eHealth

Objective

• To foster the collaborative and innovative use of eHealth technologies through partnerships between public and private sectors, and to encourage communication and coordination among eHealth initiatives in Nebraska.

Description

Health information technology (Health IT), often referred to as eHealth, promises to improve individual patient care and public health while reducing costs and improving efficiencies.   eHealth technologies include electronic health records, electronic medical records, personal health records, electronic prescribing, clinical decision support, computerized provider order entry, health information exchange, and telehealth.

♦ **An Electronic Health Record (EHR)** is a longitudinal electronic record of patient health information generated in one or more care settings.   EHR data includes patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports. (Health Information and Management System Society)

♦ **An Electronic Medical Record (EMR)** is a computer-based medical record.   The EMR is the source of information for the electronic health record (EHR). (Health Information and Management System Society)

♦ **Personal Health Record (PHR)** is the version of the health/medical record owned by the patient. (Health Information and Management System Society)

♦ **Electronic Prescribing (eRx)** is a type of computer technology whereby physicians use handheld or personal computer devices to review drug and formulary coverage and to transmit prescriptions to a printer or to a local pharmacy. (Office of the National Coordinator Glossary of Selected Terms)

♦ **A Decision-Support System (DSS)** consists of computer tools or applications to assist physicians in clinical decisions by providing evidence-based knowledge in the context of patient-specific data. (Office of the National Coordinator Glossary of Selected Terms)

♦ **Computerized Provider Order Entry (CPOE)** is a computer application that allows a physician's orders for diagnostic and treatment services (such as medications, laboratory, and other tests) to be entered electronically instead of being recorded on order sheets or prescription pads. (Office of the National Coordinator Glossary of Selected Terms)

♦ **Health Information Exchange (HIE)** facilitates access to and retrieval of clinical data from multiple providers to provide safer, more timely, efficient, effective, equitable, patient-centered care. (eHealth Initiative Glossary)

♦ **Telehealth** is the use of telecommunications and information technologies to provide healthcare services over distance and/or time, to include diagnosis, treatment, public health, consumer health information, and health professions education. (Minnesota e-Health Glossary of Selected Terms)

Electronic medical records provide the foundation for interoperable health information exchange. President Bush has called for most Americans to have electronic medical records by 2014.   A survey conducted by researchers at Creighton Health Services Research Program in the summer of 2007 found that 30% of physicians in Nebraska and South Dakota used electronic medical records.   The survey results are similar to national surveys, indicating that much progress still needs to be made.

The biggest barrier to the widespread adoption of eHealth technologies is the misalignment of benefits and costs. Providers bear the brunt of the costs for implementing eHealth technologies into their practices, but payers reap most of the benefits.   Other barriers to eHealth adoption include implementation costs, impact on workflow processes, concerns about privacy and security, and a lack of a quantifiable return on investment.

Current Initiatives

Several eHealth initiatives are currently underway in Nebraska, including the Nebraska Statewide Telehealth Network, NeHII, Western Nebraska Health Information Exchange, Hebron Area Health Information Exchange, and Southeast Nebraska Behavioral Health Information Network.

Nebraska Statewide Telehealth Network.   One of the nation's most extensive telehealth networks, the Nebraska Statewide Telehealth Network (NSTN) connects nearly all of the state's hospitals and public health departments. The major functions of the Network are to improve quality and access to care, particularly in rural Nebraska; to provide patient, provider and community education; and to provide another communication source in the event of a natural, man-made or terrorist emergency. The Nebraska Statewide Telehealth Network is governed by the NSTN Governing Board.

The network is a collaborative effort of many entities including:
- Nebraska Hospital Association
- Nebraska hospitals
- Nebraska Public Health Departments
- University of Nebraska Medical Center
- Universal Service Administrative Company
- University of Nebraska System
- Nebraska Information Network
- Nebraska telecommunications companies
- Central Nebraska Area Health Education Center
- Northern Nebraska Area Health Education Center
- Nebraska Panhandle Area Health Education Center
- Nebraska Medical Association
- Nebraska State Government
  - Lieutenant Governor's Office
  - Nebraska Public Service Commission
  - Nebraska Health and Human Services System
  - Bioterrorism Preparedness and Response Section
  - Office of Rural Health
  - Nebraska Information Technology Commission

- o Nebraska Office of the Chief Information Officer
- o Nebraska Educational Telecommunications Commission

Western Nebraska Health Information Exchange. Partners in Western Nebraska have completed a plan and are beginning to implement a regional health information exchange. Partial funding has been provided through a planning grant from the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality (AHRQ), an AHRQ implementation grant, and a Rural Network Development grant from the U.S. Department of Health and Human Services Health Resources and Service Adminstration. Partners in the project received a three-year grant from the FCC Rural Health Care Pilot Program for $19,256,942 to upgrade a patchwork of T-1 lines with an advanced fiber network connecting with National LambdaRail.

Nebraska Health Information Initiative (NeHII). The Nebraska Health Information Initiative (NeHII) is a collaboration of Nebraska health care organizations, hospitals, physicians, and Blue Cross and Blue Shield of Nebraska. The vision of NeHII is to be a leader in the secure exchange of health information enabling a healthier Nebraska. NeHII initially plans to pilot a clinical messaging service.

Southeast Nebraska Behavioral Health Information Network (SNBHIN). A $200,000 one-year planning grant from the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality (AHRQ) in 2004 enabled Region V Behavioral Health Care Providers to develop a plan to develop a health information technology infrastructure that will result in standards-based data sharing and lead to measurable and sustainable improvements in patient safety and quality of care in the region. Since the completion of the planning grant, SNBHIN partners have continued to meet and are making progress toward establishing a regional health information organization (RHIO).

Thayer County (Hebron) Health Information Exchange. This regional health information organization (RHIO) was supported by the Nebraska Office of Rural Health through a grant for the *Accelerating Performance Improvement through Enhanced Connectivity* project. The RHIO will focus on developing and implementing a sustainable interoperable system which will improve the flow of clinical information along the continuum of care in order to provide a seamless process of health care delivery for patients and providers.

Benefits

Benefits of eHealth include:

- **Reducing medication errors.** More than 2 million adverse drug events could be prevented through e-prescribing, saving 4.5 billion annually and 190,000 hospitalizations per year.
- **Reducing health care waste.** Health IT adoption is estimated to save an average of 42 billion annually during a 15-year adoption period.

- **Facilitating medical research.** Health IT can facilitate research on the effectiveness of new therapies and can accelerate the diffusion of health care knowledge.
- **Reducing variability in healthcare delivery and access.** Disparities exist in access to care and quality of care. Telehealth can provide access to specialists in rural areas. Clinical decision support systems can improve quality of care by providing treatment reminders at the point of care. Adults in the U.S. receive only about 55 percent of recommended care for a variety of common conditions. Clinical decision support systems have been shown to increase adherence to recommended care guidelines.
- **Empowering consumer involvement in health management.** Having access to medical histories as well as customized health education and guidance could increase consumer participation in their health maintenance and care.
- **Improving the identification and reporting of disease outbreaks and other public health threats.**   One study found that the use of a county-wide electronic system for public health reporting led to a 29% increase in cases of shigellosis identified and a 2.5 day decrease in reporting time.

Action Plan

Current Action Items

1. Work with Lt. Governor Sheehy and other policymakers to develop a process to assess, evaluate and prioritize health IT activities (including statewide initiatives, proposed eHealth projects of the eHealth Council or other state entities, and eHealth components such as e-prescribing) in order to make funding recommendations. Criteria used to evaluate eHealth activities, will include return on investment (ROI) as well as additional evaluation criteria determined by the eHealth Council with input from policy makers.

   Lead: eHealth Council

   Participating Entities: eHealth Council, Lt. Governor Sheehy, interested policymakers, state agencies with health IT projects, and health IT initiatives in the state wishing to participate

   Timeframe: Ongoing with consideration for the state budget cycle.

   Funding: To be determined.

   Status: New

2. Develop a sustainable action plan to facilitate progress (present and future) in assuring privacy and security protections in the exchange of health information for and by each of our citizens.

> **Lead:** Health Information Security and Privacy Committee (HISPC)
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> **Participating Entities:** eHealth Council, Nebraska HISPC, the DHHS legal department, the Attorney General's Office, the Office of the CIO, other state agencies that would become involved with PHI, and other stakeholders
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> **Timeframe:** Recommendations for the issues and model design should be ready by summer, 2008.
>
> **Funding:** Funding or in-kind contributions may be required for implementation.
>
> **Status:** New

3. Develop a plan and resources to inform citizens, health care providers, and other stakeholders about issues related to health information security and privacy and involve them in policy discussions.

> **Lead:** HISPC Education Work Group
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> **Participating Entities:** HISPC Education Work Group, eHealth Council, Department of Health and Human Services, health professional associations, DHHS health/licensure/certification board managers, and other stakeholders—possibly including University of Nebraska Extension, AARP, the League of Municipalities, the Nebraska Association of County Governments, and service organizations
>
> **Timeframe:** The eHealth Council should start this dialog immediately and then establish a tight time frame for completion of this work in 2008.
>
> **Funding:** Funding or in-kind contributions may be required for implementation of the educational plan.
>
> **Status:** New

4. The eHealth Council should ensure that an in-depth short-term study of existing laws and regulations, with guidance from representatives from the health professions, health educators and health organizations, be done in order to identify health information security and privacy and make recommendations.

Lead: HISPC Legal Work Group.

Participating Entities: eHealth Council, HISPC Legal Work Group, DHHS legal staff, professions and facility managers, health care associations and citizens.
Timeframe: This needs to start immediately and be finished by August, 2008 in order to assist with other deadlines in HIT/grants/legislation/etc.

Funding: It will probably be necessary to contract with a law firm or legal expert to address these issues (Est. $50,000).

Status: New

5. Support efforts of the Nebraska Statewide Telehealth Network Governing Board to advocate for ongoing support for line charges for telehealth.
Activities supporting this action item could include writing letters of support to policy makers as well as sharing information on this issue with policymakers.

Lead: eHealth Council

Participating Entities: eHealth Council, Nebraska Statewide Telehealth Network Governing Board, NITC, Lt. Governor Sheehy

Timeframe: 2008

Funding: No new funding is required

Status: New

6. Support efforts of the Nebraska Statewide Telehealth Network Governing Board to advocate for the reduction of barriers to connectivity posed by federal Universal Service Fund rules, regulations, and policies. Activities supporting this action item could include writing letters of support to policy makers as well as sharing information on this issue with policymakers. The eHealth Council will also explore the development of a position paper no longer than four pages in length which clarifies the issue, identifies barriers, specifies what action needs to be taken, and identifies opportunities that can be leveraged.

Lead: eHealth Council

Participating Entities: eHealth Council, Nebraska Statewide Telehealth Network Governing Board, NITC, Lt. Governor Sheehy

Timeframe: 2008

Funding: No new funding is required

Status: New

7. Explore the optimal method for identifying clients in health information exchange.

Lead: eHealth Council, UNMC Center for Biosecurity, Biopreparedness and Emerging Infectious Diseases, College of Public Health

Participating Entities: UNMC Center for Biosecurity, Biopreparedness and Emerging Infectious Diseases, College of Public Health; eHealth Council; Department of Health and Human Services; and other interested stakeholders.

Timeframe: Complete the exploration of a development project by 12/31/2008.

Funding: Exploratory project can be funded using existing resources.
Scope of project should include identification of funding sources for the next stage.

Status: New

Completed Action Items (2007)

1. Facilitate discussions to address interoperability between the Nebraska Statewide Telehealth Network with other state networks.

2. Address operational and technical support issues, including defining the level of support that will be provided by Network Nebraska and CAP.

3. Facilitate the continued testing of the Nebraska Statewide Telehealth Network for homeland security and public health alerts and training.