

Nebraska State HIE Cooperative Agreement

Final Progress Report

2010-2014

Overview

On March 14, 2010, the State of Nebraska received a four-year \$6.8 million cooperative agreement from the U.S. Department of Health and Human Services' Office of the National Coordinator for Health IT. The Nebraska Information Technology Commission's eHealth Council was instrumental in developing the strategic plan which guided the implementation of the State Health Information Exchange Cooperative Agreement.

The Nebraska Information Technology Commission's eHealth Council established the following vision which is included in Nebraska's Strategic Plan:

Stakeholders in Nebraska will cooperatively improve the quality and efficiency of patient-centered health care and population health through a statewide, seamless, integrated consumer-centered system of connected health information exchanges. Nebraska will build upon the investments made in the state's health information exchanges and other initiatives which promote the adoption of health IT.

The Strategic Plan sets forth the following goals:

- Using information technology to continuously improve health care quality and efficiency through the authorized and secure electronic exchange and use of health information.
- Improve patient care and consumer safety;
- Encourage greater consumer involvement in personal health care decisions;
- Enhance public health and disease surveillance efforts;
- Improve consumer access to health care;
- Improve consumer outcomes using evidence-based practices

The plan leveraged the investments made in health information exchange, utilizing NeHIE as the state's lead health information exchange and supporting the development of a separate behavioral health network, the Electronic Behavioral Health Information Network (eBHIN). Grant funding was also used to support the electronic submission of information to public health systems. The Nebraska Statewide Telehealth Network also received support. Evaluation of the grant was conducted by a team of researchers at the University of Nebraska Medical Center.

Top Five Accomplishments

1. NeHII, Nebraska's lead health information exchange, is one of the largest health information exchanges in the country with over 2.7 million individuals in its Master Patient Index and 3,590 users as of March 14, 2014. NeHII has grown considerably since the start of the State HIE Cooperative Agreement. In March 2010, NeHII had 1.5 million individuals in the Master Patient Index and 464 users. A 2013 survey of Nebraska healthcare providers found that 63% of providers currently using NeHII were satisfied. Accessing a comprehensive patient medication list was identified as the most important feature of the health information exchange.
2. Nebraska also has one of the nation's only health information exchanges exclusively serving behavioral health providers and clients. The Electronic Behavioral Health Information Network (eBHIN) went live with its HIE functionality in the summer of 2012 and currently has 565 users in southeast Nebraska (Region 5) and the Omaha area (Region 6). Over 19,000 unique patient IDs are included in the HIE. eBHIN is working with additional regions to address interoperability issues and exchange information through CDAs. eBHIN has developed an innovative approach to managing consent which will allow for the exchange of behavioral health information with patient consent.
3. NeHII implemented an immunization gateway in 2011, enabling the exchange of immunization records between NeHII participants and the state immunization registry. The immunization gateway accepts messages from an EHR and sends the information to the Nebraska State Immunization Information System (NESIIS). The system receives the information, validates the format specifications, transmits the data to NESIIS, receives an acknowledgement from NESIIS and can query NESIIS for immunization information about a patient. This meets the requirement for Meaningful Use Stage 2 Core Objective 13 for eligible hospitals and Core Objective 15 for eligible providers. Regional West Physicians Clinic, York General Hospital and Boys Town are currently sending information. The third phase of the project will allow NeHII users to query NESIIS and save the immunization data available in NESIIS for a patient to the provider's EMR.
4. Legislation in 2011 authorized the Nebraska Department of Health and Human Services to work with NeHII to develop a Prescription Drug Monitoring Program utilizing NeHII's medication history functionality, making Nebraska the first state to incorporate PDMP functionality into an HIE. NeHII has worked with the Nebraska Medical Association to address physician concerns. Self-pay data from nine retail pharmacy chains and five mail order pharmacies was added. NeHII also has begun offering site licenses to all participating hospitals to address physician concerns about cost. NeHII has discussed breaking out the medication query functionality so that it could be offered as a stand alone function. This will be possible when Optum migrates to a new platform.
5. The use of e-prescribing in Nebraska has grown since 2010, with Nebraska ranking 17th in Surescripts' most recent ranking of states in e-prescribing. This is particularly noteworthy considering that in 2009 only 11% of physicians in Nebraska e-prescribed. Today approximately 90% of physicians in Nebraska are e-prescribing. Pharmacy participation in e-prescribing has also increased from 81% of Nebraska community pharmacies receiving e-prescriptions in January 2011 to 95% in Feb. 2013. In 2013, Surescripts received documentation that e-prescribing controlled substances is legal in Nebraska. At this time, over 35 pharmacies are able to accept e-prescription for controlled substances. Pharmacy participation in NeHII has also continued to grow with the first pharmacists participating in 2011. As of Dec. 31, 2013, 86 pharmacists are participating in NeHII.

Lab readiness has also improved. In December 2013, 62% of labs in Nebraska were sending electronic lab results in a structured format, up from just 20% in Dec. 2011. Over a third of labs (35%) are sending electronic lab results using LOINC, up from 15% in 2011.

Lessons Learned

HIE development has been a longer and more difficult process than we imagined. Hospitals, physician practices and other providers have limited resources with which to meet many competing demands—including Meaningful Use requirements, ICD-10 compliance requirements, and HIE implementation. Since Stage 1 Meaningful Use requirements could be met largely without the use of HIE, HIE implementation has been a lower priority for many hospitals and providers.

Adoption of HIE also requires behavioral changes by providers who are already dealing with the challenges of EHR adoption and changing payment models. Like EHR adoption, successful HIE adoption and utilization may require workflow changes, staff training, and a champion within the hospital or practice. While HIE adoption efforts have focused on physicians, HIE may be more beneficial for care managers and may be more easily incorporated into their workflow.

HIE adoption is also made more challenging because HIE benefits are not evenly distributed among all participants. Patients are often the biggest beneficiary. Getting providers to see the system-level benefits can be difficult.

Vendors are also dealing with resource constraints as they deal with the developing Meaningful Use requirements and evolving standards. Many vendors are charging significant interface fees which are proving to be financial barriers for small hospitals (especially Critical Access Hospitals) and practices.

Nebraska's rural geography and population poses challenges in implementing health information exchange. Nebraska has 65 Critical Access Hospitals (CAHs), more than all but four states (Kansas, Iowa, Texas, and Minnesota). There is a wide disparity in available resources, both financial and human, across Nebraska Critical Access Hospitals. Most Critical Access Hospitals in Nebraska are implementing electronic health records and have attained Meaningful Use. Wide River TEC worked with 55 Critical Access Hospitals and the state's single rural hospital, with 51 CAHs attaining Go-Live (Milestone 2) and 49 CAHs attaining Meaningful Use (Milestone 3). Six Nebraska Critical Access Hospitals currently participate in NeHII with an additional 16 Critical Access Hospitals in Nebraska pending implementation. The IAPD submitted to CMS in July 2013 includes funding for CAH implementation and will greatly facilitate efforts to connect CAHS.

Plans to Address Gap Areas

Although NeHII has added users and hospitals during the four-year grant period, gaps in adoption remain with approximately one-third of physicians in the state utilizing NeHII, approximately one-fourth of the hospitals participating in NeHII and 52% of the hospital beds covered by NeHII. NeHII has set a goal of having 80% of hospital beds covered by NeHII and 80% of physicians participating in NeHII. A funding request (IAPD) for Medicaid 90/10 matching funds was submitted by Nebraska's Medicaid program in July 2013 to facilitate adoption by physicians and hospitals and is still awaiting final approval. NeHII's new site license program should also facilitate physician adoption.

eBHIN serves behavioral health providers in the two most populated areas of the state--southeast Nebraska (Region 5) and the Omaha area (Region 6). These two regions together serve 65% of the behavioral health patients eligible for publicly assisted care, leaving a coverage gap of 35% of behavioral health patients eligible for publicly assisted care. eBHIN is looking at ways to further develop its capabilities and infrastructure appropriately, including looking at exchanging information with other regions using Clinical Document Architecture (CDA).

Data through NeHII is mainly provided by participating hospitals (including their labs) and Surescripts. Data from ambulatory providers is largely missing. NeHII is exploring parsing data from ADT (admission, discharge, transfer) feeds to provide additional patient data.

Efforts will also focus on increasing the utilization of both eBHIN and NeHII and helping providers in Nebraska better understand the value of health information exchange to patients and the health care system.

Nebraska State HIE Cooperative Agreement 2010-2014 Metrics

NeHII	March 2010	March 2014	% Change
Number of Clients			
• Number of Clients in the Master Patient Index	1,544,570	2,703,439	75%
• Total Patients That Have Opted Out	27,032	69,020	155%
• Total Patients Opting Back In	2,092	4,372	109%
Provider Information			
• Total Number of Users	464	3,590	674%
Hospital Information			
• Number of Nebraska Hospitals Participating	8	22	175%
• % of Nebraska Hospitals Participating	8%	23%	188%
• Percent of Nebraska Hospital Beds Covered	36%	52%	44%
Public Health Information			
• State Public Health Systems Connected to NeHII	0	1 ¹	
• Local Health Departments Participating in NeHII	0	2	
Payers			
• Number of Payers Participating	1	2	100%
Total Number of Results Sent to Exchange			
• LAB	6,633,699	38,411,495	479%
• RAD	1,838,874	7,399,077	302%
• Transcription	947,739	16,623,562	1654%

¹ In 2011, NeHI implemented the immunization gateway.

eBHIN	March 2010	March 2014
Number of Clients		
• Number of Clients in the Master Patient Index	0	18,326
• Percentage of Clients That Have Opted Out	0	32%
• Percentage of Clients Opting Back In	0	6%
Provider Information		
• Total Number of Users	0	565

E-Prescribing	Jan. 2011	Feb. 2014	% Change
Pharmacies Participating			
• Pharmacies on Surescripts Network	363	429	18%
• Total Number of Community Retail Pharmacies	436	446	2%
• % of Community Retail Pharmacies on Surescripts Network	83%	96%	16%
• Pharmacies Enabled for E-Prescribing for Controlled Substances	0	Over 35	
Provider Information			
• Total E-Prescribers	1,399	4,095	193%
• MDs E-Prescribing	1,006	3,042	202%
• Estimated Percent of MDs E-Prescribing	31%	91%	194%

Labs Sending Results in Structured Format	Dec. 2011	Dec. 2013	% Change
• % of Labs Sending Electronic Lab Results to Providers in a Structured Format	32%	62%	92%
• % of Labs Sending Electronic Lab Results to Providers Using LOINC	12%	35%	181%