Health Information Exchange Legislative Study

April 2018

April 11, 2018

The Honorable Michelle Benson
Chair, Health and Human Services Finance
and Policy Committee
Minnesota Senate
3109 Minnesota Senate Building
95 University Ave. W.
Saint Paul, MN 55155-1606

The Honorable Matt Dean
Chair, Health and Human Services Finance
Committee
Minnesota House of Representatives
401 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
Saint Paul, MN 55155

The Honorable Jim Abeler
Chair, Health, Human Services Reform Finance and
Policy Committee
Minnesota Senate
3215 Minnesota Senate Building
95 University Ave. W.
Saint Paul, MN 55155-1206

The Honorable Joe Schomacker
Chair, Health and Human Services Reform
Committee
Minnesota House of Representatives
509 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
Saint Paul, MN 55155

To the Honorable Chairs:

The enclosed report summarizes the findings of the Minnesota Department of Health's (MDH) study to assess Minnesota's legal, financial, and regulatory framework for health information exchange (HIE), including the requirements in the Minnesota Health Records Act, or MHRA. As directed by the legislature, this study also provides recommended modifications that would strengthen the ability of Minnesota health care providers to securely exchange data in compliance with patient preferences and in a way that is efficient and financially sustainable, so that we can ensure the safest possible care for patients in every setting of care.

The analysis describes the barriers to achieving statewide HIE, including our current, fragmented system of unconnected HIE networks, strict privacy and disclosure requirements, an unequal playing field in terms of access to resources to support up-front and ongoing costs for HIE. Together, these challenges mean that patient information is not being shared and used as it should be to support healthy individuals and communities. It also increases patients' risk of experiencing duplicative tests, unsafe transitions between hospitals and long term care facilities, and diagnostic and other errors.

The primary recommendation, based on this study's findings, is to move Minnesota in the direction of a 'connected networks' model that will make essential HIE services accessible to all stakeholders statewide and be consistent with national initiatives. To achieve this, the

Minnesota Department of Health (MDH), with endorsement from the Minnesota e-Health Advisory Committee, recommends:

1. The Minnesota Legislature should modify the Minnesota Health Records Act to align with HIPAA only for disclosure purposes and to support HIE while maintaining key provisions to ensure patient control of information.
2. MDH should establish a task force of the e-Health Advisory Committee to develop strategic and implementation plans for coordinating HIE network connections.
3. The MN Legislature should act on the recommendations of the e-Health Initiative's HIE task force that are expected to include:
    a. Updating Minnesota's Health Information Exchange Oversight law to support the coordinated networks concept.
    b. Appropriating funds to help providers connect to HIE services and develop ongoing coordinated HIE services.

We look forward to working with key HIE stakeholders, including health care providers from acute and long term care settings, payers, local public health, and others, to move forward with this important work. Questions about this report may be directed to Diane Rydrych, Director of the Division of Health Policy at the Minnesota Department of Health, by phone at (651) 201-3564 or by email at Diane.Rydrych@state.mn.us.

Sincerely,

Jan K. Malcolm
Commissioner
P.O. Box 64975
St. Paul, MN 55164-0975
www.health.state.mn.us

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As requested by Minnesota Statute 3.197: this report cost approximately $335,660 to prepare, including staff time, printing, and mailing expenses.

Upon request, this material will be made available in an alternative format such as large print, Braille, or audio recording. Printed on recycled paper.

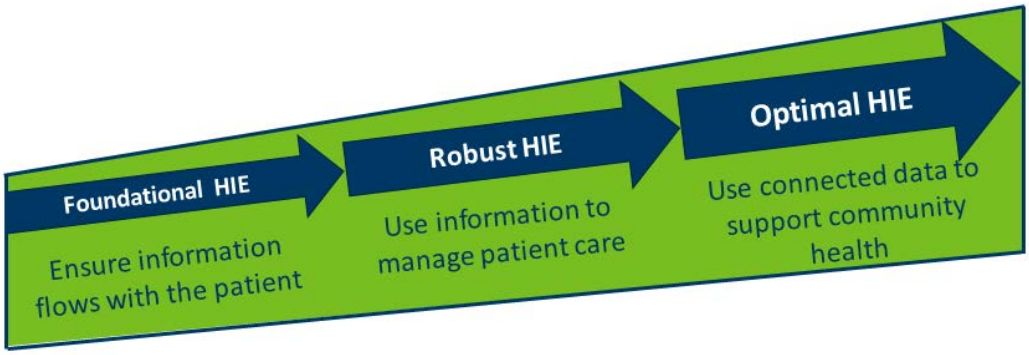
Executive summary

Health Information Exchange (HIE) is the electronic flow of health information between a patient's health care providers. Minnesota has made progress on HIE, but it is not yet occurring equitably nor robustly across the state, meaning that access to health care information for many Minnesotans continues to be inefficient and fragmented when they visit multiple providers or health systems. To have effective HIE, every health organization needs to participate, with each person's information more easily available when and where it is needed to better serve them.

To help address this problem, the 2016 Minnesota Legislature requested a study to assess Minnesota's legal, financial, and regulatory framework for HIE, including the requirements in Minnesota Statutes, Sections 144.291 to 144.298 (the Minnesota Health Records Act), and to recommend modifications that would strengthen the ability of Minnesota health care providers to securely exchange data in compliance with patient preferences and in a way that is efficient and financially sustainable.

About Health Information Exchange

This study identified three important uses for HIE that greatly and favorably impact individual and community health. First is "foundational" HIE, meaning that basic health information flows with the patient to any provider they see. Building upon the foundation, "robust" HIE involves using health information from all providers across the care continuum to coordinate and manage patient care based on the patient's consolidated health picture and use analytics to support health outcomes. A third level of "optimal" HIE use allows communities to understand the health status of their population, better handle disease outbreaks, and manage emergency response.



In Minnesota, quite a lot of HIE is happening securely, with appropriate authorization, within individual health systems and health information networks; however, many of the networks are not efficiently connected to each other, which means that even foundational HIE isn't consistently happening for every patient. Achieving higher levels of HIE will require moving

towards a concept of "connected HIE networks," which means that each of these networks has a connection to each other network and all can exchange clinical information with each other using uniform standards and rules. Any organization that participates with any of those networks is then connected to all of the organizations participating in any of the networks.

Findings

This study revealed a number of barriers and gaps that are inhibiting effective HIE in Minnesota:

- Minnesota needs to establish foundational HIE across all providers in the state to ensure that a person's entire care team is connected for transitions of care, referrals and ongoing coordination with a person's care team.
- Minnesota faces several significant barriers to establishing foundational HIE, with few organizations connected to networks, and many networks not connected to each other. Stakeholders do not expect the market to resolve the lack of connectivity without an entity establishing "rules of the road."
- Many providers face barriers to HIE because of the Minnesota Health Records Act (MHRA), which governs how health information can be used and shared in Minnesota. It includes some provisions with unintended consequences that inhibit HIE, including misalignment with the Federal Health Insurance Portability and Accountability Act of 1996 (HIPAA). This creates technical and workflow challenges because standards for EHR systems, many of which are sold and intended to operate across state lines, are designed to manage consent as required by HIPAA. There are also varied interpretations of MHRA across provider systems that lead to an unwillingness to share information, delays in care, duplication of services, and patient frustration at the need to repeatedly sign for consent.
- HIE requires up-front investments and ongoing funding for HIE infrastructure, onboarding providers, workforce training, and management of ongoing HIE transactions and workflows.
- Minnesota's current HIE environment does not support a wellness-based approach that enables unhealthy people to get healthy, and healthy people to stay healthy. Health providers need an infrastructure that supports robust HIE, allowing them to use information to understand treatment outcomes and coordinate ongoing care, as well as to support accountable health.
- HIE will enhance administrative efficiencies and cost containment as supported by other recent Minnesota and national studies. A coordinated HIE infrastructure, with efficient ways to manage administrative data transactions, can significantly contain costs for stakeholders and health care consumers. Other states are showing evidence of cost savings related to HIE services, as well as recognized value by both providers and consumers.

- Creating and connecting networks will accelerate foundational HIE. Minnesota needs to build upon the significant investments made by health organizations in the state and align with national efforts to connect providers across state lines. By supporting continued development of existing networks and establishing "rules of the road" for these networks to connect, Minnesota can achieve broad foundational HIE.

Recommendations

The primary recommendation, based on this study's findings, is to move Minnesota in the direction of a connected networks model that will provide essential HIE services accessible to all stakeholders statewide, and to align with and build upon national initiatives. To achieve this, the Minnesota Department of Health (MDH), with endorsement from the Minnesota e-Health Advisory Committee, recommends:

1. The Minnesota Legislature should modify the Minnesota Health Records Act to align with HIPAA for disclosure purposes only and to support HIE while maintaining key provisions to ensure patient control of information.
2. MDH should establish a HIE task force of the e-Health Advisory Committee to develop strategic and implementation plans for the connected networks model by focusing on actions and policies to:
    a. Expand exchange of clinical information to support care transitions between organizations that use Epic, a widely used electronic health record system in Minnesota, and those that do not.
    b. Expand event alerting (for admission, discharge, and transfer) to support effective care coordination.
    c. Identify, prioritize and scope needs for ongoing connected networks and HIE services with the goal of optimal HIE.
3. The MN Legislature should act on the recommendations of the e-Health Initiative's HIE task force that are expected to include:
    a. Updating Minnesota's Health Information Exchange Oversight law to support the coordinated networks concept.
    b. Appropriating funds to help providers connect to HIE services and develop ongoing coordinated HIE services.

Minnesota led the nation in establishing a legal and regulatory framework that incentivized health care providers to adopt and effectively use electronic health records and in providing financial and technical support to move our health care system into the electronic age. Minnesota has also been on the cutting edge in terms of promoting statewide coordinated care, transparency on quality and safety, innovative public and private accountable care and payment arrangements, and a focus on clinical-community connections and social determinants of health. An efficient, secure flow of information is critical to all of these efforts. However,

Minnesota has experienced many of the same struggles as other states as it has tried to establish a comprehensive, secure system for ensuring that a patient's health information can move with them as they navigate their health care needs, and that providers have all of the information they need to make appropriate decisions about a patient's care.

It is time for Minnesota providers, payers and other stakeholders to come together to develop and support a strong, forward-thinking, collaborative vision that looks beyond foundational HIE needs to connect providers across the care continuum and provide value to providers, patients, health plans, and communities. While much work still needs to be done to achieve these goals, this report lays out a path forward that will allow Minnesota to support continued innovation in care delivery and payment reform, while improving both individual and community health.

Introduction

Minnesota has made great strides in ensuring that nearly all hospitals, clinics, local health departments, and nursing homes have electronic health records (EHR) systems. A strong EHR foundation with standardized information across the state has been a critical tool for health providers as they care for patients. However, while most Minnesotans' personal health information is currently stored in electronic systems, it is usually in systems managed independently by each of their health care providers (or the provider's health system). The health information of patients who see a variety of providers from different organizations, including people with multiple or complex health conditions, is not easily available in a comprehensive way – for them or their providers – unless that information moves electronically between systems. This is referred to as health information exchange, or HIE.

Interview quotation:

"As a health care consumer I expect my providers to share information to coordinate my care. I don't want to have to tell my story to multiple providers. At the time I am contacted to schedule an appointment my verbal consent authorizes my providers to access my electronic health record to capture data needed to be prepared to address my needs."

HIE allows providers to securely share information with other providers or organizations using agreed-upon standards, according to patient preferences. Minnesota has made progress on HIE, but information exchange is not yet occurring equitably or robustly among all health providers across the state. This means that some health organizations can exchange with some others, but not all others. Therefore, a patient's care too often continues to be inefficient and fragmented when they need to visit multiple providers or health systems. To have effective HIE, Minnesota needs every health organization to participate, with each patient's information more easily available when and where they need it.

To help address this problem, the 2016 Minnesota Legislature requested that the Department of Health, in coordination with the e-Health Advisory Committee, assess Minnesota's legal, financial, and regulatory framework for HIE, including the requirements in Minnesota Statutes, Sections 144.291 to 144.298 (the Minnesota Health Records Act), and recommend modifications that would strengthen the ability of Minnesota health care providers to securely exchange data in compliance with patient preferences and in a way that is efficient and financially sustainable. This request was made based on recommendations from the 2015 Governor's Health Care Financing Task Force[1] that addressed data sharing to better support

[1] Available at: https://mn.gov/dhs/assets/final-materials-final-report_01-28-2016_tcm1053-165972.pdf

patient care and accountable payment models. In response, the Minnesota Department of Health's (MDH) Office of Health Information Technology (OHIT) conducted this study with guidance, input and support from the Minnesota e-Health Advisory Committee, a steering team of health information system and technology experts, the State of Minnesota's Management Analysis and Development group, and health care providers, payers and other stakeholders from around the state. The multi-modal study included interviews and group meetings with Minnesota's health care stakeholders, environmental scans of legal and HIE frameworks used in other states, and data from the Minnesota e-health profile, HIE service providers, and State Innovation Model evaluations. Full methodology is available in Appendix A.

Definitions of terms used in this report are available at http://www.health.state.mn.us/e-health/glossary/index.html.

About Health Information Exchange

At a foundational level, patients need their information to go with them between different health care organizations in order for their providers to make care decisions in a timely and efficient manner. With this flow of information, health providers can look up and retrieve patient information to prepare for a patient visit or coordinate transition from a hospital to nursing home. Providers can send information to another provider or organization that a patient sees. Without this basic flow of information, research has shown that patients are more likely to receive repeat exams and/or tests,[2] need to repeatedly describe their situation to multiple care providers, deal with uncoordinated care, face care delays, and potentially receive poor care.

HIE (the verb) is the electronic transmission of health-related information between organizations (assuming the person has provided consent to share the information).

HIE (the noun) is an organization that facilitates information exchange. Several of these HIE service providers operate in Minnesota.

Information can be exchanged directly between provider organizations (e.g., a point-to-point connection), or the exchange can happen through an intermediary organization, referred to as a health information organization (HIO) or health data intermediary (HDI). Additionally, several HIE networks have been established on a national level, and organizations can connect directly

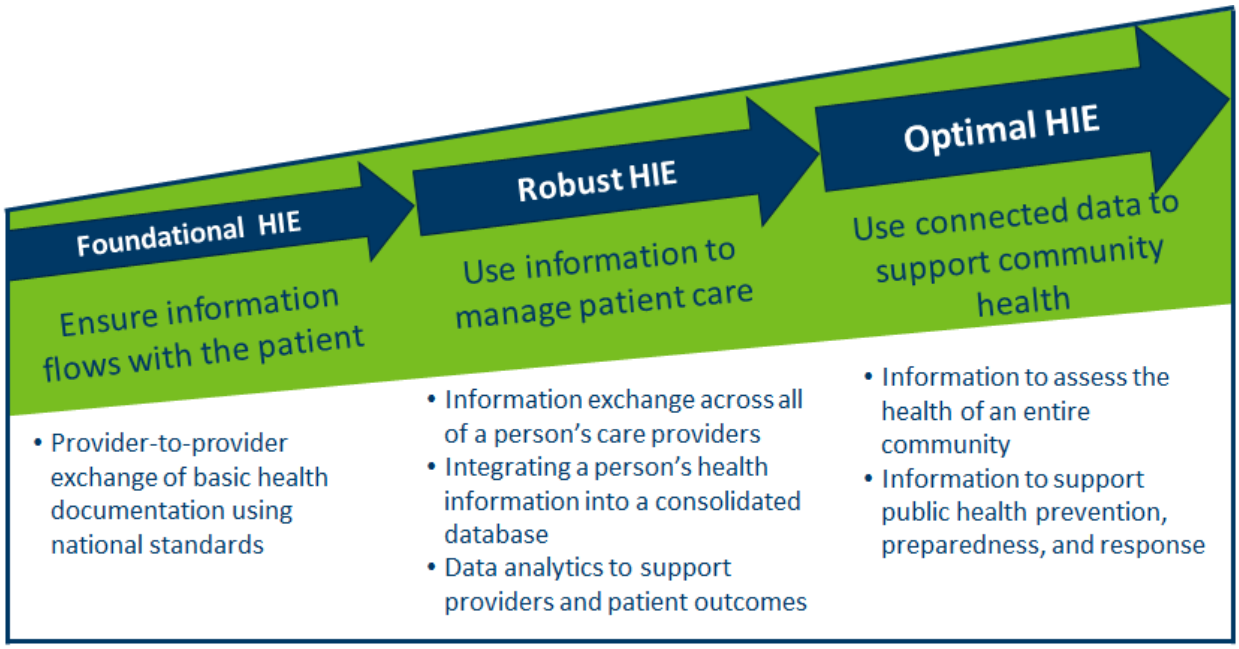
[2] Jung, H-Y, et. al., 2015. "Use of Health Information Exchange and Repeat Imaging Costs." *Journal of the American College of Radiology*, 12(12 0 0): 1364-1370.

to one or more of those networks to exchange some types of information. Many health organizations in Minnesota use one or more of these mechanisms to share some or all information with other providers, but these fragmented electronic connections do not allow information to flow with the patient in all cases and to all types of care providers.

This study identified three important uses for HIE that offer great opportunities to positively impact individual and community health. First is "foundational" HIE, meaning that basic information flows with the patient to any provider they see. This is a basic level of HIE that should be available to all providers and patients throughout the state and across state lines using nationally recognized standards.

Building upon the foundation, "robust" HIE involves using information to coordinate and manage patient care, so that providers across the care continuum can communicate, consolidate patient information, and use analytics to support health outcomes. A third level of "optimal" HIE use allows communities to understand the health status of the population in their geographic area, partner with community organizations to support patients' social needs, more quickly respond to disease outbreaks, and manage emergency response. Exhibit 1 provides examples of how these three uses of HIE support the health of individuals and communities.

Exhibit 1: How HIE Supports Health



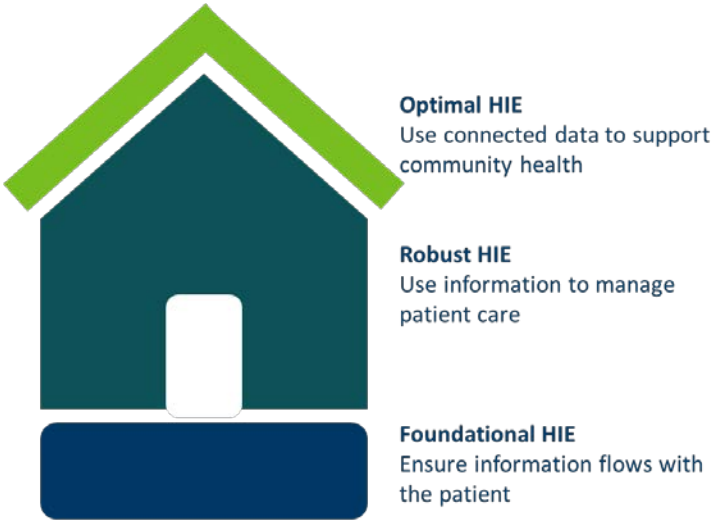
These uses for HIE, and how they evolve, can be thought of as a house. Foundational HIE provides the structural support for the robust and optimal HIE, just as the foundation of a house must be established and stable to support the walls and roof, and allow the structure to

be used as a home. Exhibit 2 portrays this conceptualization, and these uses are described in greater detail below.

- **Foundational HIE** will be achieved in Minnesota when health providers at any hospital, clinic, or nursing home can look up and retrieve a standard care summary document. The care summary document contains basic information such as lab tests and results, medications, immunizations, and diagnosis and treatment documentation. While it is not a complete picture of a patient's health, the care summary represents the minimal set of information that should be able to be exchanged between organizations.
- **Robust HIE** can be used to coordinate and manage patient care by exchanging information across the care continuum, so that providers can better address all of the factors that impact a person's health and well-being. For example, a provider can sign up to receive an automated alert when a patient is admitted to or discharged from the hospital or emergency room. This simple alert allows the care team to act promptly to address any underlying issues that cause the admission, such as medication adherence or lack of caregiver support, and to ensure that the patient has a smooth transition back to their home and community.

Many health care organizations in Minnesota are participating in risk/reward sharing or total cost of care payment arrangements with health plans that depend upon effective and efficient information sharing and use. These accountable care organizations and similar entities use information to manage care costs by coordinating care, addressing problems associated with a person's social determinants of health, and using timely information on all of the care a person receives to predict and manage future care needs. This type of care coordination usually happens at the community level, and is especially important for patients who have diseases such as asthma, diabetes, cancer and others. Robust HIE supports these needs by ensuring that providers have a complete picture of a person's health care needs and use.

Exhibit 2: Conceptualization of HIE



- **Optimal HIE** means that health data can be used to generate aggregated assessments of specific health issues in order to identify disparities, target interventions, and implement prevention programs. For example, using optimal HIE, a health information exchange organization could query for a report of obese patients in Minnesota by zip code, providing breakouts by gender, age or other demographic characteristics. Communities can overlay this with other information such as access to healthy food sources or parks, and then develop programs that address access and monitor progress over time. This type of health data also supports state policymakers as they direct resources toward greatest needs. Optimal HIE fills an important gap in information for Minnesota and communities to help target and optimize programs and interventions in order to "move the needle" toward better health.

  Optimal HIE can also help communities manage incidents, disasters, epidemics and other public health crises by providing a mechanism to quickly assess injury and disease status in the affected area. For example, Texas used HIE to help relocated Houston residents access their health information during hurricane Harvey. If a significant incident occurs in Minnesota, such as a chemical spill, fire or tornado, HIE could be used to quickly assess severity of injuries and where to direct resources.

HIE activity in Minnesota

In Minnesota, HIE happens in a variety of ways, using many different health information networks. Ways in which HIE currently happens in Minnesota include:

- Large health care provider systems that have established their own internal networks to exchange information among their hospitals and clinics.
- Independent health systems that use the same electronic health record (EHR) vendors can connect to each other via that technology.
- Some organizations are connected to HIE service providers that help them exchange data with other organizations using that service.
- Some organizations are connected to national HIE networks.
- Some organizations connect directly to each other.
- Some organizations use more than one of these approaches.

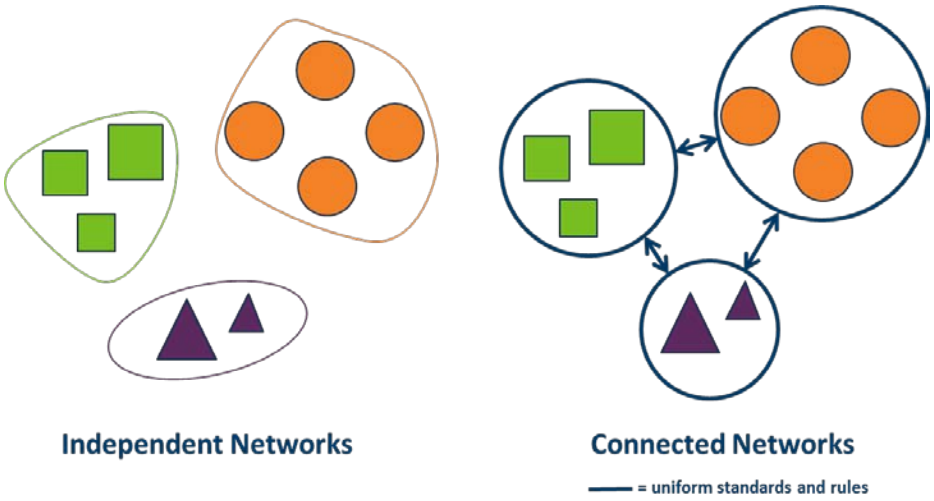
However, these various networks are not all connected together. Because each network contains different members, and the different networks do not do a good job of speaking to all of the others, the result is islands of unconnected providers and a lot of fragmentation.

In order to achieve foundational HIE these networks need to be connected, so that information can flow securely across organizations even when they belong to different networks. This

concept of "connected HIE networks" means that each of these networks has a connection to each other network and all can exchange clinical information with each other using uniform standards and rules. Any organization that participates with any of those networks is then connected to all of the organizations participating in any of the networks. Exhibit 3 presents a simplified visual to show how this concept applies. In this example:

- Independent networks may have their own standards and rules, and therefore may not be compatible to exchange information with other networks.
- Connected HIE networks have a governance process to define rules and establish uniformity so that providers in any network can communicate with providers in any other network. The rules and uniformity are portrayed as common shapes (circles), and connections (lines and arrows).

Exhibit 3: Depiction of Independent and Connected HIE Networks



Types of HIE models

There are a few basic models for HIE in the United States. For the most part, HIE organizations are established at the state or regional level. Typically, the basic conceptual frameworks for these models are government-led, a public utility model, private-sector led, or a hybrid of these[3].

- **Government-led HIE is under direct government supervision, with a public entity having responsibility for governance, financing and operations.** Using funding available through

[3] See The State Alliance for e-Health, 2009. "Preparing to Implement HITECH: A state Guide for Electronic Health Information Exchange." Available at: https://www.nga.org/files/live/sites/NGA/files/pdf/0908EHEALTHHITECH.PDF

the Federal HITECH Act of 2009, many states (such as North Dakota and South Dakota) chose to establish government-led exchanges. This funding was paired with policies that focused on clinical and hospital care. As such, few of these exchanges include non-acute care providers across the care continuum. Many of the government-led models have faced sustainability problems.

- **HIE as a public utility with strong government oversight.** In this model, the state authorizes a non-government entity to design, own, and operate one or more exchanges. The state regulates industry behavior but can grant greater operational flexibility than under the government-led model. The independent entities are typically responsible for technical infrastructure and pricing, and the state may provide an entity with exclusive rights to operate within a market. States that have pursued an approach similar to this include New York, Michigan and Texas.
- **Private sector-led HIE with government collaboration.** Private sector HIE efforts have evolved in some states and/or regions among organized groups of stakeholders, with services already in place and agreements on the technical architecture. In this model, the exchange has primary governing responsibility over its operations. State government would support and participate in the exchange and, where appropriate, provide regulation or the threat of regulation to ensure appropriate industry behavior and to protect consumer interests. States that have pursued an approach similar this include Indiana, Wisconsin and Nebraska.

The choice of a model depends on many factors, including health care market characteristics, policies, funding options, and popular or political sentiment. For example, a state-led model may work well in a state with a consolidated health care market and/or small geography, whereas one of the other models may be more appealing in markets with large geography and little consolidation. Another factor in the choice is the goal(s) of the state officials for what types of health information they want exchanged and for what purposes. At this time, most state health information exchanges are a hybrid of these three types of models.

Minnesota's HIE model

Minnesota's approach to HIE has been a hybrid between the public utility and private sector models, intended to support a market-based strategy that relies on communities and the private sector to develop innovative solutions that meet the needs of Minnesotans and our health care market. This hybrid approach includes limited government oversight to ensure fair practices, availability of HIE options and compliance with state and federal requirements, including privacy, security and consent protections, but with the ability for any private entity that meets these requirements to become certified to provide HIE services. Minnesota's HIE

oversight law (Minnesota Statutes, sections 62J.498-62J.4982), enacted in 2010 and updated in 2015, provides government oversight and is intended to:

- Ensure standards-based exchange requirements are being met.
- Create a level playing field to ensure access for all communities and providers and provide a transparent process to the certification of HIE service providers.
- Facilitate coordination and collaboration among HIE service providers.
- Allow market-driven innovation, connectivity and services.
- Assess and report on the state and progress of HIE.

Minnesota's HIE oversight law recognizes two types of entities that provide the infrastructure for HIE – Health Information Organizations (HIO) and Health Data Intermediaries (HDI). Both are required to be certified under the state's oversight program.

- An HIO is an organization that oversees, governs, and facilitates HIE among health care providers from unrelated health care organizations.
- An HDI is an entity that provides the technical capabilities, or related products and services, to enable HIE among health care providers from unrelated health care organizations (but does not govern the information).

There are currently four organizations certified as HIOs in Minnesota, and 15 certified as HDIs.[4] Minnesota's HIE oversight law requires HIOs to connect to all other HIOs, and HDIs to connect to at least one HIO. Health care providers are required to connect to an HIO, either directly or indirectly by connecting through an HDI that is connected to an HIO[5].

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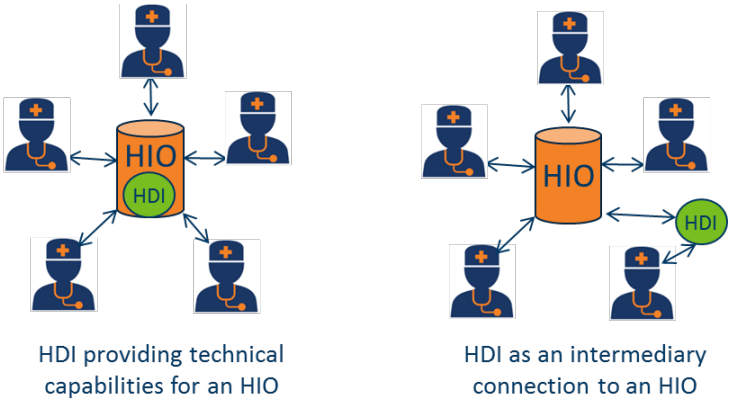
[4] A list of Minnesota's certified HIE service providers is at: http://www.health.state.mn.us/e-health/hie/certified/index.html

[5] This is a requirement of the Minnesota Interoperable EHR Mandate, which does not have an enforcement provision. Information is at: http://www.health.state.mn.us/e-health/hitimp/index.html

Exhibit 4 portrays how health providers can connect to an HIO either directly or by using an HDI (for example, an EHR system may have the technical services to be an intermediary). This model requires a broad array of point-to-point connections for the HIOs to connect to each other. There is no limit to the number of HIOs that may operate in Minnesota, so this model would increase in complexity if more HIOs entered the market.

Exhibit 4: Example HIO and HDI Roles



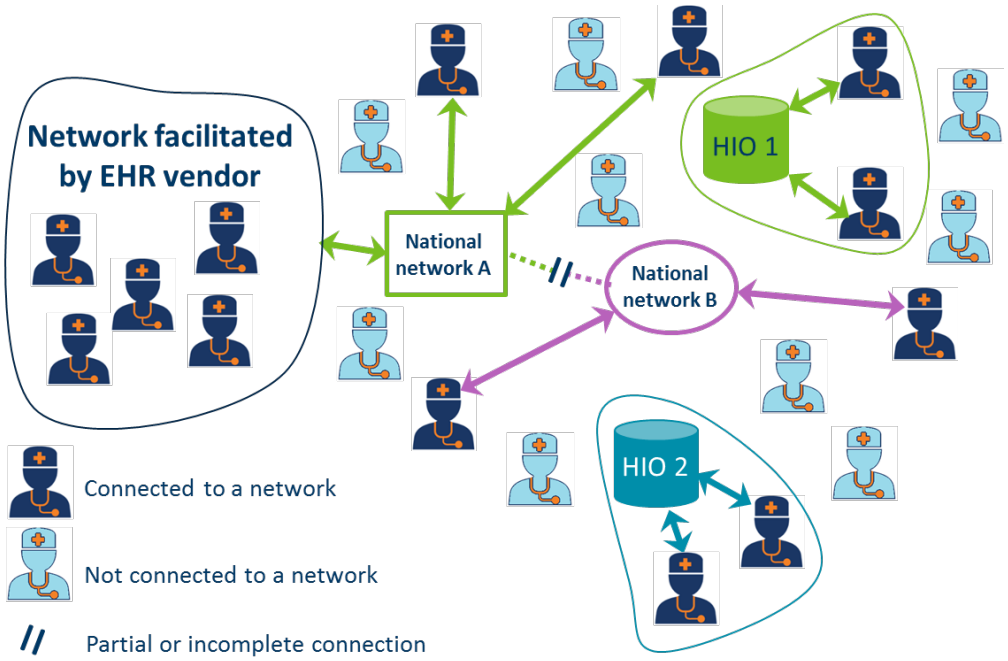
How HIE is working in Minnesota

Minnesota's market-based approach has resulted in providers having the ability to choose among a wide range of HIE organizations, all offering different services and pricing structures. For a variety of reasons, the Minnesota HIE model has not evolved as anticipated and is not meeting all needs. There is a tremendous amount of HIE happening securely and with appropriate patient authorization, but it is not happening equitably across the state or across the care continuum.

Exhibit 5 depicts the current HIE environment, showing a confusing array of connected and disconnected networks. Specifically, this image shows several different sources of complexity and fragmentation:

- Health systems that use a common EHR vendor have established connections to each other and often to one or more national networks, but may not be connected to systems that use other vendors.
- The current national networks (several) are not all connected to each other, although there is a recognition by many national organizations that they need to cooperate and link their efforts to advance HIE.
- Some organizations have connected to Minnesota's certified HIOs, but the HIOs currently do not connect to national networks or to each other.
- Some organizations have connected directly to national networks without using an HIO.
- Many organizations have not made any connections to an HIO or to national networks – these are more typically smaller and rural organizations.

Exhibit 5: Common Connected and Disconnected HIE Networks in Minnesota



Because of these various networks and non-networks, Minnesota's health organizations:

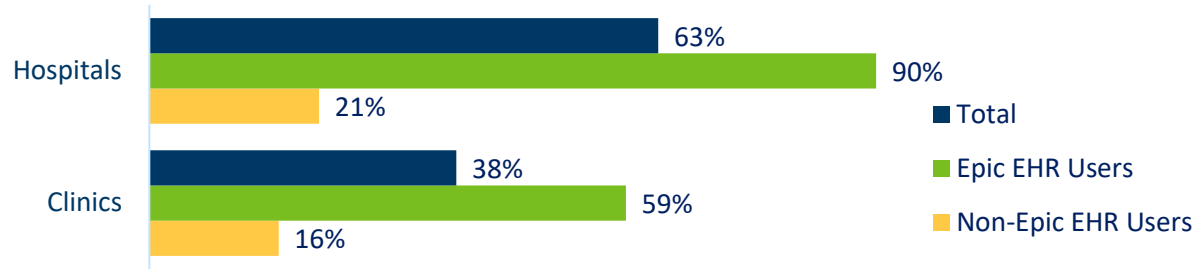
- Need to manage multiple point-to-point connections and/or rely on inefficient manual workarounds to exchange some or all shared health information.
- May need to establish separate connections to:
  - one or more national networks
  - other health systems, particularly those not connected to a national network
  - the Minnesota Department of Health (for public health reporting)
  - health plans/payers
- Dedicate time and financial resources to establish unique agreements and processes to maintain each of those connections, and manage issues in getting different systems to "speak" to each other effectively. This inefficiency takes resources away from patient care and adds costs to the health care system.

Many of Minnesota's large health systems have established mechanisms for HIE outside of Minnesota's infrastructure of HIOs and HDIs, usually by relying on the capabilities of their EHR system and national HIE networks. As an example, a large health system using the Epic EHR system might manage information exchange using reasonably seamless connections to other Epic users and national networks. However, their connections to other "trading partners" – health systems that use other EHR systems, accountable care organizations, health plans, public health, mental health, long-term and post-acute care and quality reporting organizations – may

be through a variety of unique point-to-point connections. They may potentially have no electronic connections to some types of providers resulting in gaps in care and services.

The foundational HIE happening in Minnesota is driven largely by organizations that use a common EHR vendor, in particular the Epic EHR system, which has built-in HIE functionality for the network of Epic users. More than half of Minnesota's 146 hospitals and roughly 1,500 clinics use the Epic EHR system and are therefore part of the network of Epic users, with an estimated two-thirds of the state's population receiving care from these organizations. Further, most of the large health systems serving Minnesota connect to national HIE networks that support the exchange of clinical health information among providers. Exhibit 6 shows data on the impact of these different HIE connections. While just 63% of hospitals and 38% of clinics in Minnesota indicated that their providers routinely have the necessary clinical information available electronically, Epic users more often report that they have this information,[6] due in large part to the EHR's built-in access to foundational information among Epic network users.

Exhibit 6: Percent of MN hospital and clinics that routinely have necessary clinical information from outside providers available electronically, 2017



Source: Minnesota e-Health Profile, MDH Office of Health IT, 2017

[6] Minnesota Department of Health, 2017, Minnesota e-Health Assessments (hospitals and clinics). Available at http://www.health.state.mn.us/e-health/assessment/index.html.

These challenges are not new. Minnesota has struggled to fully implement statewide HIE since the oversight law passed in 2010. Providers in Minnesota – particularly clinics and hospitals – were rapidly adopting EHR systems and the assumption was that HIE would be a logical next step. Minnesota's market-based approach allowed the market to determine success or failure. Early exchanges were not successful because, in part, they were not able to attract and sustain stakeholder participation. Some of this was due to stakeholders' reluctance to share information. In addition, federal requirements enacted in 2009 had an impact. Notably, the financial incentives for meaningful use, or EHR technology, became a huge driver for many health organizations, but those requirements had minimal emphasis on HIE and therefore offered little incentive for providers to participate with HIOs.

Interview quotation:

"I don't believe the state is doing it wrong. It's a very difficult thing, what we're trying to do here….[HIE] has not bubbled to the surface because it isn't required."

The reluctance to share information across provider systems is a trust issue that cannot be addressed by technology alone. Some who describe HIE often say that information "moves at the speed of trust," meaning that there is legal and organizational confidence in the integrity of the process, the partner, and the data. This issue is not unique to Minnesota; multiple entities have been involved in a national effort to develop a trust framework for HIE across unaffiliated organizations.[7]

Over time, many stakeholders have expressed frustration about the gaps in foundational HIE in Minnesota. They see HIE as necessary for value-based payment arrangements and other health reform efforts to reach their full potential.[8] Consumer demand for information has evolved as technology has evolved. Research shows that Minnesotans expect their information to move with them as they navigate the health care system.[9] Further, technology has evolved to ease implementation of HIE for providers across the care continuum.

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[7] National HIE Governance Forum, 2013. "Trust Framework for Health Information Exchange." Available at: https://www.healthit.gov/sites/default/files/trustframeworkfinal.pdf.

[8] Minnesota Health Care Financing Task Force Final Report, 2016. Available at: https://mn.gov/dhs/assets/final-materials-final-report_01-28-2016_tcm1053-165972.pdf

[9] Minnesota Department of Health, 2017. Impacts and Costs of the Minnesota Health Records Act. Available at: http://www.health.state.mn.us/e-health/legrpt/docs/rfi-health-record-act2017.pdf.

Other states' HIE models

This study included an environmental scan of the HIE models used in 12 states, including Minnesota's border states and other states with a range of approaches and progress. The scan examined a number of attributes, including alignment with this report's framework of foundational, robust and optimal HIE; participation rates among hospitals and non-hospital providers; overall maturity; governance; and funding.

This scan shows that Minnesota is not alone in struggling to achieve statewide HIE and that models are evolving in response to technological changes and funding challenges. Some key themes included:

- Most of the 12 states are at a foundational level; three are considered robust and none have achieved optimal HIE yet.
- At least half are already using or moving toward a hybrid model and moving away from either solely government-led or solely private sector-led HIE.
- Most states use two or more funding sources including federal and state grants, state appropriations, and/or private-sector funding, including subscription fees.
- In more than half of the 12 states, two-thirds or more of hospitals participate in the HIE model; however, only a few states have a majority of clinics participating and even fewer extend beyond those two care settings.

Few states have implemented the more visionary HIE goals of robust and optimal HIE, and many are focused primarily on connecting clinics and hospitals without considering the value of connecting across the care continuum. However, the federal Office of the National Coordinator for Health Information Technology (ONC) addresses this concept in its vision for HIE across the United States, put forth in a recently released framework.[10] Additional detail on these 12 state models is available in Appendix C.

[10] Office of the National Coordinator for Health Information Technology, 2018. Draft Trusted Exchange Framework." Available at: https://beta.healthit.gov/topic/interoperability/trusted-exchange-framework-and-common-agreement

Findings and themes

In addition to the challenges described above, HIE is extremely complex because there are many types of data that need to be securely exchanged, for different reasons, with different partners, and in different ways across multiple independent systems. Doing this successfully means building and sustaining many organizational and technical relationships.

As part of this study, MDH talked with a range of stakeholders about these challenges, and what needs to happen in order for Minnesota to achieve its HIE goals. The findings presented here are derived from 24 interviews with 67 officials and staff at health care provider organizations and health plans/payers, more than 20 meetings with a broad range of stakeholder organizations, and responses received from a 30-day public comment period (see Appendix A for more details).

These stakeholders identified a number of existing barriers and gaps that are inhibiting effective HIE in Minnesota and shared ideas to solve them. Key overarching themes are that Minnesota needs to:

- Establish and communicate a compelling and forward-thinking statewide goal for HIE.
- Develop a plan to achieve this goal.
- Address existing legal barriers that inhibit foundational and robust HIE.

The themes and proposed solutions that arose from this study are described below.

Minnesota needs to establish foundational HIE across all providers in the state

Foundational HIE – standardized basic health information that flows with the patient across health organizations – is needed to ensure that a person's entire care team is connected for transitions of care and referrals. The highest priority needs in Minnesota are to ensure:

A story of HIE:

Sally is a nonverbal adult with severe autism and chronic ear infections. Inevitably, she wakes up in the middle of the night with ear pain and a fever. The on-call physician typically would send her to the ER in the middle of the night. Due to her autism and fear, she would fight these trips. She would need to be sedated and restrained during the ambulance ride. Under the old approach, she visited the ER more than a dozen times over two years. Under the new approach with HIE connections in place, the attending clinician could see Sally's history of ear infections and prescribe antibiotics more quickly, without an ER visit.

- **Flow of information for transitions from a hospital to post-acute care** (e.g., home care, transitional care, or nursing homes). All of Minnesota's hospitals and most nursing homes are on electronic systems, but a 2016 survey of Minnesota's nursing homes revealed that they rarely receive patient information electronically from hospitals. Currently, information is most often transmitted by paper or fax, with manual data re-entry at the receiving facility.[11] This manual data entry creates opportunities for error, particularly for medications, and delays in providers getting complete information about a patient's care needs. Foundational HIE delivers the important information that providers need to assure the best care for their patients, minimize the need for re-hospitalization, speed recovery, and achieve positive outcomes.
- **Flow of information for care referrals.** When a primary care provider refers a patient to a specialist, the patient's information needs to arrive in advance of the specialist appointment and be integrated into the specialist's EHR system. After the visit the specialist needs to send a report back to the primary care provider, and that information needs to be integrated into the primary care provider's EHR. Failure to accomplish this closed-loop referral leads to redundant testing, which can be a health risk to the patient as well as an unnecessary added cost.[12] Effective and efficient exchange of patient information also

Interview quotations:

"[HIE supports] patient safety and patient care quality, first and foremost."

"Fundamentally [HIE] is better because it gives you a helpful overall view of the patient."

"We are interested in seeing the free-flow, the exchange of person-centered information across providers because it helps with care coordination."

"If you don't get [complete] information, you're missing a piece of the puzzle that may make a difference."

"We're looking for continuity of care as people transition through the health system."

"We need to be able to connect information from disparate systems for providers."

[11] Minnesota Department of Health, 2017. Minnesota Nursing Homes e-Health Report, 2016. Available at http://www.health.state.mn.us/e-health/assessment/docs/2016-nh-report-final.pdf.

[12] See Institute for Healthcare Improvement / National Patient Safety Foundation, 2017. "Closing the Loop: A Guide to Safer Ambulatory Referrals in the EHR Era." Available at http://www.ihi.org/resources/Pages/Publications/Closing-the-Loop-A-Guide-to-Safer-Ambulatory-Referrals.aspx

allows the primary care provider to track care in cases where, for example, a patient is referred to another specialist.

- **Flow of information across a person's entire care team**, including mental health, local public health, and social services. People who have multiple or complex medical or mental health conditions generally have ongoing relationships with a number of providers across different disciplines. They may also need additional support to address issues related to housing, food security, employment, or other social issues that impact their health. In order to care for a person's overall health and well-being, providers across the care continuum need to communicate in a timely manner about the person's care and support needs. For example, a care team may refer a patient to an organization that can help address housing issues for a patient who is trying to manage diabetes and hypertension, so that the team can better manage diet and treatment. Further, people who have chronic medical conditions have a higher risk of depression,[13] and to effectively manage those conditions the primary care and mental health providers need timely and accurate communication.

Minnesota faces several significant barriers to establishing foundational HIE

Few health organizations have connected to a State-Certified Health Information Organization

HIE is most valuable when all, or nearly all, providers participate. However, Minnesota's state-certified HIOs have struggled to connect provider organizations. As of January 2018, approximately 20% of hospitals (mostly rural) and 12% of clinics have connected to an HIO, but these include only one of the ten large health systems in the state. For smaller organizations, the business case for participating is not strong; because the large health systems are not connected, a small organization does not gain enough new 'trading partners' through connection to an HIO to make the investment worthwhile. For large health systems, the business case is not strong because they have invested in EHR and data management systems to manage their own patient populations and, in many cases, to share clinical information with national networks and/or with other provider systems that use their same EHR vendor. These health systems recognize that they are not connecting to all providers, but they are meeting the vast majority of their HIE needs. As such, they do not see enough return on investment for the services offered by Minnesota's certified HIOs.

[13] See https://www.nimh.nih.gov/health/publications/chronic-illness-mental-health/index.shtml

The connections that these large health systems are managing do not support information exchange with the many of Minnesota hospitals and clinics that do not use Epic, the predominant EHR vendor in the state, or are not connected to national networks. This creates an inequity across the state, in that the small, rural, and specialty organizations that by and large do not use Epic lack the same access to information exchange as the large systems. There is no expectation that all providers will ever use the same EHR solution, in part because needs vary across specialties and settings. One potential solution is for all providers to connect to each other via the evolving national networks. These connections have some important limitations, but nevertheless offer an opportunity to advance foundational HIE and bridge the gap between systems that engage in HIE now and those that do not.

Because of this gap in foundational HIE, Minnesota's health providers likely do not know the whole breadth of providers a patient sees. This is particularly problematic for organizations that are engaged with accountable care payment contracts, as they cannot control the care or outcomes resulting from care provided outside of their organization/network.

Minnesota's certified HIOs are not connected with one another

Minnesota's current model and HIE oversight law require that certified HIOs establish reciprocal data sharing agreements with each other. At this time, HIOs have not yet established these connections, but are actively discussing how to achieve this. Each HIO has implemented a consent management system with a master patient index to allow providers to accurately identify a patient who has provided consent. This infrastructure will support their ability to exchange information with each other, but at this time there is no formal governing body or timeline to establish requirements and agreements for HIO data sharing.

Stakeholders see a role for the State in resolving connectivity challenges

As noted, Minnesota has pursued a 'market based' approach to HIE, where multiple private entities essentially compete with each other to offer services to health providers to exchange data. These entities are expected to meet certain requirements – including the requirement to share information with each other. Minnesota has taken a 'limited government' approach to move HIE forward by facilitating discussions and consensus among state-certified entities, but the state does not have a governing body to make enforceable policy decisions related to HIE or to establish and enforce rules of the road.

Stakeholders believe a more coordinated approach to HIE could yield benefits, and recognize a role for state government in ensuring that the interests of all providers are represented and that expectations for participation and collaboration are met. Stakeholders also indicated that any coordinated effort needs to be financially sustainable, and funded by all participants rather than just one sector.

Many providers face barriers to HIE because of the Minnesota Health Records Act

The Minnesota Health Records Act (MHRA) governs how health information can be used and shared in Minnesota. Providers report that several MHRA provisions have had unintended consequences that inhibit HIE.

Under the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), health records information may be shared without written permission from the patient for treatment, payment, and health care operations, which include administrative activities, customer service, personnel evaluation, and business planning and development. However, sharing is restricted to only the minimum information necessary to accomplish the intended purpose. HIPAA also allows health records to be used or shared without written permission from a patient for a variety of other reasons, including sharing information to assist law enforcement in locating a criminal fugitive.[14]

Interview quotations:

"There are lots of interpretations on what consent means – what is and what it isn't."

"Patients are annoyed that we don't share…. To the patient it looks like we're withholding information."

"[MHRA] adds inefficiency, costs, and hassle for the patient."

Minnesota law (MHRA) has additional requirements beyond those in HIPAA. Most notably, the MHRA requires written consent or authorization by the patient to share health records for treatment, payment, and healthcare operations, with a few exceptions. Minnesota is one of only two states with such a requirement.

A key challenge of the MHRA for providers is that EHR systems are designed to manage consent as required by HIPAA rather than Minnesota law. Adapting and maintaining EHR systems to meet MHRA requirements can require substantial additional resources, as well as changes to workflows and documentation. The MHRA's additional consent requirement for treatment, payment and operations was designed to work in a paper workflow environment. Adapting this paper process to the digital workflow adds complexity, cost and confusion. More importantly, it can delay care and treatment.

In addition, the law lacks clarity, which leads to varied interpretations of consent requirements across provider systems. These varied interpretations lead to an unwillingness among providers

[14] HIPAA provisions are described at: https://www.hhs.gov/hipaa/for-professionals/privacy/guidance/disclosures-treatment-payment-health-care-operations/index.html

to share information, delays in care, duplication of services, and patient frustration at the need to repeatedly sign for consent.

Providers called out the MHRA as one of the most significant barriers to HIE in almost all the interviews, and changes to MHRA were the most often cited suggestion from interviewees for the single, most impactful action Minnesota government could take to promote growth in and sustainability of HIE that supports high-quality, coordinated care. This call for change is consistent with the findings of MDH's 2017 report to the legislature, "Impacts and Costs of the Minnesota Health Records Act."[15] These include:

a. The MHRA does not adequately support the majority of patients whose preference, as reported by providers, is to share their health information to ensure they receive appropriate care.
b. If the consent requirements of the MHRA remain in place, some clarifications to operationalize the current MHRA intentions are needed.
c. Providers need education, resources and legal assistance related to the MHRA, especially providers in smaller practices. Education and resources are also needed by patients to understand their rights, how information is used, and security protections.
d. Implementing MHRA often requires a manual workaround process for obtaining patient consent outside of the EHR system digital workflow. This means that more resources are needed for implementation of customized systems that are MHRA-compliant.
e. It will be difficult for Minnesota to achieve its goals related to coordination of care for complex patients, improved quality of care, and cost savings due to varied interpretations of the consent requirements in the MHRA.

Patient story:

"I was referred to a pain specialist. The pain clinic wanted to have all of my records – specialists, diagnostic studies, procedures, reports, etc…I have seen many specialists, have had numerous diagnostic tests and needed to remember all of these clinics, MD, therapists, specialists, diagnostic and procedural center and have a referral for Release of Information sent to each location…I needed to wait…until all of the records were sent from all of the locations."

HIE requires up-front and ongoing funding

HIE requires up-front investments and ongoing funding for HIE infrastructure, onboarding providers, workforce training, and managing ongoing HIE transactions and workflows. Some of these activities are underway within individual provider organizations, but developing

[15] Available at: http://www.health.state.mn.us/e-health/legrpt/docs/rfi-health-record-act2017.pdf

statewide connectivity will require additional funds that are targeted to those entities that face the greatest financial barriers to HIE. Smaller providers and those not in clinic and hospital settings will likely need additional support to plan and implement HIE connections. Examples of funding needs include:

- Grants to support under-served communities and under-resourced providers and local health departments.
- Workforce training to adapt to HIE workflows and appropriate consent management.
- Governance and coordination to support HIE network connections and guidelines.

The amount of funding that will be required is not yet known, as costs vary by organizations and specific HIE needs. As an example, several cross-sector community collaboratives, each including 4-15 organizations, connected to HIOs using Minnesota's State Innovation Model grant funds. The estimated HIO connection expenses ranged from $30,000 to $50,000 per organization for one-time implementation costs and one-year's subscription for services. These estimates do not account for funding from other sources that may also have been used.

This report recommends development of more specific estimates of the funding needed to implement and sustain HIE across the state. Most states have used a variety of funding sources for HIE for implementation and ongoing sustainability (see Appendix C). Minnesota has leveraged funding from federal and philanthropic sources – and will continue to do so – but additional funding will be needed from state appropriations, HIE participants, or other sources.

Interview quotations:

"The essence of information exchange is that if you can't find out where they were, you can't help them."

"We would welcome efforts to improve HIE because that meets the Triple Aim for patient health (improved patient experience, improved population health, and reduced costs)."

"We believe [HIE] is one of the more solid ways to reduce hospital admissions and bend that cost curve to bring those savings to fruition."

"To truly manage the patients who are assigned to us we really need HIE."

"Exchange is the tool to solve the problem of care delivery."

Robust and optimal HIE will promote individual and community health

Study participants agreed that foundational HIE is critical, but confirm that the system needs to look beyond that basic level of connectivity and establish a system for HIE that better supports a broad definition of health. In other words, even as Minnesota builds the foundation it also

needs to plan for a future that uses HIE for prevention and wellness efforts that support individual and community health.

Minnesota's current HIE environment does not support a wellness-based approach that enables unhealthy people to get healthy, and healthy people to stay healthy. Health providers need an infrastructure that supports robust HIE, allowing them to use information to understand treatment outcomes and coordinate ongoing care, as well as to support accountable health.

Minnesota has invested $45 million in federal funding since 2013 to test accountable models of health care. The Minnesota Department of Human Services and communities around the state have greatly improved outcomes and reduced costs even with the limited patient information available through claims data. But still, organizations participating in Minnesota's Integrated Health Partnerships (Medicaid accountable care organizations) shared concerns about their ability to further improve outcomes and reduce costs without access to timely clinical data via foundational HIE.

Minnesota's local health departments – and their community partners – also struggle to get timely data on sub-populations, geographic areas and health conditions so that they can effectively address health issues. Traditional health information sources typically lack this type of information. Now that the health information of most Minnesotans is stored in electronic systems, these data have the potential to help local public health and providers identify high-risk areas and sub-populations, target interventions to vulnerable populations, monitor the impact of such initiatives over time, and improve overall population health. Optimal HIE will provide the infrastructure to support appropriate use of data in support of improved population health for Minnesota's communities.

Interview quotation:

"We can only imagine what we can do with integrated data. The ideas that can come up through the grassroots are amazing. As those ideas develop, the demand for new ways to do it will force vendors to move along more innovatively. I get excited thinking [about what's possible] if we can bring to bear all the information we have to be put to use."

HIE will enhance administrative efficiencies and cost containment

Many organizations struggle to efficiently and securely transmit health information. They encounter administrative "pain points" that require manual processes, which are prone to error and direct resources away from patient care. Examples of inefficiencies include:

- Lack of precise patient matching to ensure the correct information is exchanged.
- The need to manage patient consent when a person has multiple instances of consent.
- Lack of accurate and up-to-date provider directories.
- The need to develop and support processes to efficiently conduct required reporting for quality measures and public health.

Interview quotes:

"[HIE] can shift the focus to prospective outreach rather than retroactive chart chasing."

"When you look at all the different models out there, and each one has their own method of care coordination. We see cases where someone can have 4 or 5 care coordinators. HIE provides a real opportunity to reduce the duplication of these services."

"Government requests a lot of information from payers that originates in the EHR."

MDH's 2017 report to the legislature, "Impacts and Costs of the Minnesota Health Records Act,"[16] highlighted the strong agreement among providers that the Minnesota consent requirements negatively impact care coordination, providing timely care, avoiding extra visits/tests, and their ability to provide quality care. In addition, providers indicated that Minnesota consent requirements often interfere with their efforts to provide efficient, high-quality care, especially as related to vulnerable populations. Providers described a need for care continuity and a holistic approach to patient care, requiring complete, current, and up-to-date records, all of which is difficult when complying with both different federal and state laws.

Another study conducted by MDH, "An Introductory Analysis of Potentially Preventable Health Care Events in Minnesota,"[17] estimated that Minnesota spent as much as $1.9 billion in 2012 on potentially preventable hospitalizations, readmissions, and emergency department visits. The report highlighted the need to ensure that secure electronic exchange of clinical information

[16] Available at: http://www.health.state.mn.us/e-health/legrpt/docs/rfi-health-record-act2017.pdf

[17] Available at: http://www.health.state.mn.us/healthreform/allpayer/potentially_preventable_events_072115.pdf

occurs effectively and in real-time across settings and provider systems for care coordination, as one strategy to reduce potentially preventable events.

Other states have found financial and care delivery benefits from HIE services. A 2016 study of imaging procedures in New York's HIE network found that use of HIE services was associated with an annual savings of $2.57 per patient from avoided repeat imaging. Much of the savings resulted from decreased use of high-cost imaging.[18] Rhode Island's HIE system, CurrentCare, has found that both providers and consumers find benefit to HIE services. In a 2014 survey of their providers, nearly all respondents who are actively using their HIE services find them to be beneficial, and the majority of providers believe the HIE is helping them treat patients more effectively. Similarly, CurrentCare's survey of consumers found that nearly all respondents believe that a service like CurrentCare provides benefits to their overall health.[19]

A coordinated HIE infrastructure, with efficient ways to manage and transmit these data, could significantly contain costs for health care stakeholders and consumers.

Stakeholders also identified cost containment benefits that a coordinated HIE infrastructure can support. Examples include:

- Avoiding duplicative tests and imaging, appointment delays and cancellations due to lack of information.
- Workforce resources associated with manual data entry.
- Cost of errors associated with manual entry.
- Streamlined care transitions upon hospital discharge.
- Alerting for emergency department visits.

Connecting networks will accelerate foundational HIE

Minnesota needs to build upon the significant technical, workforce, organizational and policy/practice investments made by health organizations in the state and align with national efforts to connect providers across state lines. These investments have resulted in many existing and evolving networks, as described earlier in this report (see Exhibit 6). By supporting continued development of and connections between these networks and establishing "rules of the road" for connections among them, Minnesota can achieve foundational HIE.

Exhibit 7 shows what achieving the vision for foundational HIE through connected networks might look like in Minnesota. Minnesota stakeholders support this approach, which also aligns

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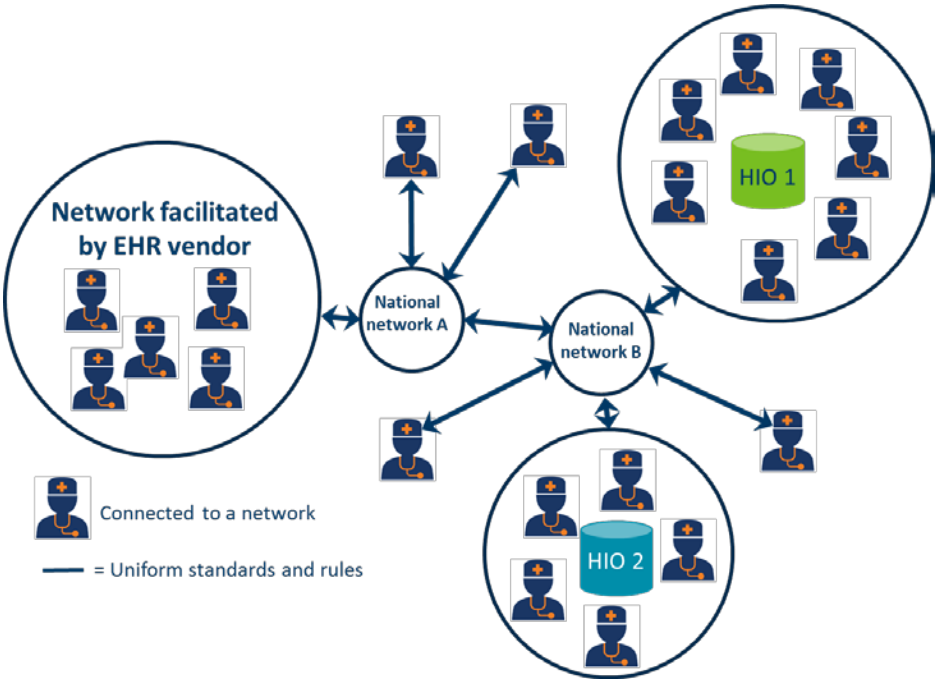
[18] Jung, H-Y, et. al., 2015. "Use of Health Information Exchange and Repeat Imaging Costs." Journal of the American College of Radiology, 12(12 0 0): 1364-1370.

[19] Available at: http://currentcareri.org/AboutCurrentCare/CurrentCarebytheNumbers.aspx

with the recently released framework from the federal Office of the National Coordination for Health Information Technology (ONC). In this vision:

- Health organizations will be able to connect to other providers by selecting the type of network that meets their care, business and community needs. For example, the network may be facilitated by their EHR vendor, or by an HIO, and/or they may connect directly to a national network.
- Each of these connected networks follows uniform rules and standards to ensure that health information can be exchanged. This uniformity is depicted in Exhibit 7 as a common structure (circles) and common connections (bidirectional arrows).

Exhibit 7: Minnesota's Vision for Connected HIE Networks



Recommendations

In arriving at these recommendations, this study's authors relied heavily on input from a broad range of Minnesota stakeholders with deep experience in the challenges associated with HIE in Minnesota, as well as content experts and thought leaders from other states and national bodies. This broad approach was intentional, to ensure that recommendations not only address current pain points related to HIE, but aim towards a future model that will support, rather than hinder, Minnesota's goals for improving individual and community health and create a more efficient, secure system for sharing critical information about patient needs.

The primary recommendation, based on this study's findings, is to move Minnesota in the direction of a 'connected networks' model that will provide essential HIE services accessible to all stakeholders statewide, build on existing networks and connections that providers have already established, and be consistent with national initiatives. To achieve this MDH, with endorsement from the e-Health Advisory Committee, recommends:

1. The Minnesota Legislature should modify the Minnesota Health Records Act to align with HIPAA for disclosure purposes only and to support HIE while maintaining key provisions to ensure patient control of information.
2. MDH should establish a HIE task force of the e-Health Advisory Committee to develop strategic and implementation plans for the connected networks model by focusing on actions and policies to:
    a. Expand exchange of clinical information to support care transitions between organizations that use Epic, a widely used electronic health record system in Minnesota, and those that do not.
    b. Expand event alerting (for admission, discharge, and transfer) to support effective care coordination.
    c. Identify, prioritize and scope needs for ongoing connected networks and HIE services with the goal of optimal HIE.
3. The MN Legislature should act on the recommendations of the e-Health Initiative's HIE task force that are expected to include:
    a. Updating Minnesota's Health Information Exchange Oversight law to support the coordinated networks concept.
    b. Appropriating funds to help providers connect to HIE services and develop ongoing coordinated HIE services.

Modify the Minnesota Health Records Act

Minnesota's health care stakeholders overwhelmingly support legislation that will enable secure use of information for robust, value-added HIE services in compliance with patient consent and preferences, and identified the MHRA as a key barrier to this.

Many stakeholders called for fully aligning MHRA with HIPAA. However, the project team and Advisory Committee instead recommend more limited modifications that are focused on aligning the consent requirements for disclosure of information for treatment, payment and operations with HIPAA but do not subject providers in Minnesota that are not currently covered under HIPAA to requirements such as the notice of privacy practices, breach notification, and federal reporting in 45 CFR 164.515-164.534. These recommended changes will create a level playing field for all providers who need to exchange information for the purposes of treatment, payment and operations and will bring Minnesota into alignment with the vast majority of other states that use HIPAA to guide their consent requirements.

The recommended proposed statutory changes to MHRA, provided in Appendix B, do not impact certain fundamental provisions of the law. Specifically, the recommendations:

- Do not change provisions related to mental health (the "Family Involvement Law" which allows caretakers to access mental health care information that will help them care for a person with mental illness[20]). This also includes no change to the law enforcement disclosure provisions related to mental health.
- Do not change the opt-out requirement for the patient information service / record locator service, which is the mechanism used by health providers to look up a patient's health information.

There has been strong support to create more consistent consent requirements across all types of providers in Minnesota – HIPAA covered entity providers, non-HIPAA covered entity providers, and government providers – so that disclosures from all providers are treated the same for purposes of facilitating HIE. The recommendations in Appendix B reflect this important principle of having a single standard that can be applied across provider types.

[20] Further information is available at http://www.namihelps.org/assets/PDFs/FamilyInvolvementBrochureFinal.pdf

HIE Task Force of the Minnesota e-Health Advisory Committee

The specific governance, finance and operational needs for Minnesota's future HIE system will be developed by a task force that represents the array of stakeholder perspectives. To advance HIE in Minnesota, this task force will develop strategic and implementation action steps consistent with this study's recommendations, focusing on a connected network model and options for moving forward with essential statewide services. The initial work will focus on exchange of clinical information for care transitions (for example, post-acute care and clinical referrals) and event alerting (notably, hospital/emergency department admissions, discharges, and transfers). The task force will seek expert input and review state and national data and HIE efforts. The task force will report updates regularly to the Minnesota e-Health Advisory Committee and submit deliverables by the end of 2018.

The task force will be convened under MDH's existing authority as part of Minnesota Statute, section 62J.495, report to the Minnesota e-Health Advisory Committee and be charged with developing a plan for the connected networks model. The task force deliverables are expected to include:

1. A 2018-2019 action plan to implement connected networks by building upon existing HIO and national network connections and addressing priority use cases and gaps, including: care transitions between Epic and non-Epic settings, and event alerting services.
2. Develop implementation specifications and requirements for implementation in 2018-19 that address key considerations such as transactions and standards, financial requirements, organization implementation and participation, and measurable targets for success,
3. Develop a plan for five-year interim governance, authority, and financing needed to establish the connected network with the goal of optimal HIE.
4. Recommend updates to Minnesota's Health Information Exchange Oversight Law (Minnesota Statutes, sections62J.498 through 62J.4982) to better ensure effective support for HIE and allow timely updates based on changing markets and technology.

The task force is expected to collaborate with and build upon complementary HIE-related efforts in the state, the region and the nation. Those efforts include, but are not limited to, Minnesota HIOs, Minnesota and national HIE networks, the event alerting system (EAS) established by the Department of Human Services, and cross-sector efforts to address the opioid crisis in Minnesota. The e-Health Advisory Committee will communicate future recommendations to the Minnesota Legislature based on the work of this task force.

Conclusion

States across the country are challenged to develop comprehensive and sustainable HIE solutions that allow health information to be exchanged securely and efficiently to meet the needs of individual patients and communities. No single model works, and instead hybrid solutions are evolving based on markets, technology, and funding.

Minnesota is experiencing many of the same struggles with HIE as other states, along with challenges associated a more restrictive state law regarding disclosure of patient information and a market-based HIE approach that lacks a clear governance structure or compliance mechanisms. But, Minnesota is also unique in thinking beyond foundational HIE needs and developing a strong, forward-thinking, collaborative vision to connect providers across the care continuum and use information to support both individual and community health.

To achieve this worthy goal, Minnesota must first advance foundational HIE that flows with the patient to the provider by addressing barriers and building upon assets already in place. These assets include significant e-health investments, lessons learned from previous efforts to establish and connect HIE networks, and the HIE options and networks emerging here in the state and nationally.

Beyond that, Minnesota needs to build towards a system of robust HIE that allows providers to coordinate and manage patient care across the care continuum and consolidate information across patients in order to analyze and support health outcomes. Ultimately, Minnesota needs a system that supports providers and communities in improving both individual and community health improvement, rapid response to emerging threats, and understanding needs for how and where to direct resources.

As a result of this study, the critical elements for success are now clear: governance, champions to lead these HIE efforts, collaboration, technical expertise, broad stakeholder participation, services that provide ongoing value, sustainable and equitable financing, and alignment with national efforts. If Minnesota can achieve this, patients and family members, providers, health plans, communities, and other key stakeholders will reap the benefits in the following ways:

- Patients will benefit because their information is easily available to any provider whom they want it shared with. They will not need to repeat their health history at each medical appointment, and they will not need to be subjected to risky and redundant tests and imaging procedures.
- Information will flow with the patient, so that care providers can trust that they have the correct health information, understand a patient's health as a whole beyond the clinical and acute care settings, and be well prepared for appointments.

- Providers will have meaningful information to support the care they provide. This includes more complete information to support clinical health care decisions, better tools for care transitions and care coordination, and better understanding of patient outcomes.
- Health systems and health plans/payers will have information to increase patient safety, participate effectively in accountable health purchasing arrangements, and efficiently manage operational and administrative functions such as patient matching, consent management, provider directories, and required reporting.
- Communities will have useful and actionable information on the health of the population, and infrastructure to support targeted response to public health challenges and emergencies.

While much work still needs to be done to achieve these goals, this report lays out a realistic path forward that will allow us to support continued innovation in care delivery and payment reform, while improving both individual and community health.

Appendix A: Methodology

This study used information collected through mixed modes, methods and data sources. Data collection efforts and sources included:

- Data to describe HIE activity in MN from Minnesota's e-Health assessments, HIE service providers, grantee reporting, and state-certified health information organizations.
- Structured interviews with Minnesota stakeholder organizations.
- Stakeholder engagement meetings.
- Public comment period.
- Literature review of HIE use in other states to understand legal, financial and regulatory framework; sustainability; transaction activity (when available); and types of participants.
- Literature review of consent models in other states, specifically to examine the specifications for other HIPAA+ states and issues providers and vendors face in managing consent.

The scope of this study focused on HIE that is exchanged between health care providers and organizations affected by Minnesota's Interoperability mandate related to person and patient data used for clinical care, behavioral health, coordination of care, public health and population health.

Not in scope:

- Patient data for the purposes of billing and/or administrative transactions.
- Issues related to the purchase and installation of electronic health record systems across the continuum of care.
- Issues related to effective use of EHRs, such as clinical decision support.
- Exchange of individual data within state government programs or within an individual organizational setting such as a health system.

Minnesota e-health assessment data

Minnesota collects data on e-health adoption, use and health information exchange from a variety of sources. MDH staff drew on the following:

- Data from Minnesota's e-Health assessments of adoption/use of electronic health record systems and health information exchange. The settings surveyed include clinics, hospitals, nursing homes and local public health departments. Reports and methods are available at http://www.health.state.mn.us/e-health/assessment/index.html.
- Required reporting from state-certified health information organizations (HIO) and health data intermediaries. Information on organizations that are connected to an HIO is available at http://www.health.state.mn.us/e-health/hie/certified/hioconnections.html.
- Required reporting by organizations that have received grant funding from MDH relating to planning for and connecting to an HIO.

Structured interviews with Minnesota stakeholder organizations

Members of the project team conducted in-depth interviews in person and by phone with 67 officials and staff at 24 health care provider organizations and health plans/payers from April 13 to June 14, 2017.

The project team used semi-structured interviews with key informants by adapting an interview protocol from Cross DA, Lin SC, Adler-Milstein J. "Assessing payer perspectives on health information exchange," *Journal of the American Medical Informatics Association* 2015;0:1-7. doi: 10.1093/jamia/ocv072.

Pretest interviews were conducted with two key informant experts (3/6/17, 3/8/17).

The project Steering Team reviewed the interview guide (by email) from 3/10/17 through 3/20/17.

Stakeholder engagement meetings

Meetings were held with key stakeholder groups to provide expert input and validate study progress. Meetings included:

- Project steering team meetings (5) on: 1/31/17, 5/16/17, 8/29/17, 11/14/17, 12/5/17.
- Minnesota e-Health Advisory committee meetings (8) on: 12/8/16, 2/16/17, 4/27/17, 5/18/17, 8/7/17, 9/7/17, 11/17/17, 12/8/17.
- Minnesota e-Health HIE Workgroup meetings (2) on: 2/7/17, 5/4/17
- Minnesota e-Health Privacy and Security Workgroup meetings (3) on: 7/11/17, 8/18/17, 9/6/17.
- Minnesota e-Health Summit presentation on 6/15/17.
- Discussions with state-certified HIOs (6/28/17), Minnesota's HIE Review panel (6/28/17), and state-certified HIE services providers (7/19/17).

- Discussion with Minnesota Council of Health Plans on 8/14/17.

Public comment period

Public comment regarding the HIE findings and preliminary recommendations was requested from October 2 to31, 2017. The public comment document included a narrative background, specific questions for which input was requested, and instructions for responding. The public comment document is available at http://www.health.state.mn.us/e-health/hie/study/hiestudy.public-comment-2017-10-02.pdf and upon request to mn.ehealth@state.mn.us.

MDH received comments from 101 individuals and organizations. A summary of the responses was presented to the steering team and advisory committee, and used to refine the study recommendations. The comments and/or summary are available upon request to mn.ehealth@state.mn.us.

Literature reviews

HIE models

One literature review was conducted with assistance from the Office of the National Coordinator for Health Information Technology under the supervision of subject matter expert Patricia MacTaggart. The review sought to describe HIE use in other states, with attention to the legal, financial and regulatory framework; sustainability; transaction activity (when available),; and types of participants. The states under review include Minnesota's border states (IA, ND, SD, WI) and six additional states that have operational exchanges (CO, MA, OH, OR, TX, WA). MDH staff also supplemented this work with information from MI and NY based on characteristics of these HIE models.

Consent models

A literature review of consent models used in other states was conducted to examine the specifications for other HIPAA+ states and issues providers and vendors face in managing consent. The review was conducted by staff at the Minnesota Department of Administration, who are used by MDH to provide subject matter expertise on privacy and consent issues.

Project team

Minnesota Department of Health

- Karen Soderberg
- Jennifer Fritz
- Marty LaVenture
- Shirley Schoening Scheuler
- Anne Schloegel
- Melinda Hanson
- Bob Johnson
- Diane Rydrych

Minnesota Management Analysis and Development

- Matt Kane
- Jim Jarvis

Minnesota Department of Administration

- Laurie Beyer-Kropuenske
- Stacie Christensen
- Taya Moxley-Goldsmith

Some graphics used in this report were adapted from the Massachusetts eHealth Institute, at https://mehi.masstech.org/Icons.

Steering team

A steering team of subject matter experts was recruited from national contacts and the Minnesota e-Health Initiative. Members of this team advised the project team on study topics, the interpretation of findings, and recommendations. Steering team members participated in five conference calls or in-person meetings over the course of the study.

The expertise and perspectives of the team members are shown in the table below:

Expertise:	Perspective:	Team Member
MN HIE history	MN's HIE model; historical perspective on HIE in MN	Alan Abramson, HealthPartners
Legal and patient consent	MN and Federal laws; patient rights	Laurie Beyer-Kropuenske, MN Dept of Admin
SIM Multi-Payer Advisory Task Force	Payers; ACOs	Garrett Black, Blue Cross Blue Shield of Minnesota
SIM Community Advisory Task Force	Population health improvement	Jennifer Lundblad, Stratis Health
HIE expert	Informatics; data use	Brian Dixon, Riegenstrief Institute
HIE research	Methods; state models	Julia Adler-Milstein, UC – San Francisco Joshua Vest, Indiana Univ.
Settings:		
Hospitals	Priority HIE transactions	Mark Sonneborn, MN Hospital Assn
Clinics	Priority HIE transactions	Deanna Mills, FUHN FQHC
Local public health	Priority HIE transactions	Dan Jensen, Olmsted County
Other non-meaningful use settings	Priority HIE transactions	Todd Bergstrom, Care Providers of MN
MN Department of Health	Health policy	Diane Rydrych
MN Department of Human Services	Medicaid; public health programs	Heather Petermann
MN Commerce Department and/or MN Public Utilities Commission	Regulatory frameworks and concepts	Donna Watz, MN Dept of Commerce

Special thanks to Patricia MacTaggart, formerly with the Office of the National Coordinator for Health Information Technology.

Information about the Minnesota e-Health Advisory Committee, including membership, is available at: http://www.health.state.mn.us/e-health/advcommittee/index.html

Appendix B: Recommended modifications to the Minnesota Health Records Act

In the past year, MDH has conducted two requests for information (RFI) to get public input on the impacts of the Minnesota Health Records Act (MHRA). The 2017 RFI study concluded that MHRA does not adequately support the majority of patients whose preference, as reported by providers, is to share their health information to help ensure they receive appropriate care.[21]

This year, in conjunction with this study, MDH focused its analysis on potential changes in MHRA to better enable health information exchange. The study team comprised of analysts and legal experts considered a range of options and proposed potential changes which were vetted by the Minnesota e-Health Privacy and Security Workgroup and shared for public comment. The options ranged from full alignment with HIPAA to various degrees of partial alignment to support information sharing for treatment, payment and health care operations. Complete language of the options reviewed is available at http://www.health.state.mn.us/e-health/hie/study/index.html (see "Options 1 and 2) or upon request to mn.ehealth@state.mn.us.

As shaped by stakeholder meetings and the public comment process, described in Appendix A (Methodology), the recommended statutory changes focus on aligning the consent requirements for information disclosed for treatment, payment and operations with the HIPAA regulations but do not subject providers in Minnesota that are not currently covered under HIPAA to requirements such as the notice of privacy practices, breach notification, and federal reporting in 45 CFR 164.515-164.534. Recommended statutory edits are included in this appendix, immediately below.

[21] Minnesota Department of Health, 2017. "Impacts and Costs of the Minnesota Health Records Act." Available at: http://www.health.state.mn.us/e-health/legrpt/docs/rfi-health-record-act2017.pdf

Recommended Draft Legislative Changes to the Minnesota Health Records Act

Reviewed by legal experts and the Minnesota e-Health Privacy and Security Workgroup.

144.291 MINNESOTA HEALTH RECORDS ACT. [22]

Subdivision 1. **Short title**. Sections 144.291 to 144.298 may be cited as the "Minnesota Health Records Act."

Section 144.291, subdivision 2, is amended to read:

Subd. 2. **Definitions.** For the purposes of sections 144.291 to 144.298, the following terms have the meanings given.(a) "Group purchaser" has the meaning given in section 62J.03, subdivision 6.

(b) "Health information exchange" means a legal arrangement between health care providers and group purchasers to enable and oversee the business and legal issues involved in the electronic exchange of health records between the entities for the delivery of patient care.

(c) "Health record" means any ~~information, whether oral or recorded in any form or medium, that relates to the past, present, or future physical or mental health or condition of a patient; the provision of health care to a patient; or the past, present, or future payment for the provision of health care to a~~ patient information that is protected health information as defined in HIPAA.

(d) "HIPAA" means the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act.

~~(d)~~ (e) "Identifying information" means the patient's name, address, date of birth, gender, parent's or guardian's name regardless of the age of the patient, and other nonclinical data which can be used to uniquely identify a patient.

~~(e)~~ (f) "Individually identifiable form" means a form in which the patient is or can be identified as the subject of the health records.

(f) "Medical emergency" means medically necessary care which is immediately needed to preserve life, prevent serious impairment to bodily functions, organs, or parts, or prevent placing the physical or mental health of the patient in serious jeopardy.

~~(g)~~ (h) "Patient" means a natural person who has received health care services from a provider for treatment or examination of a medical, psychiatric, or mental condition, the surviving spouse and parents of a deceased patient, or a person the patient appoints in writing as a representative, including a health care agent acting according to chapter 145C, unless the authority of the agent has been limited by the principal in the principal's health care directive.

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[22] Minn. Stat. §§ 144.292, 144.294-144.298 could also be amended and/or repealed for full HIPAA alignment, but there are not obvious impacts on HIE.

Except for minors who have received health care services under sections 144.341 to 144.347, in the case of a minor, patient includes a parent or guardian, or a person acting as a parent or guardian in the absence of a parent or guardian.

~~(h)~~ (i) "Patient information service" means a service providing the following query options: a record locator service as defined in paragraph ~~(j)~~ (k) or a master patient index or clinical data repository as defined in section 62J.498, subdivision 1.

~~(i)~~ (j) "Provider" or "health care provider" has the meaning given in Code of Federal Regulations title 45, chapter A, subchapter C, part 160, subpart A, section 160.103, and ~~means~~:

(1) any person who furnishes health care services and is regulated to furnish the services under chapter 147, 147A, 147B, 147C, 147D, 148, 148B, 148D, 148F, 150A, 151, 153, or 153A;

(2) a home care provider licensed under section 144A.471;

(3) a health care facility licensed under this chapter or chapter 144A; and

(4) a physician assistant registered under chapter 147A.

~~(j)~~ (k) "Record locator service" means an electronic index of patient identifying information that directs providers in a health information exchange to the location of patient health records held by providers and group purchasers.

(k) (l) "Related health care entity" means an affiliate, as defined in section 144.6521, subdivision 3, paragraph (b), of the provider releasing the health records.

144.293 RELEASE OR DISCLOSURE OF HEALTH RECORDS.[23]

Subdivision 1. **Release or disclosure of health records**. Health records can be released or disclosed as specified in subdivisions 2 to 9 and sections 144.294 and 144.295.

Subd. 2. ~~**Patient consent to release**~~ **Disclosure of patient records.** A provider may disclose health records, if that disclosure is in compliance with Code of Federal Regulations title 45, chapter A, subchapter C, part 164, subpart E, sections 164.500 – 164.514, irrespective of whether the provider is a covered entity under HIPAA, or if the disclosure is permitted or required by other federal or state law.~~, or a person who receives health records from a provider may not release a patient's health records to a person without:~~

~~(1) a signed and dated consent from the patient or the patient's legally authorized representative authorizing the release;~~

~~(2) specific authorization in law; or~~

~~(3) a representation from a provider that holds a signed and dated consent from the patient authorizing the release~~.

[23] Align more stringent consent requirements with HIPAA - Consent not required for purposes of treatment, payment, or health care operations and other permitted or required disclosures.

Subd. 3. **Release from one provider to another.** A patient's health record, including, but not limited to, laboratory reports, x-rays, prescriptions, and other technical information used in assessing the patient's condition, or the pertinent portion of the record relating to a specific condition, or a summary of the record, shall promptly be furnished to another provider upon the written request of the patient. The written request shall specify the name of the provider to whom the health record is to be furnished. The provider who furnishes the health record or summary may retain a copy of the materials furnished. The patient shall be responsible for the reasonable costs of furnishing the information.

~~Subd. 4. Duration of consent. Except as provided in this section, a consent is valid for one year or for a period specified in the consent or for a different period provided by law.~~[24]

Subd. 5. **Exceptions to consent requirement.** (a) This section does not prohibit the release of health records:

(1) for a medical emergency when the provider is unable to obtain the patient's consent due to the patient's condition or the nature of the medical emergency;

(2) to other providers within related health care entities when necessary for the current treatment of the patient; or

(3) to a health care facility licensed by this chapter, chapter 144A, or to the same types of health care facilities licensed by this chapter and chapter 144A that are licensed in another state when a patient:

(i) is returning to the health care facility and unable to provide consent; or

(ii) who resides in the health care facility, has services provided by an outside resource under Code of Federal Regulations, title 42, section 483.75(h), and is unable to provide consent.

(b) A provider may release a deceased patient's health care records to another provider for the purposes of diagnosing or treating the deceased patient's surviving adult child.

~~Subd. 6. **Consent does not expire.** Notwithstanding subdivision 4, if a patient explicitly gives informed consent to the release of health records for the purposes and restrictions in clause (1), (2), or (3), the consent does not expire after one year for:~~

~~(1) the release of health records to a provider who is being advised or consulted with in connection with the releasing provider's current treatment of the patient;~~

~~(2) the release of health records to an accident and health insurer, health service plan corporation, health maintenance organization, or third-party administrator for purposes of payment of claims, fraud investigation, or quality of care review and studies, provided that:~~

~~(i) the use or release of the records complies with sections 72A.49 to 72A.505;~~

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[24] It is not necessary to have duration of consent when provider disclosures are aligned with HIPAA.

~~(ii) further use or release of the records in individually identifiable form to a person other than the patient without the patient's consent is prohibited; and~~

~~(iii) the recipient establishes adequate safeguards to protect the records from unauthorized disclosure, including a procedure for removal or destruction of information that identifies the patient; or~~

~~(3) the release of health records to a program in the welfare system, as defined in section 13.46, to the extent necessary to coordinate services for the patient.~~[25]

Subd. 7. **Exception to consent.** Subdivision 2 does not apply to the release of health records to the commissioner of health or the Health Data Institute under chapter 62J, provided that the commissioner encrypts the patient identifier upon receipt of the data.

Subd. 8. **Record locator or patient information service.** (a) A provider or group purchaser may release patient identifying information and information about the location of the patient's health records to a record locator or patient information service without consent from the patient, unless the patient has elected to be excluded from the service under paragraph (d). The Department of Health may not access the record locator or patient information service or receive data from the service. Only a provider may have access to patient identifying information in a record locator or patient information service. Except in the case of a medical emergency, a provider participating in a health information exchange using a record locator or patient information service does not have access to patient identifying information and information about the location of the patient's health records unless the patient ~~specifically consents to~~ ~~the~~ elects not to allow access. ~~A consent does not expire but may be revoked by the patient at any time by providing written notice of the revocation to the provider.~~

(b) A health information exchange maintaining a record locator or patient information service must maintain an audit log of providers accessing information in the service that at least contains information on:

(1) the identity of the provider accessing the information;

(2) the identity of the patient whose information was accessed by the provider; and

(3) the date the information was accessed.

(c) No group purchaser may in any way require a provider to participate in a record locator or patient information service as a condition of payment or participation.

(d) Upon request, a provider or an entity operating a record locator or patient information service must provide a mechanism under which patients may exclude their identifying information and information about the location of their health records from a record locator or patient information service. ~~At a minimum, a consent form that permits a provider to access a record locator or patient information service must include a conspicuous check-box option that allows a patient to exclude all of the patient's information from the service.~~ A provider

[25] Consent expiration is unnecessary when provider disclosures are aligned with HIPAA.

participating in a health information exchange with a record locator or patient information service who receives a patient's request to exclude all of the patient's information from the service or to have a specific provider contact excluded from the service is responsible for removing that information from the service.

Subd. 9. Documentation of release. (a) In cases where a provider releases health records without patient consent as authorized by law, the release must be documented in the patient's health record. In the case of a release under section 144.294, subdivision 2, the documentation must include the date and circumstances under which the release was made, the person or agency to whom the release was made, and the records that were released.

(b) When a health record is released using a representation from a provider that holds a consent from the patient, the releasing provider shall document:

(1) the provider requesting the health records;

(2) the identity of the patient;

(3) the health records requested; and

(4) the date the health records were requested.

~~Subd. 10. **Warranties regarding consents, requests, and disclosures**. (a) When requesting health records using consent, a person warrants that the consent:~~

~~(1) contains no information known to the person to be false; and~~

~~(2) accurately states the patient's desire to have health records disclosed or that there is specific authorization in law.~~

~~(b) When requesting health records using consent, or a representation of holding a consent, a provider warrants that the request:~~

~~(1) contains no information known to the provider to be false;~~

~~(2) accurately states the patient's desire to have health records disclosed or that there is specific authorization in law; and~~

~~(3) does not exceed any limits imposed by the patient in the consent.~~

~~(c) When disclosing health records, a person releasing health records warrants that the person:~~

~~(1) has complied with the requirements of this section regarding disclosure of health records;~~

~~(2) knows of no information related to the request that is false; and~~

~~(3) has complied with the limits set by the patient in the consent.~~[26]

[26] Aligns warranty requirements related to provider disclosures with HIPAA.

Align MN law with HIPAA for insurance consent purposes

1. Repeal Minnesota Statutes, section 13.05, subdivision 4a, clause (7)
2. Minnesota Statutes, Section 72A.501, subdivision 4, is amended to read:

   Subd. 4. **Authorization; noninsurers.** If an authorization is submitted to an insurer, insurance-support organization, or insurance agent by a person other than an insurer, insurance-support organization, or insurance agent, the authorization must be dated, signed by the person.~~, and obtained one year or less before the date a disclosure is sought~~ Unless otherwise required by law, this authorization does not expire, unless an expiration date or event is specified in the authorization.

3. Minnesota Statutes, Section 72A.502, subdivisions 6 and 12, are amended to read:

   Subd. 6. **Other laws or order.** Personal or privileged information may be disclosed without a written authorization if permitted or required by another state or federal law or regulation or in response to a facially valid administrative or judicial order, including a search warrant or subpoena.

   Subd. 12. Notice. Whenever an insurer, insurance agent, or insurance-support organization discloses personal or privileged information about a person that requires the written authorization of that person under this section, the insurer, insurance agent, or insurance-support organization shall notify that person in writing within ten days of the date the information was disclosed. The notification must specify the identity of the person to whom information was disclosed and the nature and substance of the information that was disclosed. A notice is not required to be given under this subdivision if an insurer is disclosing personal information for underwriting purposes to another insurer, or to an insurance-support organization if the person had signed an authorization authorizing the disclosure. A notice is not required under this subdivision if the disclosing entity is subject to and complies with the provisions in Code of Federal Regulations title 45, chapter A, subchapter C, part 164, subpart D, sections 164.400 to 164.414.

Align relevant consent provisions in the Data Practices Act with HIPAA

Minnesota Statutes, Section 13.05, subdivision 4, is amended to read:

Subd. 4. **Limitations on collection and use of data.** Private or confidential data on an individual shall not be collected, stored, used, or disseminated by government entities for any purposes other than those stated to the individual at the time of collection in accordance with section 13.04, except as provided in this subdivision.

(a) Data collected prior to August 1, 1975, and which have not been treated as public data, may be used, stored, and disseminated for the purposes for which the data was originally collected

or for purposes which are specifically approved by the commissioner as necessary to public health, safety, or welfare.

(b) Private or confidential data may be used and disseminated to individuals or entities specifically authorized access to that data by state, local, or federal law enacted or promulgated after the collection of the data.

(c) Private or confidential data may be used and disseminated to individuals or entities subsequent to the collection of the data when the responsible authority maintaining the data has requested approval for a new or different use or dissemination of the data and that request has been specifically approved by the commissioner as necessary to carry out a function assigned by law.

(d) Private data may be used by and disseminated to any person or entity if permitted or required under the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act or if the individual subject or subjects of the data have given their informed consent. Whether a data subject has given informed consent shall be determined by rules of the commissioner.

The responsible authority may require a person requesting copies of data under this paragraph to pay the actual costs of making and certifying the copies.

(e) Private or confidential data on an individual may be discussed at a meeting open to the public to the extent provided in section 13D.05.

Section 13.3805, subdivision 1, is amended to read:

Subdivision 1. **Health data generally.** (a) **Definitions.** As used in this subdivision:

(1) "Commissioner" means the commissioner of health.

(2) "Health data" are data on individuals created, collected, received, or maintained by the Department of Health, political subdivisions, or statewide systems relating to the identification, description, prevention, and control of disease or as part of an epidemiologic investigation the commissioner designates as necessary to analyze, describe, or protect the public health.

(b) **Data on individuals.** (1) Health data are private data on individuals. Notwithstanding section 13.05, subdivision 9, health data may not be disclosed except as provided in this subdivision and section 13.04.

(2) The commissioner or a community health board as defined in section 145A.02, subdivision 5, may disclose health data to the data subject's physician as necessary to locate or identify a case, carrier, or suspect case, to establish a diagnosis, to provide treatment, to identify persons at risk of illness, or to conduct an epidemiologic investigation.

(3) With the approval of the commissioner, health data may be disclosed to the extent necessary to assist the commissioner to locate or identify a case, carrier, or suspect case, to alert persons who may be threatened by illness as evidenced by epidemiologic data, to control or prevent the spread of serious disease, or to diminish an imminent threat to the public health.

(4) If permitted or required under the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act.

(c) **Health summary data.** Summary data derived from data collected under section 145.413 may be provided under section 13.05, subdivision 7.

Minnesota Statutes, Section 13.384, subdivision 3, is amended to read:

Subd. 3. **Classification of medical data.** Unless the data is summary data or a statute specifically provides a different classification, medical data are private but are available only to the subject of the data as provided in sections 144.291 to 144.298, and shall not be disclosed to others except:

(a) pursuant to section 13.05;

(b) pursuant to section 253B.0921;

(c) pursuant to a valid court order;

(d) to administer federal funds or programs;

(e) to the surviving spouse, parents, children, siblings, and health care agent of a deceased patient or client or, if there are no surviving spouse, parents, children, siblings, or health care agent to the surviving heirs of the nearest degree of kindred;

(f) to communicate a patient's or client's condition to a family member, health care agent, or other appropriate person in accordance with acceptable medical practice, unless the patient or client directs otherwise; ~~or~~

(g) as otherwise required by law~~.~~; or

(h) as permitted or required under the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act.

Minnesota Statutes, Section 13.386, subdivision 3, is amended to read:

Subd. 3. **Collection, storage, use, and dissemination of genetic information.** (a) Unless otherwise expressly provided by law, genetic information about an individual:

(1) may be collected by a government entity, as defined in section 13.02, subdivision 7a, or any other person only with the written informed consent of the individual;

(2) may be used only for purposes to which the individual has given written informed consent;

(3) may be stored only for a period of time to which the individual has given written informed consent; and

(4) may be disseminated only:

(i) with the individual's written informed consent; or

(ii) if necessary in order to accomplish purposes described by clause (2). A consent to disseminate genetic information under item (i) must be signed and dated. Unless otherwise provided by law, such a consent is valid for one year or for a lesser period specified in the consent.

(b) Newborn screening activities conducted under sections 144.125 to 144.128 are subject to paragraph (a). Other programs and activities governed under section 144.192 are not subject to paragraph (a).

(c) Notwithstanding paragraph (a), genetic information may be collected, used, stored, or disseminated as permitted or required under the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act.

Minnesota Statutes, section 13.46, subdivision 2, is amended to read:

Subd. 2. General. (a) Data on individuals collected, maintained, used, or disseminated by the welfare system are private data on individuals, and shall not be disclosed except:

(1) according to section 13.05;

(2) according to court order;

(3) according to a statute specifically authorizing access to the private data;

…

(31) to a health care provider governed by sections 144.291 to 144.298, to the extent necessary to coordinate services.

(32) to the chief administrative officer of a school to coordinate services for a student and family; data that may be disclosed under this clause are limited to name, date of birth, gender, and address; ~~or~~

(33) to county correctional agencies to the extent necessary to coordinate services and diversion programs; data that may be disclosed under this clause are limited to name, client demographics, program, case status, and county worker information; or

(34) as permitted or required under the Health Insurance Portability and Accountability Act of 1996, title II, subtitle F, as amended, including federal regulations adopted under that act.

Private classification for all health records held by government entities[27]

A new section in Minnesota Statutes, chapter 13, is added to read:

[27] Consider adding a catch-all private classification for health records that applies to all government entities whether they are HIPAA covered entities or not. All health information in MN should be maintained as private. There are certain times the Data Practices Act would dictate release of health information, such as in law enforcement records, when not held by a HIPAA covered entity or MHRA provider.

Section 13.388. **Privacy of health records.** A health record, as defined in section 144.291, subdivision 2, paragraph (c), is private data on individuals. Notwithstanding section 13.05, a health record may not be disclosed except as provided in this chapter.

Appendix C: Environmental scan of HIE models in other states

This assessment is based on a semi-structured environmental scan of the HIE models used in 12 states, including Minnesota's border states and other states with a range of designs and progress.[28] The scan examined a number of attributes, including alignment with this report's framework of foundational, robust and optimal HIE; participation rates among hospitals and non-hospital providers; overall maturity; governance; and funding. To summarize the scan, the following categories and ratings were developed from the source analysis; these are considered descriptive because the information upon which they are based is not uniformly available.

HIE services capability:

MU	**Meaningful Use** HIE is when HIE services are primarily used for public health reporting (e.g., immunizations) but are not yet at the Foundational HIE level
	Foundational HIE is when basic health information flows with the patient to any provider during care transitions, including, for example, hospital discharge and referral between the primary care physician and specialist.
	Robust HIE allows organizations to use patient information from all providers across the care continuum to better understand a person's consolidated health picture and provide enhanced care coordination and better outcomes.
	Optimal HIE means that health information can be used to generate aggregated assessments of specific health issues, such as obesity rates, by population characteristics, such age and zip codes, in order to identify disparities, target interventions, and implement prevention programs.

[28] Office of the National Coordinator for HIT, Patricia Mactaggart, Technical Assistance Advisor (Minnesota). ONC Summary of Characteristics of Statewide Exchange of Information and HIEs. June 6, 2017. Michigan and New York information collected separately. Available upon request to mn.ehealth@state.mn.us.

Participation in state HIE models:

Hospital participation estimates were available for every state.

■	<1/3 of hospitals participating
■■	between 1/3 and 2/3 of hospitals participating
■■■	>2/3 of hospitals participating

Participation for clinics and other provider types, aside from hospitals:

Y	Participating
N	Not participating

Statewide HIE maturity rating:

Maturity ratings, incorporating both the HIE services capability and hospital participation estimates:

1	Less than foundational HIE capabilities with any level of participation
2	< 2/3 participation with at least **foundational** HIE capabilities
3	> 2/3 participation with **foundational** HIE capabilities
4	< 2/3 participation with **robust** HIE capabilities
5	> 2/3 participation and **robust** HIE capabilities
6	> 2/3 participation and **optimal** HIE capabilities

HIE governance model:

Gov	Government-led HIE is under direct government supervision, with government responsible for governance, financing and operations.
PU	HIE as a public utility with strong government oversight.
PS	Private sector-led HIE with government collaboration.
H	Hybrid of public utility and private sector models

Table C-1: Environmental Scan of State HIE Models and Characteristics

	MN	CO	IA	MA	MI	ND	NY	OH	OR	SD	TX	WA	WI
HIE Services Capability				MU									
Hospital Participation													
Participation beyond hospitals	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Statewide HIE Maturity Rating (1-6)	2	4	2	1	5	3	3	3	2	3	2	5	2
Current HIE Governance Model	PS	PS	PU	Gov	H	Gov	H	PS	Gov	Gov	H	PS	PS
Future HIE Governance Model	H	H							H	H			
Funding Sources													
CDC Grant										√			
CMS 90-10	√					√	√					√	
Medicaid Management Information System		√	√	√		√		√	√	√	√	√	√
ONC Grant (√-past; + current)	√	√+	√	√	√	√	√	√+	√+	√	√	√+	√
SIM Testing Grant (ended 2017)	√			√					√				
SIM Testing Grant (2018)		√	√		√		√	√				√	
State Appropriation	√	√			√	√	√		√				
Subscriber/User fees	√	√			√	√		√		√	√	√	√