ADDENDUM TO MINNESOTA'S STRATEGIC AND OPERATIONAL PLAN FOR HEALTH INFORMATION EXCHANGE

Response to the Office and the National Coordinator for Health Information Technology
February 9, 2011

Minnesota e-Health Initiative Advisory Committee and the Minnesota Department of Health

Table of Contents

Acknowledgements

The Minnesota Department of Health (MDH) thanks the many members of the Minnesota e-Health Initiative, including Advisory Committee members and Workgroup members for their ideas, their expertise and their time in developing the Addendum to Minnesota's Strategic and Operational Plans for Health Information Exchange.

A complete list of the Advisory committee members and workgroup co-chairs is available in original Strategic and Operational Plans for Health Information Exchange in the acknowledgements section.

MDH also thanks Noam Arzt, PhD of HLN Consulting, LLC and Ross Martin, MDH, MHA of Deloitte for providing their expertise to MDH staff on several aspects of this Addendum.

Executive Summary

This addendum to Minnesota's Strategic and Operational Plans for Health Information Exchange is in response to the issues identified by Office of the National Coordinator in November 10th 2010. The Minnesota addendum and response aims to add detail, to clarify and to update information for the Minnesota approach to implementing HIE statewide.

Background and Overall Timeline
As required by Minnesota's Health Information Exchange Cooperative Agreement with the Office of the National Coordinator for Health Information Technology, Minnesota submitted its Strategic and Operational Plan for Health Information Exchange on July 16, 2010. The original plans can be located at http://www.health.state.mn.us/e-health/hitech/hitechmn.html.

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- Unique **health information exchange landscape**, including how Minnesota's Health Information Exchange oversight law fits with Minnesota's plans for health information exchange
- **Environmental scan, gap analysis, and approach for meaningful use attainment**, including providing linkages between data and strategies for three stage one meaningful use requirements – lab results reporting, e-prescribing, and exchange of clinical summary documents; and a plan to ensure how federal funds will support eligible providers in having at least one option for meeting each of the meaningful use requirements
- Strategies to **support statewide services and address gaps** including the priorities and phases for implementation
- Plans for **privacy and security**, including plans for adherence to the federal privacy and security framework and plans for both interstate and intrastate data exchange
- Efforts to **coordinate with other federally-funded programs**, particularly programs funded under the HITECH act
- Plans for **technical infrastructure**, including additional detail on how the technical approach will fill the needs of Minnesota; the plans to connect Minnesota's Certified Health Information Organizations and plans to leverage their offerings; and plans for prioritizing and implementing connectivity of providers and implementation of shared services

Summary of eight sections in the Minnesota Response to ONC on Minnesota's Plans for Health Information Exchange
Each section addresses at specific question of topic identified in the ONC November letter or in the ONC PIN document.

Section 1: Minnesota's Health Information Exchange Landscape
Section 1 describes how Minnesota's health information exchange landscape is distinctive compared to other parts of the country due to several factors:

- Minnesota's regulatory framework for health information exchange requiring the Minnesota Department of Health to provide oversight and regulation of Minnesota Health Information Exchange Service Providers, resulting in two State-Certified Health Information Organizations who are offering clinical meaningful use exchange services statewide.
- Minnesota's high EHR adoption rate, one of the highest in the country, attributed in part to several years of work in this area and Minnesota mandates for e-prescribing by 2011 and interoperable EHR adoption by 2015
- The widespread use of EHR products from the vendor Epic by most larger health systems and the momentum created by the Minnesota Epic Users group to exchange information within Epic using the Care Everywhere functionality as well as exploration of exchange outside of Epic using the Care Elsewhere functionality in some settings.
- The use of direct exchange in both the broad sense (of push transactions between providers or from providers to other known entities such as public health databases) and the Office of the National Coordinator definition using NWHIN Direct specifications. Recently, Vision Share, a Health Information Service Provider (HISP) **demonstrated the first NWHIN Direct-based protocol transaction** between a Minnesota hospital, Hennepin County Medical Center, and the Minnesota Immunization Registry (MIIC).

Section 2: Health Information Exchange Environmental Scan Update

This section describes a comprehensive assessment framework and plan that includes key settings impacted by the Meaningful Use Regulations. These include ambulatory clinics, hospitals, long-term care, public health, pharmacies, laboratories, and Minnesota-certified Health Information Exchange Service Providers plus other settings and domains.

Section 2 provides an update to Minnesota's July 2010 health information exchange environmental scan and provides additional data for two recently completed surveys: a survey of Minnesota ambulatory clinics and a survey of Minnesota hospitals. Both of these statewide surveys are statewide and provide valuable information on the EHR adoption rate, health information exchange capabilities, and insight into the barriers to health information exchange in Minnesota hospitals and clinics.

Some key findings of these two surveys include (additional detail provided in Section 2):

- Almost 71% of clinics electronically exchange clinical and patient data with state immunization registries while 30% exchange with MDH for required reportable diseases.
- Over half of clinics have an agreement with at least one other clinic/hospital/health system for exchange. The remaining clinics that subscribe to an outside service to facilitate health information exchange use a vendor/intermediary exchange service (35%) or a non-profit health information organization (8%).
- Arrangements exist in 50 hospitals (39%) to share electronic patient level clinical data through an electronic health information exchange or regional health information organization. Of those with arrangements 25 are currently participating and actively engaging in at least one HIE service.

Details on the methods and timelines for assessment of HIE services are also described in Section 2. Assessment of the capabilities and barriers for three key meaningful use areas is described including: e-Prescribing, laboratory results reporting and sharing of clinical summary documents.

Section 3: Strategies to Support Statewide Services and Address Gaps
This section describes Minnesota's approach to ensure options available for all Minnesota providers and hospitals to achieve meaningful use and achieve Minnesota's goal for robust interoperability by 2015. Section 3 describes the process used by MDH, through the Minnesota e-Health Initiative Advisory Committee and associated workgroups, to identify three types of gaps regarding health information exchange in Minnesota. The types of gaps identified are:

- Technical infrastructure gaps
- Connectivity gaps
- Information gaps

Section 3 describes 11 strategies for addressing these gaps which are summarized in Figure 1. In addition, the strategies are organized into three phases for implementation. The plan emphasizes Phase I, which will begin in 2011 upon ONC approval of Minnesota's plans. Figure 1 below describes Minnesota's strategies to address the health information exchange gaps.

Figure 1: Strategies to Address Minnesota Health Information Exchange Gaps

Strategies to Address Technical Infrastructure Gaps
Strategy 1: Integration of entity level provider and service directories
Strategy 2: Establish statewide mechanism to manage consumer preferences
Strategy 3: Integration of Certified Health Information Organization record locator services
Strategies to Address Connectivity Gaps
Strategy 1: Expansion of directory content to include essential data sources
Strategy 2: Establishing connectivity for robust exchange
Strategy 3: Connecting providers in need – community connectivity grants
Strategies to Address Information Gaps
Strategy 1: Understanding connectivity gaps – Minnesota's plan for assessment
Strategy 2: Outreach and education to eligible hospitals and providers
Strategy 3: Specialized technical assistance to improve interoperability
Strategy 4: Outreach and education to Minnesota consumers

Section 4: Privacy and Security Alignment with State and National Issues.
This section describes how Minnesota's regulatory framework aligns with the Health and Human Services Privacy and Security Framework, including how Minnesota-Certified Health Information Exchange Service Providers are required to demonstrate adherence to all Minnesota and Federal laws pertaining to privacy and security, and Minnesota's commitment to ensuring continuous alignment in this area.

Section 5: Coordination with Federal Programs Update
This section provides more specific details of how MDH staff, including the State Government HIT Coordinator, are ensuring a close collaboration with other Federal programs, particularly other programs funded under HITECH. The section describes involvement with 20 sets of activities and staff that support coordination with Minnesota's Regional Extension Center (REACH), Minnesota Medicaid, Minnesota's Beacon project, Minnesota's SHARP project, and Minnesota's Workforce and Education programs and others.

MDH has a seven-year history of the Minnesota e-Health Initiative, a public-private collaborative whose vision is to "accelerate the adoption and effective use of health information technology to

improve health care quality, increase patient safety, reduce health care costs and enable individuals and communities to make the best possible health decisions." The Minnesota e-Health Initiative provides an established, trusted and effective forum for Minnesota stakeholders to coordinate and collaborate around the HITECH programs funded in Minnesota.

Section 6: Plans for Funding
This section provides a high-level overview of how MDH plans to use and distribute the funding for several major components described in this Addendum. Funding is targeted to fill gaps, ensure core infrastructure and support information and knowledge distribution.

Section 7: Project Management and Oversight
This section provides specific detail around how Minnesota plans to provide project oversight through fiscal controls and use strong and effective project management principles. Details on Minnesota policies, procedures, and plans for fiscal audits, grant management, procurement, and project management are included.

Section 8: Appendices
This section provides the additional detail for key elements of the updated plan. The appendices are:

- **Appendix A**: Minnesota Health Information Exchange Service Provider Application Form
- **Appendix B**: Assessment and Evaluation Framework
- **Appendix C**: Minnesota Clinical Laboratory Assessment Project Charter
- **Appendix D**: Project Schedule
- **Appendix E**: Project Risk Assessment

ADDENDUM TO MINNESOTA'S STRATEGIC AND OPERATIONAL PLAN FOR HEALTH INFORMATION EXCHANGE

Response to the Office and the National Coordinator for Health Information Technology
February 1, 2011

Introduction
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Section 1: Minnesota Health Information Exchange Landscape

In 2008, Minnesota developed its first strategic plan on health information technology and EHR adoption, effective use, and exchange. A more detailed plan was developed in 2009 and early 2010 and submitted to ONC in mid-2010. Since submission in July 2010, the health information exchange landscape has continued to evolve rapidly and significant changes are occurring nationally and across Minnesota.

Minnesota's approach to health information exchange is distinctive because it endorses a free market approach with the state government serving a key oversight and regulatory role for the free market. The free market provides a rich environment for innovation and competition and the regulatory role provides public oversight, consumer protection and ensures a fair playing field for the market approach. Below describes key progress in the Minnesota HIE market and public oversight since June 2010 as well as new developments impacting the Minnesota HIE Landscape.

Developments Impacting Minnesota HIE Landscape
Since Minnesota originally developed its Strategic and Operational Plan for Health Information Exchange, there have been several significant developments in the health information exchange landscape that impact Minnesota and have provided additional clarity on areas where resources should be focused.

National developments include:

- Finalization of Stage 1 meaningful use requirements
- Advancement of the Nationwide Health Information Exchange Direct protocols
- Clarification by ONC on the request for states to:
    - Identify the need for and develop shared services for health information exchange
    - Ensure that eligible providers and eligible hospitals have options for meeting Stage 1 meaningful use requirements
- Significant industry announcements by private-sector companies indicating intentions to invest in the health information exchange infrastructure necessary to support providers in achieving meaningful use requirements. For example:
    - Surescripts announced its plans to expand its capabilities to allow for patient information to be exchanged between providers, Health Information Exchange Organizations, and Integrated Delivery Networks. With the significant network already captured by Surescripts for e-prescribing, it is anticipated that Surescripts has the potential to capture large segments of the market in regard to other clinical exchanges necessary for meaningful use.
    - Announcements of telecommunication companies (e.g., Verizon) with plans to expand the network capabilities for health information exchange.
    - Capabilities of EHR vendors (e.g., Epic) providing mechanisms for providers to conduct meaningful use transactions.
    - Announcements by Health Internet Service Providers (HISPs), e.g., Vision Share, and clarification on the increasing role HISPs will play in facilitating health information exchange to known entities.

Minnesota developments include:

- Minnesota's mandate for interoperable electronic health records by 2015 requires health care providers in Minnesota to connect to a State-Certified Health Information Organization or Health Data Intermediary by 2015 to ensure interoperability, thus making Direct Exchange an interim option for health information exchange in Minnesota. Providers are making progress in achieving the mandate (as evidenced by the high EHR adoption rate of 67% in ambulatory settings), but other settings have additional barriers to EHR adoption. While some progress is being made in EHR adoption, providers are hesitant to sign up with State-Certified HIE Service Providers, making financial sustainability an important consideration for Minnesota's approach to health information exchange
- New data has documented the widespread use of the Epic electronic health record system in Minnesota. It is estimated that approximately 33% of Minnesota health care providers are using an Epic system and that 75% of Minnesota patients have a record in a health system using the Epic EHR. Epic recently announced the launch of its health information exchange capabilities both within Epic users (Care Everywhere) and outside of Epic Users (Care Elsewhere). Eight of the largest healthcare organizations in Minnesota have successfully launched Care Everywhere exchange services (including: Allina Hospitals and Clinics; CentraCare Health System; Essentia Health; Fairview Health Services; Health Partners Clinics and Regions Hospital; Hennepin County Medical Center; North Memorial Health Care; and Sanford Health).
- Two organizations have been certified by the Commissioner of Health as Health Information Organizations. The two organizations are Community Health Information Collaborative (CHIC) and Minnesota Health Information Exchange (MN HIE). Other applications for Health Data Intermediaries are anticipated in the future.
- Results from comprehensive surveys in the ambulatory clinic and hospital settings have been finalized, providing additional insight into readiness for meaningful use and needs
- Minnesota, through the broad stakeholder support of the Minnesota e-Health Initiative Advisory Committee, has recognized the need to capitalize on private investments in health information technology and health information exchange and has focused the need for public financing for certain health information exchange services to be offered in Minnesota long term, including:
    - Statewide services to enable connectivity between the multiple entities providing health information exchange in Minnesota
    - Providing gap health information exchange services to entities for which there is little health information exchange capability or greater need.

Update on Health Information Exchange Oversight

In 2010, Minnesota passed the Minnesota Health Information Exchange Oversight Law requiring organizations that provide HIE services for the transmission of clinical "meaningful use" transactions to apply for a certificate of authority to operate in Minnesota, in accordance with Minn. Stat. §62J.498-62J.4982.

Implementation of the Minnesota HIE Oversight Law

Effective July 1, 2010, all organizations that provide HIE services for the transmission of clinical "meaningful use" transactions must apply for a certificate of authority to operate in Minnesota, in accordance with Minn. Stat. §62J.498-62J.4982. There are two categories of Health Information Exchange Service Providers that require certification:

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

The law also calls out another type of exchange, ***Direct Exchange*** defined as: ***exchange of health-related information between parties without the use of an intermediary***. The law specifies that health information exchange that does not involve the use of an intermediary is not currently regulated under this framework. Because Health Information Service Providers (HISP) do act as an intermediary for some functions in carrying out NWHIN Direct protocols, they would fall within Minnesota's definition of a Health Data Intermediary. Minnesota recognizes that the current definitions in the statute can be confusing given the use of similar terms in the HIE marketplace, and as such will be exploring ways to clarify the statute in the future. However, Minnesota does not anticipate delays in the availability of HISPs to facilitate NWHIN Direct protocols and anticipate one or more HISPs being certified by the State in 2011.

Recommendations for Improvements to Minnesota's HIE Oversight Law

Changes in the marketplace since the Minnesota HIE Oversight Law was first enacted, and definitions of certain terms at the federal level imply the need for future clarification of Minnesota's oversight law, specifically:

- Industry announcements indicate that there will be some HDIs that have the capacity to provide the full range of clinical meaningful use transactions. This implies the need for a modification in the definition of an HDI to acknowledge this market reality and enable HDIs to be able to obtain a certificate of authority to provide services for all transactions required for meaningful use of electronic health records, and not just a subset of those transactions.
- The recently established Nationwide Health Information (NWHIN) Direct Project introduces a new type of Health Information Exchange Service Provider into the market place. This development has led to the need for Minnesota to clarify that the definition of an HDI includes Health Internet Service Providers (HISP) as defined by NWHIN Direct Project: *An entity that is responsible for delivering health information as messages between senders and receivers over the Internet, providing qualified users with access to NWHIN Direct services.*
- The NWHIN Direct Project, and Minnesota's use of the term "direct exchange" in the statute has proved confusing for stakeholders and health information exchange service providers in determining how the requirements of Minn. Stat. §62J.498-62J.4982 apply to their organization. To provide the necessary clarification on this issue, it is necessary to update the definition of "Direct" exchange to reconcile the differences and between the state and federal use of the term, and clarify that to the extent that "Direct" exchange is facilitated

by a HISP (see above), those entities facilitating the exchange would be subject to the requirements of HDIs under Minn. Stat. §62J.498-62J.4982.

- Current language in the statute that outlines minimum criteria for HDIs including the requirement for HDIs to have a record locator service (RLS) that is compliant with the requirements of Minn. Stat. §144.293 sub. 8. This language has been confusing to stakeholders because the definition of meaningful use allows for health care providers and hospitals to meet health information exchange through transactions that do not require the use of an RLS. An update in the language is warranted to clarify that the requirement for HDIs to have an RLS applies only to situations when an RLS is necessary for conducting the meaningful use transactions, and that the HDI may fulfill this requirement through a connection to the RLS of a state-certified HIO or other mechanism sufficient to locate a patient's records to facilitate the exchange of health information across the continuum of care.

These recommendations have been incorporated into Minnesota's 2011 report to the Legislature and will be pursued in upcoming legislative sessions.

Status of HIE Service Provider Application Submissions to Date

Based on the statutory requirements in the Minnesota HIE Oversight Law, MDH established a formal application process for HIOs and HDIs to follow in order to obtain a certificate of authority to operate as an HIE Service Provider in Minnesota. See Appendix A for a copy of the Application Form to be completed by Minnesota HIE Service Providers. Since the application process was opened in September 2010, MDH has received two applications from HIOs and one application from an HDI. The two HIO applicants, Minnesota Health Information Exchange and Community Health Information Collaborative, presented their complete applications at a public hearing on December 2, 2010. The HDI Applicant expects to submit supplemental application materials in early 2011 because their original application was not fully complete. Minnesota anticipates that the two Health Information Organizations will be issued certificates of authority by mid-February, 2011.

MDH has initially identified approximately 13 additional companies that may be engaging in HIE activities in Minnesota that would require them to apply for an HIE Service Provider Certificate of Authority. MDH has sent correspondence to these entities to alert them of the requirements under the Minnesota HIE Oversight Law and will continue to take enforcement action as needed to ensure compliance with the Minnesota HIE Oversight Law. MDH will continue to monitor the marketplace to identify new entities that are subject to the law.

High level Architecture to Ensure Options for Meaningful Use

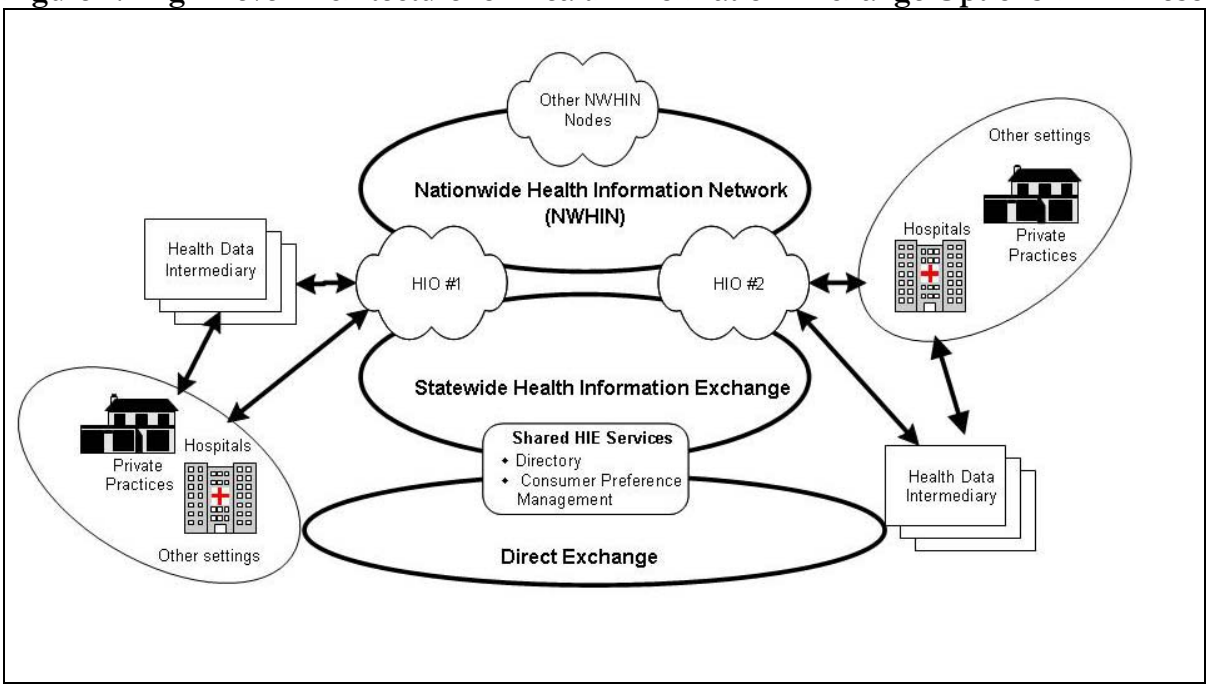
Minnesota's technical infrastructure is designed to support a free market approach to health information exchange. The architecture is based on a model that requires interoperability between Health Information Exchange Service Providers. While Minnesota's statute does not articulate how HIE Service Providers must be interoperable, the diagram below (Figure 2) describes the multiple types of health information exchange services currently offered in the state, and Minnesota's vision for interoperability between HIE Service Providers, which will be supported through State HIE Cooperative Agreement funds.

Minnesota's high-level architecture for health information exchange options include:

- Direct exchange (push transactions only) utilizing NWHIN Direct protocols or other protocols adopted by the state (e.g., self-facilitated through Epic Care Everywhere)

- Facilitated health information exchange provided by State-Certified Health Data Intermediaries (this could be for both push and pull transactions, or push transactions only)
- Robust health information exchange for both push and pull transactions provided by State-Certified Health Information Organizations
- Connectivity to the Nationwide Health Information Network for both push and pull transactions through connectivity to State-Certified Health Information Organizations

Figure 2: High-Level Architecture for Health Information Exchange Options in Minnesota



Last updated: January 26, 2011

Supporting Use of NWHIN Direct Protocols

Minnesota uses the term "direct exchange" in a broader sense than the use of the national term which involves using NWHIN Direct protocols and the use of Health Information Service Providers (HISPs) to facilitate push transactions. However, NWHIN Direct falls under the direct exchange umbrella in Minnesota's high-level architecture for HIE options, and Minnesota supports the use of NWHIN Direct by providers who wish to use it as a method for achieving meaningful use. Specifically, Minnesota's plan supports the use of NWHIN Direct in the following ways:

- Developing entity level and individual level provider directories to support all types of push transactions, including those using NWHIN Direct protocols
- Requiring State-Certified Health Information Organizations to be connected to the Nationwide Health Information Network and using NWHIN protocols to support both push and pull transactions
- Offering education to Minnesota providers about the types of health information exchange options available to them, including NWHIN Direct
- Supporting NWHIN Direct through the connection between Vision Share (as a HISP) and the Minnesota Immunization Registry (MIIC) – as the nation's first NWHIN Direct transaction

- Ensuring that Minnesota has HISPS available through our regulatory framework to support providers in implementing NWHIN Direct protocols

Other HIE Options for Supporting Stage 1 Meaningful Use

Minnesota has one of the highest electronic health record (EHR) adoption rates in the nation, with 67% of ambulatory clinics and 30% of hospitals in Minnesota having a basic or comprehensive electronic health record and with 60% of hospitals having plans to achieve a basic EHR system within the year. As described above, the Epic Users are implementing the use of the Care Everywhere functionality that enables exchange among other Epic users.

Electronic Health Record Adoption and Direct Exchange – Epic Users Group

The Minnesota Epic users have formed the Minnesota Epic Users Group, a non-profit organization, to provide a forum for collaboration and sharing of tools, templates and other knowledge resources. The recently established Care Everywhere Governance Council assists Minnesota Epic Users to:

- Oversee compliance with the "rules of the road" by organizations that are contracted for Care Everywhere (i.e., participants).
- Provide a venue for discussing modifications to the "rules of the road" as the health care environment and supporting technology changes
- Promote best practices (e.g., auditing practices can be written up and disseminated to all participating organizations)

In discussion with Epic Users, several Care Everywhere enhancements are anticipated in the near future, including:

- The ability for clinicians to reconcile discrete data elements from Care Everywhere data – specifically meds, problems, and allergies – with the local chart, so they are available for decision support, trending, etc.
- The ability to view patient records that have been received from outside organizations using EpicCare Link
- Automation of the Care Everywhere "phone book" so that updates can be provided without staff performing manual imports of files that Epic staff manually provide
- A gateway allowing connectivity to the Nationwide Health Information Network (NWIN)
- Epic changes to support Stage 1 meaningful use objectives

The Epic Users Group in Minnesota plays an important role by supporting providers in achieving meaningful use as well as helping to achieve the longer-term vision of full interoperability throughout the healthcare system in Minnesota.

State-Certified Health Information Organization Offerings for Stage 1 Meaningful Use

While Minnesota Health Information Organizations' core functions are meant to support query (pull) transactions, both HIOs offer some services that support direct (push) transactions as well. Full details on the transaction capabilities of, and standards supported by both HIOs can be found in Figure 3 below.

Minnesota Health Information Exchange

MN HIE operates a secure health information network for the purpose of exchanging patient specific clinical information. The infrastructure is designed using a federated architecture. MN HIE operates a Master Patient Index (MPI) with a Record Locator Service (RLS) that allows MN HIE to access patient specific information from other EMRs and data sources connected to the MN HIE network. The MPI has approximately 4.2 million records primarily representing the patient population of Minnesota and bordering states.

In addition to offering services that allow access to medication history, eligibility/benefits information, immunization data, lab history, and services to manage patient consent and opt out information, MN HIE also offers the following services to facilitate direct exchange:

- Enhanced two-factor authentication for MN HIE subscribers that leverage the web browser solution.
- Update capabilities to the Immunization Registry maintained by the Department of Health
- Clinical summary exchange (CCD)
- Stand-alone e-Prescribing

Anticipated future services will concentrate on:

- Meeting future meaningful use requirements
- Implementation of NWHIN framework to connect with other HIOs, HDIs, large Integrated Delivery Networks (IDNs) and federal/state agencies
- Minnesota state strategies and requirements to support interoperable health records by 2015.

MN HIE uses direct exchange under the following scenarios:

- Unsolicited transactions: transactions that are initiated by one entity and sent to another under an accepted set of protocols. This model was deployed on the administrative side of healthcare many years ago in the form of claims submission and remittances. Today, Health Information Organizations such as MN HIE support direct exchange for certain functions such as updates to the state's immunization registry.
- Secure messaging: under this approach, an individual send an e-mail attachment with certain security features that require receiver to obtain 'key' to retrieve and access the document.
- MN HIE plans to add the capacity for using NWHIN Direct framework as part of its business strategy.

Community Health Information Collaborative

CHIC provides through its health information exchange, HIE-Bridge™, an integrated, secure, exchange network for health information. CHIC offers HIE-Bridge™ to its members with the following functionality:

- Access Record Locator Service (patient look-up): currently, the Record Locator Service allows authorized users to query with commonly known criteria, such as name, address, and

date of birth and retrieve a list of where patient records meeting this criteria can be found among participating organizations

- Manage patient privacy: this function is currently available to authorized personnel in order to opt requesting patients out of the service. Through this function, patients are opted out of the entire network
- Manage security: this function allows authorized privacy and security personnel at participating organizations to monitor and manage the audit log for HIE-Bridge™ usage within their organizations

HIE-Bridge™ is currently exchanging demographic patient information to help providers identify the location of a patient's health information. CHIC will be working with its members and others throughout Minnesota, Wisconsin, and North Dakota not currently on HIE-Bridge to implement the exchange as a requirement for meaningful use and for improved patient care. In addition, CHIC is planning for current HIE-Bridge participating organizations to begin exchanging clinical information using the Continuity of Care Document format.

CHIC's work with the Social Security Administration's Disability Determination project is allowing them to become a Participant Member of the NWHIN and complete their on-boarding requirements. In addition, it allows their current facilities to develop the CCD and begin exchanging with the SSA. Planned updates to the Data Exchange and Support Agreement (DESA) will expand its scope to include the exchange of clinical data and allow us to exchange beyond current CHIC members. These additional capabilities will be enhanced as we work with other certified HIOs in Minnesota to exchange information by the third quarter of 2011.

In 2011, CHIC will be implementing several 'push transactions' that further support health information exchange. Specifically, CHIC will allow providers to 'push' discharge information to appropriate destinations, such as long-term care facilities, primary care providers, and specialists for referrals. CHIC will also provide the capability for our participating organizations to push quality reports to federal and state agencies as well as Minnesota's public health laboratory.

Figure 3: Clinical Meaningful Use Transactions and Health Information Exchange Services Provided by State-Certified Health Information Organizations

Stage 1 Meaningful Use Transactions	Currently Offered	Offered in Next 12 Months	Standards Offered (or Planned to Offer)	
			CHIC	**MN HIE**
Electronic prescribing	MN HIE	CHIC	X12N 270/271 v4010/50 NCPDP Stds 1.0 NCPDP Scpt v8.1 & 10.6	X12 4010A 270/271 EDI NCPDP IG1 and above NCPDP v8.1
Immunization transactions	MN HIE CHIC		HL7 messages over https	VXQ HL7 v2.1 HL7 v2.3, 2.5
Laboratory related transactions, including reportable lab results		MN HIE CHIC	HL7 v2.3, 2.5	HL7 v2.5.1
Electronic transmission of records/key clinical information Transmission of summary care record from one setting of care provider to another provider of care to support transition of care or referral	MN HIE CHIC		CCD	CCD
Electronic transmission of records/key clinical information Transactions that support exchange of key clinical information (e.g., discharge summary, procedures, problem list, etc.)	CHIC	MN HIE	CCD	CCD
Syndromic surveillance reporting to public health (if requested by MDH)	CHIC	MN HIE	HL7 2.3.1 or 2.5.1	CDC and MN standards
Electronic reportable disease conditions reporting to public health	CHIC	MN HIE	NWHIN GIPSE v1.0	CDC and MN standards
Radiology-related transactions Transmission of radiology results	CHIC	MN HIE	HL7, DICOM, IHE	HL7 2.3, 2.5
Radiology-related transactions Transmission of radiology images	CHIC			HL7 2.3, 2.5
Radiology-related transactions Capability to support radiology history		MN HIE CHIC		HL7 2.3, 2.5
Quality Reporting to CMS	CHIC	MN HIE	CMS PQRI v4.1 NWHIN PQRI v1.0	CMS PQRI v4.1 NWHIN PQRI v1.0
NWHIN Connectivity	CHIC	MNHIE	NWHIN Prod Spec Rel 1	

State Health Department Capabilities

A recent survey of the Association for States and Territorial Health Organizations (ASTHO) collected information from MDH on readiness in 2011 to received data provided by eligible providers and hospitals as part of meaningful use. The survey asked about MDH public health systems currently prepared or planning to be prepared to receive data from meaningful use-certified EHRs by April, 2011. Figure 4 below summarizes MDH's plans for Stage 1 meaningful use.

Figure 4: MDH Capabilities and Plans for Stage 1 Meaningful Use

	Currently Prepared	**Planning to be Prepared**	**Not Planning**
Reportable lab results (for reportable disease information from hospitals)	Currently prepared to receive results in LOINC Codes v2.27; ready to receive test messages for meaningful use.	Planning to be prepared to receive results in HL7 2.5.1	
Immunization information system	Currently prepared to receive immunization data submissions in HL7 v2.31 and CVX Codes; ready to receive test messages for meaningful use.	Planning to be prepared to receive immunization data submissions in HL7 v2.5.1	
Syndromic surveillance system			Preparation for syndromic surveillance is under consideration. Possible plan to receive under review pending release of national standards related to syndromic surveillance reporting.

Section 2: Health Information Exchange Environmental Scan Update

Since Minnesota originally submitted its Strategic and Operational Plan for Health Information Exchange, additional data has become available that further describes the HIE environment context in Minnesota. Comprehensive survey data on Minnesota ambulatory clinics and hospitals is now available and more thoroughly describes EHR adoption, use and exchange capabilities as well as barriers to exchange. In addition, the surveys describe specific readiness for achieving HIE requirements for Stage 1 meaningful use. Specifically this includes e-prescribing, laboratory results reporting, and clinical summary document exchange.

Minnesota has also developed a comprehensive assessment plan (see Appendix B: Assessment and Evaluation Framework) which includes plans for regular ongoing assessment activities for multiple settings including:

- Annual surveys in ambulatory clinics
- Annual surveys in hospitals
- Annual survey of laboratories
- Annual survey of local health departments
- Survey of long-term care facilities (frequency to be determined)
- Quarterly reporting by Minnesota Certified HIE Service Providers
- Quarterly analysis of Surescripts data for monitoring of e-prescribing trends
- Working with providers in bordering states to assess adoption and use of health information technology outside of Minnesota, allowing OHIT and partners to work towards interstate health information exchange

National Comparisons on EHR Adoption

According to a report recently issued by the Centers for Disease Control and Prevention, Minnesota is leading the nation in adoption and use of EHRs with 80.2% of office-based physicians using an EMR/EHR system (source: Electronic Medical Record/Electronic Health Record Systems of Office-based Physicians: United States, 2009 and Preliminary 2010 State Estimates, National Ambulatory Medical Care Survey (NAMCS), conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics, December 2010). Although this figure may be high, the study shows national comparisons that can't currently be captured through state-based surveys. In comparison to Minnesota border states, Wisconsin is the next highest EHR adoption rate at 75.4%, followed by North Dakota at 74.9%, Iowa at 59.6%, and South Dakota at 54.2%.

Ambulatory Care Clinics

The 2010 MN Health Information Technology Ambulatory Clinic Survey was completed by 1121 of 1285 physician clinics for a response rate of 87%. The survey, which includes both primary and specialty care, found that two-thirds of respondents have an EHR installed and in use in all or some areas of the clinic (Figure 5). Of the remaining 371 clinics, 101 have purchased and/or begun installation of an EHR. The remaining quarter of clinics have no EHR. Over 70% of the clinics reported using five vendors. Of those 851 clinics that have an EHR, Epic is the most common vendor with 33% implemented in the ambulatory settings. Other common vendor systems include Allscripts (16%), Cerner (11%), GE Healthcare (6%), and NextGen Health Information (5%).

Figure 5: EHR Adoption Rates of Minnesota Clinics (N = 1121) - 2010

	Percent of Clinics (Number of Clinics)
EHR installed and in use by all/some areas of the clinic	67% (750)
Purchased/began installation of an EHR but not using	9% (101)
No EHR	24% (270)
Source: MDH Health Information Technology Ambulatory Clinic Survey, 2010.	

Routine exchange occurs most frequently with hospitals in the same system or affiliated with the clinic and least frequently with other care settings including nursing home and home health providers (Figure 6). Almost 71% of clinics exchange clinical and patient data with state immunization registries while 30% exchange with MDH for required reportable diseases. A smaller percent of clinics, 17%, routinely send and receive clinical and patient data with the patient.

Figure 6: Percent of Clinics Routinely Electronically Exchanging Clinical and Patient Data with Specific Providers (N = 750) - 2010

	Hospitals in system/ affiliated	Hospitals outside of system	Providers outside system	Other care settings (nursing homes, home health)
Routinely SEND electronic data from EHR	23%	17%	21%	11%
Routinely RECEIVE electronic data	6%	1%	1%	1%
Routinely SEND and RECEIVE electronic	30%	2%	13%	2%
DO NOT send or receive electronic data	38%	77%	63%	83%
No Answer	3%	3%	2%	3%
Source: MDH Health Information Technology Ambulatory Clinic Survey, 2010.				

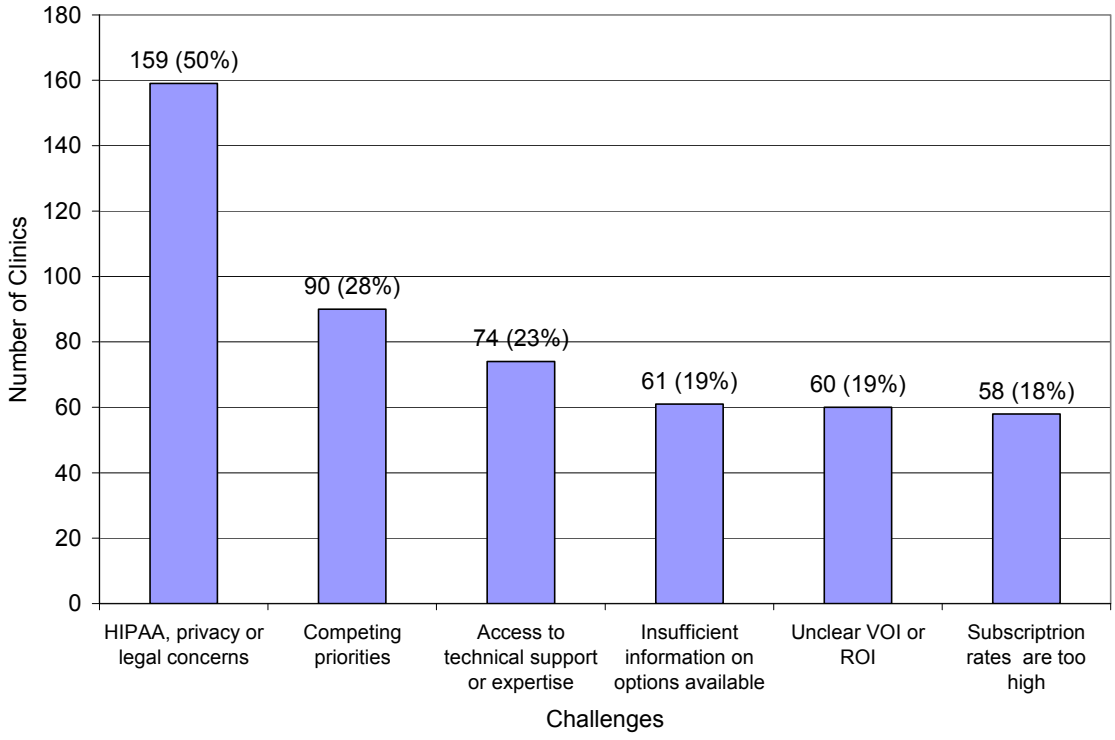
Slightly more than one third of clinics (257) provide an electronic summary of care record for 80% or more of care transitions and referrals. Over half of clinics have a direct agreement with at least one other clinic/hospital/health system (Figure 7). The remaining clinics that subscribe to an outside service to facilitate health information exchange use a vendor/intermediary exchange service (35%) or a non-profit health information organization (8%).

Figure 7: Percent of Clinics that Subscribe to Outside Services to Facilitate Health Information Exchange across Organizations (N=750) - 2010

Type of Service	Percent and Number of Clinics
Direct Agreement	56% (418)
Vendor or Intermediary Exchange Service	35% (260)
Non-Profit Health Information Organization	8% (61)
Other/No answer	1% (11)
Source: MDH Health Information Technology Ambulatory Clinic Survey, 2010.	

Figure 8 shows the largest challenges related to secure information exchange with outside organizations. HIPAA, privacy, or legal concerns were indicated by 50% of respondents. Competing priorities and access to technical support or expertise were next with 28% and 23% respectively.

Figure 8: Challenges to Secure Information Exchange (N=750)
Source: MDH Health Information Technology Ambulatory Clinic Survey, 2010.



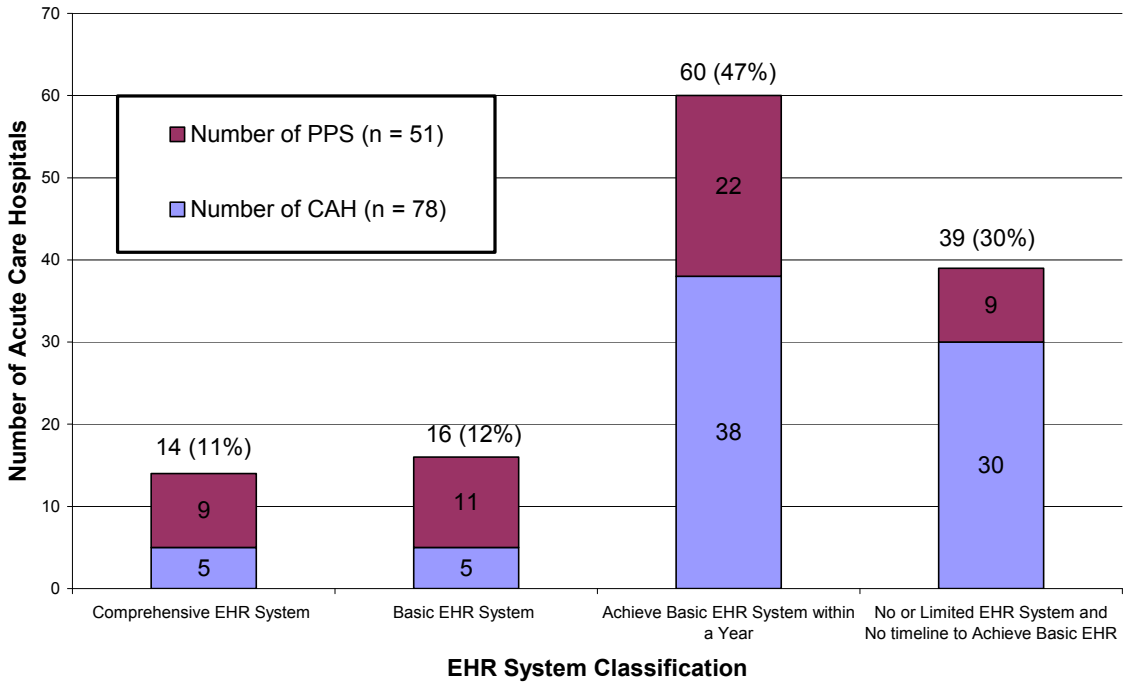
Acute Care Hospitals

The 2009 American Hospital Association (AHA) Annual Survey was distributed to 151 Minnesota Hospitals. In Minnesota, in conjunction with the Minnesota Hospital Association supplemental questions were developed and distributed. In Minnesota, the Information Technology Supplement was completed by 129 acute care hospitals, 78 critical access hospitals (CAH) and 51 prospective payment system (PPS) hospitals, for a response rate of 98%. Minnesota applied the methodology used by Jha et al[1] to classify the EHR systems. Minnesota also classified EHRs as having the potential to achieve a basic classification within a year.

[1] Jha, A. K., et al. *Use of Electronic Health Records in U.S. Hospitals.* N Engl J Med. 2009; 360(16): 1628-38.

Using this methodology, 14 hospitals have a comprehensive EHR system and 16 have a basic system (Figure 9). Thirteen percent of CAHs have a comprehensive or basic EHR compared to 39% of PPS hospitals. Almost 50% of hospitals have an EHR system that has the potential to be a basic system within a year. Thirty-nine hospitals have no or limited EHRs. A majority of hospitals with no or limited EHRs are CAHs, which account for 38% of all CAHs in Minnesota.

Figure 9: Type of EHR System by Hospital Setting (N=129) - 2010
Source: 2009 American Hospital Association Annual Survey



The vendors, Meditech, Epic, and Healthland are the most frequently indicated as providing the primary inpatient and outpatient EHR system (Figure 10). These account for 62% of inpatient and 58% of outpatient EHR systems. "Primary" is defined as the system that handled the large number of patients or the systems in which you have made the single largest investment.

Figure 10: Most Common Primary EHR Systems for Inpatient and Outpatient Identified by Acute Care Hospitals (N=129) - 2010

	Inpatient	Outpatient
Meditech	34 (26%)	26 (20%)
Epic	25 (19%)	33 (26%)
Healthland	21 (16%)	16 (12%)
Source: 2009 AHA Annual Survey: Information Technology Supplement		

Hospitals exchange patient data most frequently with hospitals and ambulatory providers within their systems (Figure 11) and least frequently with assisted living facilities (Figure 12). Eighteen percent of hospitals exchange patient demographics with state public health agencies, which is higher than nursing homes (14%) and home health providers (13%). Exchange with providers was identified as the most challenging meaningful use criteria to achieve by 42% of all hospitals. Exchange was identified as a challenge by a higher percent of CAH (49%) than PSS hospitals (24%).

Figure 11: Percent of Hospitals Exchanging Patient Data with Hospitals and Ambulatory Providers (N=129) - 2010

	Inside System		Outside System	
	Hospitals	Ambulatory Providers	Hospitals	Ambulatory Providers
Patient Demographics	48%	47%	15%	27%
Clinical Care Record	46%	50%	17%	24%
Lab Results	47%	53%	13%	29%
Medication History	46%	45%	8%	22%
Radiology Reports	49%	53%	19%	29%
2009 AHA Annual Survey: Information Technology Supplement				

Figure 12: Percent of Hospitals Exchanging Patient Data with Other Provider Types (N=129) - 2010

	Nursing Homes	State Public Health Agencies	Home Health Providers	Assisted Living Facilities
Patient Demographics	14%	18%	13%	2%
Clinical Care Record	9%	7%	9%	0%
Lab Results	13%	16%	11%	0%
Medication History	10%	10%	9%	0%
Radiology Reports	13%	7%	10%	0%
2009 AHA Annual Survey: Information Technology Supplement				

Arrangements exist in 50 hospitals (39%) to share electronic patient level clinical data through an electronic health information exchange or regional health information organization (Figure 13). Of those with arrangements, 25 are currently participating and activity engaging in at least one HIE. Another 19 hospitals have the electronic framework and are not participating, and the remaining 6 hospitals lack the electronic framework and are not able to participate with a HIE. Of the 79 hospitals without an arrangement for sharing, 23 have the electronic framework and are not participating and 55 do not have an electronic framework and are not participating.

Figure 13: Number of Hospitals with Sharing Agreements and Level of Exchange Readiness (N=129) - 2010

	Sharing Agreements Exist	No Sharing Agreements	Total
Participating and Actively Exchanging with an HIE	25	0	25
Have electronic framework but NOT exchanging	19	23	42
No electronic framework and NOT exchanging	6	55	61
No Answer	0	1	1
Total	50	79	129
2009 AHA Annual Survey: Information Technology Supplement			

Data on E-prescribing

Data on electronic prescribing from Surescripts[2] shows that approximately 38% of Minnesota providers and prescribers and 82% of Minnesota community pharmacies could e-prescribe in 2009. The adoption rate has increased for both groups since 2007 (Figure 14). Additionally, 4.8 million or 21% of all eligible prescriptions were routed electronically; representing an increase from 807,910 or 4% of eligible prescriptions in 2008 (Figure 15). This large increase is due in part to large health systems in Minnesota starting to e-prescribe in 2009.

Figure 14: Rates of E-Prescribing Adoption or Use by Physicians, Prescribers and Pharmacies in Minnesota (2007-2009)

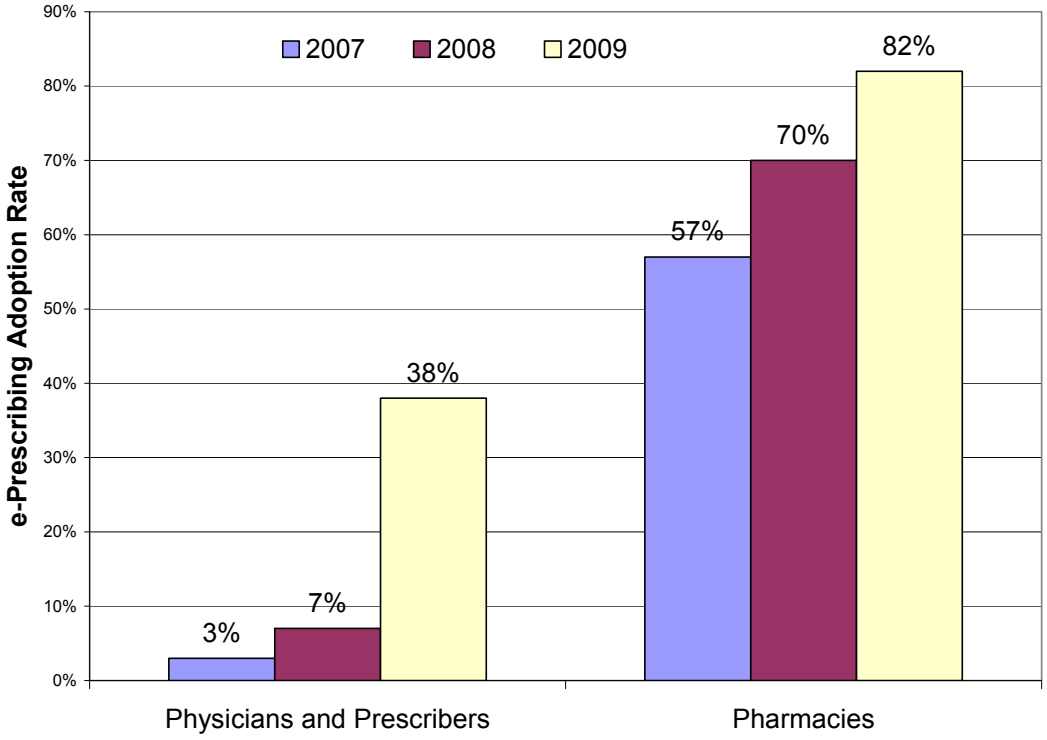


Figure 15: Minnesota Utilization of E-Prescribing (2007-2009).

	2007	2008	2009
Total Prescriptions Routed Electronically	258,0019	807,910	4,845,676
% of Eligible Prescriptions Routed Electronically	1%	4%	21%

Assessing information from the 2010 MN HIT Ambulatory Clinic Survey provides a clinic perspective on e-prescribing. Figure 16 shows the prescribing practices of clinics with EHRs (750 clinics). Almost 90% of clinics with EHRs order medication by entering prescription in the EHR. Sixty-seven clinics use a prescription pad and paper. Interestingly, no clinics use a web-based entry system. About one out of four clinics without an EHR system are able to e-prescribe.

[2] Surescripts 2010. Minnesota Status Progress Report on Electronic Prescribing (Data as of December 31, 2009). http://www.surescripts.com/about-e-prescribing/progress-reports/state.aspx?state=mn

Figure 16: Prescribing Practices of Clinics with EHRs (N=750) - 2010

Prescribing Practice	Number of Clinics
Entering prescription in EHR	664 (89%)
Using prescription pads and paper	67 (9%)
Entering prescriptions into a computer system separate from EHR	4 (1%)
Entering prescriptions in a web-based system	0 (0%)
No Answer	15 (2%)
Source: 2010 MDH HIT Ambulatory Clinic Survey	

Figure 17 shows the e-prescribing abilities of clinics with EHRs. Over half of clinics are able to e-prescribe for more than 75% of prescriptions. Another 7% are e-prescribing for some prescriptions, but less than 75% of prescriptions. The remaining clinics did not know or use pad and paper to prescribe.

Figure 17: E-prescribing Ability of Clinics with EHR System (N=750) - 2010

	Number of Clinics
75% or more of prescriptions are e-prescribed	448 (60%)
Some but less than 75% of prescriptions are e-prescribed	56 (7%)
Function is off or not available	167 (22%)
Not Sure/No Answer (includes those clinics that use pad and paper)	79 (11%)
Source: 2010 MDH HIT Ambulatory Clinic Survey	

The 2009 AHA Annual Survey also provides e-prescribing information but from the hospital perspective. Thirty-six percent of acute care hospitals use CPOE to directly enter medication orders that are transmitted electronically in all or some units (Figure 18). Only 21% of CAHs use CPOE to order medication in all or some units compared to 59% of PPS hospitals. Half of the CAH and 31% of PSS hospitals will begin implementing this functionality in the next year. One hospital has no plans to implement CPOE for medication. The remaining 26 hospitals, of which all but one are CAHs, have no resources but are considering implementation of CPOE for medication orders.

Figure 18: The Number and Percent of Acute Care Hospitals Using CPOE for Medication Ordering and Electronic Transmittal (N=129) - 2010

	Number and Percent of CAH (N=78)	Number and Percent of PPS Hospitals (N=51)	Number and Percent of All Hospitals (N=129)
Fully Implemented in all or some units	16 (21%)	30 (59%)	46 (36%)
Beginning/Planning to implement in next year	40 (51%)	16 (31%)	56 (44%)
No resources but considering implementing	21 (27%)	5 (10%)	26 (20%)
Not in place and Not considering	1 (1%)	0 (0%)	1 (1%)
Source: 2010 MDH HIT Ambulatory Clinic Survey			

Minnesota's original Strategic Plan for Health Information Exchange (July 2010) identified a connectivity gap among community independent pharmacies. Based on data presented in the original plan, 52.9% of Minnesota's community pharmacies are linked to allow e-prescribing by prescribing providers and are electronically filling prescriptions. Of the community pharmacies electronically filling prescriptions, 86.3% are community chain pharmacies 6% are community independent pharmacies. See Table 19 below. The majority of community chain pharmacies are in urban Minnesota while the majority of community independent pharmacies are located in rural Minnesota. Their geographic location is likely to be a factor to the difference in their adoption.

Figure 19: Electronic Prescribing Use by Pharmacies or Other Dispensers

Pharmacies or Other Dispensers

				Electronic Prescribing Use		
	Totals [6,7]	Urban	Rural	Electronically Filling [9,10]	Percent Active	Gap/ Need
Community Chain Pharmacy	626	361	265	540	86.3%	13.7%
Community Independent Pharmacy	445	139	306	27	6.1%	93.9%
Total Chain and Independent	**1,071**	**500**	**571**	**567**	**52.9%**	**47.1%**
Special Settings	240	62	178			

[6] Source: Minnesota Board of Pharmacy, 2006 Note: There are 6,901 licensed pharmacists in Minnesota.
[7] Source: Minnesota Board of Pharmacy, 2006. Special settings include hospitals, nursing homes, parenteral-enteral/home health care, and nuc
[8] Source: Surescripts, 2008. Activated by Surescripts after pharmacy software is certified.
[9] Source: Surescripts, 2008. Actively electronically filling prescriptions.
[10] Source: HealthPartners, 2009. HealthPartners pharmacies electronically filling prescriptions (18 pharmacies).

Data on Laboratory Exchange Capabilities

The Minnesota Strategic and Operational Plan submitted to ONC in July 2010 provided some description of the HIE capabilities of Minnesota laboratories and specifically in regard to electronic public health reporting of reportable conditions laboratory results.

The Minnesota Department of Health infectious disease surveillance program receives approximately 10,000 lab results per month through electronic lab reporting. This estimate also includes lead reporting (both positive and negative results), which is a reportable condition in Minnesota. Figure 20 below lists details related to format of reporting and frequency (note frequency includes multiple reports which are then parsed by disease condition).

Figure 20: Electronic public health report – reportable conditions laboratory results

Private Labs		**Frequency of Messages**
Lab 1	HL7 V.2.3(z)	1 per week
Lab 2	HL7 V.2.3(z); changing to HL7 2.3.1	2 or 3 per week
Lab 3	HL7 V.2.3(z); changing to HL7 2.3.1	1 or more per day
Lab 4	HL7 V.2.3.1	1 or more per day
Public Labs		
MDH Public Lab	Delimited	1 per day
Ramsey County Public Lab	Delimited	1 every other week
Source:: Minnesota Department of Health Disease Surveillance program - 2010		

This estimate of electronic lab reporting accounts for approximately 10 percent of total lab reports received by the Minnesota Department of Health related to surveillance of infectious diseases and lead. As of January 2011, six laboratories of about ~ 170 are providing electronic reporting (ELR). The goal is to help > 95% percent of labs in Minnesota and reference labs to report results electronically using standard protocols.

In addition to the information provided by MDH on electronic lab reporting capabilities, the 2010 MDH HIT Ambulatory Clinic Survey provides a snapshot of exchange readiness between clinics and labs. Of the clinics with an EHR, 555 (75%) use CPOE for medications, laboratory, and other tests. Although we cannot specifically identify the hospitals using CPOE for labs, we are able to assume that clinics and providers use CPOE for labs as 393 of these clinics use CPOE for 80%-100% of all provider orders. The most commonly identified barriers in using CPOE are the time required for staff training and to build orders in the system. Less than 5% of clinics without an EHR use CPOE for physician's orders.

Eighty-one percent of clinics with EHRs indicated that providers regularly use a computerized system to retrieve lab and diagnostic test results. Another 11% retrieve lab and diagnostic test results with computerized systems for some but not all lab and diagnostic test results. More than 50 % of lab test results are incorporated as structured data in the EHR for 83% of clinics.

The 2009 AHA Annual Hospital Survey provides information on computerized systems with functionalities related to labs and on exchange of lab results. Figure 21 and Figure 22 show the number and percent of hospitals that use a computerized system to view lab reports and order lab tests. The CAHs are much less likely to use CPOE to order lab testing than PPS Hospitals. Over a quarter of CAHs are considering implementing CPOE for lab test ordering. All PPS hospitals use a

computerized system to view lab results compared to 76% of CAH. Almost all of the remaining CAH are able to view lab results within the year.

Hospitals exchange laboratory results most frequently with hospitals (47%) and clinics (53%) that are within the same system. The rate drops off significantly when looking at hospitals (13%) and clinics 29%) outside of the system. Another 16% of hospitals exchange lab results with state public health agencies, 13% with nursing homes, and 9% with home health providers.

Figure 21: The Number and Percent of Acute Care Hospitals Using CPOE to order Laboratory Tests (N=129)

	Number and Percent of CAH (N=78)	Number and Percent of PPS Hospitals (N=51)	Number and Percent of All Hospitals (N=129)
Fully Implemented in all or some units	16 (21%)	30 (59%)	46 (36%)
Beginning/Planning to implement in next year	40 (51%)	16 (31%)	56 (43%)
No resources but considering implementing	21 (27%)	5 (10%)	26 (20%)
Not in place and Not considering	1 (1%)	0 (0%)	1 (1%)
Source: 2009 AHA Annual Survey: Information Technology Supplement			

Figure 22: The Number and Percent of Acute Care Hospitals able View Laboratory Reports with a Computerized System (N=129)

	Number and Percent of CAH (N=78)	Number and Percent of PPS Hospitals (N=51)	Number and Percent of All Hospitals (N=129)
Fully Implemented in all or some units	59 (76%)	51 (100%)	110 (85%)
Beginning/Planning to implement in next year	14 (21%)	0 (0%)	14 (11%)
No resources but considering implementing	4 (5%)	0 (0%)	4 (3%)
Not in place and Not considering	0 (0%)	0 (0%)	0 (0%)
No Answer	1 (1%)	0 (0%)	1 (1%)
Source: 2009 AHA Annual Survey: Information Technology Supplement			

Future Lab Assessments

The Office of Health Information Technology is partnering with the MDH Lab to conduct a comprehensive survey of Minnesota clinical laboratories in the winter and spring of 2011. The survey will be in the field March to April, 2011 with the full analysis completed July-August, 2011. MDH anticipates this survey being conducted two years in a row to allow for refinement of questions and then the survey will most likely be conducted bi-annually after that. For more information, see Appendix C for MDH's Clinical Laboratory Assessment Project Charter.

Data on Exchange of Clinical Summary Documents

Slightly more than one-third of clinics with EMRs (N=750) provide an electronic summary care record for patients requiring transition of care (e.g., transfer of care from the clinic to an inpatient, outpatient, office or another setting) or a referral (a provider-initiated referral to another provider) to 80% or more of care transitions and referrals. In addition, 15% of clinics with EMRs have the capability to provide the electronic summary care record, but for less than 80% of care transitions and referrals. The remaining clinics do not this function or it is turned off.

Fifty-seven percent of hospitals have systems with functionalities that include summary care record for relevant transitions in care in some or all units. Some 47% of CAHs have summary care record functionality compared to 71% of PPS hospitals. Thirty-seven hospitals will begin or are planning to implement this functionality in the next year with 18 hospitals, including 15 CAHs, considering implementation.

Half of hospitals electronically exchange clinical care records with ambulatory providers inside their system and 46% with hospitals inside their system. Electronic exchange of the clinical care record by hospitals does not happen as frequently with ambulatory providers (24%) and hospitals (17%) outside their systems. Nine percent of hospitals electronically exchange with nursing homes and with home health providers. Only 7% electronically exchange the clinical care record with the state public health agencies.

Section 3: Strategies to Support Statewide Services and Address Gaps

The information in this section describes Minnesota's approach to ensure options are available for all Minnesota providers and hospitals to achieve meaningful use and achieve Minnesota's goal for robust interoperability by 2015. Minnesota has been consistent in its approach to ensure that interoperability occurs statewide, and has been mindful of the fact that there will be various gaps and barriers that must be overcome to ensure that HIE services are available to all Minnesota health and health care stakeholders statewide.

Prior to submission of Minnesota's Strategic and Operational Plans for Health Information Exchange in July 2010, Minnesota had taken preliminary steps to address anticipated gaps through our health information exchange oversight law. The criteria for certification of Health Information Exchange Service Providers contains provisions that assist Minnesota in ensuring that options for exchange are available statewide and that particularly challenged stakeholders do not get left behind. Specifically, the law requires state certified HIOs to develop and maintain a business plan that provide an explanation of methods employed to address the needs of community clinics, critical access hospitals, and free clinics in accessing HIE services. Additionally, the HIO's must annually submit a rate plan to the commissioner for review and approval that outlines fee structures. Prior to approval, the commissioner must determine that the rate plan distributes costs equitably among users of HIE services and provides predictable costs for participating entities.

Since the submission of Minnesota's Strategic and Operational Plans for Health Information Exchange, Minnesota has continued to work with stakeholders to actively monitor developments in the marketplace, and to refine plans accordingly. Several significant developments in the health information exchange landscape have provided additional clarity on what technical infrastructure will be available through the private sector, and have helped Minnesota pinpoint the areas where resources should be focused in order to address gaps in the technical infrastructure. These developments are highlighted in Section 1 of this document that discusses the health information exchange landscape in Minnesota.

During the fall of 2010, through the Minnesota e-Health Initiative workgroups on Health Information Exchange, and Standards and Interoperability, a conceptual view for shared services was developed, and endorsed by the full Advisory Committee on December 15, 2010 (See Figure 22 below). This conceptual view specified that public funds should be focused on statewide shared services, including: shared directories, interoperability services, consumer services and gap services; with the majority of the technical infrastructure to facilitate the movement of clinical meaningful use transactions conducted through health information organizations, health data intermediaries, and direct exchange developed and supported through private sector investments.

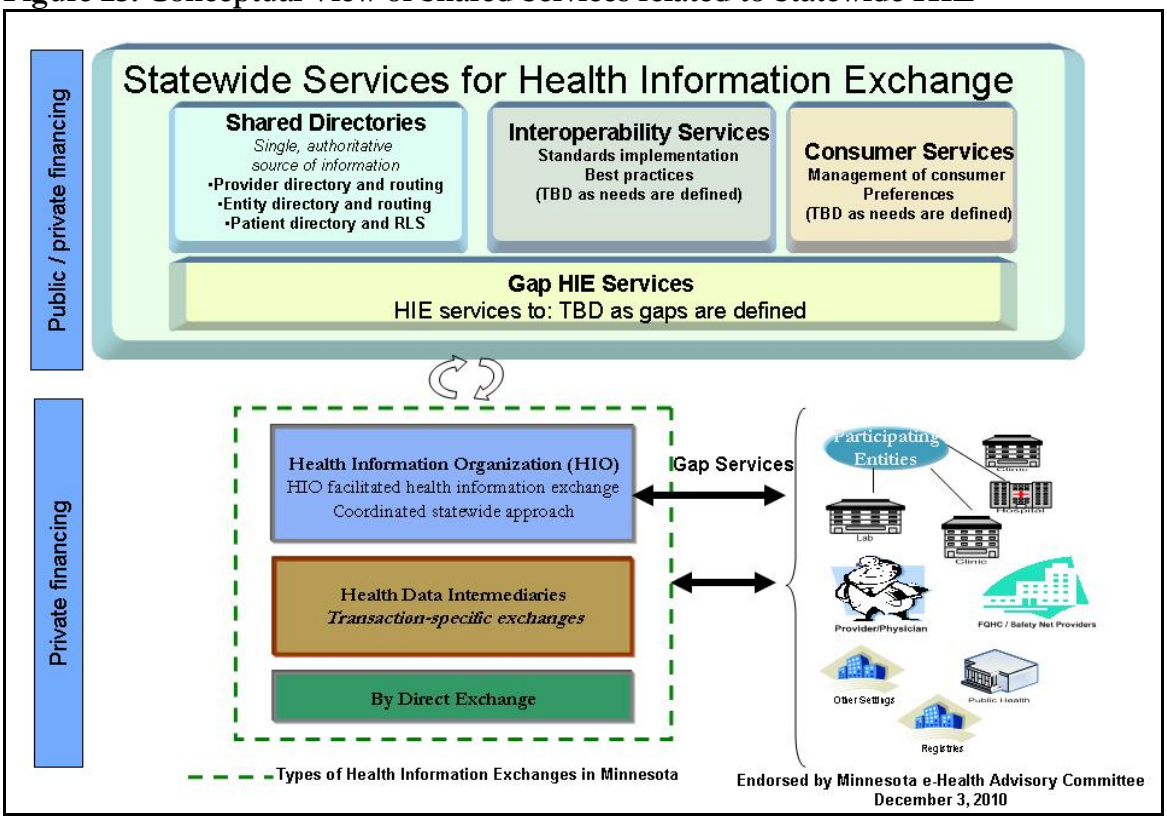
The Minnesota e-Health Initiative has identified the need for certain health information exchange services to be provided and/or accessible statewide utilizing public and private financing. Although additional statewide services may be identified over time, the initial statewide shared services for health information exchange include:

- Shared directories – to provide a virtual, authoritative source of information for entities, providers, and interoperability of record locator services
- Interoperability services – to provide technical assistance in supporting best practices regarding standards implementation and interoperability

- Consumer services – to provide a mechanism to manage consumer preferences
- Gap health information exchange services – to support provider connectivity to statewide Health Information Exchange Service Providers

Figure 23 below depicts a conceptual view of shared services related to statewide health information exchange.

Figure 23: Conceptual View of Shared Services related to Statewide HIE



Use of Funds to Support Gaps

Taking into consideration the evolution of the marketplace in Minnesota and nationally, and consistent with the conceptual view for shared services adopted by the Minnesota e-Health Advisory Committee, Minnesota has revised its approach for the use of funding provided through the State Health Information Exchange Cooperative Agreement. The revised approach is designed to address immediate needs to enable Minnesota providers to be successful in meeting stage 1 meaningful use requirements for health information exchange, and to lay the groundwork for the statewide shared services necessary to meet future meaningful use requirements and achieve Minnesota's goal for robust interoperability by 2015. The plan is focused on addressing needs in three areas:

1. Addressing gaps and long-term needs for technical infrastructure
2. Addressing gaps in connectivity and links to essential data sources
3. Addressing gaps in information and specialized technical assistance

The plan is designed to be implemented in three phases, which are outlined in figure 35 (page 49) The revised approach takes into consideration that the marketplace will continue to evolve as implementation occurs. An outline of anticipated implementation activities that we expect to occur

in Phases II and III is included in the summary table, however flexibility will be built in to allow for necessary adjustments to changes in the HIE landscape both in Minnesota and nationally. The following is a detailed view of Minnesota's plans for implementation of Phase I to enable Minnesota providers to be successful in meeting stage 1 meaningful use requirements for health information exchange, and to lay essential groundwork for the statewide shared services and connectivity necessary to support robust interoperability long-term.

Implementation of Phase I: Meeting Immediate Needs & Laying Groundwork for Statewide Shared Services to Support Robust Interoperability

Phase I: Addressing Gaps in Technical Infrastructure to Enable Meaningful Use

Technical Infrastructure Strategy 1 - Integration of Entity Level & Individual Level Provider Directories

A. Support a process to develop agreements and mechanisms for state certified HIOs to share entity level directory information, and programs to make this information accessible to all Minnesota providers to help facilitate exchange to known entities (push transactions).
B. Support a multi-stakeholder process to develop governance, policies related to content and quality, specifications and technical infrastructure for statewide mechanisms to allow access to authoritative statewide directory services (ELPD, ILPD) to achieve long term goals for robust HIE and interoperability. This effort includes the evaluation of existing data sources that could be used in expanding the directories to include all providers covered by the 2015 mandate.
C. Support the implementation of policies, and development of mechanism(s) to synchronize content contained in existing state certified HIO directories, conduct testing, and pilot implementation.

Minnesota has been actively monitoring and participating in discussions at the national level with regard to both entity level provider directories (ELPD), as well as individual level provider directories (ILPD), with Minnesota's State Government HIT Coordinator James Golden serving as a member of the Health Information Technology Policy Committee Information Exchange Workgroup – Provider Directory Task Force. While it appears that there is momentum for the development of national directories, the timeline for their development remains unclear, and as such, Minnesota stakeholders have identified the need for entity level and individual level provider directories to be made available to providers and hospitals statewide, at least on a short-term or interim basis until a national solution is made available.

Phase I, Strategy 1A provides modest funding to support the integration and/or harmonization of existing directories in Minnesota to ensure that statewide access to accurate, complete information necessary for facilitating push transactions is available to Minnesota providers, hospitals and HISPs employing NWHIN Direct protocols to meet Stage 1 meaningful use requirements. Minnesota's oversight law provides a clear directive for state certified HIE service providers to be interoperable, but is not specific as to how this should occur. Phase I, Strategy 1A, will support the first steps toward interoperability by supporting the integration of existing entity and individual level provider directories, and establishing programs to offer open access to ELPD/ILPD services as soon as

possible to enable Minnesota's providers and hospitals to meet Stage 1 meaningful use requirements.

Phase I, Strategy 1B, provides additional funding to support the convening of Minnesota's providers, hospitals, HIE service providers and state government to evaluate and reach consensus on the approach to establish statewide shared services building upon the existing technical infrastructure for directories, and the governance and policies for content and quality, specifications and technical infrastructure for a statewide mechanism that allows authoritative statewide entity and individual level provider directories that will achieve Minnesota's long term goals for robust health information exchange and interoperability.

Figure 24 below describes the current and future state to be achieved by this strategy.

Figure 24: Integration of Entity Level & Individual Level Provider Directories – Current/Future State

Current State	Gaps to be Addressed in Phase I:	Future State – Following Phase I:
▪ Minnesota's two state-certified HIOs each have disparate ELPD/ILPD databases, with disparate approaches to content, quality, specifications, and technical infrastructure. ▪ Neither database contains complete information on all entities, or all providers statewide. ▪ Agreements do not exist for sharing directory information between state-certified HIOs. ▪ Access to both state-certified HIOs is available only to their participating entities and directory services are bundled with other HIO services.		▪ Minnesota's state-certified HIE service providers will establish the technical interfaces of existing entity and individual level provider directories, and establish programs to **offer open access** to ELPD/ILPD services to providers, hospitals statewide, as well as to HISPS. ▪ Directory **services may be accessed as a stand alone service and are not contingent on participation in robust exchange services** offered by the HIO. ▪ Minnesota's providers, hospitals, HIE service providers, and state government have reached consensus on policies and governance for directory content, quality, specifications, and technical infrastructure necessary for interoperability statewide. ▪ Minnesota's Certified HIE Service providers, consistent with the consensus view, have developed technical infrastructure/interfaces to implement consensus view, and begin testing by the end of Phase I.

<u>Technical Infrastructure Strategy 2</u> - Establish Statewide Mechanism to Manage Consumer Preferences

A. Support the development of policies and initial mechanisms for sharing opt-out information between certified health information exchange service providers.
B. Establish mechanism to make UM HIE tools for interstate exchange available to Minnesota providers and hospitals to facilitate exchange with upper Midwest states.
C. Support implementation of policies to facilitate exchange with upper Midwest states.

Minnesota has long recognized that protecting a patient's health record information from unauthorized disclosure and providing patients with mechanisms to control how health record information is disclosed are important for all Minnesotans. Patient control of their health information is a critical component for establishing trust in the development of electronic health information exchange in our state. The importance of these issues is reflected in the protections established in the Minnesota Health Records Act, and described more specifically in Section 4 of this document. While Minnesota's law specifically indicates that individuals have the ability to opt-out of record locator services, it is silent as to how this information should be shared between Health Information Exchange Service Providers. Strategy 2A provides support for the development of policies and initial mechanisms to begin sharing opt-out information between certified Health Information Exchange Service Providers, which is an incremental step to advance the effective management of consumer preferences and an important aspect to ensure an on-going environment of trust in Minnesota.

Minnesota also recognizes that many Minnesotans access health care beyond our borders, most frequently in our immediate border states with different laws governing the sharing of protected health information. Minnesota is an active participant in the Upper Midwest Health Information Exchange Collaborative that is working to identify mechanisms to overcome barriers to interstate health information exchange, and work toward consensus on how to move forward with policy alignment. The timeline for the project indicates that work products from this project will be available in 2011. Strategy 2B provides resources to ensure that all resources and tools developed by the UM HIE consortium be made available to Minnesota providers and hospitals, and that policies of HIE service providers are aligned to support the interstate exchange mechanisms supported by the consortium. Strategy 2C provides resources to support the implementation of policies to facilitate exchange with the upper Midwest states and will be based off of the Upper Midwest Health Information Exchange Collaborative work.

Figure 25 below describes the current and future state to be achieved by this strategy.

Figure 25: Establish Statewide Mechanism to Manage Consumer Preferences – Current/Future State

	Gaps to be Addressed in Phase I:	Future State – Following Phase I:
▪ Both of Minnesota's state-certified HIO's have demonstrated compliance with the Minnesota Health Records Act in documenting and responding to consumer's preferences to opt-out of statewide record locator services. ▪ Currently, there is no requirement or process in place for the sharing of opt-out information between HIE service providers, requiring consumers to opt-out of each record locator service individually. ▪ Currently, health information exchange service providers have limited mechanisms available to assist their participating entities in understanding and meeting consent requirements for health information exchange with providers/hospitals in other states.	▪ Gaps in sharing of opt-out information between HIE service providers ▪ Addressing barriers to interstate exchange	▪ At the end of Phase I, agreements and technical interfaces necessary for sharing patient opt-out information between health information exchange service providers will be implemented. ▪ At the end of Phase I, Minnesota will have established a mechanism to make available all resources developed through the Upper Midwest HIE Collaborative available to Minnesota providers and hospitals, including the alignment of policies necessary to support the implementation of UM HIE resources and tools developed to enable interstate exchange. ▪ Policies will be in place to facilitate interstate exchange.

<u>Technical Infrastructure Strategy 3</u> – Interoperability of Certified HIO Record Locator Services

A. Support the development of reciprocal agreements and mechanisms to enable state certified HIOs to query and receive RLS information from other state certified HIOs.
B. Support a multi-stakeholder process to develop policies, specifications and technical infrastructure for statewide mechanism to allow access to authoritative statewide directory services (MPI) to achieve long term goals for robust HIE and interoperability.

Recognizing that ONC has placed a strong emphasis on the need for states to focus on enabling health information exchange for Stage 1 of meaningful use, the significant progress already made in Minnesota to enable providers and hospitals to conduct both push and pull transactions and the state mandate for interoperability by 2015, justifies the use of resources to continue advancing the interoperability of record locator services already established in Minnesota. Minnesota's oversight law provides a clear directive for state certified HIE service providers to be interoperable, but is not specific as to how this should occur. Phase I, Strategy 3A, will support the development of reciprocal agreements required under the law, and enable state certified HIOs to augment their existing technical infrastructures to query and receive record locator service information from other state certified HIOs.

Phase I, Technical Infrastructure Strategy 3B, provides additional funding to support the convening of Minnesota's providers, hospitals, HIE service providers and state government to evaluate and reach consensus on the approach to establish statewide shared services building upon the existing technical infrastructure for master patient indices and record locator services, and the governance and policies for content and quality, specifications and technical infrastructure for a statewide mechanism that allows access to authoritative master patient indices and record locator services that will achieve Minnesota's long term goals for robust health information exchange and interoperability.

Figure 26 below describes the current and future state to be achieved by this strategy.

Figure 26: Interoperability of Certified HIO Record Locator Services – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Both of Minnesota's state-certified HIOs have record locator services that have been demonstrated to be compliant with both federal and state laws. ▪ Minnesota's two state-certified HIOs each have disparate master patient indices, with disparate approaches to content, quality, specifications, and technical infrastructure. ▪ Neither database contains complete information on all individuals statewide. ▪ Agreements do not exist for sharing MPI information between state-certified HIOs. ▪ Access to state-certified HIOs record locator services is available only to their participating entities and returns information only from those participating entities and/or data sources to which the HIO has an established connection, resulting in the return of incomplete information.	▪ Gaps in accessibility statewide ▪ Gaps/inconsistencies in content of MPI/RLS ▪ Lack of technical infrastructure/interfaces for HIE-HIE interoperability ▪ Gaps in quality of information returned from statewide record locator services ▪ Gaps in standards/policies	▪ Minnesota's state-certified HIE service providers will establish the technical interfaces, and reciprocal agreements consistent with Minnesota law, that enable the record locator service of one HIO to query and return record locator information from the other HIO. ▪ Minnesota's HIOs, participating entities, and state government will have reached consensus on policies and governance for content, quality, specifications, and technical infrastructure necessary for interoperability statewide. ▪ Minnesota's Certified HIE Service providers will have developed technical infrastructure/interfaces to implement, and begin testing by the end of Phase I.

Phase I: Addressing Gaps in Connectivity to Enable Meaningful Use

Connectivity Strategy 1 – Expansion of Directory Content to Include Essential Data Sources

A. Expand the content of existing state certified HIO entity-level provider directories (ELPDs) to include directory information for essential/priority data sources (e.g. state public health databases, laboratories) to enable push transactions.

Minnesota recognizes that in addition to ensuring the technical infrastructure is in place to provide entity and individual provider level directory services, concentrated efforts will be necessary to ensure that directory content is expanded to include routing information for priority participants and/or data sources. Phase I, Connectivity Strategy 1A focuses on targeted efforts to gather the content necessary to ensure that directory information essential to enable Minnesota providers and hospitals to meet Stage 1 meaningful use requirements is readily available statewide. In implementing this strategy in 2011, efforts will be focused initially on Minnesota's laboratories and state public health databases, and be expanded over time to include other priority groups identified by ONC and the Minnesota e-Health Advisory Committee. Entities eligible to receive funding for these activities may propose a variety of approaches to the collection of this information, however the content collected must be consistent with technical infrastructure activities discussed above.

Figure 27 below describes the current and future state to be achieved by this strategy.

Figure 27: Expansion of Directory Content to Include Essential Data Sources – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Minnesota's two state-certified HIOs each have disparate ELPD/ILPD databases, with disparate approaches to content, quality, specifications, and technical infrastructure. ▪ Neither database contains complete information on all entities, or all providers statewide, including laboratories.	▪ Gaps in directory content/routing information for laboratories ▪ Gaps in directory content/routing information for state public health registries/databases ▪ Gaps in mechanisms for priority participants and/or data sources to receive electronic information from Minnesota providers and hospitals.	▪ By the end of Phase I, harmonized ELP & ILP directories will include routing information necessary for Minnesota providers and hospitals to accurately and consistently route information to laboratories and state public health registries/databases. ▪ Consistent with TI Strategies, directories containing this information will be made available on a statewide basis. ▪ Portal services will be made available to priority participants and/or data sources that do not have the capacity for receiving electronic information from Minnesota providers and hospitals.

Connectivity Strategy 2 - Establishing Connectivity for Robust Exchange

A. Support State Certified HIOs in connecting to essential data sources through performance based incentives (state public health databases, laboratories).
B. Support State Certified HIOs in achieving connectivity of eligible providers and hospitals through performance-based on-boarding incentive program to reach critical mass necessary for financial sustainability.

Minnesota has two State-Certified Health Information Organizations that represent significant private investments to establish technical infrastructure to facilitate robust health information exchange. Consistent with guidance contained in the funding opportunity announcement for the State HIE Cooperative Agreement Program, Minnesota's approach for health information exchange relies heavily on leveraging and expanding on this existing infrastructure for health information exchange. Through the certification process and close examination of the business plans and financial documents provided by Minnesota's HIOs, it is clear that the viability of these organizations rests heavily on their ability to recruit and retain a critical mass of participating entities during 2011.

Phase I, Connectivity Strategies 2A and 2B, provide resources to support Minnesota's state certified HIOs in connecting to priority data sources, and securing participating entities sufficient to achieve the critical mass necessary for financial sustainability. These strategies will provide performance-based incentives for on-boarding Minnesota providers, hospitals and establishing connections with essential data sources. Entities eligible for funding are free to propose a variety of approaches to recruit participating entities, which could include covering connectivity costs or offering reduced or subsidized rates, rebates, or other creative strategies. Incentives will be based upon performance and will vary based on criteria such as the type and duration of contracts secured with participating entities. Examples incentives include a range of options such as subscriptions/contracts for simple directory access enabling push transactions or options that cover the full range of clinical transactions offered by the HIO.

Figure 28 below describes the current and future state to be achieved by this strategy.

Figure 28: Establishing Connectivity for Robust Exchange – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Minnesota's state certified health information organizations represent significant investments by Minnesota stakeholders. ▪ Minnesota's approach for health information exchange rests heavily on the ability to build off of the technical infrastructure developed as a result of these investments by Minnesota stakeholders. ▪ The financial viability of Minnesota's state certified HIOs rests heavily on their ability to secure a critical mass of participating entities during 2011.	▪ Gaps in connections of Minnesota providers & hospitals to the statewide health information network. ▪ Gaps in the financial viability of Minnesota's health information organizations.	▪ Minnesota's state certified HIOs will have achieved a critical mass of participating entities necessary to ensure financial viability. ▪ Minnesota's providers and hospitals will benefit from the connection of essential data sources for health information exchange. ▪ A significant number of Minnesota providers will have achieved significant strides in their efforts to prepare for Stages 2-3 meaningful use and will have made significant movement toward compliance with the 2015 mandate for interoperability.

Connectivity Strategy 3 - Connecting Providers in Need: Community Connectivity Grants

A. A connectivity grant program will be established to address the needs of rural and underserved independent pharmacies to assist Minnesota pharmacies in compliance with the 2011 mandate and accepting electronic prescriptions and refill requests. The grants will be administered through the Minnesota Department of Health's Office of Rural Health and Primary Care and prioritized based on need and availability of grant funding.

B. A connectivity grant program will be established to address the needs of independent laboratories based on assessment findings noted in Phase I, Information Strategy 1A.

Minnesota recognizes that there are certain provider groups and situations where the performance-based on-boarding approach is less likely to be effective in incentivizing certain groups to sign on for health information exchange services. In these situations, we believe that providing incentives directly to the entity would likely be more effective. For example, independent community pharmacies are much more likely to go through their software vendor and Surescripts to enable the receipt of electronic prescriptions rather than going through a state-certified HIO. Phase I, Connectivity Strategy 3A and 3B establish connectivity grant programs to assist Minnesota's independent, rural pharmacies and laboratories in identifying exchange solutions that best meets their needs, and establishing the necessary connections for health information exchange. Specific eligibility criteria for pharmacies will be established early in 2011, and targeted toward those with the most significant financial need; eligibility criteria for independent laboratories will be determined based on survey data collected under Phase I, Information Strategy 1A. Figure 29 below describes the current and future state to be achieved by this strategy.

Figure 29: Connecting Providers in Need – Current/Future State

	Gaps to be Addressed in Phase I	**Future State – Following Phase I**
▪ Minnesota has approximately 359 pharmacies that are currently not receiving electronic prescriptions, and are not yet in compliance with Minnesota's mandate for e-prescribing that became effective on January 1, 2011. ▪ Most, if not all, Minnesota pharmacies have an electronic system that is capable of receiving an electronic prescription, or could be upgraded to enable electronic prescribing. ▪ The majority of pharmacies that are not currently receiving electronic prescriptions are independent pharmacies. ▪ Information gathered from stakeholders at Minnesota's e-Prescribing Workgroup indicate that two types of costs are a barrier to pharmacies implementing e-prescribing, including: - Costs for upgrading pharmacy systems to meet national standards. - Per-Transaction costs associated with receiving prescriptions. ▪ MDH reports that only 10% of reportable lab results are reported to MDH electronically. Other than the information from MDH, little concrete data exists on the barriers to health information exchange by Minnesota laboratories.	▪ Gaps in electronic prescribing due to financial barriers ▪ Gaps in laboratory connectivity due to financial barriers ▪ Geographic gaps, or "white space" – areas where there are no pharmacies or labs that can receive/transmit electronic information necessary for patient care.	▪ Grant programs will be implemented for pharmacies and labs, with funding targeted based on data secured through MDH surveys and the analysis of Surescripts data provided by ONC and pharmacy information from the Minnesota Board of Pharmacy. ▪ Funding will also be geographically targeted to "white spaces" to ensure statewide availability of pharmacies with the ability to receive electronic prescriptions, and laboratories with the ability to electronically receive orders and deliver results to Minnesota providers, hospitals and public health.

Phase I: Addressing Gaps in Information to Enable Meaningful Use

Information Strategy 1 - Understanding Connectivity Gaps: Minnesota's Plan for Assessment & Evaluation

A. MDH Initiated Assessment Activities: Laboratories

B. Analysis of Data from Other Sources:
Hospitals, Ambulatory Clinics, Specialty Clinics, Pharmacies, Local Public Health, Long Term and Acute Post Care, Health Information Organization Reporting

The Minnesota Department of Health (MDH) is responsible for assessing and evaluating the level of adoption, use and interoperability of electronic health records (EHRs) and other Health Information Technology (HIT) in a variety of health and health care settings in Minnesota. This vital information is needed to:

- Measure Minnesota's progress on state and national goals to accelerate adoption and effective use of health information technology across the continuum of care;
- Monitor advancement towards meaningful use to help ensure that eligible professionals and hospitals receive federal incentives under the HITECH Act or other federal incentive programs; and
- Identify strategies and leverage resources to address gaps and barriers in adoption, use, and interoperability.

The Assessment and Evaluation Framework & Methodology for Electronic Health Records and Health Information Technology, developed by the Office of Health Information Technology (OHIT), offers a coordinated, systematic approach for assessment and evaluation and assures the findings are used to advance health information exchange. Phase I, Information Strategy 1A and 1B focuses on assessment activities planned for 2011. Consistent with ONC's clear directive for states to focus on the connectivity of laboratories to enable providers and hospitals to meet meaningful use requirements, the Minnesota Department of Health will be conducting a comprehensive survey of Minnesota's labs to identify barriers to interoperability. The information gathered will inform our strategies for engaging the laboratories and achieving connectivity (see Phase I Connectivity Strategies 1A, 3B).

Minnesota has also developed a standard approach that will be used following the analysis of each assessment survey to evaluate Minnesota's progress, identify gaps and barriers to health information exchange, and determine the best course of action to continue to advance HIE in the state, including the evaluation of: policy and purchasing levers; needs related to workforce and specialized technical assistance; dissemination of best practices; outreach to providers, hospitals, and consumers.

Figure 30 below describes the current and future state to be achieved by this strategy.

Figure 30: Understanding Connectivity Gaps: Minnesota's Plan for Assessment and Evaluation – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Minnesota has current assessment data with regard to the adoption and use of electronic health records in both the hospital and ambulatory clinic settings. ▪ Further analysis of existing survey data is necessary to better understand the unique challenges experienced by providers in specialty clinics. ▪ Minnesota has little assessment data with regard to laboratories. ▪ See environmental scan in Section 2 for a full overview of the current data available on health information exchange capacity and connectivity by Minnesota providers.	▪ Gaps in data regarding laboratory capacity for exchange ▪ Gaps in data regarding financial and other barriers to exchange experienced by Minnesota laboratories. ▪ Gaps in data analysis and barrier identification for specialty clinics. ▪ Gaps in analysis of e-prescribing data and barriers to e-prescribing. ▪ Gaps in understanding of geographic distribution of pharmacies with the capacity to receive electronic prescriptions.	▪ A complete assessment of laboratories in Minnesota will be conducted, and used to inform the development of the connectivity grant program outlined in CON Phase I, Strategy 3. ▪ Assessment data will be evaluated by stakeholder groups as outlined in Appendix B, resulting in a formal set of recommendations to the Commissioner of Health on: - Policy and purchasing levers - Workforce needs - Specialized technical assistance needs - Dissemination of best practices, - Outreach to target audiences

Information Strategy 2 - Outreach & Education to Eligible Hospitals & Providers

A. Engage marketing firm/consultant to assist in message development and development of materials to inform Minnesota's providers and hospitals on:
   - HIE options available: Stage 1 MU
   - Education on value of HIE
   - Options for meeting 2015 mandate for interoperable EHRs
   - Resources available for interstate exchange

B. Implement outreach and education through provider/hospital associations:
   - Presentations

Information from Minnesota providers and hospitals, along with feedback from REACH field staff, point to significant information gaps that exist in the understanding of health information exchange options for meeting Stage 1 meaningful use criteria, and in understanding Minnesota's 2015 mandate for interoperability. Additionally, assessment data gathered through the hospital and ambulatory clinic surveys point to competing priorities as a barrier to health information exchange. INF Strategies 2A and 2B provide resources to engage a marketing firm/consultant to assist the Office of Health Information Technology in developing messaging, strategies, and outreach and communications materials targeted to address the needs of Minnesota providers and hospitals. Providing information on the options available to eligible providers and hospitals in order to meet Stage 1 meaningful use requirements will be the primary focus of the materials in 2011. Information will also be provided on the return and value on investment of HIE, as well as options for meeting the requirements of Minnesota's 2015 mandate, which specifies that, *"The electronic health record system must be connected to a state-certified health information organization either directly or through a connection facilitated by a state-certified health data intermediary as defined in section 62J.498."* Figure 31 below describes the current and future state to be achieved by this strategy.

Figure 31: Outreach & Education to Eligible Hospitals & Providers – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Health information exchange is one among many priorities competing for providers' attention. ▪ Data from assessment surveys point to the fact that providers in Minnesota remain unsure of what their options are to meet the exchange criteria for Stage 1 meaningful use. ▪ Information gathered from REACH field staff indicate that education on health information exchange options, including the use of NWHIN Direct, is in high demand. ▪ While Minnesota has a mandate for interoperable electronic health records, further clarification is necessary to assist Minnesota providers in understanding their options for complying with the law.	▪ Gaps in understanding of Stage 1 meaningful use requirements for health information exchange, ▪ Gaps in understanding of NWHIN Direct ▪ Gaps in understanding of Minnesota's mandate for interoperable EHRs by 2015. ▪ Gaps in resources available to educate Minnesota providers on the topics outlined above.	▪ Minnesota providers will have a clear understanding of what options are available to them to achieve Stage 1 meaningful use. ▪ Minnesota providers will have a clear understanding of NWHIN Direct, and statewide shared directory services available to them to meet Stage 1 meaningful use criteria. ▪ Minnesota providers will be provided with resources that identify health information service providers, and other entities capable of testing for meaningful use. ▪ Minnesota providers will have a clear understanding of what is required for compliance with the 2015 mandate for interoperable EHRs, and access to resources that outline options for connecting to the statewide HIE network.

<u>Information Strategy 3</u> - Specialized Technical Assistance to Improve Interoperability

A. Partner with REACH to offer specialized technical assistance on challenges identified in assessment data & feedback from REACH field staff. 2011 topics will include:
   - HIE options available: Stage 1 MU
   - Implementing CPOE effectively
   - Effective use of care summaries and standards for exchange
   - HIPAA privacy/security and HIE
   - Accessing statewide shared services

The ongoing assessment and analysis of data as described in INF Strategy 1A, has pointed to several areas where specialized technical assistance is warranted in Phase I. As these surveys are conducted and analyzed over the course of the project, we believe they will continue to point to areas where focused, in-depth training/education will greatly improve our progress toward our goals for interoperability. For 2011, in addition to providing in-depth technical assistance to providers and hospitals to understand their options available for meaningful use in Stage 1 (including statewide services available), a strong need for technical assistance in the areas of privacy and security laws and the Minnesota Health Records Act, and the effective use of CPOE and care summaries have also been identified. INF Strategy 3A provides resources to support collaboration between MDH, DHS, and REACH in the provision of boot-camps and technical assistance webinars to Minnesota stakeholders on the topics identified for Phase I. REACH will be providing some HIE assistance and support to providers as part of its HIT Regional Extension Center services, but for specialized assistance and support that falls outside of the HIT REC scope of work, MDH will contract with them for additional technical assistance support.

Figure 32 below describes the current and future state to be achieved by this strategy.

Figure 32: Specialized Technical Assistance to Improve Interoperability – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Assessment data points to a need for specialized technical assistance on HIE Options Available: Stage 1 MU, Implementing CPOE Effectively, Effective use of Care Summaries & Standards for Exchange, HIPAA Privacy & Security & HIE, and Accessing Statewide Shared Services ▪ REACH Field staff have validated that these topics are consistent with what they are hearing from Minnesota providers and hospitals as they work to achieve Stage 1 meaningful use.	▪ Gaps in understanding implementation options for HIE in Stage 1 ▪ Gaps in effective use of CPOE, and integration of CPOE into provider workflow ▪ Gaps in effective use of care summaries ▪ Gaps in understanding related to standards required for exchange ▪ Gaps in understanding of privacy and security laws that impact health information exchange	▪ MDH, DHS, and REACH will have developed a program to provide technical assistance to meet the needs of Minnesota providers and hospitals identified in assessment data and by those in the field. ▪ MDH, DHS, and REACH will have worked together to provide bootcamps on 2011 topics identified. ▪ MDH, DHS, and REACH will have reviewed new assessment data and revised the specialized technical assistance plan for Phase II.

Information Strategy 4 - Outreach & Education for Minnesota Consumers

A. Engage a marketing firm/consultant to assist in message development and development of materials to inform Minnesotans on:
   - Benefits of HIE
   - How patient information is protected: state and federal law
   - How to make preferences known
   - Options available to voice concerns

B. Provide outreach via community organizations through presentations and articles.

Outreach and education is needed by Minnesota consumers to help them understand what HIE is, how their patient information is protected by federal and state laws, what their options are for making their preferences known, and the options available to them to participate in public hearings and if necessary to register a complaint. INF Phase I, Strategies 4A and 4B provide the resources for the development of messages and materials in multiple languages to meet the needs of Minnesotans. Figure 33 below describes the current and future state to be achieved by this strategy.

Figure 33: Outreach & Education for Minnesota Consumers – Current/Future State

	Gaps to be Addressed in Phase I	Future State – Following Phase I
▪ Few resources are available to Minnesota consumers to understand the benefits of health information exchange. ▪ Many consumers are unaware of their rights as it relates to consent and the ability to opt out of record locator services. ▪ Minnesota's role in the regulation of Health Information Exchange Service Providers is largely unknown to the public, as is the mechanisms available to them to register a complaint.	▪ Gaps in consumer resources (multi-lingual) ▪ Gaps in understanding of consent & opt-out rights	▪ Resources are developed and made broadly available through the OHIT website. ▪ Resources have been disseminated to associations and other organizations representing various consumer groups.

Summary of Strategies to Ensure Stage 1 Meaningful Use in 2011

The plan above describes in detail the key activities for Phase I in 2011. Below is a summary table (Figure 34) that describes current gaps based on Minnesota's assessment and gap analysis, future assessment activities for ongoing planning, and how the key strategies align with the three HIE-related meaningful use areas: e-prescribing, laboratory results, and clinical summary document.

Figure 34: Gaps, Assessment Activities, and Strategies to Ensure Meaningful Use in 2011

Strategies to Ensure Stage 1 Meaningful Use Attainment in 2011			
	E-Prescribing	**Laboratory Result Reporting**	**Clinical Summary Document**
Current Gaps	▪ Connecting rural, independent pharmacies ▪ Provider training needs around CPOE and e-prescribing ▪ Provider understanding on how to achieve the Minnesota 2011 mandate for e-prescribing ▪ Provider understanding on how to utilize Minnesota state-certified Health Information Exchange Service Providers and their offerings	▪ Lab connectivity including use of standards and achieving interoperability ▪ Supporting providers wanting to conduct direct exchange ▪ Provider understanding of how to achieve the Minnesota 2015 mandate for interoperable EHRs ▪ Provider understanding on how to utilize Minnesota state-certified Health Information Exchange Service Providers and their offerings	▪ Identifying providers who are having difficulty achieving stage 1 meaningful use (testing)
Future Assessment Activities	Future assessment activities: ▪ Identify rural, independent pharmacies through cross-check of Surescripts and Board of Pharmacy data ▪ Analysis of monthly Surescripts data to monitor trends ▪ Annual Ambulatory Clinic and Hospital surveys ▪ Reports from REACH (Minnesota's Regional Extension Center) field staff	Future assessment activities: ▪ Lab survey conducted in 2011 will inform strategies for lab community connectivity grant program ▪ Quarterly reports from HIOs ▪ Annual Ambulatory Clinic and Hospital surveys ▪ Reports from REACH staff	Future assessment activities: ▪ Quarterly reports from HIOs ▪ Annual Ambulatory Clinic and Hospital surveys ▪ Reports from REACH staff
Technical infrastructure strategies		▪ Integration and expansion of entity level, provider, and service directories to include essential data fields on labs (e.g., routing information) ▪ Integration of certified HIO record locator services ▪ Establish statewide mechanism to manage consumer preferences	▪ Integration of entity level, provider, and service directories ▪ Integration of certified HIO record locator services ▪ Establish statewide mechanism to manage consumer preferences
Connectivity Strategies	▪ State-Certified HIO Connectivity to Surescripts as required by state law (requiring HDIs to connect to at least one HIO) ▪ Expansion of directory content to include essential data sources (pharmacies) ▪ Provide community connectivity grants to support rural, independent pharmacies in establishing HIE connectivity	▪ Populate directory content to include labs ▪ Provide incentives for connecting laboratories to statewide HIE solutions in order to support robust exchange	▪ Provide incentives for connecting providers to statewide HIE solutions in order to support robust exchange

<table>
<tr><th colspan="4">Strategies to Ensure Stage 1 Meaningful Use Attainment in 2011</th></tr>
<tr><th></th><th>E-Prescribing</th><th>Laboratory Result Reporting</th><th>Clinical Summary Document</th></tr>
<tr><td rowspan="2">Information Strategies</td><td>▪ Work with Board of Pharmacy and professional associations to promote grant program to support rural, independent pharmacies
▪</td><td>▪ Work with lab regulatory agency and associations to promote resources and programs (e.g., grant program)</td><td></td></tr>
<tr><td colspan="3">▪ Fully coordinate HIE activity with the work of REACH (Minnesota's Regional Extension Center) to support providers in exchange activities (materials development, boot camp training, and best practices dissemination)
▪ Inform/educate providers on HIE options, including direct exchange and participation in state certified Health Information Exchange Service Providers
▪ Inform/educate on options to providers on Minnesota mandates and the benefits toward greater interoperability</td></tr>
<tr><td>Policy Strategies</td><td colspan="3">Current Policies:
▪ 2011 Minnesota mandate for e-prescribing: requires providers and pharmacies to have an electronic prescription program
▪ 2015 Interoperable EHR mandate: requires requiring providers, including pharmacies, to be connected to a state-certified Health Information Organization or Health Data Intermediary
▪ Minnesota oversight law of Health Information Exchange Service Providers

Future Policies:
▪ Explore enforcement mechanism for Minnesota mandates
▪ Consensus policies on standards and interoperability
▪ Coordinated approach to quality and other reporting</td></tr>
</table>

Summary of Minnesota's Phased Approach to Ensure Meaningful Use for All Minnesota Providers – 2011 and Beyond

Figure 35 below summarizes Minnesota's phased approach for all three phases to align with meaningful use requirements as Minnesota's the long-term goal of robust interoperability by 2015. The strategies in the table below are described for technical infrastructure, connectivity, and information gaps.

Figure 35: Summary of Minnesota's Phased Approach to Ensure Options are Available for All Minnesota Providers & Hospitals to Achieve Meaningful Use and Achieve Minnesota's Goal for Robust Interoperability by 2015

Technical Infrastructure (TI)			
Strategy (S)	**Phase I (Ph I): July 2011 – June 2012**	**Phase II (Ph II): July 2012 – June 2013**	**Phase III (Ph III): July 2013 – February 2014**
S1 - Integration of Entity Level Provider & Service Directories	A. Support process to develop agreements and mechanisms for state certified HIOs to share entity level directory information, and programs to make this information accessible to all Minnesota providers (for a nominal fee) to help facilitate exchange to known entities (push transactions). B. Support multi-stakeholder process to develop governance, policies related to content and quality, specifications and technical infrastructure for statewide mechanism to allow access to authoritative statewide directory services (ELPD, ILPD) to achieve long term goals for robust HIE and interoperability. This includes the evaluation of existing data sources that could be used in expanding the directories to include all providers covered by the 2015 mandate. C. Support implementation of policies, and development of mechanism(s) to synchronize content contained in existing state certified HIO directories, conduct testing, and pilot implementation.	A. Continue support of implementation of policies, and development of mechanism(s) to synchronize content contained in existing state certified HIO directories. Technical infrastructure may be either centralized or virtual, depending on what is most efficient for the state. However, the end result must be an authoritative source of directory information (ELPD, ILPD) accessible to all Minnesota participating entities. B. Support implementation of any relevant national standards for directory services. C. Support connections to enable access to ELPD, ILPD directories of border and high frequency trading states.	A. Support implementation of any relevant national standards for directory services (ELPD, ILPD).
S2 - Establish Statewide Mechanism to Manage Consumer Preferences	A. Support the development of policies and initial mechanisms for sharing opt-out information between certified HIOs. B. Establish mechanism to make UM HIE common consent form available to Minnesota providers and hospitals to facilitate exchange with upper Midwest states. C. Support implementation of policies to facilitate exchange with upper Midwest states.	A. Support development of mechanism to electronically communicate consents and link consents to records contained in the MPI/RLS. B. Support implementation of any relevant national standards for managing consumer preferences. C. Support communications and policy development with other states' HIOs to make consent information contained in Minnesota MPI/RLS accessible to participating entities in other states and enable interstate exchange.	A. Establish mechanism for consumers to view preferences on file with certified HIOs, and log/ modify preferences related to sharing of PHI. B. Support implementation of any relevant national standards for managing consumer preferences.
S3 - Integration of Certified HIO Record Locator Services	A. Support development of reciprocal agreements and mechanisms to enable state certified HIOs to query and receive RLS information from other state certified HIOs. B. Support multi-stakeholder process to develop policies, specifications and technical infrastructure for statewide mechanism to allow access to authoritative statewide directory services (MPI) as needed to achieve long term goals for robust HIE and interoperability.	A. Support implementation of policies, and development of mechanism(s) to synchronize content contained in existing state certified HIO MPI/RLS. Technical infrastructure may be either centralized or virtual, depending on what is most efficient for the state. However, the end result must be an authoritative source of MPI/RLS information. B. Support implementation of any relevant national standards for directory services. C. Support communications and policy development with other states' HIOs to make consent information contained in Minnesota MPI/RLS accessible to participating entities in other states and enable interstate exchange.	A. Support implementation of any relevant national standards for directory services (MPI/RLS). B. Support Minnesota state certified HIOs initiation and participation in pilot projects with other states' HIOs to advance interstate HIE, related to connections to enable access to MPI/RLS directories of border and high frequency trading states.

Connectivity (CON)			
Strategy (S)	**Phase I (Ph I): July 2011 – June 2012**	**Phase II (Ph II): July 2012 – June 2013**	**Phase III (Ph III): July 2013 – February 2014**
S1 - Expansion of Directory Content to Include Essential Data Sources	A. Expand content of existing state certified HIO ELPDs to include directory information for essential/priority data sources (e.g. state public health databases, laboratories) to enable push transactions.	A. Continue expansion of content of existing state certified HIO ELPDs to include directory information for essential/priority data sources to enable push transactions. B. Support the expansion of existing directories to include directory content/ information to include all entities covered by the 2015 mandate for interoperable EHRs, including incorporation of data from existing data sources (see Phase I, Technical Infrastructure Strategy 1B). Routing information will be added as participating entities are on-boarded.	A. Continue expansion of content of existing state certified HIO ELPDs to include directory information for essential/priority data sources to enable push transactions.
S2 - Establishing Connectivity for Robust Exchange	A. Support State Certified HIOs in connecting to essential data sources through performance based incentives (state public health databases, laboratories, PERAC). B. Support State Certified HIOs in achieving connectivity of eligible providers and hospitals through performance-based on-boarding incentive program to reach critical mass necessary for financial sustainability. (Incentives will vary based on the type and duration of contracts secured with participating entities, ranging from subscriptions/contracts for simple directory access enabling push transactions to those that cover the full range of clinical transactions offered by the HIO.)	A. Continuation of performance-based incentives for connections to essential databases. Program requirements may be adjusted as necessary depending on ONC priorities identified and lessons-learned in Phase I. B. Continuation of performance-based on-boarding incentive program to reach critical mass necessary for financial sustainability – all funds not expended in Phase I of the project would roll-forward into Phase II. Program requirements may be adjusted as necessary depending on ONC priorities identified and lessons-learned in Phase I.	A. Continuation of performance-based incentives for connections to essential databases. Program requirements may be adjusted as necessary depending on ONC priorities identified and lessons-learned in Phase I.
S3 - Connecting Providers In Need: Community Connectivity Grants	A. A connectivity grant program will be established to address the needs of rural and underserved independent pharmacies to assist Minnesota pharmacies in compliance with the 2011 mandate and accepting electronic prescriptions and refill requests. The grants will be administered through the Minnesota Department of Health's Office of Rural Health and Primary Care. B. A connectivity grant program will be established to address the needs of independent laboratories based on assessment findings noted in Phase I, INF Strategy 1A.	A. Continuation of connectivity grants will be provided to other financially-challenged entities identified as a priority by ONC and the State, and considered to be essential data sources or entities without access to certified systems that would benefit from portal services, depending on funds available and rolled forward from Phase I.	A. Continuation of connectivity grants will be provided to other financially-challenged entities identified as a priority by ONC and the State, and considered to be essential data sources or entities without access to certified systems that would benefit from portal services, depending on funds available and rolled forward from Phase I.

Information (INF)			
Strategy (S)	**Phase I (Ph I): July 2011 – June 2012**	**Phase II (Ph II): July 2012 – June 2013**	**Phase III (Ph III): July 2013 – February 2014**
S1 - Understanding Connectivity Gaps: Minnesota's Plan for Assessment & Evaluation	B. **MDH Initiated Assessment Activities:** Laboratories C. **Analysis of Data from Other Sources:** Hospitals, Ambulatory Clinics, Specialty Clinics, Pharmacies, Local Public Health, Long Term and Acute Post Care, Health Information Organization Reporting See Minnesota's 2011 Plan for Assessment: Appendix B.	A. **MDH Initiated Assessment Activities:** Laboratories and up to 2 others TBD - Based on ONC and State priorities identified. Possible groups include: Consumer, telemedicine, specialty clinics, dentists, chiropractors, MDH, tribal public health and health care services. B. **Analysis of Data from Other Sources:** Hospitals, Ambulatory Clinics, Specialty Clinics, Pharmacies, Local Public Health, Long Term and Acute Post Care, Health Information Organization Reporting	A. **MDH Initiated Assessment Activities:** Laboratories and up to 2 others TBD - Based on ONC and State priorities identified. Possible groups include: Consumer, telemedicine, specialty clinics, dentists, chiropractors, MDH, tribal public health and health care services. B. **Analysis of Data from Other Sources:** Hospitals, Ambulatory Clinics, Specialty Clinics, Pharmacies, Local Public Health, Long Term and Acute Post Care, Health Information Organization Reporting
S2 - Outreach & Education to Eligible Hospitals & Providers	A. Engage marketing firm/consultant to assist in message development and development of materials to inform Minnesota's providers and hospitals on: - HIE Options Available: Stage 1 MU - Education on Value of HIE - Options for Meeting 2015 Mandate - Resources available for interstate exchange B. Implement outreach and education through provider/hospital associations: - Presentations - Articles	A. Update and continue outreach and education campaign to inform Minnesota's providers and hospitals on: - HIE Options Available: Stage 1-2 MU - Education on Value of HIE - Options for Meeting 2015 Mandate - Resources available for interstate exchange B. Implement outreach and education through provider/hospital associations: - Presentations - Articles	A. Update and continue outreach and education campaign to inform Minnesota's providers and hospitals on: - HIE Options Available: Stage 1-3 MU - Education on Value of HIE - Options for Meeting 2015 Mandate - Resources available for interstate exchange B. Implement outreach and education through provider/hospital associations: - Presentations - Articles
S3 - Specialized Technical Assistance to Improve Interoperability	A. Partner with REACH to offer specialized technical assistance on challenges identified in assessment data & feedback from REACH field staff: - HIE Options Available: Stage 1 MU - Implementing CPOE Effectively - Effective use of Care Summaries & Standards for Exchange - HIPAA Privacy & Security & HIE - Accessing Statewide Shared Services	A. Partner with REACH to offer specialized technical assistance on challenges identified in assessment data & feedback from REACH field staff: - Enabling Interstate HIE: Addressing Privacy & Security - Topics TBD based on new data identified through S1 and information from the field	A. Partner with REACH to offer specialized technical assistance on challenges identified in assessment data & feedback from REACH field staff: – Enabling Interstate HIE: Addressing Privacy & Security – Topics TBD based on new data identified through S1 and information from the field
S4 - Outreach & Education for Minnesota Consumers	A. Engage marketing firm/consultant to assist in message development and development of materials to inform Minnesotans on: - Benefits of HIE - How Patient Information is Protected: State & Federal Law - How to Make Preferences Known - Options Available to Voice Concern B. Outreach through community organizations: - Presentations, articles	A. Update and continue outreach and education campaign to inform Minnesotans on: - Benefits of HIE - How Patient Information is Protected: State & Federal Law - How to Make Preferences Known - Options Available to Voice Concern B. Outreach through community organizations: - Presentations, articles	A. Update and continue outreach and education campaign to inform Minnesotans on: - Benefits of HIE - How Patient Information is Protected: State & Federal Law - How to Make Preferences Known - Options Available to Voice Concern B. Outreach through community organizations: - Presentations, articles - Articles

Section 4: Privacy and Security

Minnesota has long recognized that protecting a patient's health record information from unauthorized disclosure and providing patients with mechanisms to control how health record information is disclosed are important for all Minnesotans. Patient control of their health information is a critical component for establishing trust in the development of electronic health information exchange in our state. The Minnesota Health Records Act (Minn. Stat. §144.291-144.298) was enacted to codify many of the key principles related to privacy of patient health records.

In developing its strategy for electronic health information exchange, both on an intra-state and inter-state basis, Minnesota has examined the core principles of the HHS Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information and related ONC/HHS documents and materials. Minnesota strongly supports the core principles outlined in the HHS Privacy and Security Framework and believes its state laws and policy initiatives firmly adhere to the components of the national approach to addressing privacy and security challenges in implementing electronic health information exchange initiatives.

As an example, in 2010, the Minnesota Legislature enacted the Minnesota Health Information Exchange Oversight Law (Minn. Stat. §62J.498-62J.4982) which established the requirement for any entity operating as a Health Information exchange service provider to apply for and obtain a Certificate of Authority to do business in Minnesota. To become a state-certified HIE service provider, an applicant must demonstrate, as part of the comprehensive application process, that it has established policies and procedures to ensure compliance with all federal and state privacy and security laws. These include, but are not limited to, all HIPAA and HITECH laws and regulations, such as administrative, technical and physical safeguards; minimum necessary policies, breach notification procedures, accounting and auditing processes, and protections of individual choice and rights. In addition, the Minnesota HIE Oversight Law incorporates the requirement for state-certified entities to be accredited by EHNAC under its Health Information Exchange Accreditation Program, further demonstrating its compliance with nationally recognized federal privacy and security requirements. Furthermore, a state-certified HIE service provider must provide a complete set of its policies and procedures establishing that it is in compliance with Minnesota privacy laws, which in many instances, are more protective of patients' data than HIPAA.

The application process for HIE service providers under the Minnesota Oversight Law also establishes an open and transparent process for public and stakeholder review of an applicant's policies and procedures and business practices related to the protection of a patient's health records. Applicants must agree to have all of their specific policies and procedures made available for public review and comment, and must respond to questions regarding its business practices and policies at a public hearing to examine its application for state certification. This coincides with the HHS Privacy and Security Framework Core Principle for Openness and Transparency, as well as the Core Accounting Principle.

The Minnesota Health Records Act (Minn. Stat. §144.293-144.298) provides additional evidence of Minnesota's alignment with the core principles in the HHS Privacy and Security Framework. Minnesota consent requirements, establishing that a provider must obtain a patient's consent before disclosing health record information even for treatment, payment or health care operation purposes,

recognizes the importance of an individual's right to choose how his or her information is disclosed. Additionally, Minnesota law requires an HIE service provider to adhere to the opt-out requirements for including the location of a patient's health information in a record locator service, as well as requiring a patient to authorize a provider to access the record locator service to obtain his or her health records for treatment purposes.

In the development of its health information exchange program, Minnesota remains committed to ensuring a balance of protecting an individual's protected health information, while assuring that such information is available in a secure and authorized way to those who need access to it to provide treatment across the continuum of care. Adherence to the core principles of the HHS Privacy and Security Framework is a continued goal of Minnesota as it works to advance electronic health information exchange in this state.

Section 5: Coordination with Federal Programs

Minnesota e-Health Advisory Committee – Coordination, Leadership, and Guidance
The Minnesota e-Health Advisory Committee is a legislatively-chartered effort whose members are appointed by the Commissioner of Health and a committee that provides a public-private forum for collaboration among Minnesota's organizations involved in health information technology. All HITECH programs funded in Minnesota report quarterly to the Minnesota e-Health Advisory Committee. The e-Health Advisory Committee is coordinated by the MDH Office of Health Information Technology.

MDH Coordination
MDH also provides coordination with federal programs, including those funded under HITECH. MDH plays a coordination role both by participating on committees as well as convening stakeholders through the Minnesota e-Health Initiative. The figure below (Figure 36) describes participation by MDH staff, including Jim Golden, the State Government HIT Coordinator and Office of Health Information Technology (OHIT) staff.

Figure 36: MDH Coordination with Federal Programs

	MDH Staff Participation		
Federal Program	*SGHIT Coord.*	*OHIT staff*	**Progress Update**
Regional Extension Center			
REACH Minnesota Council	X	X	Jim Golden, State Government HIT Coordinator, participates in Minnesota's Regional Extension Center's (REACH) Minnesota Council on a monthly basis. The purpose of the REACH Minnesota Council is to guide the strategy, approach, and implementation of the HIT Regional Extension Center efforts in Minnesota; to identify opportunities and issues in HIT that may affect the REC work, and coordinate with other ARRA-funded HIT efforts; and provide feedback on the REC programs and services offered in MN.
HITECH Coordination Group		X	Quarterly meetings between MDH (State HIE Cooperative Agreement), Department of Human Services (Minnesota Medicaid), and REACH (Regional Extension Center) to coordinate communications and outreach activities. OHIT staff are also participating on REACH Field Service Staff calls to receive feedback from the field on provider needs around meaningful use and health information exchange
Ongoing Coordination Activities	X	X	REACH provides quarterly reports to Minnesota e-Health Advisory Committee meetings, and participates monthly in Minnesota e-Health Adoption and Meaningful Use Workgroup to offer ongoing guidance and support in providers in achieving meaningful use.
REACH Participation on MN e-Health Advisory Committee		X	Jennifer Lundblad and Paul Kleeberg both serve on the Minnesota e-Health Initiative Advisory Committee; in addition, Paul Kleeberg is Co-Chair of the Minnesota e-Health Adoption and Meaningful Use Workgroup
Minnesota Medicaid Program			
State Government HIE Steering Committee	X	X	The State Government HIE Steering Committee provides state government oversight of 3013 activities, including the technical infrastructure aspects of health information exchange and state government use of policy and purchasing levers to promote health information exchange. The Committee meets monthly.
HITECH		X	Quarterly meetings between MDH (State HIE Cooperative Agreement),

	MDH Staff Participation		
Federal Program	*SGHIT Coord.*	*OHIT staff*	**Progress Update**
Coordination Group			Department of Human Services (Minnesota Medicaid), and REACH (Regional Extension Center) to coordinate communications and outreach activities.
Ongoing Coordination Activities	X	X	DHS provides quarterly reports to Minnesota e-Health Advisory Committee meetings, and participates monthly in Minnesota e-Health Adoption and Meaningful Use Workgroup to offer ongoing guidance and support in providers in achieving meaningful use and Minnesota e-Health Health Information Exchange Workgroup advising the state on plan for health information exchange. In addition, OHIT staff has been involved in DHS's incentive distribution plan through participation in their EHR Incentive Development Team.
MN e-Health Initiative		X	The State Medicaid Director has an appointment to the Minnesota e-Health Initiative Advisory Committee; in addition, the MN Medicaid program has utilized the Minnesota e-Health Initiative Adoption and Meaningful Use Workgroup to receive feedback on their plans for administering the Medicaid Incentive Program.
Public Health – State and Local Health Departments			
Public Health HIE Workgroup		X	OHIT staff regularly participate on the State Community Health Advisory Committee Public Health HIE Workgroup which is comprised of state and local health departments working together to develop a plan for public health participation in health information exchange statewide. This workgroup meets monthly.
Public Health Informatics Institute Academy		X	Project to support the Beacon Community in Minnesota. It is helping identify detailed business, informatics, and technical options for migrating current local public health PH EHR to an open source environment to increase adoption and enhanced standards-based interoperability.
MDH OHIT Public Health Informatics Collaboration Workgroup		X	The purpose of this workgroup is to convene MDH programs and provide coordination opportunities on related health information exchange activities. This workgroup meets monthly.
Immunization / Disease Surveillance & Lab Program Coordination		X	OHIT staff work closely with the MDH Immunization, Disease Surveillance and Lab programs on standards implementation for health information exchange. MDH and OHIT coordinate activities on a regular basis through a formal arrangement within the agency. In addition, an OHIT Staff member is on a temporary 2-year assignment so support the immunization with standards implementation to support health information exchange.
Ongoing Coordination Activities			Membership on Minnesota e-Health Advisory Committee, and monthly participation in all five e-Health Workgroups: Adoption and Meaningful Use, Health Information Exchange, Communications and Outreach, Privacy, Legal, Policy, and Standards and Interoperability
Beacon			
Advisory Committee		X	OHIT Staff participate in the both the planning and advisory committees for the Southeast Minnesota Beacon Community which consists of eleven counties, their public health offices, many health care providers, and school districts.
Ongoing Coordination Activities		X	Mayo (Beacon program) provides quarterly reports to the Minnesota e-Health Advisory Committee and annual reports at the statewide e-Health Summit.
SHARP			
Advisory Committee		X	OHIT staff are members of the Minnesota SHARP project implementation team consisting of an assembled federated informatics research community

	MDH Staff Participation		
Federal Program	*SGHIT Coord.*	*OHIT staff*	**Progress Update**
			committed to open-source resources that can industrially scale to address barriers to the broad-based, facile, and ethical use of EHR data for secondary purposes.
Ongoing Coordination Activities		X	Mayo (SHARP program) provides quarterly reports to the Minnesota e-Health Advisory Committee and annual reports at the statewide e-health Summit in June.
Education and Workforce			
Up Hi Community Partner Council		X	Monthly meetings to foster bi-directional, proactive engagement between UP-HI and the larger health care community so that UP-HI can meet its goal of delivering sustainable, world-class, highly progressive educational programs and experiences that are responsive to our nation's HIT workforce shortage.
Midwest Community College Consortium		X	The MN Health IT Grant Leadership Council meets monthly or as needed to provide leadership, advice and community support in assessing the MN HIT workforce needs from an employer perspective, collaborating on outreach activities and giving feedback on program goals.
Ongoing Coordination Activities		X	Both Workforce grantees provide quarterly updates to the Minnesota e-Health Advisory Committee.

Section 6: Plans for Funding

Section 3 described Minnesota's efforts since the time of the original submission of Minnesota's Strategic and Operational Plans for Health Information Exchange to work with stakeholders to respond to market developments and to refine plans accordingly. These efforts have led to a corresponding revision in Minnesota's approach for State HIE Cooperative Agreement program funding to align with the phased approach outlined in this addendum. The table below (Figure 37) provides a high-level summary of Minnesota's original budget, and current plans for funding from Minnesota's State Health Information Exchange Cooperative Agreement. Additional detail is provided in the proposed revised budget submitted to ONC as a separate document.

Figure 37: Plans for Funding to Support Meaningful Use

Funding Component	Original Application Budget	Proposed Revised Budget	Activities Supported in Proposed Revised Budget
MDH-OHIT Operations Salaries, travel, supplies, etc.	$1,901,655	Year 1: $235,052 Year 2: $552,881 Year 3: $540,098 Year 4: $567,045 **Total: $1,895,077**	Oversight and implementation of strategic and operational plan, including: ▪ Project management ▪ Governance and HIE oversight ▪ Assessment and evaluation activities ▪ Communication and marketing materials ▪ Interstate HIE
Technical Infrastructure Services (TBD-Competitive)	$6,600,000	Year 1: $0 Year 2: $1,250,000 Year 3: $350,000 Year 4: $250,000 **Total: $1,850,000**	Core Statewide Shared Services: Integration of directories, integration of RLS, management of consumer preferences
Connectivity Incentives (TBD-Competitive)	$0	Year 1: $0 Year 2: $3,400,000 Year 3: $250,000 Year 4: $250,000 **Total: $3,900,000**	Performance-based incentives for community connectivity to State-Certified Health Information Organizations
Community Connectivity Grants (TBD-Eligibility & Needs Based)	$0	Year 1: $0 Year 2: $500,000 Year 3: $250,000 Year 4: $250,000 **Total: $1,000,000**	Connectivity grants to rural, independent pharmacies initially. Utilization of assessment data to identify additional needs for Phase II, likely to include independent laboratories and others as defined by gap analysis.
Specialized Technical Assistance Contract (REACH)	$630,000	Year 1: $0 Year 2: $60,000 Year 3: $50,000 Year 4: $50,000 **Total: $160,000**	REACH will provide some HIE assistance and support to providers as part of its HIT Regional Extension Center services, but for specialized assistance and support that falls outside of the HIT REC scope of work, MDH will contract with them for additional technical assistance support.
Indirect	$795,244	**Total: $816,923**	Federally-approved indirect rate
Total	$9,622,000	**$9,622,000**	

Section 7: Project Management and Oversight

The Minnesota Department of Health deploys a range of policies and procedures to ensure adequate project oversight, including financial controls and project management procedures.

Financial Controls
The MDH Financial Management Office provides guidance and fiscal oversight over all MDH programs, including the Minnesota State Health Information Exchange Cooperative Agreement Program. MDH complies with all required reporting as required by ARRA, and MDH's Financial Management Office coordinates that activity with all ARRA-related programs at MDH. In addition to ARRA reporting, below are some of the MDH policies and procedures related to financial controls, all of which that are consistent with state law around financial management and procurement.

Audits
MDH maintains a policy on single audit procedures. MDH maintains a system for monitoring the completion of required audits and assures timely and appropriate resolution of audit findings in subrecipient audit reports. MDH is required to include standard audit language in all grants and contracts funded with federal funds.

Financial Reporting
MDH maintains a policy on financial reporting. Various types of financial status reports are provided to division directors on a monthly basis on the activities assigned to them and are used by managers to identify potential fiscal problems and determine possible solutions.

Grant/Contract Execution and Management
MDH has a variety of policies in place to ensure effective grant/contract execution and management, including, policies regarding solicitation of vendors and grant/contract management. Some of the most relevant policies for Minnesota's Strategic and Operational Plan for Health Information Exchange are regarding:

- Grant agreements (both competitive and single source).
- Professional/Technical Contracts using a competitive process (contracts over $50,000)
- Professional/Technical Contracts using an informal solicitation process (contracts under $50,000)
- Grantee monitoring for non-profits
- Policies regarding grantee / contractor monitoring

In addition to the above MDH policies and procedures, MDH convenes a Grant Management Workgroup monthly to share best practices regarding grant/contract management. The purpose of the MDH Grant Management Workgroup is to:

- Provide support, value and resources for grant staff at MDH
- Improve communication and networking opportunities
- Review, advise, address and develop grants policy and best practices
- Communicate and institute developed enterprise standards

The Grant Management Workgroup has developed a variety of resources, including resources for RFP development and effective grant/contract management. OHIT staff participate on the Grant Management Workgroup.

Project Management

Project Management Policies and Procedures

MDH endorses project management as a mechanism for ensuring the success of information technology projects. MDH has developed a policy for information technology projects that requires a formal project management process be used within MDH for projects such as those funded by the Minnesota Health Information Exchange Program. The MDH policy requires MDH to register all information technology projects with the State Office of Enterprise Technology and to report larger-scale information technology projects to an MDH Executive Steering Committee. Through this process, MDH staff follow an IT Project Management Policy that includes a set of standards regarding effective project management. Because of the funding level and enterprise-wide implications, the Minnesota State Health Information Exchange Cooperative Agreement program falls under Category 1 which holds the highest level of requirements. Some of the requirements include:

- Reporting to the MDH Executive Steering Committee
- Registration of the project with the Minnesota Office of Enterprise Technology
- Development of a project steering committee to oversee the project deliverables
- Work with an MDH Project Portfolio Manager to coordinate project deliverables for review by the MDH Executive Steering Committee or Minnesota Office of Enterprise Technology
- Follow standard process regarding key project phases: initiation, planning, execution, and closing
- Produce standard deliverables such as: a project charter, project plan, monthly project status reports, and a project close report.

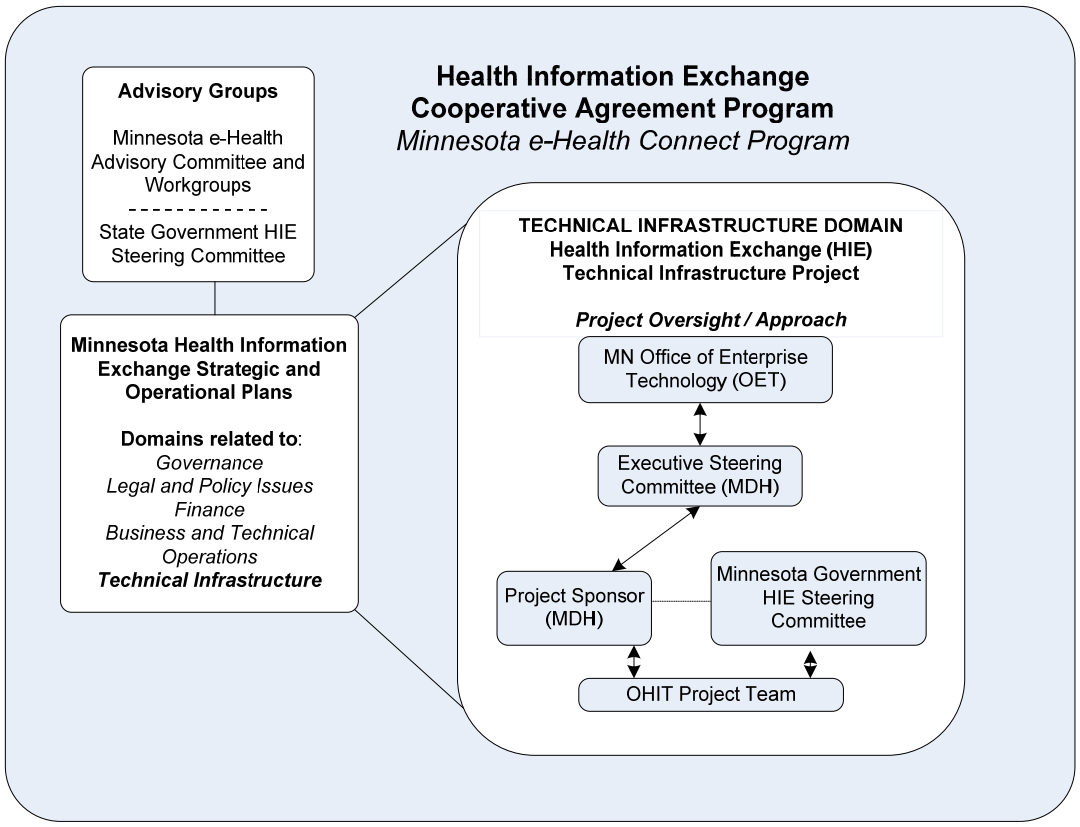
Project Oversight and Stakeholder Relationships

Figure 38 below describes Minnesota's overall approach to project management and reporting of project deliverables through the necessary channels. The day-to-day activities are managed by OHIT, who reports to both the State Government Health Information Exchange Steering Committee, the Project Sponsor (State Government Health Information Technology Coordinator), and the MDH Executive Steering Committee. The Executive Steering Committee also has a reporting relationship to the Minnesota Office of Enterprise Technology regarding large-scale projects.

In addition to the formal project reporting mechanisms, the Minnesota State Health Information Exchange Cooperative Agreement project has many important stakeholders. Therefore, Minnesota's existing infrastructure will be utilized for providing regular updates and gaining valuable stakeholder feedback on the project, particularly through the Minnesota e-Health Advisory Committee meetings as well as Minnesota e-Health Workgroups, including:

- Health Information Exchange
- Standards and Interoperability
- Privacy, Legal, and Policy Issues
- Adoption and Meaningful Use
- Communications and Outreach

Figure 38: Minnesota Health Information Exchange Cooperative Agreement Program Project Management Reporting Relationships and Stakeholder Input



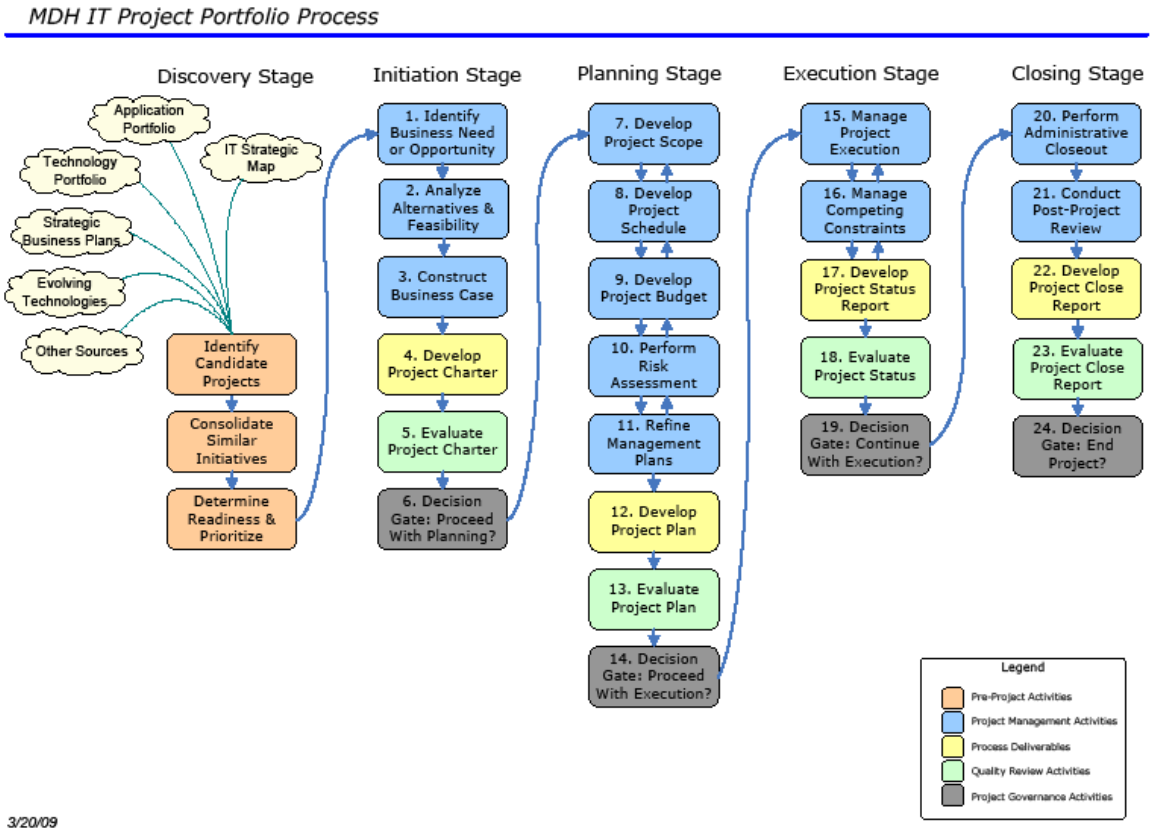
Project Management Activities and Deliverables

The diagram in Figure 39 below describes the overall project management process broken out by major project stages and key deliverables for those stages. In addition to the above overall project management approach, MDH OHIT will use the following specific methods for project management:

- Monthly reports by vendors regarding management of tasks
- Utilization of the MDH OHIT team for small change management processes and the use of the MDH Executive Steering Committee and State Government Health Information Exchange Steering Committee, as needed, for large-scale change management processes. MDH anticipates that revisions to the Project Scope and Project Plan will be updated as needed to communicate any significant changes in the overall plan.
- Through monthly status reports to the State Government Health Information Exchange Steering Committee and the MDH Executive Steering Committee, the project manager will update on any significant issues and escalate those issues as necessary. Issue escalation is essential to ensure the project is kept on schedule and within budget.

See Appendix D for an updated project schedule and Appendix E for an updated project risk assessment plan.

Figure 39: MDH Project Management Process utilized for Minnesota State Health Information Exchange Cooperative Agreement



Section 8: Appendices

Appendix A

Application For Certificate Of Authority To Operate As A Health Information Exchange Service Provider

In accordance with Minnesota Statute §13.41, ALL DATA SUBMITTED ON THIS APPLICATION SHALL BE CLASSIFIED PUBLIC INFORMATION, EXCEPT DATA MARKED AS NON-PUBLIC AND INCLUDED IN APPENDIX G.

BEFORE COMPLETING THIS APPLICATION:

Please read Minnesota Statutes, §§ 62J.498-62J.4982, 72A.49-72A.505, and 144.291-144.298, and the accompanying GUIDANCE TO APPLICANTS FOR CERTIFICATE OF AUTHORITY TO OPERATE AS A HEALTH INFORMATION EXCHANGE SERVICE PROVIDER, which includes a glossary of key terms.

Please answer all questions completely and accurately to avoid unnecessary delay.

All renewal applications shall be filed 30 days prior to the expiration date of the current certificate of authority with:

MINNESOTA DEPARTMENT OF HEALTH
Division of Health Policy
Office of Health Information Technology
85 East Seventh Place, Suite 220
P.O. Box 64882
St. Paul, Minnesota 55164-0882

SECTION A: Applicant Type [For Completion by All Applicants]

☐ The undersigned hereby makes application for a certificate of authority to operate as a **Health Data Intermediary** subject to the provision of Minnesota Statutes, §§62J.498 – 62J.4982.
[A "Health Data Intermediary" is defined under Minn. Stat. §62J.498 sub. 1(e). Health data intermediaries are required to apply for a certificate of authority if the entity provides health information exchange services for the transmission of one or more clinical transactions necessary for hospitals, providers, or eligible professionals to achieve Meaningful Use of electronic health records.]

☐ The undersigned hereby makes application for a certificate of authority to operate as a **Health Information Organization** subject to the provision of Minnesota Statutes, §§ 62J.498 – 62J.4982.
[A "Health Information Organization" is defined under Minn. Stat. §62J.498 sub. 1(h). Health information organizations are required to apply for a certificate of authority if the entity provides all electronic capabilities for the transmission of clinical transactions necessary for Meaningful Use of electronic health records.]

For a list of clinical transactions necessary for Meaningful Use, please see table in Section D.

SECTION B: Identification [For Completion by All Applicants]

Legal Name of Applicant_____

Doing Business As _____

Contact Person _____

Address_____

City _____State_____ ZIP_____

Telephone Number _____ Email Address _____

Web Site Address _____

Federal Tax ID Number _____State Tax ID Number _____

SECTION C: Summary Description of Health Information Exchange Services [For Completion by All Applicants]

1. Generally describe the health information exchange services provided, or to be provided by the Applicant, including its health information exchange contracts, facilities and personnel. [Limit 500 Words]

2. Describe the geographic area or areas to be served by the Applicant. [Limit 100 Words]

3. Describe the types of Participating Entities to be served by the Applicant. [A "Participating Entity" is defined under Minn. Stat. §62J.498 sub. 1(m).] [Limit 100 Words]

SECTION D: Detailed Description of Health Information Exchange Services [For Completion by All Applicants]

1. Identify which of the following clinical Meaningful Use health information exchange transactions are currently offered by the Applicant, or will be offered by the Applicant in the next 12 months:

Table 1: Clinical Meaningful Use Transactions

Clinical Health Information Exchange Transactions (Stage 1 Meaningful Use*)	Currently offered by Applicant	Will be offered by Applicant in next 12 months	No plans by Applicant to offer in next 12 months
I. Electronic prescribing			
Transmission of permissible prescriptions electronically Transactions between prescribers and dispensers - New prescriptions - Prescription refill requests and responses - Prescription change requests and responses - Prescription cancellation request and response	☐	☐	☐
II. Immunization transactions			
Transmission of electronic data to immunization registries or immunization information systems	☐	☐	☐
III. Laboratory related transactions			
Transmission of electronic data on reportable lab results to public health agencies	☐	☐	☐
IV. Electronic transmission of records/key clinical information			
a. Transmission of summary of care record from one setting of care or provider of care to another provider of care to support transition of care or referral	☐	☐	☐
b. Transactions that support exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results) among providers of care and patient authorized entities electronically *Please specify the type of clinical information transmitted*_____	☐	☐	☐

* Stage 1 Meaningful Use transactions require use of recommended standards

For details on Meaningful Use and related standards, please refer to final rules in links below

- Medicare and Medicaid Programs - Electronic health record incentive program: http://edocket.access.gpo.gov/2010/pdf/2010-17207.pdf
- Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology: http://edocket.access.gpo.gov/2010/pdf/2010-17210.pdf

☐ Applicant attests that the organization is compliant with standards specified by federal rules for the Medicare and Medicaid Programs Electronic Health Record Incentive Program (42 CFR Parts 412, 413, 422 and 495), and the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology (45 CFR Part 170).

2. Identify which of the following additional health information exchange services are currently offered by the Applicant, or will be offered by the Applicant in the next 12 months, and specify standards used in conducting these transactions:

Table 2: Additional Health Information Exchange Services Provided

Health Information Exchange Services	Currently offered by Applicant	Indicate standards used and their versions	Will be offered by Applicant in next 12 months	No plans by Applicant to offer in next 12 months
I. Electronic prescribing				
a. Transactions related to exchange of eligibility details	☐	_____	☐	☐
b. Transactions on formulary and benefits information	☐	_____	☐	☐
c. Transactions related to medication history	☐	_____	☐	☐
d. Transactions on fill status notifications	☐	_____	☐	☐
II. Immunization transactions				
a. Transactions on query for immunization history and delivery (request and/or receive)	☐	_____	☐	☐
b. Transactions supporting decision forecasting (decision support)	☐	_____	☐	☐
III. Laboratory related transactions				
a. Transactions related to ordering of laboratory tests	☐	_____	☐	☐
b. Transactions related to delivery of laboratory results	☐	_____	☐	☐
IV. Surveillance data transmissions				
a. Transmission of electronic syndromic surveillance data to public health agencies	☐	_____	☐	☐
b. Transmission of electronic data on reportable disease conditions to public health agencies	☐	_____	☐	☐
V. Quality reporting				
a. Transmissions related to reporting of clinical quality measures to CMS or the States **(Stage 1 Meaningful Use) ***	☐	_____	☐	☐
- Transactions supporting ambulatory clinical quality measures				
- Transactions supporting hospital clinical quality measures				
b. Reporting related to additional quality of care metrics *(please specify the quality of care metrics)*	☐	_____	☐	☐
VI. Radiology related transactions				
a. Transmission of radiology results (reports)	☐	_____	☐	☐
b. Transmission of radiology images	☐	_____	☐	☐
c. Capability to support radiology history *(please specify the list of tests)*	☐	_____	☐	☐
VII. Diagnostic test histories				
a. Capability to support additional diagnostic histories *(please specify)*	☐	_____	☐	☐

Appendix A

Health Information Exchange Services	Currently offered by Applicant	Indicate standards used and their versions	Will be offered by Applicant in next 12 months	No plans by Applicant to offer in next 12 months
VIII. Registry reporting				
a. Reporting to disease registries *(please specify)*	☐	_____	☐	☐
b. Connection to other specific registries (e.g, Trauma, Traumatic Brain Injury and Spinal Cord Registries) *(please specify)*	☐	_____	☐	☐
IX. Interoperability with devices/personal health records (PHR)				
a. Support reporting from and to select devices that collect health information *(please specify)*	☐	_____	☐	☐
b. Transmissions that support interoperability of home monitoring devices (transactions from and to home device and electronic health record/personal health record/other electronic record)	☐	_____	☐	☐
X. Consumer preferences				
a. Capability to manage consumer preferences related to a patient's choice to opt-out of exchange of health information	☐	_____	☐	☐
b. Capability to support transmission of information amongst related entities for advanced directives	☐	_____	☐	☐
c. Specify any additional mechanisms to manage consumer preferences and consent	☐	_____	☐	☐
XI. Nation-wide and interstate interoperability				
a. Connectivity to other state HIOs, federal agencies, the National Health Information Network (NHIN)	☐	_____	☐	☐
XII. Eligibility transactions Capability to support eligibility verification transactions (270/271)	☐	_____	☐	☐
XIII. Please state any other transactions not included in the above list that you currently support/plan to support within the next 12 months				

SECTION E: Organizational Information [For Completion by All Applicants]

Pursuant to the requirements of Minn. Stat. §§62J.498-62J.4982, the following documents must be attached to this application in Appendix B:

- ☐ Articles of incorporation, bylaws, or other basic organizational documents and related amendments.
- ☐ Documentation of non-profit corporation status **[Required for HIO Applicants Only]**
- ☐ Certificate of Good Standing from the Minnesota Secretary of State
- ☐ List of all members of the Applicant's board of directors, including name, address, and official positions or offices held.
- ☐ Explanation of how the Applicant's board of directors broadly represents the Applicant's Participating Entities and consumers.
- ☐ List of all principle officers of the Applicant, including name, address, official positions or offices held.
- ☐ Explanation of how these officers and staff have the capacity to ensure accountability to the Applicant's mission.
- ☐ Explanation of how the board of directors oversees the work of the Applicant's organization.
- ☐ List of all shareholders of the Applicant.
- ☐ Copy of conflict of interest policy(ies) that apply to all members of the board of directors and principle officers of the Applicant.

SECTION F: Information Related to Participating Entities [For Completion by All Applicants]

[A "Participating Entity" is defined under Minn. Stat. §62J.498 sub. 1(m).]

[A "Major Participating Entity" is defined under Minn. Stat. §62J.489 sub. 1(j).]

Pursuant to the requirements of §62J.4981, the following documents must be attached to this application in Appendix C:

- ☐ List of all Minnesota Participating Entities, including:
  - Name, address, type and duration of each contract or agreement.
- ☐ List of all Major Participating Entities, including:
  - Name, address, type and duration of each contract
  - Name, address and official position of each member of the board of directors
  - Name, address and official position of each shareholder beneficially owning more than 10 percent of any voting stock of the Major Participating Entities.
- ☐ A copy of each standard agreement or contract intended to bind the Applicant and a Participating Entity.
  - Describe how the contractual provisions are consistent with the purposes of Minn. Stat. §62J.4981 in regard to:
    (a) The services to be performed under the standard agreement or contract
    (b) The manner in which payment for services is determined
    (c) The nature and extent of responsibilities to be retained by the Applicant; and
    (d) The contractual termination provisions
- ☐ A copy of each contract executed, or intended to be executed, between the Applicant and a Major Participating Entity.

  [Note: These contracts should be clearly marked as "NONPUBLIC in accordance with Minn. Stat. § 62J.498" and included in an Appendix G entitled "Information Classified as Nonpublic Information Under the Minnesota Government Data Practices Act, Minn. Stat. chapter 13"]

Appendix A

☐ A description of the mechanisms by which Participating Entities have an opportunity to participate in matters of policy and operation. [Limit 500 Words]

SECTION G: Compliance with Minn. Stat. §62J.4981 sub. 3(c) and (d): [For Completion by HIO Applicants Only]

G.1 Pursuant to requirements established in **Minn. Stat. §62J.4981 sub. 3(c),** documentation of compliance with required minimum criteria must be attached to this application in Appendix D.1, including:

- ☐ Documentation demonstrating that the Applicant is a legally established, nonprofit organization.
- ☐ Documentation that Applicant maintains appropriate insurance, including liability insurance, for the operation of the health information organization is in place and sufficient to protect the interest of the public and participating entities.
- ☐ Strategic and operational plans that clearly address how the organization will expand technical capacity of the health information organization to support providers in achieving Meaningful Use of electronic health records over time;
- ☐ A description of how the Applicant addresses the parameters to be used with Participating Entities and other health information organizations for Meaningful Use transactions, compliance with Minnesota law, and interstate health information exchange in trust agreements;
- ☐ Detailed description of Applicant's Record Locator Service.
- ☐ List of health information organization(s) that intend to, or are currently seeking Minnesota certification that the Applicant currently interoperates with.
- ☐ A copy of the Applicant's most recent independent audit of the organization's financial statements.

G.2 Applicant attests that the organization is compliant with the following criteria:

- ☐ Applicant has policies to protect against disclosure of protected health information (PHI).
- ☐ Applicant utilizes strong encryption, user authentication, message integrity, and support for non-repudiation as security measures in compliance with any legislation requiring it. 45 CFR §§ 164.312(a)(2)(iv) See also CMS Internet Security Policy.
- ☐ Applicant maintains a list of all individuals, contractors, and business associates with access to Electronic PHI.
- ☐ Applicant has policies in place that prohibit individuals from storing unencrypted PHI on portable devices.
- ☐ Applicant is able to receive and submit 100% of all eligible transactions electronically from and to all trading partners who accept or generate transactions electronically.
- ☐ Applicant complies with all applicable federal and state requirements and regulations.
- ☐ Applicant has a minimum system availability and appropriate redundancy that assures system access for 98.0% of contracted and/or advertised hours. This requirement shall not include outages due to acts of God.
- ☐ Applicant has an established implementation plan for compliance with all applicable federal and state adopted rules and implementation guides. This implementation plan should include at least an implementation sequence and timetable for implementation within mandatory timeframes.
- ☐ Applicant maintains off-site, a minimum six-month back-up archive, storage and retrieval capability for all batch transactions and adheres to all applicable federal and state regulations.
- ☐ Applicant has a firewall configured to protect the system and has processes and procedures to monitor and/or block intrusion attempts or attacks from the Internet and provide alarms to appropriate personnel.
- ☐ Applicant has processes and procedures to monitor and/or block intrusion attempts or attacks from the Internet and provide alarms to appropriate personnel.
- ☐ Applicant conducts threat and vulnerability assessments on a quarterly basis and has an improvement process based on the results of those assessments.
- ☐ Applicant has threat and vulnerability assessments conducted through an independent third party on an annual basis.
- ☐ Applicant has physical resources (including plant facilities and the relevant hardware and software) adequate for accomplishing the stated mission.

- ☐ Applicant provides annual job training, which includes privacy, and confidentiality, and security for all employees and contractors with access to PHI. 45 CFR §§ 164.308(a)(5)(i)
- ☐ Applicant conducts an accurate and thorough assessment of the potential risks and vulnerabilities to the confidentiality, integrity, and availability of PHI held by the candidate. 45 CFR §§ 164.308(a)(1)(ii)(A)
- ☐ Applicant has a process in place to identify and respond to suspected or known security incidents; mitigate harmful effects of security incidents that are known to the candidate or its Workforce; and appropriately document security incidents and their outcomes. 45 CFR §§ 164.308(a)(6)(ii)
- ☐ Applicant has established and implemented disaster recovery procedures to restore any loss of data, with the Recovery Point Objective not to exceed 48 hours and the Recovery Time Objective not to exceed 48 hours for critical transaction processing. 45 CFR §§ 164.308(a)(7)(ii)(B)
- ☐ Applicant has established and implemented policies and procedures to address the final disposition of Electronic PHI and/or the hardware or electronic media on which it is stored. 45 CFR §§ 164.310(d)(2)(i)
- ☐ Applicant has established and implemented policies and procedures to address the final disposition of paper containing PHI, including the appropriate shredding and disposal of such documents.
- ☐ Applicant has established and implemented technical policies and procedures for electronic information systems that maintain Electronic PHI to allow access only to those persons or software programs that have been granted access rights. 45 CFR §§ 164.312(a)(1)

Please list other accreditation and/or certification Applicant has obtained pertaining to the delivery of health information exchange services.

G.3 Applicant further attests that:

- ☐ The Applicant will apply for accreditation by the Health Information Exchange Accreditation Program of the Electronic Healthcare Network Accreditation Commission (EHNAC) within 30 days of when the accreditation program becomes available.
- ☐ The Applicant maintains a Record Locator Service as defined in section 144.291, subdivision 2, paragraph (i), that is compliant with the requirements of section 144.293, subdivision 8, when conducting Meaningful Use transactions;
- ☐ The Applicant will pursue interoperability using nationally recognized standards with all other health information organizations certified by the state of Minnesota.
- ☐ The Applicant uses financial policies and procedures consistent with generally accepted accounting principles and has an independent audit of the organization's financials on an annual basis.
- ☐ The Applicant will meet the requirements established for utilizing the Nationwide Health Information Network (NHIN) and corresponding standards within the federally mandated timeline or within a time frame established by the Commissioner and published in the State Register.

G.4 Pursuant to requirements established in **Minn. Stat. §62J.4981 Subd.4a (14),** the Applicant must attach the following required documentation in Appendix D.2:

- ☐ Copies of Applicant's strategic and operational plans, that specifically address:

  [Applicant must indicate page numbers where required content can be found]:

  - How the applicant will increase adoption rates to include a sufficient number of Participating Entities to achieve financial sustainability.

Appendix A

- Progress in achieving objectives included in previously submitted strategic and operational plans across the following domains: business and technical operations, technical infrastructure, legal and policy issues, finance, and organizational governance. [See definition of domains in Guidance to Applicants]
- What actions the Applicant will take to expand its technical capacity to support providers in achieving Meaningful Use of electronic health records over time.
- A description of the Applicant's proposed method of marketing the services.
- A financial plan that includes a three-year projection of the Applicant's expenses and income and other sources of future capital.
- A description of how the Applicant meets or intends to meet the requirements established for utilizing the Nationwide Health Information Network (NHIN) and corresponding standards within the federally mandated timeline or within a time frame established by the Commissioner of Health.
- A description of how the Applicant intends to increase adoption rates to include a sufficient number of Participating Entities to achieve financial sustainability.

☐ A copy of the Applicant's business plan that specifically address the following:

[Applicant must indicate page numbers where required content can be found].

- Plans for ensuring the necessary capacity to support all electronic capabilities for the transmission of clinical transactions necessary for Meaningful Use of electronic health records in accordance with nationally recognized standards.
- Approach for attaining financial sustainability, including public and private financing strategies, and rate structures.
- Rates of adoption, utilization, and transaction volume, and mechanisms to support health information exchange, and
- An explanation of the methods employed to address the needs of community clinics, critical access hospitals, and free clinics in accessing health information exchange services in Minnesota.

☐ A copy of the Applicant's rate plan that outlines fee structures for health information services, including a description of how the fee structure: *[Applicant must indicate page numbers where required content can be found].*

- Distributes costs equitably among users of health information services;
- Provides predictable costs for Participating Entities;
- Covers all costs associated with conducting the full range of Meaningful Use clinical transactions, including access to health information retrieved through other state-certified health information exchange service providers; and
- Provides for a predictable revenue stream for the Applicant and generates sufficient resources to maintain operating costs and develop technical infrastructure necessary to serve the public interest.

☐ Copies of policies and procedures related to managing and promptly responding to complaints from Participating Entities and consumers.

☐ Copies of reciprocal agreements with health information organization(s) that intend to, or are currently seeking Minnesota state certification to enable Record Locator Services to find patient data, and for the transmission and receipt of Meaningful Use transactions consistent with the format and content required by national standards established by Centers for Medicare and Medicaid Services, including:

- A description of how the Applicant's reciprocal agreements meet the requirements of Minn. Stat. §62J.4981 sub.5(a) and (b).

SECTION H: Compliance with Minn. Stat. §62J.4981 sub. 2(c): [For Completion by HDI Applicants Only]

Pursuant to requirements established in Minn. Stat. §62J.4981 sub. 2(c) and 4(a), documentation of compliance with required minimum criteria must be attached to this application in Appendix E, including:

- ☐ List of health information organization(s) that intend to, or are currently seeking Minnesota state certification with whom the Applicant currently interoperates.
- ☐ List of health information organization(s) that intend to, or are currently seeking Minnesota state certification through which Applicant provides an option for Minnesota entities to connect to Applicant services.
- ☐ Documentation that Applicant maintains appropriate insurance, including liability insurance, for the operation of the health data intermediary is in place and sufficient to protect the interest of the public and participating entities.
- ☐ Detailed description of Applicant's Record Locator Service, including Attestation that *"Applicant has a Record Locator Service, as defined in Minn. Stat. §144.291 sub. 2 (i) that is compliant with the requirements of Minn. Stat. §144.293 sub. 8, when conducting Meaningful Use transactions."*
- ☐ Copies of Applicant's strategic and operational plans, that specifically address: *[Indicatage numbers].*
  - What actions the Applicant will take to expand its technical capacity to support providers in achieving Meaningful Use of electronic health records over time.
  - A description of the Applicant's proposed method of marketing the services.
  - A schedule of proposed charges.
  - A financial plan that includes a three-year projection of the Applicant's expenses and income and other sources of future capital.
  - A description of how the Applicant meets or intends to meet the requirements established for utilizing the Nationwide Health Information Network (NHIN) within the federally mandated timeline or within a time frame established by the Commissioner of Health.
  - A description of how the Applicant intends to increase adoption rates to include a sufficient number of Participating Entities to achieve financial sustainability.
- ☐ Copies of reciprocal agreements with health information organization(s) that intend to, or are currently seeking state certification to enable access to Record Locator Services to find patient data, and for the transmission and receipt of Meaningful Use transactions consistent with the format and content required by national standards established by Centers for Medicare and Medicaid Services.
- ☐ Description of how the Applicant's reciprocal agreements meet the requirements of Minn. Stat. §62J.4981 sub.5(a) and (b).

SECTION I: Compliance with Federal and Minnesota Privacy Laws, including Minn. Stat. §§ 144.291-144.298, 72A.49-72A.505 and Minn. Stat. ch. 13 [For Completion by All Applicants]

Applicant attests that the organization is compliant with the following criteria, and must attach to this application in Appendix F copies of all relevant policies and procedures and a detailed description as to how Applicant is in compliance with these criteria as requested in the sections below:

- ☐ Applicant has policies and procedures to ensure on-going compliance with all applicable requirements of the HIPAA Privacy and Security Rules and the Health Information Technology for Economic and Clinical Health (HITECH) Act, and all applicable regulations and guidance issued pursuant to HIPAA or HITECH.
- ☐ Applicant has policies and procedures to ensure on-going compliance with all applicable requirements of Minnesota law protecting the privacy of a patient's health record information, including but not limited to: the Minnesota Health Records Act, Minn. Stat. §§144.291-144.298; the Minnesota Fair Information Reporting Act, Minn. Stat. §§72A.49-72A.505; and the Minnesota Government Data Practices Act, Minn. Stat. chapter 13.
  - Provide a comprehensive list and copies of all Applicant's policies and procedures that demonstrate Applicant's compliance with the applicable Minnesota Statutes identified above.
  - Describe the Privacy Compliance Program that Applicant has implemented to ensure that a patient's

health records are protected in accordance with federal and Minnesota privacy laws, including a description of the sanctions applicable for violations of Applicant's policies and procedures.

- Describe the procedures used by Applicant to perform periodic reviews and updates of its privacy and security policies and procedures to ensure compliance with new federal and state laws.
- Provide the name, title and contact information for the Applicant's Chief Privacy Officer.
- Provide copies of all standard Business Associate Agreements entered into by Applicant.

☐ Applicant has policies and/or procedures that establish a mechanism for patients to opt-out of having their information included in a Record Locator Service in accordance with Minnesota law.

- Describe how Applicant and Participating Entities educate consumers on a patient's right to opt-out of having his or her health record information included in the Record Locator Service.
- Describe how Applicant tracks a patient's decision to opt-out and the process used when an inquiry is made for information on that patient through the Applicant's Record Locator Service.

☐ Applicant has policies and/or procedures for Record Locator Services and comparable directories that protect the identity and health records of patients that can be identified through the Applicant's systems.

- Describe how Applicant has reasonable safeguards to minimize unauthorized incidental disclosures of health records during the process of identifying a patient and locating a record, and how Applicant prohibits unauthorized users from accessing health records in any manner inconsistent with the policies and procedures established by the Applicant.

☐ Applicant has policies and/or procedures to adequately address complaints regarding privacy and security.

- Describe what process and mechanisms are in place: (1) to educate consumers about how to file a privacy complaint with the Applicant and (2) to demonstrate what actions the Applicant takes to promptly respond to a complaint received by the Applicant and take corrective action.
- Describe what policies and procedures Applicant has in place and uses to identify and respond promptly to a breach of a patient's health record information.

☐ Applicant has policies and/or procedures to require performance of periodic, random audits to ensure compliance with applicable state and federal laws regarding privacy and security, including consent requirements.

- Describe what process Applicant uses to conduct periodic random audits to ensure compliance with Applicant's policies and procedures and Minnesota privacy laws, including but not limited to how Applicant verifies consents are on file for patients whose health records are transmitted or accessed via the Applicant's Record Locator Service other than in emergency situations.
- Describe the policies and procedures used by Applicant to minimize privacy and security risks, including how the Applicant ensures that health records are properly accessed in emergency situations.

SECTION J: Attestation, Verification and Signature [For Completion by All Applicants]

☐ I certify that I am an Officer of the Applicant and I am duly authorized to submit this Application for Certificate of Authority to Operate as a Health Information Organization on behalf of the Applicant.

☐ I attest that all information submitted on this application and in corresponding attachments accurately reflect the activities of the Applicant and is complete to the best of my knowledge.

Date_____ *Signature_____

Name of Officer _____

Title _____

Name of Applicant_____

* Note: Electronic copies of the application must provide the name of the Applicant, name and title of the Officer authorized to submit the applicationon behalf of the Applicant. Printed copies of the application must include all information on the electronic copy as well as the signature of the Officer of the Applicant.

LIST OF APPENDICES
To be submitted in conjunction with

MINNESOTA APPLICATION FOR CERTIFICATE OF AUTHORITY TO OPERATE AS A HEALTH INFORMATION EXCHANGE SERVICE PROVIDER

Appendix A:	Checklist of Information to be Included in HIE Service Provider Application with Page References
Appendix B:	Organizational Information (Section E of Application)
Appendix C:	Information Related to Participating Entities (Section F of Application)
Appendix D.1:	Required Information for Health Information Organization Applicants (Section G.1 of Application)
Appendix D.2:	Required Information for Health Information Organization Applicants (Section G.4 of Application)
Appendix E:	Required Information for Health Data Intermediary Applicants (Section H of Application)
Appendix F:	Required Documentation to Demonstrate Compliance with Privacy Laws (Section I of Application)
Appendix G:	Information Classified as Non-public Information under the Minnesota Government Date Practices Act, Minn. Stat. chapter 13 (See Application Guidance Document).

Appendix A

Health Information Exchange Service Provider Application

Checklist of Information to be Included in HIE Service Provider Application with Page References

In order to expedite the Minnesota Department of Health's verification of a complete Application as required by Minnesota Statutes §62J.4981 subdividision 4 (b), Applicants must complete the checklist below clearly identifying the specific page numbers in the Application or corresponding Appendix that contains the information on required content.

Attached	Application Requirement	Page Reference
☐	**Section A:** Applicant Type [All Applicants]	_____
☐	**Section B:** Identification [All Applicants]	_____
☐	**Section C:** Summary Description of HIE Services [All Applicants]	
☐	1. General description of HIE services	_____
☐	2. Geographic areas to be served	_____
☐	3. Types of Participating Entities to be served	_____
☐	**Section D:** Detailed Description of HIE Services [All Applicants]	
☐	1. Table 1: Clinical Meaningful Use Transactions offered/to be offered by Applicant	_____
☐	2. Attestation that Applicant is compliant with standards specified in 42 CFR Parts 412,413,422 and 495 and 45 CFR Part 170.	_____
☐	3. Table 2: Additional HIE Services Provided	_____
☐	**Section E:** Organizational Information [All Applicants]	
☐	1. Articles of Incorporation, Bylaws or other organizational documents, including amendments	_____
☐	2. Documentation of non-profit corporation status [HIO Applicants only]	_____
☐	3. Certificate of Good Standing from the Minnesota Secretary of State	_____
☐	4. List of Applicant's board of director members	_____
☐	5. Explanation of how board of directors represents Applicant's Participating Entities and consumers	_____
☐	6. List of Applicant's principle officers	_____
☐	7. Explanation of how officers and staff have capacity to ensure accountability to Applicant's mission	_____
☐	8. Explanation of how board of directors oversees work of Applicant's organization	_____
☐	9. List of Applicant's shareholders	_____
☐	10. Copies of all conflict of interest policies that apply to board of director members and principle officers of Applicant	_____

Attached	**Application Requirement**	*Page Reference*
☐	**Section F:** Information Relating to Participating Entities [All Applicants]	
☐	1. Information on all Minnesota Participating Entities	_____
☐	2. Information on all Major Participating Entities	
☐	3. Copy of each standard agreement or contract intended to bind Applicant and a Participating Entity and description of how contractual provisions are consistent with Minn. Stat. §62J.4981	_____
☐	4. Copy of each contract executed or intended to be executed between Applicant and a Major Participating Entity [marked as Non-Public in accordance with a section of the Minnesota Government Data Practice Act, Minn. Stat. chapter 13]	_____
☐	5. Description of mechanisms by which Participating Entities can participate in policy and operation matters	_____
☐	**Section G:** Compliance with Minn. Stat. 62J.4981 sub.3(c) & (d) [HIO Applicants only]	_____
☐	G.1 Documentation of the following items:	
☐	1. Documentation of nonprofit status	_____
☐	2. Documentation of insurance	_____
☐	3. Applicant's strategic and operational plans	_____
☐	4. Description of how Applicant addresses parameters to be used with Participating Entities and other HIOs for Meaningful Use transactions, compliance with Minnesota law and interstate HIE in trust agreements	_____
☐	5. Description of Applicant's Record Locator Service	_____
☐	6. List of HIOs with which Applicant currently interoperates	_____
☐	7. Copy of Applicant's most recent independent audit of financial statements	_____
☐	G.2 Applicant attestations regarding compliance with listed criteria	_____
☐	G.3 Applicant attestations regarding compliance with listed criteria	_____
☐	G.4 Attachments required:	
☐	1. Applicant's strategic and operational plans, including:	_____
☐	A description of how Applicant will increase adoption rates to achieve financial sustainability	_____
☐	Progress in achieving objectives included in previously submitted strategic and operational plans across the five domains	_____
☐	A description of what actions Applicant will take to expand its technical capacity to support Meaningful Use	_____
☐	A description of Applicant's proposed method of marketing the services	_____
☐	A financial plan including a three-year projection of Applicant's expenses, income, and other capital	_____
☐	A description of how Applicant will meet NHIN requirements within the established timeline	_____

Attached	**Application Requirement**	*Page Reference*
☐	2. Applicant's business plan, including:	
	☐ Plans for ensuring the necessary capacity for all clinical transactions necessary for Meaningful Use	
	☐ Approach for attaining financial sustainability, including public and private financing strategies, and rate structures	
	☐ Rates of adoption, utilization, and transaction volume, and mechanisms to support health information exchange	
	☐ An explanation regarding needs of community clinics, critical access hospitals, and free clinics	
☐	3. Applicant's rate plan, including how Applicant:	
	☐ Distributes costs equitably among users of health information services	
	☐ Provides predictable costs for Participating Entities	
	☐ Covers all costs associated with conducting the full range of Meaningful Use clinical transactions	
	☐ Provides for a predictable revenue stream and generates sufficient resources to maintain operating costs and develop technical infrastructure	
☐	4. Copies of policies and procedures related to Complaint Process	
☐	5. Copies of reciprocal agreements with HIOs, including description of how agreements meet requirements of Minn. Stat. § 62J.4981 subs. 5 (a) and (b)	

☐ **Section H:** Compliance with Minn. Stat. § 62J.4981 sub. 2(c)
[HDI Applicants Only]
Documentation of the following items:

☐	1. List of HIOs with whom Applicant currently interoperates	
☐	2. List of HIOs through which Applicant provides an option for Minnesota entities to connect to Applicant's services	
☐	3. Documentation of insurance	
☐	4. Description of Applicant's Record Locator Service	
☐	5. Applicant's strategic and operational plans, including:	
	☐ Description of what actions Applicant will take to expand technical capacity to support Meaningful Use	
	☐ A description of Applicant's proposed method of marketing the services	
	☐ A schedule of proposed charges	
	☐ A financial plan including a three-year projection of expenses, income and other capital	
	☐ A description of how Applicant will meet NHIN requirements within established timeline	
	☐ A description of how Applicant will increase adoption rates to acheive financial sustainability	
☐	6. Copies of reciprocal agreements with HIOs	
☐	7. Description of how Applicant's reciprocal agreements meet the requirements of Minn. Stat. §62J.4981 sub.5(a) and (b)	

Appendix A

Attached	**Application Requirement**	*Page Reference*
☐	**Section I:** Compliance with Federal and Minnesota Privacy Laws [All Applicants]	
☐	1. All Attestations included in Section I	_____
☐	2. List of all policies and procedures demonstrating compliance with Minnesota laws related to the privacy of patient health record information	_____
☐	3. Description of Applicant's Privacy Compliance Program	_____
☐	4. Description of procedures to perform periodic updates to privacy and security policies and procedures	_____
☐	5. Name, title and contact information of Applicant's Chief Privacy Officer.	_____
☐	6. Copies of all standard Business Associate Agreements	_____
☐	7. Description of consumer education regarding "opt-out" option for Record Locator Service	_____
☐	8. Description of how Applicant tracks "opt-out" elections and the process used when an inquiry is made for information on that patient through Applicant's Record Locator Service	_____
☐	9. Description of Applicant's safeguards to minimize unauthorized incidental disclosure during use of the Record Locator Service	_____
☐	10. Description of consumer education regarding how to file a privacy complaint and how Applicant responds to complaints	_____
☐	11. Description of policies and procedures regarding identification and response to a breach of a patient's health record information	_____
☐	12. Description of Applicant's process to conduct periodic random audits to ensure compliance with Applicant's policies and procedures, including verification that patient consent has been obtained before access is granted to the Record Locator Service	_____
☐	13. Description of policies and procedures to minimize privacy and security risks, including how Applicant ensures health records are properly accessed in emergency situations	_____
☐	**Section J:** Attestation, Verification and Signature of Authorized Officer of Applicant Organization [All Applicants]	_____

Appendix B: Assessment and Evaluation Framework

Assessment and Evaluation Framework & Methodology for Electronic Health Records and Health Information Technology

Background

The Minnesota Department of Health (MDH) is responsible for assessing and evaluating the level of adoption, use and interoperability of electronic health records (EHRs) and other Health Information Technology (HIT) in a variety of health and health care settings in Minnesota. This vital information is needed to:

- Measure Minnesota's progress on state and national goals to accelerate adoption and effective use of health information technology across the continuum of care;
- Monitor advancement towards meaningful use to help ensure that eligible professionals and hospitals receive federal incentives under the HITECH Act or other federal incentive programs; and
- Identify strategies and leverage resources to address gaps and barriers in adoption, use, and interoperability.

Introduction

The Assessment and Evaluation Framework & Methodology for Electronic Health Records and Health Information Technology, developed by the Office of Health Information Technology (OHIT), offers a coordinated, systematic approach for assessment and evaluation and assures the findings are used to advance health information exchange.

The Framework & Methodology

The framework and methodology requires collaboration with many partners including

- E-Health Initiative
- Minnesota Hospital Association
- Minnesota Medical Association
- Stratis Health
- Local Public Health Association
- REACH
- Minnesota Community Measurement
- Health Economics Program (MDH)
- Office of Rural Health and Primary Care (MDH)
- Department of Human Services
- University of Minnesota

Collaboration with many partners is essential because the framework includes health and health care settings domains from across the continuum of care and private and government sectors. A total of 21 domains are included in the framework and methodology. The domains are adapted from the *A Prescription for Meeting Minnesota's 2015 Interoperable Electronic Health Record Mandate Appendix A*. The domains to be addressed in 2011 are:

- Hospitals
- Clinics
- Clinical Laboratories
- Local Health Departments
- Long Term and Post Acute Care
- Pharmacies
- Health Information Organizations (HIO)

Assessment and evaluation data is primarily collected through state and national surveys. OHIT and partners provide ongoing feedback on the development and implementation of the surveys, focusing on identifying the status, barriers, and gaps. The findings are shared with partners and stakeholder groups for interpretation. Technical assistance, best practices, policies, and outreach and communication strategies are developed to address the gaps and barriers.

2011 Assessment and Evaluation Plan

	Quarter 1 2011			Quarter 2 2011			Quarter 3 2011			Quarter 4 2011		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hospitals												
AHA Annual Survey Information Technology Supplement with MN Specific Questions	Finalize 2009 analysis & fact sheet (OHIT)	Develop MN specific questions & finalized 2010 survey (AHA, MHA, & HEP)		2010 survey in the field for about 4 weeks (AHA, MHA, HEP)	2010 preliminary analysis & fact sheet (OHIT)		Finalize 2010 analysis & fact sheet (OHIT)			Specialized/ drill down analysis if needed (OHIT)	Identify needs for 2011 Survey (OHIT)	
Distribution & Use	Post 2009 Fact sheet	Post 2009 Chart book	Offer/time for brown bags/ outreach		Post preliminary 2010 fact sheet	Preliminary 2010 analysis & fact sheet released at Summit 6-16	Post 2010 final fact sheet	Post 2010 chart book		Offer/time for brown bags/ outreach		
Clinics												
MN Health HIT Ambulatory Clinic Survey	Finalize 2010 analysis & fact sheet (OHIT)	2011 Survey in the field Feb 15 - Mar 15 (MNCM)		Survey follow-up (MNCM)	2011 preliminary analysis and fact sheet		Finalize 2011 analysis & fact sheet (OHIT)			Specialized/ drill down analysis if needed (OHIT)	Identify needs for 2012 Survey (OHIT)	
Distribution & Use	Post 2010 Fact sheet	Post 2010 chart book	Offer/time for brown bags/ outreach		Post 2011 preliminary fact sheet	Preliminary 2011 analysis & fact sheet released at Summit 6-16	Post 2011 final fact sheet	Post 2011 chart book		Offer/time for brown bags/ outreach		
Laboratories												
MN Health HIT Laboratory Survey	Develop and Pilot 2011 Survey (OHIT)		2011 Survey in the field (OHIT)		2011 Follow-up and preliminary analysis and fact sheet (OHIT)		Finalize 2011 analysis & fact sheet (OHIT)			Specialized/ drill down analysis if needed (OHIT)	Identify needs for 2012 Survey (OHIT)	
Distribution & Use		Reach out to labs on survey			Post 2011 preliminary fact sheet	Preliminary 2011 analysis & fact sheet released at Summit 6-16	Post 2011 final fact sheet	Post 2011 chart book	Offer/time for brown bags/ outreach			

Updated: 2/3/2011
Based on Available Funding and Resources

2011 Assessment and Evaluation Plan

	Quarter 1 2011			Quarter 2 2011			Quarter 3 2011			Quarter 4 2011		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pharmacies												
SureScripts & MN Pharmacy Board	Develop understanding, Identify population (OHIT)		Point in time analysis and fact sheet (OHIT)				Plan for 3rd or 4th quarter activities (OHIT)	TBD	TBD	TBD	TBD	TBD
Distribution & Use				Post fact sheet		Analysis and fact sheet released at Summit 6-16	Offer/time for brown bags/ outreach					
Local Health Departments												
PPMRS Informatics Questions	Technical assistance to LHD to complete questions (OHIT and OPI)			Follow-up and analysis (OHIT)			Finalize 2010 analysis & fact sheet (OHIT)			Specialized/ drill down analysis if needed (OHIT)	Identify needs for 2011 Survey (OHIT)	
Distribution & Use					Post 2010 preliminary fact sheet	Preliminary 2010 analysis & fact sheet released at Summit 6-16	Post 2010 final fact sheet	Post 2010 chart book		Offer/time for brown bags/ outreach		
Long Term and Acute Post Care												
Update Stratis Tool	Review survey tool & meet with partners (OHIT)		Update Tool	Survey in the field			analysis & fact sheet (OHIT)					
Distribution & Use												
Health Information Organizations (HIOs)												
Quarterly Reports			Quarterly Status			Quarterly Status			Quarterly Status			Quarterly Status
Distribution & Use												

Identified domains to be evaluated in 4th quarter for possible assessment in 2012: consumer, telemedicine, dental clinics, chiropractic clinics, tribal public health and health services, and MN Department of Health

Updated: 2/3/2011
Based on Available Funding and Resources

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Project Charter (Draft for Discussion)

Minnesota Clinical e-Laboratory Assessment for HIT Adoption and Use

Project Sponsors: MDH Office of Health Information Technology (OHIT) and
MDH Public Health Laboratory (PHL)

Project Leads: Vipat Kuruchittham (OHIT/CDC), Kari Guida (OHIT), Matthew Zerby (PHL)

Project Supervisors: Martin LaVenture (OHIT) and Chris Brueske (PHL)

Duration: 8 months starting January 2010

Last Updated: 1/24/2011

Introduction

Minnesota Clinical e-Laboratory Assessment is a joint project between Office of Health Information Technology (OHIT) and Public Health Laboratory (PHL) to establish statewide profile of Minnesota clinical laboratories on their adoption, use, and exchange of standardize electronic orders and results delivery. The OHIT and PHL need the assessment to know current status of the laboratories in order to provide them guidance and assistance as needed in modernizing their laboratory system to electronically interoperable statewide.

Background

The Minnesota e-Health Initiative is a public-private collaborative whose vision is to accelerate the adoption and use of health information technology (HIT) in order to improve health care quality, increase patient safety, reduce health care costs, and improve public health. Minnesota has been a leader in pursuing bold e-health policies and applying statutory mandates and governmental funding to accelerate the adoption of HIT, electronic health records and health data standards to meet Minnesota Statutes Section 62J.495, which requires all hospitals and health care providers to have an interoperable electronic health records (EHRs) system by January 1, 2015.

The work of the initiative has increased in momentum with passage of Health Information Technology for Economic and Clinical Health (HITECH) Act Programs which are coordinated by the Office of the National Coordinator for Health Information Technology (ONC). Minnesota Department of Health (MDH) is one of the program awardees to implement State Health Information Exchange (HIE) Cooperative Agreement Program [1], which supports Minnesota to build capacity for exchanging health information. To demonstrate Minnesota's progress on HIE, MDH needs to assess the level of adoption, utilization and exchange of EHRs and other HIT in different health care settings including clinical laboratories.

MDH Public Health Laboratory (PHL) is part of the national Laboratory System Improvement Program (L-SIP) of the Association of Public Health Laboratories (APHL) to strengthen states laboratory systems by developing and implementing an improvement plan based on identified strengths and weaknesses. A L-SIP assessment on June 15, 2010 lists assessing readiness for exchange and creating system wide agreements and policies for information exchange as high priority next steps [2]. This is aligned with Minnesota Strategic Plan for Health Information Exchange describing a need for modernizing clinical laboratories with a use of Health Level Seven (HL7), Logical Observation Identifiers Names and Codes (LOINC), Systematized

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Nomenclature of Medicine (SNOMED) and other standards to improve statewide interoperability and exchange of electronic orders and results delivery. With a joint interest and goal of having statewide interoperable laboratory systems, the OHIT and PHL have agreed to collaborate on the Minnesota clinical e-Laboratory assessment project.

Presently, there is no process and survey tool to monitor current state and progress of the adoption, use, and exchange of HIT in Minnesota-based clinical laboratories. This project intends to fill a gap of establishing and maintaining statewide clinical laboratory profile as related to HIT adoption and effective meaningful use. The statewide clinical laboratory profile will enable MDH PHL, OHIT, Minnesota e-Health Initiative and its partners to determine strategies to accelerate Minnesota-based clinical laboratories to adopt and use HIT effectively which ultimately will improve overall public health.

Other Laboratory Assessments

Magnuson conducted a regional data exchange survey in August 2010 of potential partners to evaluate their interest and capacity for exchange data electronically in the region. Twenty-five organizations completed the survey and most (76%) of which represent either public health, clinic/hospital associated, or referent laboratory [3]. Her report shows that laboratories currently lack ability to electronically exchange laboratory orders and results using standardized format and method. To achieve regional data exchange, privacy and confidentiality, resource difficulties and funding difficulties are listed as the top three challenges the partners have to overcome.

There is an ongoing assessment project by University of Utah and Utah Department of Health to determine human and information technology needs of clinical laboratories to fulfill public health reporting across multiple jurisdictions [4]. They aim to establish a dynamic knowledge base for reportable conditions in the United States. Their preliminary results show one national clinical laboratory has more than 3 persons to manage different reporting requirements for all 50 states.

Purpose and Objectives

The purpose of this project is to establish statewide clinical e-lab profile detailing progress, opportunities, and barriers on the use of HIT along the continuum of adoption, use, and exchange.

Four specific objectives are:

- To develop a survey tool and assess current status of Laboratory Information Management System (LIMS) and other HIT adoption and use in clinical laboratories,
- To identify status, barriers, and gaps among clinical laboratories in fulfilling a Health Information Exchange (HIE) requirement for standard-based electronic orders and results delivery,
- To distribute findings to inform ongoing planning and outreach initiatives to a variety of audiences including border state programs, and
- To identify issues and plan for annual use of this tool and align with national surveys and trends.

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Scope

Include in the scope:

- Survey Minnesota-based clinical laboratories and selected border state labs serving MN residents
- Independent and hospital associated clinical laboratories
- Focus on the 3013 funding as described in the Program Information Notice (PIN) to the Minnesota e-health initiative [5]

Not included in the scope:

- Environmental laboratories, and other non-clinical laboratories
- Any other project or grant requirements not approved by project sponsors

Constraints

- Preliminary findings of the clinical e-laboratory profiles are needed for e-Health Summit on June 16, 2011.
- Budget is limited.

Assumptions

- The project leads are able to reach out to subject matter experts and obtain existing tools in a timely manner to create a valid, complete survey.
- Consensus among stakeholders can be reached on which aspects should be covered in the survey.
- A point of contact for each selected clinical laboratory can be obtained and responses to the survey are received within the set timeframe.

Benefits and Risks

Expected benefits

- Results of the survey will help MDH PHL, OHIT, Minnesota e-Health Initiative and its partners establish appropriate strategies to accelerate HIT adoption, use, and exchange among clinical laboratories.
- The survey tool can be used to regularly monitor and evaluate HIT progress of clinical laboratories statewide, so as to enable MDH Public Health Laboratory and its partners to assist late adopters as needed.

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Anticipated risks

Risks	Probability of Occurrence	Impact	Risk Mitigation Strategy
Unable to identify the right person for survey	Low-Medium	Medium-High	Utilization of network of team members to identify a lead person in each laboratory
Vague direction and objectives	Low	Medium	Early agreement on objectives and scope; follow project charter
Staff turnover	Low	High	Adequate documentation for knowledge transfer
Insufficient tool	Low	High	Consult subject matter experts to ensure the tool is valid and complete.

Communications and Outreach Plan

Targeted clinical laboratories will be informed early in the process about purpose and objectives of the survey and plan using existing PHL communication channels as much as possible. After the survey, results will help determine how to reach out to laboratories in need of guidance and support. By the end of this project, factsheet and chart book will be produced and distributed to participated laboratories and interested audiences.

Approach

The project team will identify Minnesota clinical laboratories and border state clinical laboratories serving Minnesota residents for the survey. In addition, the team will specify which laboratories will additionally serve in pilot testing of survey instrument. While a number of laboratories for survey should be manageable to obtain results quickly and enable the group to present preliminary findings at the e-Health Summit in June 2011, the number must also be sufficient to represent all clinical laboratories in Minnesota.

We will try not to reinvent the wheel and leverage existing resources as much as possible in constructing a set of questions to identify current status, barriers, and gaps in exchanging standard-based laboratory orders and results delivery electronically. We expect our respondents to complete the survey in 15 minutes and this will determine how many questions we may have in total. Then, the advisory group will meet to review the selection method of laboratories and survey questions prior to a pilot test.

After incorporated changes from the advisory group, the instrument will be pilot tested with a few selected laboratories. Depending on results of the pilot test, revision of the questions may be needed. The advisory group may meet to help finalize questions prior to the survey roll out. The survey will be administered through electronic mediums (e.g., SurveyMonkey) to allow prompt data collection and analysis. Two e-mail reminders will be sent to non-respondents to encourage participation.

Preliminary analysis of the survey should be done in May so as to present preliminary findings at e-health Summit. The advisory group may reconvene to advise on the analysis and findings. Respondents may be followed up for unanswered questions or clarification. Final analysis will

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

produce factsheet, chart book, recommendation for the next survey cycle. The advisory group will meet to review these documents before distribution.

Major Deliverables

Deliverables	Anticipated date
Team members assembled	1/26/2011
Approved project charter and work plan	2/16/2011
Selected list of laboratories and inform them of the survey	2/23/2011
Pilot test goes out in the field	3/14/2011
Statewide survey implemented in the field	4/11/2011
Preliminary analysis of results (Factsheet)	5/31/2011
Follow-up and validation completed	7/15/2011
Final products ▪ Factsheet ▪ Chart book ▪ Recommendation for the next survey cycle	8/31/10

e-Lab Assessment Project Team

Project team members will meet regularly to collectively design, guide implementation, interpret results, and determine next steps of the clinical e-Laboratory assessment.

Name	Role
Martin LaVenture	OHIT Sponsor
Chris Brueske	PHL Sponsor
Matthew Zerby	PHL Lead
Carrie Wolf	Member
Paula Vagnone	Member
Jennifer Adams	Member
Kari Guida	OHIT Lead
Vipat Kuruchittham	OHIT Lead

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

e-Lab Assessment Advisory Group

Members of the advisory group will advise the project team members on assessment methodology, interpretation of findings, and recommendations of next steps. Advisory members are expected to participate in 2-4 one-hour teleconference calls or in-person meetings from March to August 2011. Documents will be distributed prior to each meeting for your review.

Name / Representation
Tamara Winden
Patina Zarcone-Gagne
Donald Connelly
Asa Schmit
Epidemiology
Independent lab
Large hospital (non-lab) e.g., hospital association
Small hospital (non-lab)
External lab

References

1. Office of the National Coordinator for Health Information Technology. (December 13, 2010). State Health Information Exchange Cooperative Agreement Program. Retrieved December 23, 2010, from http://healthit.hhs.gov/
2. Minnesota Department of Health (July 20, 2010). Final Report Summarizing the Minnesota Department of Health Laboratory System Improvement Program (L-SIP) Assessment. Retrieved January 5, 2010, from http://www.health.state.mn.us/divs/phl/LSIP/lsip_results.html
3. Magnuson JA, Final Summary Report of Regional Data Exchange Survey conducted in August 2010. (Personal communication)
4. Gundlapalli AV, et al. Public Health Reporting by Clinical Laboratories: Survey of Current Practices and Needs Assessment for Informatics Solutions. AMIA 2010 Annual Symposium Proceedings.
5. Office of the National Coordinator for Health Information Technology. (July 6, 2010). Requirements and Recommendations for the State Health Information Exchange Cooperative Agreement Program. Retrieved December 23, 2010, from http://healthit.hhs.gov/

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Appendix

Definition

In this study, we defined **clinical laboratory** as a facility where moderate or high complexity tests are performed on human specimens for health assessment of a patient as pertaining to the diagnosis, prevention, or treatment of disease. These laboratories are likely to send lab results externally to ordering providers and not being the ordering providers themselves.

This study excludes clinical laboratories performing only waive tests and/or microscopy procedures. In other words, the study excludes laboratories with CLIA certificate of waiver or CLIA certificate for Provider-Performed Microscopy Procedures (PPMP).

Waiver tests include tests of:

- Cholesterol
- Fecal Occult Blood
- Glucose
- Hemoglobin
- Hemoglobin A1C
- Hematocrit
- Influenza
- Lyme Disease
- Ovulation
- Prothrombin Time
- Rapid Strep
- Sedimentation Rate
- Urinalysis Dipstick
- Urine Pregnancy

[Source: https://www.cms.gov/CLIA/downloads/waivetbl.pdf ; https://www.cms.gov/CLIA/downloads/wquest.pdf]

Microscopy procedures include:

- Fecal leukocyte (WBCs)
- Fern test
- Potassium hydroxide (KOH)
- Nasal smear for granulocytes
- Pinworm
- Post-coital (vaginal or cervical)
- Semen analysis (presence/absence)
- Urinalysis (microscopic) – including 2 or 3 glass test
- Wet mount

[Source: http://health.utah.gov/lab/labimp/CLIA_cert_types.pdf]

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Number of CLIA labs by type and certificate

Lab Type Description	v. accreditation	iv. compliance	ii. microscopy	i. waiver	Total
1. Ambulance	1			77	**78**
2. Ambulatory Surgery Center	2	3	2	49	**56**
3. Ancillary Test Site	8	4		30	**42**
4. Assisted Living Facility				149	**149**
5. Blood Banks	2				**2**
6. Community Clinic	66	18	20	60	**164**
7. Comprehensive Outpatient Rehab				5	**5**
8. End Stage Renal Disease Dialysis	1			84	**85**
9. Federally Qualified Health Center	2	3		5	**10**
10. Health Fair				11	**11**
11. Health Health Maint Organization	15			2	**17**
12. Home Health Agency			1	358	**359**
13. Hospice				17	**17**
14. Hospital	94	53	3	15	**165**
15. Independent (including **Quest**)	17	16	1	12	**46**
16. Industrial				10	**10**
17. Intermediate Care Facility				70	**70**
18. Mobile Lab			2	26	**28**
19. Other	43	20	15	520	**598**
20. Other Practitioner	16	3	2	51	**72**
21. Pharmacy				147	**147**
22. Physician Office	309	92	104	229	**734**
23. Prison				3	**3**
24. Public Health Laboratory		2		4	**6**
25. Rural Health Care Clinic	6	10	2	25	**43**
26. School/Student Health Service	6	2	8	45	**61**
27. Skilled Nursing/Nursing Facility	1		1	361	**363**
28. Tissue Bank/Repositories		1			**1**
Total	**589**	**227**	**161**	**2,365**	**3,342**

Source: [http://wwwn.cdc.gov/clia/oscar.aspx on 2011-01-21](http://wwwn.cdc.gov/clia/oscar.aspx)

Types of CLIA Certificates

i. **Certificate of Waiver** is issued to a laboratory to perform only waived tests.
ii. **Certificate for Provider-Performed Microscopy Procedures (PPMP)** is issued to a laboratory in which a physician, midlevel practitioner or dentist performs no tests other than the microscopy procedures. This certificate permits the laboratory to also perform waived tests.
iii. **Certificate of Registration** is issued to a laboratory that enables the entity to conduct moderate or high complexity laboratory testing or both until the entity is determined by survey to be in compliance with the CLIA regulations.
iv. **Certificate of Compliance** is issued to a laboratory after an inspection that finds the laboratory to be in compliance with all applicable CLIA requirements.
v. **Certificate of Accreditation** is issued to a laboratory on the basis of the laboratory's accreditation by an accreditation organization approved by HCFA.

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Possible options for e-Lab selection

		# of Labs
By Certificate		
A.	v. Accreditation + iv. Compliance	**816**
By Lab Type		
B.	14. Hospital	165
	15. Independent	46
	24. Public Health Laboratory	6
	Total	**217**
C.	All B. [9 + 14 + 15 + 24]	217
	6. Community Clinic	164
	9. Federally Qualified Health Center	10
	22. Physician Office	734
	25. Rural Health Care Clinic	43
	Total	**1,168**
By Certificate and Lab Type		
D.	A and B	**182**
E.	A and C	**688**
F.	A or B	**851**
G.	A or C	**1,296**

Appendix C: Minnesota Clinical Laboratory Assessment Project Charter

Sections of e-Lab assessment survey

1. Introduction
2. Survey instructions
3. Basic information
    a. Respondent's name, title, email, phone
    b. Lab name, county, zip code
    c. CLIA lab type and certificate type
    d. # of clinics within a group (e.g., Allina)
    e. Affiliation with hospitals/clinics, larger national chain, etc.
    f. Monthly volume of clinical tests and type of tests
    g. Number of customers and spread (local, regional, statewide, national)
    h. Awareness of State HIE Cooperative Agreement Program and interest to participate
4. Workforce
    a. FTEs by category (technical staff, IT staff, administrative, etc.)
    b. IT support (in-house/outsource; hardware/software support)
5. Current status of using LIMS
    a. Yes/being implemented
        i. Name of LIMS
        ii. Influence of using LIMS (required by providers, want better system, etc.)
        iii. Functionalities (downloadable lab results, lab notes, flag/submit reportable diseases, highlighted out-of-rage values, etc.)
        iv. Standards used for exchange (HL7, LOINC, SNOMED, etc.)
        v. Ability to exchange (send/receive) structured data between laboratories, providers, and public health; percentage of exchanging electronically with each entity
    b. No/ in planning
        i. Method of information exchange (paper, fax, email, etc.) and with whom
        ii. Implementation plan
            1. When
            2. Messaging and coding standards planned to implement
        iii. Challenges/barriers of the implementation (cost, personnel, privacy and security, Internet access, IT support, etc.)
6. Support needed for exchange

Appendix D: Project Schedule

Milestone / Activity	Status	Q5 (1/11 - 3/11)	Q6 (4/11 - 6/11)	Q7 (7/11 - 9/11)	Q8 (10/11 - 12/11)	Q9 (1/12 - 3/12)	Q10 (4/12 - 6/12)	Q11 and beyond	Lead (L) & Consulting (C) Workgroups					Advisory Committee (AC), MDH/OHIT Staff, Sub-Recipient and Other Roles (RP= Review Panel; DHS = Dept of Human Services, SC = State Government HIE Steering Committee, SP = HIE Service Providers)			
									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
STRATEGIC AND OPERATIONAL PLANS																	
Strategic Plan – Establish and implement a strategic plan.																	
Develop and approve a vision for health information exchange in Minnesota	✓								L		C	C	C	X	X		
Develop and approve public good principles for health information exchange in Minnesota	✓								L		C	C	C	X	X		
Develop and approve goals, objectives, and strategies for the strategic plan for each of the five domain areas	✓								L		C	C	C	X	X		
Draft strategic plan	✓										C	C	C		X		
Preliminary approval of the strategic plan by Advisory Committee	✓								L		C	C	C	X			
Two week public comment period for the strategic plan	✓														X		
Final approval of the strategic plan by the Advisory Committee with letters of support from members and approval by the Commissioner of Health and the Commissioner of Human Services	✓													X			
Submission of plan to ONC	✓														X		
HIE Workgroup and Standards and Interoperability Workgroup Meetings - refining overall strategy	✓								L			C		X	X		
Endorsement by HIE Workgroup and Advisory Committee	✓	X												X			
Submission of plan addendum to ONC	✓	X													X		
Approval of Plan by ONC		X													X		ONC
Annual updates to the Strategic Plan reviewed and approved by ONC (as required)						X		X	L	C	C	C	C	X	X		
Operational Plan – Establish and implement an operational plan.																	
Draft operational plan	✓								C		C	C	C		X		
Preliminary approval of operational plan by Advisory Committee	✓													X			
Four week public comment period on the operational plan	✓														X		

*Project Schedule to be updated on an ongoing basis as additional federal and state requirements are defined
Last updated:2/4/2011

Appendix D: Project Schedule

Milestone / Activity	Status	Q5 (1/11 - 3/11)	Q6 (4/11 - 6/11)	Q7 (7/11 - 9/11)	Q8 (10/11 - 12/11)	Q9 (1/12 - 3/12)	Q10 (4/12 - 6/12)	Q11 and beyond	Lead (L) & Consulting (C) Workgroups					Advisory Committee (AC), MDH/OHIT Staff, Sub-Recipient and Other Roles (RP= Review Panel; DHS = Dept of Human Services, SC = State Government HIE Steering Committee, SP = HIE Service Providers)			
									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Final approval of operational plan by the Advisory Committee	✓													X			
Submission of plan to ONC	✓														X		
Submission of plan addendum to ONC	✓														X		
Operational Plan approved by ONC		X													X		ONC
Annual updates to the Operational Plan reviewed and approved by ONC (as required)						X		X	C	C	C	C	C	X	X	X	
GOVERNANCE DOMAIN																	
Governance Structure – Establish a governance structure that achieves broad-based stakeholder collaboration with transparency, buy-in and trust.																	
Review and approve possible governance models for health information exchange in Minnesota (differentiating different levels of governance - policy governance through the Adivisory Committee, oversight governance through the oversight panel, internal HIO/HDI governance)	✓								L		C	C		X	X		
Develop and approve health information exchange governance recommendations following a 30 day public comment period.	✓								L		C	C		X	X		
Collaborative governance model endorsed by stakeholders	✓								L		C	C		X			
Collaborative governance model approved by ONC	Pending	X													X		
Health Information Exchange Oversight law enacted and implemented	✓														X		
HIE Oversight Process established, including establishment of HIE Oversight Review Panel	✓														X		
State Certification of two Health Information Organizations	✓														X		
Ongoing e-Health Advisory Committee and Workgroup meetings - stakeholder guidance and support		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
FINANCE DOMAIN																	
Sustainability Plan – Develop a path to sustainability including a business plan with feasible public/private financing mechanisms for ongoing information exchange.																	

*Project Schedule to be updated on an ongoing basis as additional federal and state requirements are defined
Last updated:2/4/2011

Appendix D: Project Schedule

Milestone / Activity	Status	Q5 (1/11 - 3/11)	Q6 (4/11 - 6/11)	Q7 (7/11 - 9/11)	Q8 (10/11 - 12/11)	Q9 (1/12 - 3/12)	Q10 (4/12 - 6/12)	Q11 and beyond	Lead (L) & Consulting (C) Workgroups					Advisory Committee (AC), MDH/OHIT Staff, Sub-Recipient and Other Roles (RP= Review Panel; DHS = Dept of Human Services, SC = State Government HIE Steering Committee, SP = HIE Service Providers)			
									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Develop Minnesota Approach to HIE Financial Sustainability (including working definition, principles, issues/barriers, discussion questions, and overall approach)	✓								L					X	X		
Develop scope for financial sustainability (what is included, what is excluded)	✓								L					X	X		
Identify potential data sources and gather supporting data to help facilitate discussions	✓								L					X	X		
discussion questions generated by sub-workgroup on financial sustainability	✓								L					X	X		
Identify solutions for mitigating risks associated with potential issues / barriers related to financial sustainability	✓								L					X	X		
Identify and discuss recommendations on HIE financing framework core components (e.g., sources of funds, funders, funding mechanisms, recipients, uses of funds, revenue mechanisms, revenue sources, etc.)	✓								L					X	X		
Review data submitted by HIOs on financial sustainability	✓								L						X		RP
Develop Minnesota plan for financial sustainability				X	X				L					X	X		
Sustainability plan endorsed by stakeholders and approved by Advisory Committee					X				L					X	X		
Sustainability plan approved by ONC						X									X		ONC
Sustainability plan reviewed and updated annually								X							X		
TECHNICAL INFRASTRUCTURE DOMAIN																	
Technical Infrastructure – Develop or facilitate the creation of a statewide technical infrastructure that supports statewide HIE.																	
Statewide technical infrastructure for supporting HIE services developed and ready for implementation by State Certified Health Information Exchange Service Providers	Ongoing	X	X	X	X	X	X	X									SP
HIO interoperability as required by MN Statute			X	X											X		SP
Establish Connectivity for Robust Exchange (HIO Performance-based Incentives) and Connecting Providers in Need (Community Connectivity Grants)																	

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Develop initial use requirements and specifications for establishing robust exchange and connecting providers in need (onnectivity gaps/strategies)		X													X		
Solicitation for establishing connectivity for robust exchange and connecting providers in need		X	X												X	X	
Award(s) made			X												X	X	
Contract(s) / grant(s) executed				X											X	X	
Phase 1 of connectivity strategies completed					X	X									X	X	
Phase 2 of connectivity strategies completed								X							X	X	
Phase 3 of connectivity strategies completed								X							X	X	
Shared Services – Develop or facilitate the creation and use of shared services to support statewide HIE (directories, consumer preferences, RLS integration)																	
Recommend an approach for creation and use of shared services to support HIE	✓								L			L		X	X		
Develop initial use narratives, technical requirements, and specifications for shared directories and interoperability of RLS		X															
Solicitation for development of shared services		X	X												X	X	
Award(s) made			X														
Contract(s) executed				X													
Phase 1 of technical infrastructure strategies completed					X	X									X	X	
Phase 2 of technical infrastructure strategies completed								X							X	X	
Phase 3 of technical infrastructure strategies completed								X							X	X	
Activities related to Standards and Interoperability																	

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									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Provide review and feedback as necessary on HITECH activities including: proposed standards, implementation criteria for electronic exchange and use of health information (related to "meaningful use" requirements); security standards; strategic and operational plans that support standards-based health information exchange as specified by Section 3013 of HITECH Act		X	X	X	X	X	X	X	C			L		X	X		
Identify implementation tools and resources promoted at national level and disseminate to support statewide standards implementation		X	X	X	X	X	X		C			L		X	X		
Review plans of regional extension centers to promote standards-based exchange of health information as part of "meaningful use" requirements and work collaboratively on resources and actions that will help increase implementation of these standards		X	X	X	X	X	X		C	C		L		X	X		
Update the tools and resources to support implementation of e-health standards including those that can help support achieving meaningful use		X	X	X	X	X	X		C			L		X	X		
Deliver updated drafts of Guide 2 (Standards Recommended for Use in Minnesota)			X				X	X				L		X	X		
Activities related to EHR Adoption and Meaningful Use																	
Provide input and feedback on State Medicaid HIT Plan ("as-is" landscape, "to-be" landscape, administration and oversight activities, audit strategy, roadmap); Medicaid EHR Incentive Administration Plan; CMS final regulations for EHR incentives; analyze the implications of changes/updates to meaningful use guidelines and communicate those implications to stakeholders, providers, and the public		X								L				X	X		DHS

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Coordinate communication efforts to: encourage all stakeholders and providers to understand state and federal mandates for HIT/EHR adoption; encourage all stakeholders and providers to understand and take advantage of resources made available through state and federal grants, low cost loans, and other sources of funding, technical assistance and training		X	X	X	X	X	X	X	C	C	C	C	C	X	X		DHS; REACH
Review and amend/update the state "meaningful use" adoption strategy. Review tactics that support the strategy and suggest changes/updates if strategic goals are not being reached		X	X	X	X	X	X	X	C	L	C	C	C	X	X		DHS; REACH
Provide recommendations and guidance to the Regional Extension Center (REACH) and others regardeing solutions to addressing barriers to HIT adoption and achievement of meaningful use		X	X	X	X	X	X	X	C	L	C	C	C	X	X		DHS; REACH
BUSINESS AND TECHNICAL OPERATIONS DOMAIN																	
Monitoring Capacity – Monitor and plan for remediation of the actual performance of HIE throughout the state.																	
Project management protocols are identified and operational	✓														X	X	SC
Reporting requirements: ARRA reports due 10 days after each calendar quarter, submitted along with Financial Status Report SF-269		X	X	X	X	X	X	X							X	X	
Program progress reports due semi-annually	TBD														X	X	
Communications and Technical Assistance																	
Communication plan implementation and ongoing updates as necessary		X	X	X	X	X	X	X	C	C	C	C	L	X	X		
Communication plan implementation: leveraging meaningful use along the entire continuum of care; e-Health Summit promotion	✓		X												X		DHS; REACH
Phase 1 of information strategies completed			X	X	X	X									X	X	

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									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Phase 2 of information strategies completed								X							X	X	
Phase 3 of information strategies completed								X							X	X	
Focused communication / education: Minnestoa law on HIE oversight goes into effect in July (announce law, oversight process for HIE service providers established, etc.)				X											X		
Focused communication /education: Meaningful use rule released,				X											X		DHS; REACH
Focused communication / education: messages about 2011 e-prescribing mandate		X	X	X	X										X		REACH
Focused communication / education: ongoing MN e-Health plans for workgroups, how to participate		X	X	X	X	X	X	X							X		
Focused communication / education: meaningful use incentives for hospitals		X	X	X	X	X	X	X							X		DHS; REACH
Focused communication / education: announcements on health information exchange (how to get connected to a certified HIE service provider; announce HIE service provider complaint process)		X	X	X	X	X	X	X							X		REACH
Quarterly coordination meetings with REACH program, MN Dept of Human Services, and others as identified		X	X	X	X	X	X	X							X		DHS; REACH
Identify needs for outreach and communications, identify mechanisms for providing ongoing outreach and communications		X	X						C	C	C	C	C		X		DHS; REACH
Develop targeted communications to address outreach gaps that engage health care organizations, providers to support the adoption and use of EHRs to achieve meaningful use and compliance with the 2011 and 2015 mandates			X	X	X	X	X	X	C	C	C	C	C		X		DHS; REACH
Recommend consumer communications resources to add to the Minnesota e-Health website, incorporating contributions of the Minnesota e-Health workgroups			X	X	X	X	X	X	C	C	C	C	C		X		
Implement boot camps in partnerhsip with REACH			X	X	X	X	X	X		C							REACH

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									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Develop a guide targeted to health/health care providers about health information exchange to help develop solutions addressing identified HIE barriers and update as needed			X	X	X	X	X		L	C	C	C	C		X		REACH
Project management/risk management																	
State Governement Health Information Exchange Steering Committee established	✓														X		DHS
Monthly meetings to provide project management oversight - State Governement Health Information Exchange Steering		X	X	X	X	X	X	X							X		DHS
Project status reports with ongoing risk management plans and project revisions as necessary reported monthly		X	X	X	X	X	X	X							X		DHS
LEGAL AND POLICY ISSUES DOMAIN																	
Statewide Policy Framework – Establish a statewide policy framework that allows incremental development of HIE policies over time.																	
Statewide Policy Framework endorsed by stakeholders	✓								C		L	C		X	X		
Statewide Policy Framework established and approved by ONC (Current legal framework pertaining to privacy & security, specific elements in HIE oversight language provides for automatic adjustments in HIE policies with the changing federal landscape and the evolution of HIE policy.)	Pending													X	X		ONC
Needed modifications to state laws to enable and foster health information exchange within the state and interstate have been identified and, where possible, enacted		X	X	X	X	X	X	X	C		L	C		X	X		
Policies, procedures and trust agreements have been established to enable and foster health information exchange within the state and interstate and include provisions allowing for public health data use (as required by state law)	✓														X		

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Provide review and feedback necessary on HITECH activities including: proposed federal rules and guidance pursuant to the HITECH Act related to privacy, legal and policy issues; legal and policy sections of updated strategic and operational plans that support health information exchange as specified by section 3013 of HITECH Act; privacy, legal and policy issues identified by the Minnesota e-Health Initiative Advisory committee and staff		X	X	X	X	X	X	X	C		L			X	X		
Develop annual report to be submitted to the Office of the National Coordinator on "Implementation and Evaluation of Policies and Legal Agreements related to HIEs" and identify any issues for further policy development	TBD								C		L			X	X		
Review and comment on policy issues, including: breach notification issues and requirements; management of consumer preferences issues and establishment of dispute resolution process regarding differences among HIOs, HDIs and providers related to consumer preferences		X	X	X	X	X	X		C		L			X	X		
COORDINATION WITH ARRA PROGRAMS																	
Alignment with ARRA – Statewide HIE efforts are aligned with other federal programs.																	
Ongoing coordination activities with other ARRA/HITECH programs (see Addendum for additional detail)		X	X	X	X	X	X	X						X	X	X	HITECH programs
COORDINATION WITH OTHER STATES																	
Develop UM-HIE Coalition charter, project plan, timeline, and deliverables	✓								C		L				X		
UM-HIE states identify mechanisms that will be used to gather stakeholder input on concerns/barriers and potential solutions to enable interstate HIE; UM-HIE states identify relevant statutes and regulations pertaining to consent laws and authority/enforcement mechanisms and liability for bad actors	✓								C		L				X		

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									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
UM-HIE states work with stakeholder groups to gather input on potential assurances that could be incorporated into agreements with other states to address concerns; research potential mechanisms for establishing agreements to the states		X	X						C		L				X		
UM-HIE states work toward consensus on solutions to identified concerns/ barriers		X	X						C		L				X		
UM-HIE states gather feedback on proposed consensus solutions and potential mechanisms for establishing agreements between states		X	X						C		L				X		
UM-HIE states identify appropriate individuals to serve on drafting team to develop proposed language for state agreements		X	X	X					C		L				X		
Initial draft language is prepared for agreements between UM-HIE states; UM-HIE states gather feedback from stakeholders on draft language		X	X	X					C		L				X		
Final review and approval of language for agreements between UM-HIE states		X	X	X					C		L				X		
Review environmental scan of laws in those states and identify potential barriers to successful interstate HIE, including laws related to: patient consent requirements/options; sensitive services; processing paper transactions; release of lab results to providers other than the ordering provider; authentication	✓								C		L				X		
Discuss and comment on possible solutions, including: interstate compact agreements; DURSA/federal initiatives; changes to Minnesota law		X	X	X					C		L				X		
OUTCOMES AND PERFORMANCE MEASURES - Ongoing Assessment and Evaluation																	
Review HIT/HIE assessments, key performance measures, and other data sources to identify issues and barriers regarding health information exchange		X	X	X	X	X	X	X	C	L				X	X		

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									EX	MU	L/P	S/I	O/E	AC	MDH/ OHIT	SUB	OTHER
Develop evaluation plan for HIE - including surveys to be used and timelines for receiving the data (e.g., Minnesota framework for evaluation; available data sources; data collection methods; analysis plans)	✓	X	X	X	X	X	X	X	C	L				X	X		
Collect and analyze data and publish information about Minnesota's health information exchange efforts		X	X	X	X	X	X	X	C	L				X	X		
Hospital (AHA) Annual Survey in the field			X							C					X		
Hospital (AHA) Annual Survey results released				X						C					X		
MN Health IT Ambulatory Clinic Survey in the field		X								C					X		
MN Health IT Ambulatory Clinic Survey results released			X	X						C					X		
Lab Survey in the field		X	X							C					X		
Lab Survey results released			X	X						C					X		
Pharmacy analysis (Surescripts data)		X	X	X	X	X	X	X		C					X		
Local Health Departments Survey in the field		X								C					X		
Local Health Departments Survey results released			X	X						C					X		
Long-term and Post Acute Care Survey in the field			X							C					X		
Long-term and Post Acute Care Survey results released				X						C					X		
Quarterly reports from State Certified HIE Service Providers		X	X	X	X	X	X	X	C						X		
Annual report to legislature regarding status of health information exchange in Minnesota		X				X									X		
Identify specific benchmarks that will be included in contracts with sub-recipients & outline technical assistance that will be available to the HIO to assist in reaching specified targets		X	X												X		
Evaluate Minnesota's impact of HIT/HIE on achieving Minnesota's health care reform goals								X	C	L				X	X		

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Identify gaps, make recommendations, and identify resources for how to support health / health care providers in other settings		X	X	X	X	X	X	X	C	L				X	X		
Review Minnesota progress in effective use of EHRs and make recommendations for supporting Minnesota providers, including idenfying gaps and providing guidance to health / health care providers		X	X	X	X	X	X	X	C	L				X	X		
developing a standard set of questions that can be used in assessments conducted in other settings and promoting the standard set of questions with associations to encourage additional		X	X	X	X	X	X	X	C	L				X	X		

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Appendix E: Project Risk Assessment

Minnesota Strategic and Operational Plan for Health Information Exchange

Risk Description	Impact (1=low, 3=high)	Likelihood (1=low, 3=high)	Total Weight (IxL)	Plan to Address Risks
National focus on NWHIN Direct decreases emphasis (and perceived need) for more robust exchange, placing financial sustainability of Health Information Organizations at risk	3	2	6	Address in connectivity gaps by providing financial incentives to State-Certified Health Information Organizations for on-boarding of providers; increase communication efforts to explain the need for more robust exchange to achieve Minnesota's 2015 mandate for interoperability.
Confusion over Minnesota health information exchange options, including NWHIN Direct	3	2	6	Address in information gaps by providing clear communications to providers about their options for achieving meaningful use.
Lack of standards related to content for shared directories	2	3	6	Participate in national discussions regarding shared directories while supporting incremental steps in Minnesota that can be adaptable over time.
Delay in start of the project and resulting implementation of HIE due to delays in RFP development, executing contracts	2	3	6	Project manager will follow-up at necessary steps to ensure prompt sign-off. Project requires detailed project schedule to ensure expedited project execution.
Uncertainty over future phases of meaningful use, EHR certification, and NWHIN requirements makes it difficult for longer-term planning	2	2	4	Develop plans with incremental steps and processes to adjust plans as needed as there is more clarity.
Inconsistencies in Minnesota statute definitions regarding direct exchange from the national definition resulting in confusion in the marketplace	1	3	3	Change language in Minnesota statute to clarify inconsistencies and to allow for regulatory oversight of Health Information Service Providers
Minnesota's free market approach through Minnesota's regulatory framework inadvertently limits the number of entities wanting to become certified by the state and therefore, limits Minnesota's HIE options	2	1	2	Monitor developments in the Minnesota HIE marketplace and adjust plans accordingly.