

Minnesota Local Public Health e-Health Report, 2015

ADOPTION AND USE OF ELECTRONIC HEALTH RECORD SYSTEMS AND
HEALTH INFORMATION EXCHANGE

Minnesota Local Public Health e-Health Report, 2015

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Introduction

E-health is the adoption and effective use of electronic health record (EHR) systems and other health information technology (HIT) to improve health care quality and accessibility, increase patient safety, reduce healthcare costs, and improve public health. E-health can also increase local public health's ability to provide efficient and effective services to the communities they serve.

The Minnesota Department of Health (MDH), in partnership with the Minnesota e-Health Initiative, is responsible for assessing e-health in a variety of settings. This vital information is needed to:

- Measure Minnesota's status on achieving state and national goals to accelerate adoption and use of EHRs and other HIT and to achieve interoperability of health information;
- Identify gaps and barriers to enable effective strategies and efficient use of resources;
- Help develop programs and inform decisions at the local, state and federal levels of government; and
- Support community collaborative efforts.

Data presented in this report are from the Local Public Health Planning and Performance Management Reporting System (LPH PPMRS) Performance Measures. This information is submitted by Minnesota's Community Health Boards (CHBs) to MDH via LPH PPMRS, a web-based reporting system. The 2015 reporting was collected from January 2 through March 31, 2016, and includes responses from all 48 CHBs in Minnesota; 19 of the CHBs represent more than one county and therefore have multiple local health departments in their jurisdictions. Complete methodology information is presented in Appendix A.

Use of Electronic Health Record Systems

EHR Systems Used

All of the CHB report that their local public health departments used electronic health record systems (EHR) in 2015. Some reported multiple systems, because either they have multiple local public health departments in their jurisdiction, and/or they used more than one system. Two local public health departments did not have an EHR installed, but other local health departments within their CHB do have EHRs. Exhibit 1 shows the number and percent of EHR systems used by CHBs.

Exhibit 1: EHR Systems Used by CHBs, 2015

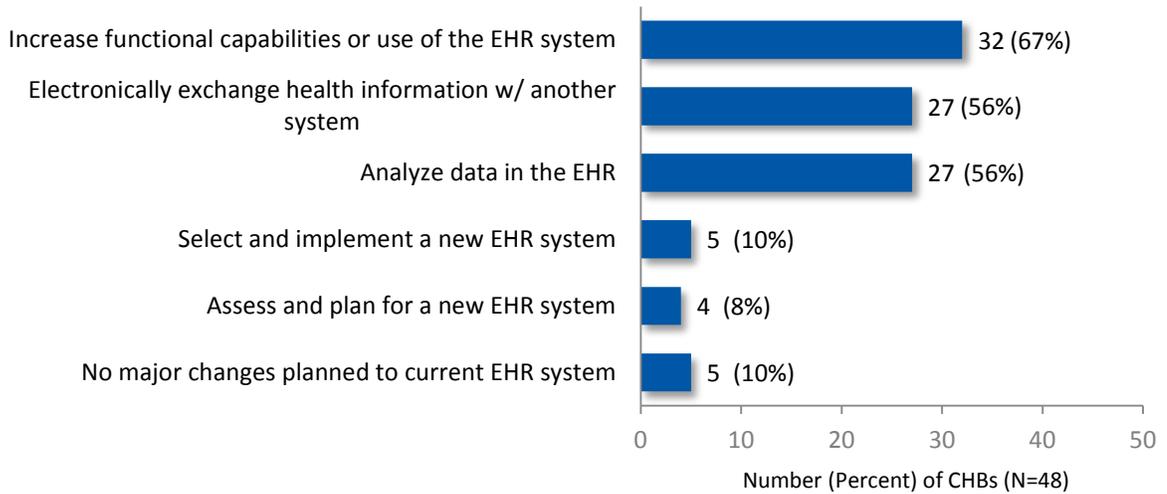
EHR System	Number	Percent
PH-Doc	27	56%
CHAMP	17	35%
CareFacts	6	13%
Custom-built local system	3	6%
Digital Health Department	2	4%
Other	6	13%
Total*	48	

* More than one system may be in use in a CHB

Planned Changes to EHR Systems and Capabilities

Most CHBs are planning changes to their EHR systems in 2016. Exhibit 2 shows the most common planned changes were upgrades to increase the functional capability (32), electronically exchanging health information (27), and/or analyzing data that resides in the EHR. Five planned to select and implement a new EHR system in the coming year, and four CHBs planned to assess and plan for a new EHR. Five CHBs plan no major changes in the coming year.

Exhibit 2: Changes Planned for EHR in 2016



Health Information Exchange

Health information exchange (HIE) is the secure electronic exchange of clinical information between organizations using nationally recognized standards (Minn. Stat. §62J.498 sub. 1(f)). The goal of HIE is to help make health information available, when and where it is needed, to improve the quality and safety of health and health care. Examples of HIE include secure messaging, electronic alerts, and electronic submission of immunization data to MDH.

Use of standard data structure and terminologies are important aspects in interoperability of EHR systems. In Minnesota, many efforts are underway to help achieve the secure electronic exchange of clinical information between organizations using nationally recognized standards. An example is the Omaha System standard terminology used by many local public health departments in Minnesota. This point-of-care nursing terminology allows for the collection, use, and sharing of assessment, intervention and evaluation information. Another example is the use of HL7 data standards for submitting immunization reporting to the Minnesota Department of Health.

Health Information Exchange Partners

Exhibit 3 shows the exchange activity among CHBs and *non-clinical partners*, compared to their needs to exchange with these partners. In 2015, the greatest need for sharing health information with the Minnesota Department of Health (48), Minnesota Department of Human Services (45), health or county-based purchasing plans (42), and counties or departments within the CHB (39).

CHBs were also asked about their ability to electronically share information with these partners (not including fax or regular email). The difference in the number of CHBs that need to share information and their ability to do so electronically is referred to in Exhibit 3 as a “gap.” These HIE gaps are greatest with the Minnesota Department of Human Services (-20), counties or departments within the CHB (-16), jail/correctional health (-15), health or county-based purchasing plans (-13), and the Minnesota Department of Health (-12).

Exhibit 3: Need to Share Information with Non-Clinical Partners and Ability to Electronically Exchange Health Information, 2015

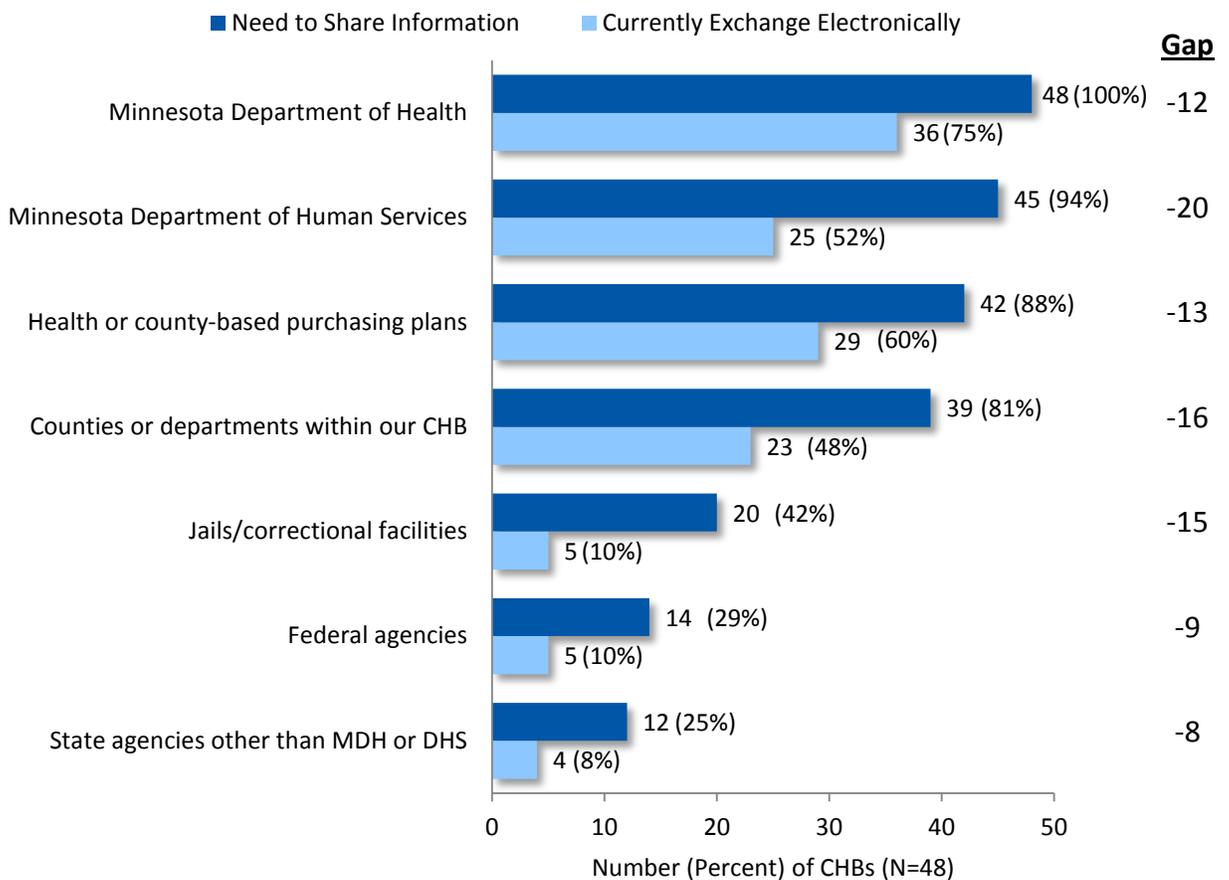
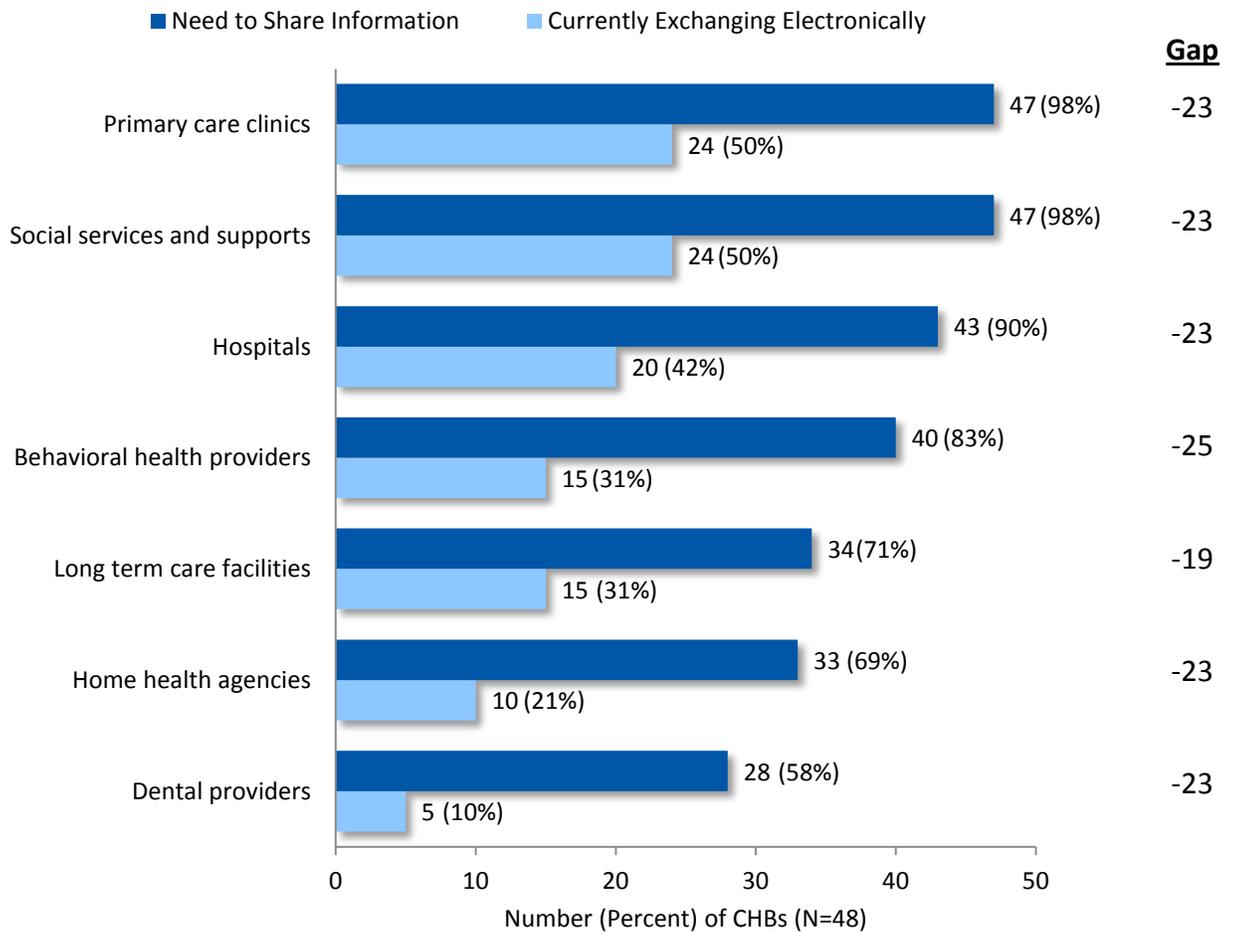


Exhibit 4 shows the exchange activity among CHBs and *clinical/health* partners, compared to their needs to exchange with these partners. In 2015, the greatest need for health information exchange was with primary care clinics (47), social services and supports (47), hospitals (43), and behavioral health providers (40). Many also need to share client information with long term care facilities (34), home health agencies (33), and dental providers (28).

Gaps in the ability to electronically exchange with these partners are large for all of these care settings. On average, 23 CHBs that need to share information with these types of care providers are not able to do so electronically.

Exhibit 4: Need to Share Information with Clinical/Health Partners and Ability to Electronically Exchange Health Information, 2015



Challenges to Health Information Exchange

Most CHBs indicated several challenges to health information exchange. Exhibit 5 shows the top challenges, including managing consent to share information (31), planning for and executing data use agreements (27), not knowing the exchange partners' abilities to exchange (23), partners not able to exchange (19), and inadequate technical support to implement HIE (18). In addition to the challenges shown in Exhibit 5, CHBs mentioned issues with financial resources, lack of staff expertise, and difficulties establishing interfaces with exchange partners.

Exhibit 5: Challenges to Secure Health Information Exchange with Outside Organizations, 2015

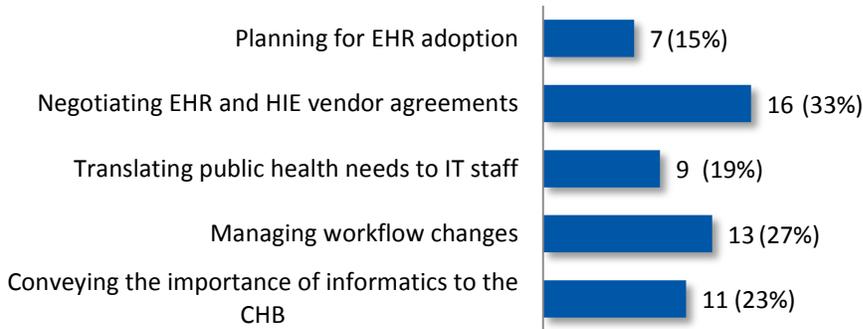


E-Health Resources Needed

Many CHBs needed resources for implementing EHRs, optimizing EHRs, and/or sharing data. Exhibit 6 shows that, while few needed resources to plan for EHRs, many more (16) needed assistance in negotiating vendor agreements and/or managing workflow changes (13). Twenty CHBs needed resources for managing consent to share information, and 22 needed resources for managing security breaches. The most commonly-needed resources for HIE and data use include establishing agreements with exchange partners (25), developing infrastructure to support HIE (25) and learning how to use data in the EHR to support community health assessments (20).

Exhibit 6: E-Health Resources Needed, 2015

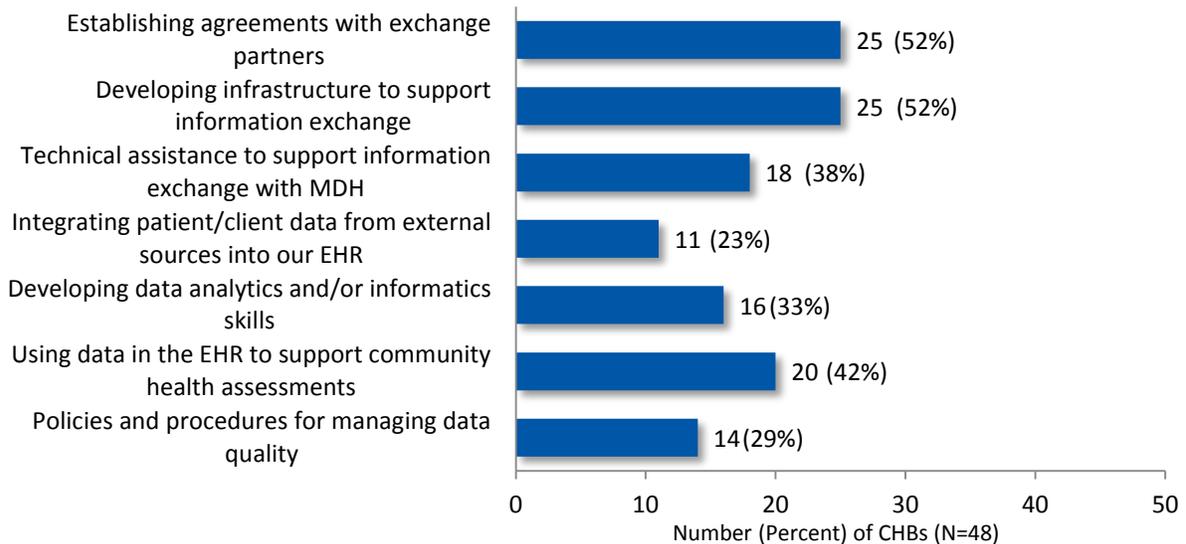
Implementing EHRs



Managing Privacy and Security

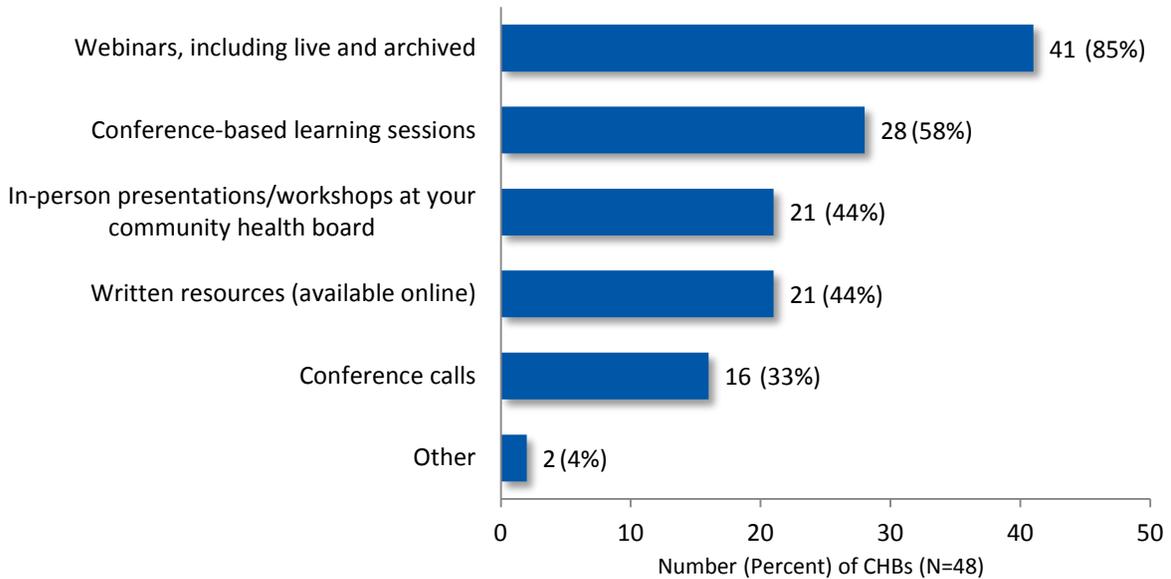


Exchanging and Using Data



When asked how CHBs would like to receive e-health resources, Exhibit 7 shows the most common format was through live and/or archived webinars (41). More than half (28) preferred conference-based learning, 21 preferred in-person training and/or written resources, and 16 preferred conference calls.

Exhibit 7: Preferred Method for Receiving e-Health Resources, 2015



Conclusion

Local public health departments in Minnesota have made progress adopting EHR systems, but use of these systems is minimal and not meeting their needs for secure exchange of health information with key partner organizations. CHBs have the greatest need to share patient/client information with primary care clinics and hospitals, but large gaps exist in their ability to do so electronically. The greatest challenges to secure electronic health information exchange with outside partners were managing consent to share, developing data sharing agreements, and understanding partners’ ability to exchange. CHBs need resources to support the sharing of health information using best practices for consent management and data security.

Appendix A: Methods

The data in this summary contains the most up-to-date information on e-health capacity, capability, training needs, and challenges of local public health in Minnesota. The primary source of the data is the Local Public Health Planning and Performance Management Reporting System (LPH PPMRS) Performance Measures. This information is submitted by Minnesota's Community Health Boards (CHBs) to the Minnesota Department of Health via LPH PPMRS, a web-based reporting system. All 48 of Minnesota's CHBs contributed responses. Information on Minnesota's CHBs is available at: <http://www.health.state.mn.us/divs/opi/gov/find/>. Note that the number of CHBs has changed over time due to changes in jurisdictions.

The LPH PPMRS Performance Measures related to informatics and e-health were developed by the Office of Performance Improvement and the Office of Health Information Technology, both of the Minnesota Department of Health, and the Local Public Health Association Informatics Sub-committee. The CHBs completed the seven question sets from January through March of 2016. All local public health departments were required to complete the LPH PPMRS Performance Measures by the Office of Performance Improvement. The response rate was 100%, with 48 of 48 CHBs responding; beginning in 2014, CHBs were required to report once for all local public health departments within their jurisdiction.

Definitions

Health information exchange (HIE): The electronic transmission of health related information between organizations according to nationally recognized standards. Health information exchange does not include paper, mail, phone, fax, or standard/regular email exchange of information.

Direct Secure Messaging (or Direct): Direct Secure Messaging is an approach to protect sensitive data using industry standards. It includes security features that go beyond typical email to (1) protect the confidentiality and integrity of sensitive data transmitted between systems or organizations and (2) provides proof of the origin of the data. Secure messages are encrypted bi-directionally and are stored on network or internet servers that are protected by login. Secure messaging functionality may be integrated with the EHR or maintained in a system separate and distinct from the EHR.

Terms used in the report are defined in the e-health glossary found at: <http://www.health.state.mn.us/e-health/glossary.html>.

More information on e-health assessment and activities in Minnesota can be found at: <http://www.health.state.mn.us/e-health/assessment.html> Questions about this report and the data can be directed to Karen Soderberg, HIT Evaluation and Assessment Coordinator, karen.soderberg@state.mn.us or 651-201-3576.

Appendix B: Resources to Promote e-Health in Minnesota

There are many resources available to promote e-health in Minnesota as well as many actions that can be taken by health care professionals, their associations and consumers. This appendix offers suggestions and resources to help stakeholders participate in the process.

Health Care Professionals and Organizations

- Collaborate with organizations and other health care settings
- Participate in e-health training & education
- Use, adapt and share e-health tools
 - MN e-health EHR information: <http://www.health.state.mn.us/e-health/ehr.html>
 - Stratis Health Toolkits: www.stratishealth.org/expertise/healthit/index.html
- Join/participate in the Minnesota e-Health Initiative
 - <http://www.health.state.mn.us/e-health/abouthome.html>
 - Subscribe to e-Health Updates at www.health.state.mn.us/e-health/index.html
 - Participate in Minnesota e-Health Initiative Workgroups: <http://www.health.state.mn.us/e-health/wgshome.html>

Associations

- Create a roadmap that includes components to:
 - Modernize electronic health records systems
 - Implement secure, standard-based electronic HIE
 - Ensure an informatics-savvy organization and workforce
- Draft model language for policies, contracts, use agreements, and best practices
- Create/support opportunities for collaboration statewide and regionally

Consumers

- Become engaged in managing your health and health care
 - Request a summary of your clinic visit
 - Ask for access to your personal health information electronically (e.g., patient portal)
- Use online tools to help manage your health and the health of your dependents or others you care for
- Learn about consumer engagement in health care from patients:
 - Office of the National Coordinator for HIT: <http://www.healthit.gov/patients-families>
 - National eHealth Collaborative: <http://www.nationalehealth.org/patient-engagement-framework>