

Illinois HIE Strategic & Operational Plan



Submitted by the
Illinois Office of
Health Information
Technology

July 30, 2010

Updated and Resubmitted:
October 22, 2010

Illinois HIE Strategic & Operational Plan

Table of Contents

Introduction	5
Executive Summary	7
Goals and Objectives	8
Environmental Scan.....	9
Coordination with Medicaid	24
Coordination with Other Federally-Funded Programs	25
Gap Analysis and Strategy to Meet Meaningful Use.....	32
Communications Plan.....	32
Governance.....	38
Finance.....	41
Technical Infrastructure.....	55
Business and Technical Operations.....	70
Legal and Policy.....	74
Operational Plan.....	87
List of Appendices	145

Strategic Plan

Illinois HIE Strategic & Operational Plan

Acknowledgements

On behalf of the Office of Health Information Technology, we would like to thank the following organizations and agencies (and the dedicated individuals within those groups) that supported and guided this document:

AARP
Access Community Health Network
Alliance of Chicago Community Health Services
American Academy of Pediatrics, Illinois Chapter
Blue Cross Blue Shield of Illinois
Chicago Community Trust
Chicago Department of Public Health
Chicagoland Chamber of Commerce
Children's Memorial Hospital
City of Chicago
Cook County Bureau of Health Services
Community Behavioral Healthcare Association of Illinois
Healthcare Consortium of Illinois
Health Information Management Systems Society
Illinois Critical Access Hospital Network
IFMC-Illinois
Illinois Academy of Family Physicians
Illinois Chamber of Commerce
Illinois Health Connect
Illinois Department of Central Management Services
Illinois Department of Commerce and Economic Opportunity
Illinois Department of Healthcare and Family Services
Illinois Department of Financial and Professional Regulation
Illinois Department of Insurance
Illinois Department of Public Health
Illinois Hospital Association
Illinois Maternal and Child Health Coalition
Illinois Office of the Attorney General
Illinois Primary Health Care Association
Illinois Public Health Institute
Illinois Science and Technology Coalition
Illinois State Medical Society
Infinite Systems Support
Metropolitan Chicago Healthcare Council
Mt. Sinai Health System
Northern Illinois University
Northwestern University
Quality Quest for Health of Illinois
SEIU Healthcare Illinois
Southern Illinois Healthcare Foundation
Southern Illinois University School of Medicine
Supervalu
SureScripts
TriRivers Health Partners
University of Illinois at Chicago
Walgreens

Illinois HIE Strategic & Operational Plan

Introduction

The State of Illinois is facing unprecedented financial challenges caused by economic recession and long-term budget pressures, including the escalating costs and public demand for health care. The entire economy of Illinois, including all public and private sectors, is facing ever-greater costs for providing health care and the consequences in diminished worker capacity and productivity caused by illness and chronic health conditions.

Double-digit annual cost increases in health coverage, redundant and unnecessary testing and procedures, and the fractured nature of health care delivery among multiple providers, particularly for patients with chronic conditions, have pushed an already strained health care system to the breaking point. In short, current cost and utilization trends in health care are unsustainable.

At present nationwide and in Illinois, the vast majority of patient medical records are available only in paper form and are not easily transferred when a patient changes doctors, sees a specialist or needs emergency care. Medication history, allergies, test results and other important health information often must be provided each time a patient goes to a new provider or facility, creating greater probability of error and inefficiency.

Policy leaders in both the public and private sector have long sought concrete strategies to improve health care quality and outcomes and control costs. Decision makers need more tools at their disposal to derive creative solutions to persistent health care problems. The use of electronic health records (EHR) and the exchange of health information (HIE) are two of the most promising tools available today to address these vexing problems. The widespread use of EHR and the facilitation of HIE have the potential to transform the health care delivery system and provide long-sought relief to spiraling health care costs and hopelessly fractured patient care.

EHRs can provide clinicians with full and accurate information about their patients at the point of care and allow them to make better decisions with their patients about treatments and therapies that will improve health outcomes. For that reason, the Health Information Technology for Economic and Clinical Health Act (HITECH) components of the American Recovery and Reinvestment Act of 2009 (ARRA), dedicated more than \$30 billion nationwide to develop HIT infrastructure and accelerate the adoption of EHR. Like all other states, Illinois is taking advantage of the unprecedented level of federal investment in HIT to implement a statewide HIE that achieves the overarching goals of improving health care quality and outcomes and controlling costs.

A recent Harris poll of U.S. adults indicated that a large-majority of Americans agree that doctors should have access to their EHR, including health history, illness, test results, allergies, and medications.¹ Although provider EHR adoption rates in Illinois are low at present, their use has been growing steadily and is expected to increase exponentially in the next five to ten years as Medicaid and Medicare payment incentives become available to hospitals and individual practitioners, and patient awareness and demand for EHR grows. Illinois' HIE Strategic and Operational Plan will ensure that there is a strong governance structure in place to support the statewide exchange of EHR with adherence to strict privacy and security laws and policies for the exchange of protected health information.

¹ Harris Interactive/Health Day poll, June 8-10, 2010, www.harrisinteractive.com

Illinois HIE Strategic & Operational Plan

The vision and mission of Illinois' efforts to develop a statewide HIE are incorporated in the recently enacted Illinois Health Information and Technology Act², which states "The State of Illinois has an interest in encouraging the adoption of a health information system to improve the safety, quality and value of health care, to protect and keep health information secure, and to use the health information exchange system to advance and meet population health goals. To ensure that the benefits of health information technology are available to the consumers of Illinois and to encourage greater patient participation in health care decisions, the State must provide a framework for the exchange of health information and encourage the widespread adoption of electronic health systems and the use of electronic health records among health care providers and patients. The creation of a State-level health information exchange system will allow, among other benefits, the widespread utilization of electronic health records by health care providers and patients in order to ensure that Illinois health care providers can achieve the Meaningful Use of electronic records, as defined by federal law, and participate fully in the health information technology incentives available from the federal government under the Medicare and Medicaid programs."

The Illinois HIE Strategic and Operational Plan will result in the development of a statewide HIE that will allow health care providers to exchange clinical information, such as medication histories and test results, access that information at the point of care and make better informed decisions with their patients. The Plan will ensure that the maximum number of Illinois Medicaid and Medicare eligible professionals and hospitals qualify and receive payment incentives for the Meaningful Use of EHRs. It will provide vital statewide information quickly to public health officials, significantly improving efforts to protect and promote public health.

The Plan will also outline Illinois' current and future strategies to leverage existing EHR capacity, investment and broad stakeholder commitment to advance the HIE goals in Illinois. Specific tasks, timelines for completion and risk mitigation are addressed in the Operational Plan portion of this document.

² P.A. 96-1331

Illinois HIE Strategic & Operational Plan

Executive Summary

On behalf of the State of Illinois, the Illinois Office of Health Information Technology (OHIT) is pleased to submit the following Strategic and Operational Plan for review by the Office of the National Coordinator for Health Information Technology (ONC), US Department of Health and Human Services, pursuant to the Health Information Exchange (HIE) State Cooperative Agreement Program (Program). Under that program, Illinois was awarded \$18.8 million (\$1 million for planning and \$17.8 million for implementation) in federal funding to establish widespread, interoperable HIE and assist Medicaid and Medicare providers in meeting the information exchange requirements for the Meaningful Use of EHRs under federal law.

The Illinois Strategic and Operational Plan is built upon the foundational efforts of two statewide initiatives: the Illinois Electronic Health Records Task Force³ and subsequent report and the Illinois HIE Planning Grant Program.⁴ The Plan, which reflects the consensus input of Illinois' statewide HIE Advisory Committee, has been posted for public comment and has been reviewed by numerous other key stakeholders, including the Illinois RECs, and State Medicaid and Public Health officials.

Governor Quinn created OHIT within the Office of the Governor in February 2010 to coordinate all HIT efforts throughout Illinois. To maximize efficiency and effectively promote the use of EHR among providers and patients, OHIT is leveraging its efforts with those of the two federally-funded RECs in Illinois, and with all activities related to the State's Medicaid HIT Plan. In addition, OHIT is coordinating activities with several other federally funded initiatives in support of HIT, in the areas of broadband deployment, workforce development and EHR adoption and implementation in community health centers.

Illinois also has recently created the Illinois HIE Authority (Authority) via statute to operate a statewide HIE and enable the achievement of these goals. The Authority will provide the long-term governance structure for the statewide HIE and ensure that the statewide exchange of health information is implemented with robust consumer and public health participation in a consistently open and transparent manner, reflecting policies designed to achieve and build upon public trust.

OHIT and the Authority will secure the necessary financial resources to meet the matching requirements for the \$17.8 million in federal funding for HIE implementation and for the long-term operation of the statewide HIE. The Authority will begin operations in the fall of 2010. OHIT will continue to provide policy and administrative support to the Authority throughout the duration of the four-year Cooperative Agreement Program period.

The following Strategic and Operational Plan details how the Authority and OHIT will fulfill the Cooperative Agreement requirements across the five Program domains: governance; finance; technical infrastructure; business and technical operations; and legal and policy.

Illinois will begin implementation of the statewide HIE with the goal to ensure that every health care provider in the state has access to an HIE and every Illinois patient can enjoy the benefits of EHRs, regardless of their geographic location or choice of provider or payer. The implementation will build upon the results of the 2009 statewide HIE Planning Grant program, which helped increase health care

³ http://www.idph.state.il.us/ehrtf/ehrtf_home.htm

⁴ <http://hie.illinois.gov/planning.html>

Illinois HIE Strategic & Operational Plan

stakeholder awareness of the need for HIT expansion, assess provider and patient readiness for HIE, achieve broad statewide stakeholder engagement in planning for HIE, detail specific use cases for the exchange of health information and identify ongoing barriers to widespread EHR adoption and exchange of health information. Five of the HIE Planning Grant recipients have indicated their intent to implement local HIEs with varying plans to achieve exchange functionality in the coming year. Under the Illinois Strategic and Operational Plan, OHIT and the Authority will monitor the progress of local HIEs as their implementation plans develop and support opportunities for providers to exchange data securely and achieve Meaningful Use.

Illinois will begin the implementation phase of the statewide HIE upon approval of the Strategic and Operational Plan, which is anticipated in November or December 2010. As Illinois enters the implementation phase, OHIT staff will continue discussions it has already begun with State HIT Coordinators in surrounding states to identify functional requirements related to the eventual interstate exchange of health information and opportunities to coordinate the development of technical specifications, legal requirements and pool resources. Finally, the Strategic and Operational Plan details how Illinois plans to develop the statewide HIE in manner consistent with the standards and services of the Nationwide Health Information Network (NHIN) to facilitate secure HIE within the national framework.

Goals and Objectives

The **goals** of the Illinois HIE Strategic and Operational Plan, which are aligned with those of the Illinois State Health Improvement Plan,⁵ State Medicaid program, and EHR Incentive Program, are to:

- Improve health care quality and outcomes
- Improve patient safety
- Enhance public health and disease surveillance
- Control the cost of health care
- Reduce health disparities

The **objectives** related to these overarching goals are to:

- Protect the privacy and security of identifiable health information
- Promote the adoption and Meaningful Use of EHR
- Facilitate quality reporting and measurement
- Encourage information technology-enabled care delivery
- Develop a statewide HIE

The Illinois HIE initiative will employ the following **strategies** to achieve its goals and objectives:

- Increase EHR adoption through implementation of the Medicaid EHR Incentive Program, support for the Medicare EHR Incentive Program and participation in other programs that encourage practitioners and hospitals to adopt EHR
- Facilitate secure exchange of EHR by developing statewide HIE infrastructure in accordance with evolving national standards and protocols and all applicable state and federal laws
- Increase the use of e-prescribing by increasing awareness of the benefits to both patients and providers and removing existing barriers to use of e-prescribing technology

⁵ <http://www.idph.state.il.us/ship/index.htm>. (See Summary of Recommendations)

Illinois HIE Strategic & Operational Plan

- Increase the electronic transmission of structured laboratory results by supporting interoperable standards and removing barriers to the sharing of data
- Increase the sharing of patient care summaries by aligning programs and payment mechanisms to encourage and incent this activity
- Increase awareness and public support for the use of EHR through a communications plan that delivers accurate and complete information about EHR and HIE in culturally-relevant formats
- Increase broadband deployment through coordinated activities with the Illinois Broadband Deployment Council and participation in the federal Broadband Opportunities Program
- Provide focused resources for safety net providers and their patients by identifying additional technical resources for EHR adoption and supporting workforce development programs to retrain existing workers in the transition from a paper to an EHR environment
- Develop a plan for financial sustainability of the statewide HIE by calculating a value model for each entity that will participate in the statewide HIE and devising a revenue model that distributes costs reasonably and fairly

These strategies will be employed through a three-tiered model that leverages existing capacity and builds on the particular strengths of HIE stakeholders across the state:

- The statewide HIE, authorized by Illinois statute and governed by the Authority, will be available to providers throughout the state as a function for local and enterprise HIEs;
- Local HIEs dedicated to engaging and serving diverse groups of local providers; and
- Enterprise HIEs throughout the state, under a variety of private ownership models, all organized to exchange protected health information within a particular privately-controlled institution.

These three levels of HIE will be complimentary, interconnected, and integrated to the greatest extent possible. This delivery model supports OHIT's responsibility to provide a path to participation in HIE to every provider in Illinois.

Environmental Scan

Illinois is the fifth most populous state in the U.S., with a total population of nearly 13 million. Its length of nearly 400 miles and width of 200 miles covers 102 counties and more than 1,300 municipalities that are both urban and rural; affluent and impoverished; industrial and agricultural, and every variation in between. It is home to numerous academic medical centers with nationally recognized programs for health care innovation, as well as many medically underserved areas. There are more than 50,000 physicians and 170,000 nurses serving Illinois patients every day in numerous care settings, including nearly 200 acute care hospitals and health systems, 50 of which are critical access hospitals (CAHs), 400 community health center sites, 3,193 pharmacies, 9,225 CLIA certified laboratories, 95 local health departments, 100 ambulatory surgical treatment centers, and 1,100 long term care facilities.⁶ Approximately 7.4 million residents are covered by commercial insurance, 2.5 million by Medicaid and Medical Assistance programs, 1.9 million by Medicare, and the remainder are estimated to be uninsured.⁷

⁶ Illinois Department of Professional Regulation, Illinois Department of Public Health, and CDC, CLIA.

⁷ HealthLeaders-Inter Study, Illinois & Iowa Health Plan Analysis, Winter 2010 Vol 1, No. 1 and Illinois Department of Healthcare & Family Services.

Illinois HIE Strategic & Operational Plan

In August of 2009, the IL HIE EHR Adoption Survey (2009 Survey), was conducted statewide to determine EHR adoption and HIE participation and an environmental scan performed that informed the initial State HIE planning efforts. Through semi-structured discussions, various stakeholders were engaged to gain an understanding of the current state of implementation and use of EHR, including identifying the obstacles and opportunities for adopting EHR and developing HIE capabilities.

Some of the key findings from the 2009 environmental scan included:

- The EHR adoption rate in Illinois (16%) was estimated to be close to the national average in the ambulatory setting⁸ and slightly higher than the national average in the inpatient setting⁹ but the level of adoption varies greatly across the state.
- In the inpatient setting, implementation has mainly occurred in larger hospitals and smaller hospitals that are part of a larger system. As anticipated, EHR use is concentrated more heavily in urban areas and in academic medical settings.
- According to a 2009 survey of Illinois' CAHs, 45.2% of the 50 CAHs have adopted EHRs and a majority of these users utilize ancillary systems.¹⁰ Additionally, 51% of rural clinics owned by rural hospitals or CAHs had adopted EHRs.¹¹

The 2009 Survey was distributed by the HIE Planning Grantees to a diverse set of local healthcare providers. Although the survey sample was relatively small, it provided a snapshot of Illinois providers' readiness to adopt EHR and participate in HIE. The results of the survey are briefly summarized below and the full survey report is included as an Appendix. [See Appendix C]

- The survey generated responses from virtually the entire spectrum of healthcare providers in Illinois, including a predictably strong response from solo and group practitioners and hospitals but also included responses from public health, community mental health and long-term care providers.
- The survey indicated that the majority of providers' (approximately 60%) office practice utilized a part paper/part EHR system.
- 16% of respondents indicated that their offices had converted to EHR and 22% indicated that their organizations were completely paper-based for their medical records.
- Approximately 40% of hospital respondents indicated that they shared information outside of their corporate systems.

The barriers to EHR adoption that respondents cited in the 2009 Survey are similar to those found in other areas of the country, including: concerns about capital needed to acquire and implement an EHR; uncertainty about return on investment; finding a system that meets the providers' needs, and lack of productivity during implementation. Many of the concerns and barriers identified in the 2009 Survey will be addressed in Illinois' Operational Plan through coordinated efforts with the Illinois RECs, the Medicaid HIT Plan and the administration of the Medicare HIT incentives. It should be noted that the 2009 Survey preceded the ARRA funding for RECs.

⁸ Medical Group Management Association. (2005). Assessing Health Information Technologies in Medical Groups Information for the State of Illinois.

⁹ HIMSS Analytics. HIMSS Analytics™ Database. (2009). Retrieved from: http://www.himssanalytics.org/hc_providers/emr_adoption.asp

The mean HIMSS score for EMR implementation in Illinois in the second quarter of 2009 was 2.7552 versus 2.4874 across the entire United States.

¹⁰ Illinois Critical Access Hospital Network (ICAHN) Health Information Technology. Survey. (2009).

¹¹ ICAHN Health Information Technology Survey. (2009).

Illinois HIE Strategic & Operational Plan

On September 27, 2010, OHIT, in cooperation with the State Medicaid Agency, the Illinois Department of Healthcare and Family Services (HFS), released the 2010 Illinois EHR Statewide Provider Survey (the 2010 Survey). The survey design is reflective of the collaboration between HFS for the development of the State Medicaid HIT Plan and OHIT's responsibility to encourage HIT and EHR adoption and facilitate HIE throughout the state.

The 2010 Survey is intended to measure providers' EHR adoption rates, readiness to qualify for the Medicare and Medicaid EHR Incentive Programs, the degree of e-prescribing and electronic lab reporting functionality and knowledge and current capacity for HIE, including ability to support electronic eligibility, submit claims electronically and manage consent authorization (see Appendix D for survey). The 2010 Survey will be in the field until October 29, 2010.

This annual survey will not only inform OHIT's assessment of the current status of EHR adoption in comparison to the previous year, but will provide additional detail regarding gaps and barriers to achieving widespread Meaningful Use. Survey results will inform OHIT's efforts for developing the roadmap to filling those gaps and removing barriers through execution of the Operational Plan. Both the 2009 Survey and environmental scan identified opportunities for continuous improvement which are addressed in the Gap Analysis section of this Plan. In addition, the Gap Analysis identifies areas of high impact to include in OHIT's Communication Plan and highlights technical assistance needs in order to effectively encourage and accelerate the adoption of EHR technology to support Meaningful Use requirements and HIE capacity.

Current HIE Capabilities

In the Program Information Notice dated July 6, 2010, the ONC directed states participating in the HIE Cooperative Agreement Program to gather and track data on the following measures:

Pharmacies accepting electronic prescribing and refill requests

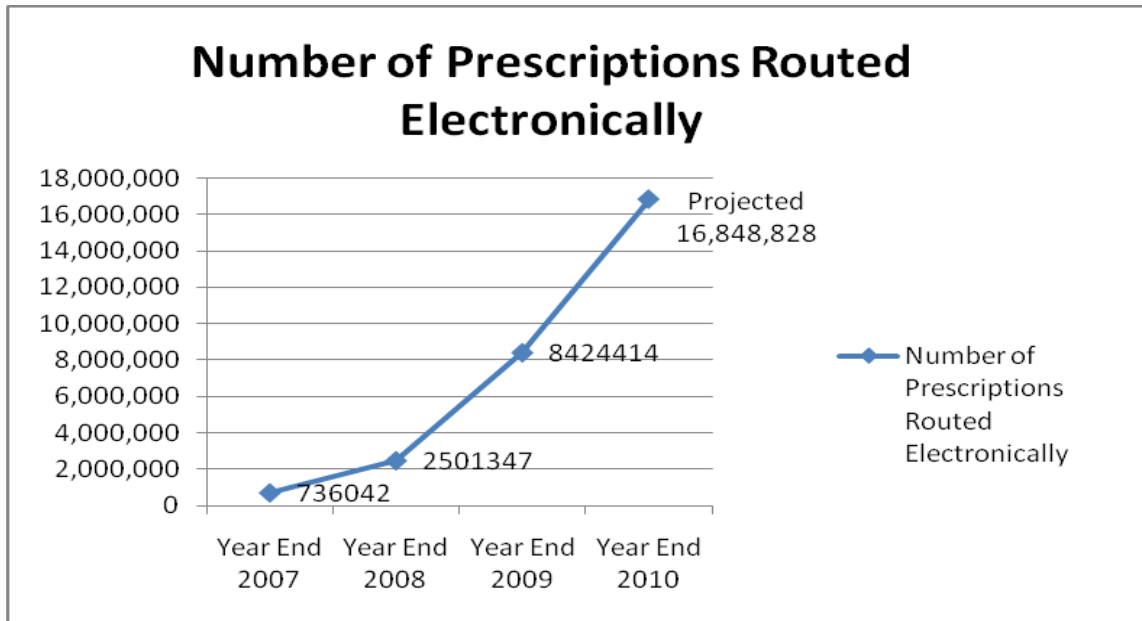
The most recent data on the e-prescribing capabilities in Illinois is current through June 30, 2010. **Based on that data, 89% of the pharmacies in Illinois are able to receive e-prescriptions (activated).**¹² A pharmacy's use of e-prescribing is dependent on the ability of the physician to send e- scripts; the number of active e-prescribers as of June, 2010 was 8,540, up 57% from year's end 2010¹³. In 2009, 8.4 million prescriptions were routed electronically in Illinois. Between 2008 and 2009, the volume of prescriptions routed electronically more than tripled; and Surescripts estimates that between 2009 and 2010 volume will at least double.¹⁴ In addition, 61% of the Illinois population is represented in the Surescripts Master Person Index, representing the population for whom prescription benefit, formulary, and medication history is available through e-prescribing processes.¹⁵

¹² Surescripts, Senior VP Strategy and Innovation, personal communications, July 24, 2010.

¹³ Surescripts, Senior VP Strategy and Innovation, personal communications. July, 24, 2010.

¹⁴ Surescripts, Senior VP Strategy and Innovation, personal communications, July 20, 2010.

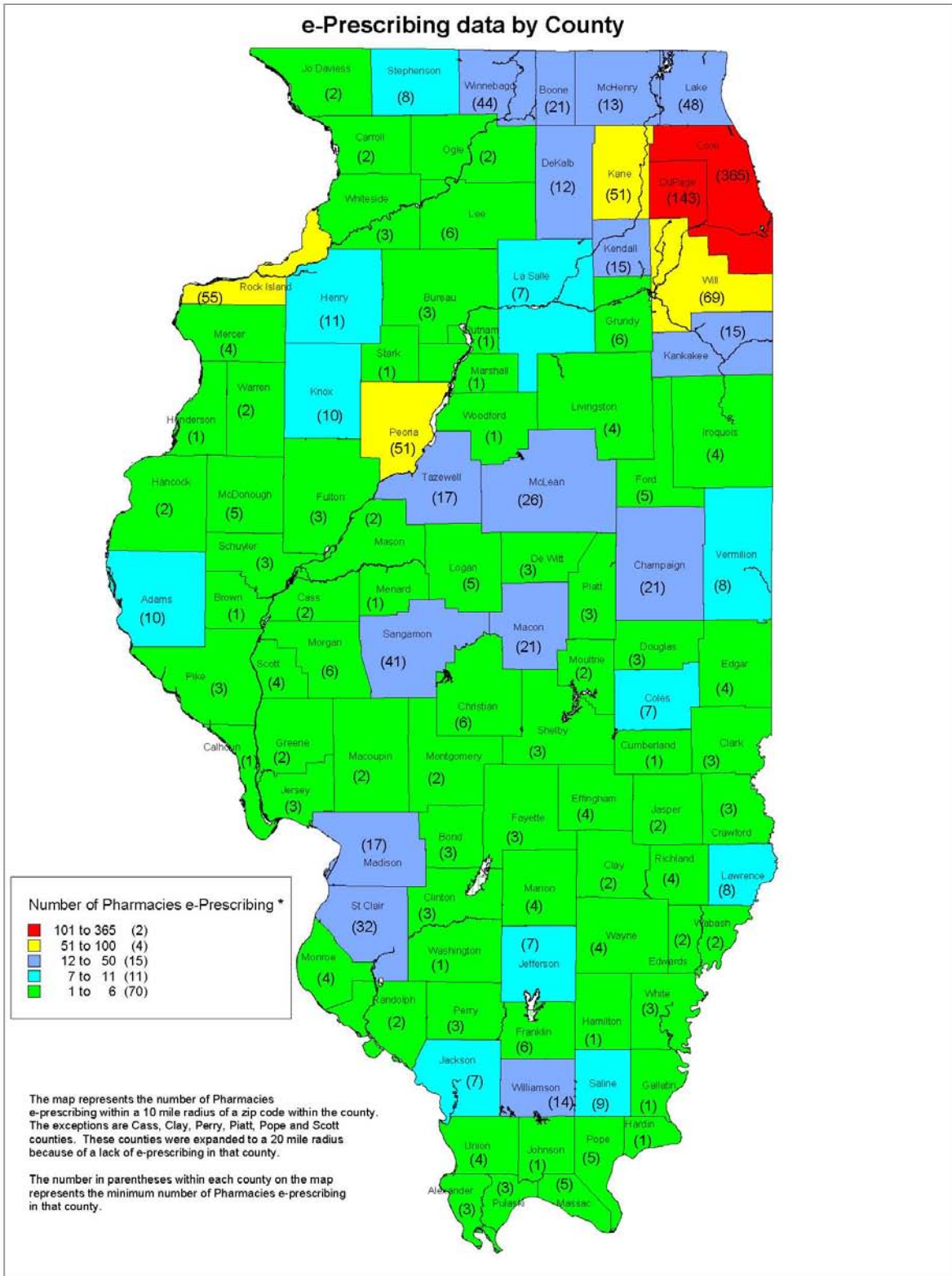
¹⁵ Surescripts, Senior VP Strategy and Innovation, personal communications, July 24, 2010.



In order to assess geographic distribution and access to e-prescribing options, OHIT conducted an analysis of e-prescribing outlets in all 102 Illinois counties. OHIT utilized the county seat as the most likely location for e-prescribing within a county as county seats are typically centrally located within a county and generally the most populous city within a county, particularly in rural counties. Using Surescripts data about e-prescribing locations by zip code and the county seat as the reference point, OHIT identified the number of e-prescribing options within a 10 mile radius. The following map (Map 1) illustrates counties in Illinois that have an e-prescribing option within a 10 mile radius. The counties in densely populated urban areas are noted in red and yellow on the map. These counties are saturated with options for e-prescribing and will not require OHIT resources to identify additional options. Seven rural counties did not have an e-prescribing option within 10 miles, so a 15 mile radius was used to identify an e-prescribing pharmacy and mapped accordingly.

It should be noted that there are a few instances when the available e-prescribing option was in a neighboring state yet still located within the 10 mile radius; these data points are not displayed on the Illinois map. However, as Illinois Medicaid recipients are able to receive their prescription benefits from pharmacies outside of Illinois, the fact that these e-prescribing options are located out-of-state is not a barrier. The counties with fewer options for e-prescribing pharmacies represent predominately rural and underserved communities with low population density and corresponding low levels of EHR adoption. Many of the counties with a limited number of e-prescribing options are also designated as Medically Underserved Areas, as defined by HRSA.

Illinois HIE Strategic & Operational Plan



Illinois HIE Strategic & Operational Plan

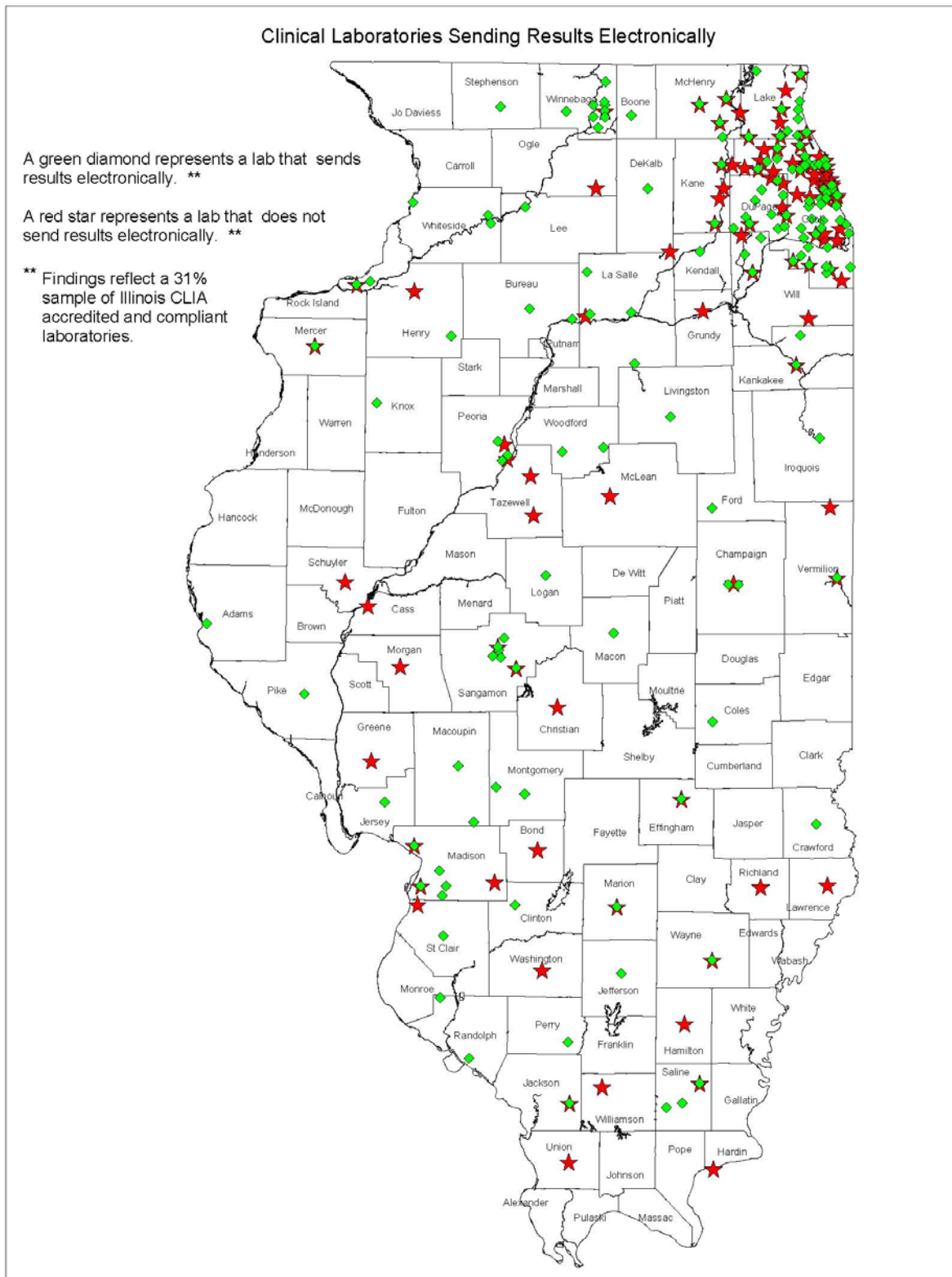
Clinical laboratories sending results electronically

In Illinois, there are 9,225 CLIA-certified (Clinical Laboratory Improvement Amendments) laboratories.¹⁶ In order to gather data about the number of clinical laboratories sending results electronically, OHIT chose to focus its research on the laboratories performing moderate and/or high complexity testing or those laboratories with a Certificate of Compliance and/or a Certificate of Accreditation laboratories. These two certifications are issued to laboratories conducting more full scale diagnostic laboratory tests that go beyond the simple in-house testing that may occur only within a physician's office. OHIT is recently completed a survey of the 1,103 CLIA accredited and compliant laboratories within the state to determine a baseline estimate of the number of laboratories sending results electronically, the degree of standards-based terminology utilization, and the identification of barriers to the electronic exchange of laboratory results (see Appendix E for laboratory survey). Following a one-day test calling period, OHIT determined that based on an average successful response rate of 50% and an average of 10 minutes to complete each call, it would take approximately 366 hours (or approximately 5 weeks for 2 FTEs) to achieve a 100% response rate. OHIT decided that a more prudent use of resources would be to target a large sample size of 30% of the 1,103 CLIA accredited and compliant laboratories. This approach also ensured that respondents were distributed geographically throughout the state. The resulting gap analysis and strategies to address these gaps will be based on the results of this sample.

OHIT achieved the desired 30% sample size, surveying 349 CLIA accredited and compliant laboratories throughout the state. **Based on this representative sample, approximately 61% of the laboratories surveyed have the capability to deliver laboratory results electronically** (See Map 2). By extrapolating this finding to the all CLIA accredited and compliant laboratories, OHIT estimates 672 of the 1,103 CLIA accredited and compliant laboratories in Illinois are capable of electronic laboratory results delivery. Of those laboratories, the majority of respondents were able to provide the State additional information on their capabilities to send laboratory results as structured data; 73% of those respondents reported having this capability. Because the survey respondents tended to be lab managers rather than IT professionals, there was a noticeable decline in respondents' ability to provide detailed information on the particular standards terminology in use at their facility. It should be noted that those who were knowledgeable of their laboratory IT systems, the majority respondents reporting using LOINC.

¹⁶ <http://www.cms.gov/clia/>

Illinois HIE Strategic & Operational Plan



Illinois HIE Strategic & Operational Plan

Public health laboratories sending results electronically

Data gathered independently from the State public health laboratories reflects the State's capacity for electronic laboratory reporting and an opportunity to leverage current reporting specification for broader laboratory interoperability. The State laboratories conduct approximately 2,000,000 tests per year and communicate electronically among locations (Chicago, Springfield, and Carbondale).¹⁷ The Illinois Department of Public Health's (IDPH) laboratories use the web-based Laboratory Information Management System, STARLIMS. STARLIMS provides patient and environmental test results for specimens tested in the State Public Health laboratories. **Through STARLIMS, one hundred percent (100%) of the State Public Health Laboratories use HL7 messaging and send their laboratory results using LOINC and SNOMED codes to communicate notifiable disease conditions to the I-NEDSS system.**

Health plans supporting electronic eligibility and claims transactions

Illinois' Medicaid program supports electronic eligibility checking and claims submission through two different modules. The Medical Electronic Data Interchange (MEDI) system web portal allows registered providers with proper security credentials to check eligibility and the status of claims. There are more than 5,000 Illinois providers using the MEDI system. **In addition, Illinois' MMIS system supports electronic claims transactions, annually processing more than 82,000,000 electronic claims from providers, representing nearly 96% of all Medicaid claims submitted.**

At the request of OHIT, the Illinois Department of Insurance issued a data call to the over 600 insurers authorized to write health insurance policies in Illinois and inquired about their ability to support eligibility and claims information electronically. To date, 419 companies responded to the data call representing a 70% response rate. Of those responding to the data call, 195 (or 47%) responded that they are currently marketing health or medical coverage in Illinois. In addition, **47%, representing 92 companies indicated that they support electronic eligibility transactions.** Of the 103 companies that did not support electronic eligibility, only 7 indicated that they were planning to implement the option within the next year.

123 companies (or 63% of respondents) indicated that they currently support electronic claims submissions. The annual volume of electronic claims received varies dramatically, from a low of 5 claims to a high in excess of 70,000,000. The rate of electronic claims submission for the 10 largest health insurance companies in Illinois is 86%. **In addition, 85 companies (or 44%) responding to the data call indicated that they currently support both electronic eligibility and claims transactions.**

Health departments electronically receiving immunization data

The Illinois Comprehensive Automated Immunization Registry Exchange (I-CARE) is an immunization registry application developed by the Illinois Department of Public Health (IDPH), allowing health care providers to share immunization records of Illinois residents. I-CARE is designed to help providers collect, store, analyze and report their patients' immunization data as well as access patient records for information about immunizations administered outside their practice. I-CARE currently stores immunization information on approximately 4 million patients and contains nearly 40 million records¹⁸.

Among the functionality available to I-CARE users is the capability to: forecast immunization due dates; produce a child health record and pre-printed school physical forms; record patient contraindications, adverse reactions, and immunities; track vaccine inventory; collect patient demographic data and

¹⁷ Illinois Department of Public Health Division of Laboratories, Interview, July 28th, 2009.

¹⁸ Illinois Department of Public Health, 2010.

Illinois HIE Strategic & Operational Plan

insurance eligibility; maintain running progress notes; and schedule appointments as well as track and notify patients of upcoming due dates. The I-CARE program has also incorporated additional data fields to track and record BMI, height and weight, blood pressure, and blood lead screenings.

Currently, one hundred percent (100%) of local health departments in Illinois are able to electronically receive immunizations through I-CARE (see Map 3). I-CARE can accept data from Cornerstone (the statewide data management information system developed to effectively measure health outcomes and facilitate the integration of community maternal and child health services provide to Illinois residents by the Illinois Department of Human Services) through daily batch flat file transfers. Data entered directly into the I-CARE web-portal is available in real-time. IDPH is currently working with providers to enable secure messaging directly between a provider's EHR and I-CARE. I-CARE is able to accept HL7 data, in versions 2.31 and 2.51, from outside sources and is prepared to accept batch data through a secure STP site, which it will use to populate the registry. **IDPH anticipates implementing 2-way real time patient data exchange in early 2011.**

Illinois HIE Strategic & Operational Plan

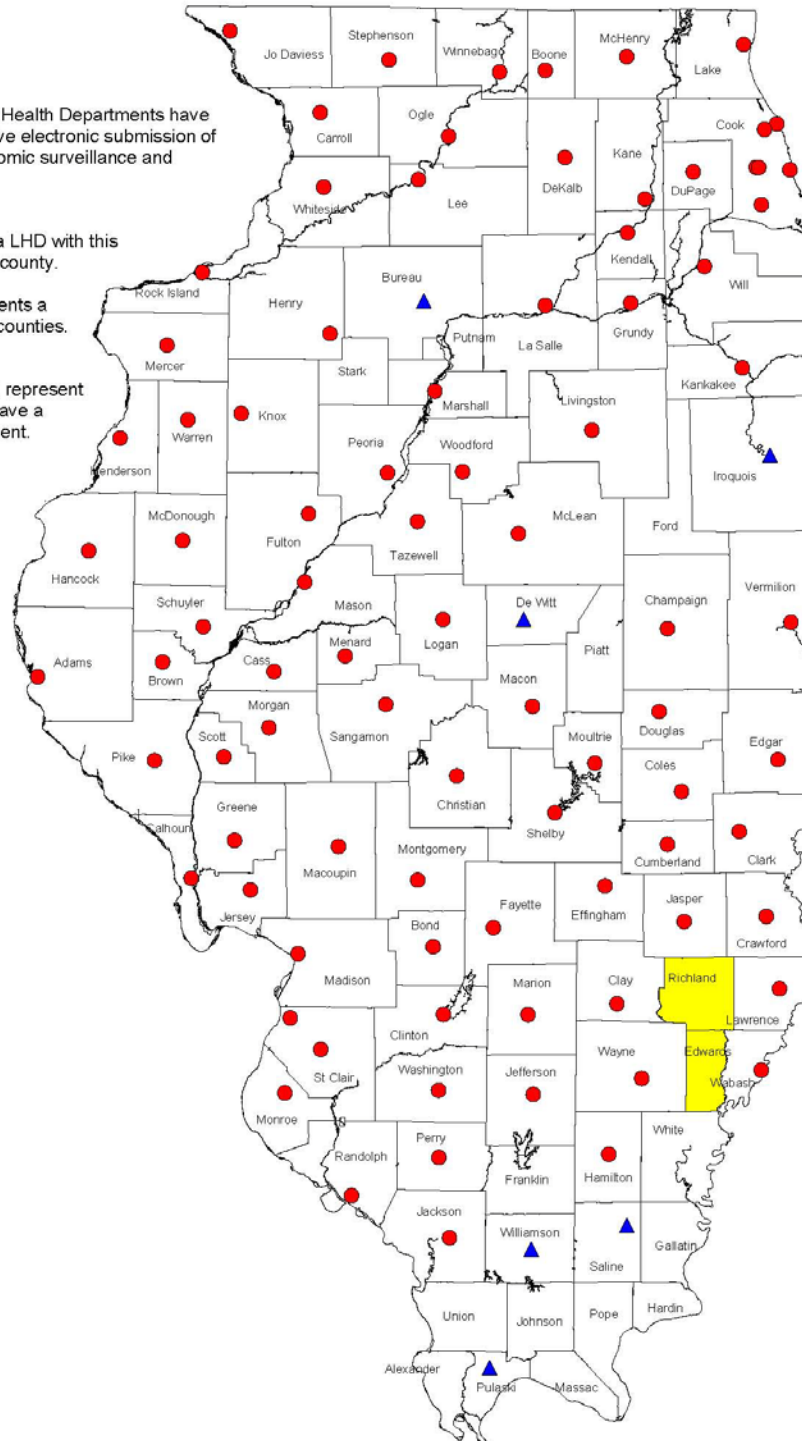
Local Health Departments with capability for electronic immunization reporting, syndromic surveillance and notifiable lab result reporting

100% of Illinois Local Health Departments have the capability to receive electronic submission of immunizations, syndromic surveillance and notifiable lab results.

A red dot represents a LHD with this capability for a single county.

A blue triangle represents a LHD for one or more counties.

The shaded counties (Richland & Edwards) represent counties that do not have a Local Health Department.



Illinois HIE Strategic & Operational Plan

Health departments electronically receiving syndromic surveillance

The Illinois-National Electronic Disease Surveillance System (I-NEDSS) is a web-based system that provides a secure, real-time communication link between hospitals, laboratories, other health care providers, and local health departments for the purpose of disease reporting and surveillance. The I-NEDSS application has been operational for seven years with electronic laboratory reporting (ELR) functional for six of those years. Both I-NEDSS and the State's Laboratory Information Management System, STARLIMS, are compliant with the CDC's Public Health Information Network certification standards and use standardized coding and vocabulary management, integration engines, and public health messaging architecture.

Currently, one hundred percent (100%) of local health departments in Illinois are able to electronically receive disease reports and conduct surveillance and epidemiological investigations through I-NEDSS (see Map 3). Today I-NEDSS allows for the entry of 77 reportable diseases with the ability to add more as regulations and requirements dictate.¹⁹

In addition to the I-NEDSS systems, one hundred percent (100%) of local health departments can access syndromic surveillance via the CDC's BioSense. BioSense receives, analyzes, and evaluates health data from numerous data sources such as emergency rooms, ambulatory care clinics, and clinical laboratories.

Local health departments in northern Illinois and in the Metro-St. Louis area utilize ESSENCE, the Electronic Surveillance System for the Early Notification of Community-Based Epidemics. ESSENCE software is a system that inputs electronic emergency department data for the purpose of syndromic surveillance. In the Chicago metropolitan area, the Cook County Department of Public Health has implemented ESSENCE with hospitals in its jurisdiction since 2005. The Cook County ESSENCE project includes hospitals in the highly populated suburban communities of Skokie, Evanston and Oak Park as well as hospitals in suburban DuPage and Kane counties and shares resulting data with these entities. Downstate rural St. Clair and Madison Counties utilize ESSENCE through the Gateway Essence project (Metro St. Louis partnership). Other Illinois local health departments have implemented their own home-grown or small scale surveillance projects, including several school absentee surveillance system projects.

Health departments electronically receiving notifiable laboratory results

Local health departments electronically receive notifiable laboratory results through I-NEDSS. I-NEDSS facilitates the electronic transfer of lab results from state and private laboratories, and case reports from health care providers to the corresponding local health department for investigations. Because health care provider reports and laboratory reports are stored in the same repository as I-NEDSS surveillance data, the routing of provider and laboratory reports is instantaneous to the investigating health department. **Currently, one hundred percent (100%) of local health departments in Illinois are able to electronically receive notifiable laboratory results through I-NEDSS** (see Map 3).

Sharing of patient care summaries across unaffiliated organizations

Based on the environmental scan activities of the HIE Planning Grant recipients throughout the state, the feedback of the State HIE Advisory Committee and Illinois two Regional Extension Centers, the exchange of full patient care summaries across unaffiliated organizations is not currently occurring in

¹⁹ Illinois Department of Public Health. Illinois – National Electronic Disease Surveillance System (I-NEDSS) NASCIO Recognition Award Submission, 2009.

Illinois HIE Strategic & Operational Plan

any known volume in Illinois. The ability to exchange summary of care records currently exists at the health care systems level, among hospitals' enterprise systems.

HIE Capacity Developed and Assessed through the HIE Planning Grant Program

In February 2009 the Illinois General Assembly appropriated \$3 million to the Illinois Department of Healthcare and Family Services (HFS) for statewide HIE planning. As a result of this initial State investment in HIE, the HFS Office of Planning developed a methodology based on Medicaid claims data to create Medical Trading Areas that represented a patient-centric model of health care transactions within a geographic region.

One of the most significant accomplishments of the year-long HIE Planning Grant process was the degree of statewide stakeholder engagement. The HIE Planning Grantees (Grantees) were asked to develop strategies for stakeholder engagement that were regionally relevant and likely to engage a diverse group of stakeholders. Various methods and strategies were employed during the planning year to engage stakeholders, resulting in nearly 10,000 individual and institutional contacts made by local planning efforts. All of the Grantees who achieved broad stakeholder engagement held regular meetings to keep their stakeholders informed and motivated. Among the elements of successful engagement were one-to-one meetings for key decision makers (hospital executives, physician leaders and practice managers) and identifying HIE "champions" among clinicians who have adopted EHR to encourage their peers to do the same.

In addition, the Grantees initiated extensive educational and research activities about HIE planning and implementation from experts across the country, engaging in multiple webinars, teleconferences, site-visits and educational sessions. The Grantees spoke to HIE subject matter experts in other Midwestern states, including Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin to capitalize on lessons learned and best practices. As a result of these educational sessions, the Grantees employed multiple research methods to inform their planning efforts, including: the development of use specific cases to address the needs of local stakeholders; extensive documentation of medical transaction and business flows in a multi-county area; documentation of EHR adoption rates of 700 physicians in the Southern Illinois Medical Trading Area; and a series of physician focus groups about EHR adoption and quality outcomes in the Central Illinois Medical Trading Area. These results will inform implementation of HIE in Illinois, and represent a number of best practices for stakeholder engagement.

As a result of the HIE Planning Grant program, five entities have developed plans to implement local HIEs. These local HIE planning efforts have the following characteristics in common: high levels of health care community involvement and stakeholder buy-in, the beginning of governance models, and a desire to be included in Illinois' statewide HIE. These local efforts are developing business and sustainability plans and looking to OHIT for funding. Another common element is that the local HIEs are looking to the Authority to establish statewide standards, particularly for privacy and security and public health reporting.

Much of OHIT's work underway is focused on integrating these local planning efforts into a cohesive plan to encourage the adoption of EHRs, facilitating providers' ability to achieve the Meaningful Use requirements, and establishing the infrastructure to enable statewide HIE.

Illinois HIE Strategic & Operational Plan

Inventory of HIT Capacity

The following details the comprehensive inventory of HIT capacity in Illinois that will serve as the foundation for the Meaningful Use of EHR and statewide HIE.

Regional Extension Centers (RECs)

Illinois received \$15.2M in funding from the ONC to establish two RECs: the Illinois Health Information Technology Regional Extension Center (IL-HITREC) and the Chicago Health Information Technology Regional Extension Center (CHITREC). The RECs will provide general assistance in the form of outreach, education, needs assessment, workflow analysis and redesign, identifying of resources and providing direct technical assistance to priority primary care providers to adopt and achieve Meaningful Use of EHR systems. Together, the RECs plan to provide services to more than 3,000 of Illinois' priority primary care providers.

IL-HITREC is a statewide consortium led by Northern Illinois University (NIU), serving all areas of Illinois outside metropolitan Chicago. IL-HITREC has established four satellite locations throughout Illinois to more effectively communicate and coordinate efforts with local providers. The Northwest Satellite Office will be administered by NIU; the other three satellites are administered by three partner organizations: Metropolitan Chicago Healthcare Council is responsible for suburban Chicago providers; Quality Quest for Health of Illinois is responsible for central Illinois providers; and the Southern Illinois Healthcare Foundation is responsible for the southern Illinois providers. IL-HITREC is also supported by six collaborating organizations, including the Illinois Hospital Association, the Illinois Critical Access Hospital Network, the Illinois Public Health Institute, Illinois State University, the University of Illinois at Chicago and Northern Illinois Physicians for Connectivity.

CHITREC is a public-private partnership led by Northwestern University and the Alliance of Chicago Community Health Services, serving the densely populated Chicago metropolitan area. CHITREC's efforts are supported by more than 40 local and national collaborating organizations, including the University of Chicago Medical Center, the City Colleges of Chicago and the University of Illinois at Chicago Medical Center.

IL-HITREC and CHITREC plan to offer the following services to primary care providers: assistance with EHR selection and implementation, HIT-related workflow design and management, technical infrastructure and interoperability consulting, and guidance with privacy and security practices. Both RECs have representation from or are contracting with organizations that participated in the Illinois HIE Planning Grants program, leveraging existing locally-based HIE organizational capacity in multiple regions throughout the state.

Public Health

IDPH is a leader in data analysis for health care quality improvement and patient safety, for prevention issues with immunization registries, and in preparedness with mandated reporting of communicable diseases. The benefits resulting from the significant increase in the adoption of HIT and the implementation of HIE will support the public health system in performing the core functions and essential public health services. The improvements in data quality and available information will enhance clinical and population health data analysis, evaluation, and research.

IDPH currently coordinates with other State agency databases, performs several registry functions, and administers web-enabled reporting applications that allow for electronic messaging and receipt of data. Specifically, the functionality of I-CARE and I-NEDSS systems was discussed in detail in the Environmental

Illinois HIE Strategic & Operational Plan

Scan section of this Plan. Past and current opportunities for EHR implementation and the electronic sharing of health information has targeted improved patient care through medication management, clinical decision support, reduced health care associated infections, and triggered intervention alerts.

Public health electronic laboratory reporting interoperability project

The software development group within the Infectious Disease Department at the John H. Stroger Jr. Hospital of Cook County, the largest public hospital in the state has partnered with the Chicago Department of Public Health (CDPH) to establish an electronic laboratory reporting data feed, sending reportable laboratory results to CDPH's Chicago Health Event Surveillance System. Based on the success of this partnership, CDPH has contracted with the Stroger group to establish electronic laboratory report sending capacity at other Chicago area hospitals. Currently, six Chicago hospitals are utilizing the Stroger-designed ELR interface to automate the sending of reportable laboratory results to CDPH via IDPH's I-NEDSS. The best practices and lessons learned from this pilot will help drive future electronic lab reporting initiatives.

Interoperability of EHRs and the State immunization registry, I-CARE

Illinois submitted a proposal to the CDC in response to the funding announcement for Enhancing the Interoperability of Electronic Health Records and Immunization Information Systems, to securely exchange data between EHR systems of large health care providers and the Illinois Comprehensive Automated Immunization Registry Exchange (I-CARE) registry application. The secure exchange of this data will allow Illinois to increase the number of children and adults participating in the immunization registry, reduce health care costs associated with giving unnecessary immunizations, reduce the risk of care interruption and establish greater accuracy on Illinois and national immunization levels. Participating health care providers are already able to utilize the I-CARE registry to search all documented vaccinations, produce day care and school entry health forms and measure immunization coverage levels for specific providers and practices, but under this initiative also will be able to reduce the double entry of data into I-CARE and EHR systems and receive data on additional vaccinations from I-CARE to the EHR systems.

Although IDPH did not receive federal funding, IDPH will continue to collaborate with Illinois-based health care providers systems to assess EHR systems for interoperability with I-CARE, with the goal of enhancing functionality and data exchange between EHRs systems and public health. Data exchanges will be available in both batch and real-time transmissions initially utilizing HL7 version 2.3.1 and upgrading to version 2.5.1 by early 2011. IDPH will provide assistance to staff of provider EHR systems to effectively implement and sustain routine data exchanges. However, the ability of IDPH to financially support the complete technical assistance needs of providers, especially for those providers whose health systems are not currently able to transmit information in a format compatible with the I-CARE system, has been impacted.

Telehealth and Telemedicine

For the past decade there has been a consistent attempt to explore the integration of telemedicine into health care delivery in Illinois. While many of the earlier pilot projects demonstrated improvements in quality and reduction in costs, there were significant obstacles identified that prevented programs being adopted into the overall health care delivery model. Aside from niche or department specific programs, wide adoption of telehealth has yet to be integrated into the health care delivery system in Illinois.

Illinois HIE Strategic & Operational Plan

With the change in the Medicare reimbursement regulations and the passing of revised Medicaid regulations in Illinois that provide reimbursement for a more broad range of telemedicine services, Illinois is poised to develop as a leading state in the integration of telemedicine services into HIE.

Included below is a brief summary of some of the work by institution and collaborative groups over the past decade:

- Southern Illinois University has been an early adopter of telemedicine and continues to be a bellwether organization for Illinois in this area. Southern Illinois University has led the State's initiative for establishing primarily educational programs in association with the Illinois Critical Access Hospital Network. The majority of Critical Access Hospitals obtained video conferencing connections to the medical campus at Southern Illinois University in Springfield. This telehealth network is also used for clinical services and consultations but numerous obstacles prevented clinical services from becoming the primary service line. The telehealth network achieved success in providing medical educational services, grand rounds, and other telehealth related services.
- The University of Illinois at Chicago (UIC), an early adopter of electronic medical records and wireless technology, has explored telemedicine primarily through grant funded efforts and has explored both domestic and international telemedicine opportunities. On the domestic front, UIC has explored efforts that include home monitoring for CHF patients, delivery of psychiatry to children in remote locations, and use of mobile devices for achieving weight loss. More recent programs include a telemedicine program with the Illinois Department of Corrections to provide remote management support to the prison system, development strategies for telehealth simulation training centers, and creation of a testing and training laboratory for telehealth research.
- The University of Illinois continues to build its telehealth programs across the healthcare disciplines exploring the use of telehealth and remote monitoring in nursing, pharmacy, dental and medical applications as well as social service support, medical informatics, allied health and public health.
- The Illinois Critical Access Hospital Network (ICAHN), in collaboration with several State universities, has created an internal committee to examine telehealth opportunities that would benefit ICAHN. The ICAHN was recently identified as the preferred partner for pilot projects for the State telestroke network.
- In response to State mandate, the State Stroke Committee established a subcommittee to focus on the development of a model to provide telestroke services to rural areas. The telestroke network will provide telestroke services to geographic regions without adequate access to stroke services.
- The Metropolitan Chicago Healthcare Council (MCHC) is supporting program development to allow access to Illinois Poison Center and through a novel collaboration of interpreters through video conferencing.

Coordination with Medicaid

OHIT is working closely with the Illinois Department of Healthcare and Family Services (HFS), Illinois' Medicaid Agency, on the development of the State Medicaid HIT Plan. The two entities share a common vision to accelerate adoption and Meaningful Use of EHR among Medicaid providers and improve the quality and efficiency of health care for the 2.5 million Illinois patients covered by Medical Assistance programs. The Medicaid HIT Plan is a cornerstone of the overall statewide HIE planning efforts. The enhanced federal matching funds available to Illinois for the administration of the Medicaid payments for EHR Meaningful Use is a major financial resource for Illinois' HIE Strategic and Operational Plan and will be utilized to advance shared HIT goals.

In September, 2009, HFS commissioned a brief study to determine estimates on the number of eligible professionals expected to participate in the Medicaid EHR Incentive Program authorized under the HITECH provisions of ARRA and the aggregate financial benefit to those providers based on expected participation levels. The results of that analysis estimated that 4,000 individual practitioners would be eligible for the Medicaid EHR Incentive Program. Based on the assumption that 80% of those eligible would become meaningful users and fully participate, the total estimated Medicaid incentive payments under this scenario is \$220 million between 2011 and 2021. This study was completed prior to changes made to the EHR Incentive Program Final Rule pertaining to physicians in hospital-based outpatient settings, so the number of estimated eligible professionals is expected to now be higher. In concert with the development of the Medicaid HIT Plan, and based on findings and the 2010 statewide provider survey and gap analysis of the environmental scan, Illinois will refine and expand this analysis to include hospitals and identify target participation levels for all providers in the Medicaid and Medicare EHR Incentive Program.

The Director of OHIT, who also serves as the State Health IT Coordinator, is a project sponsor of the Medicaid HIT Plan and participated in drafting Illinois' Planning-Advanced Planning Document for the development of the Plan. This Planning-Advanced Planning Document was approved by Centers for Medicare & Medicaid Services (CMS) Region 5 on January 20, 2010. OHIT and HFS staff have regularly scheduled conference calls to review timelines and updates to the State Medicaid HIT Plan, Illinois' HIE Strategic and Operational Plan and potential areas of overlap. OHIT and HFS will align specific goals for provider EHR adoption contained in OHIT's Operational Plan and in the Medicaid HIT Plan which is being developed and leverage anticipated aggregate Meaningful Use incentives to encourage provider participation in HIE. Initial areas of coordinated activities are provider assessment and outreach.

The Advisory Committee includes a standing Medicaid Work Group, which is the same advisory body that will facilitate stakeholder involvement in the Medicaid HIT Plan. The Medicaid Work Group is staffed by both OHIT and HFS to ensure consistency and coordination of issues and recommendations that affect both the Medicaid HIT plan and the statewide HIE development. As one example, the results of the environmental scan performed in conjunction with this Strategic and Operational Plan is being shared with the Medicaid program staff and the contracted vendor they are working with to develop the Medicaid HIT Plan to ensure that in developing the work plan to conduct provider assessment, their work builds upon and does not duplicate the work already done on assessing capacity to achieve widespread participation in the EHR Incentive Program.

Illinois HIE Strategic & Operational Plan

The Planning-Advanced Planning Document for the Medicaid HIT Plan was shared with both Illinois Regional Extension Centers (RECs) and staff from OHIT, RECs and HFS are working to coordinate resources and messages in reaching out to eligible professionals to assess their readiness for EHR adoption and Meaningful Use and accelerate adoption efforts.

One recent example of effective coordination with the Medicaid program and the RECs facilitated by OHIT was the release of the 2010 Survey. After review of each entity's high-level work plans, it was determined that all three entities needed to survey Illinois providers and many of the questions that were to be asked were duplicative. In order to ensure a higher quality and better rate of response, minimize the possibility of provider confusion and establish a framework for data sharing, OHIT collaborated with HFS and the RECs to produce and distribute the 2010 Survey. OHIT is taking the lead with provider organizations to ensure a high response rate, and HFS and the RECs are reinforcing this strategy in their work with those organizations. The results of the 2010 Survey will be shared by all three entities to inform and further develop their work plans and timelines and assist each in achieving its goals. OHIT expects that this successful collaboration will be replicated throughout the implementation of the HITECH programs.

To ensure long-term alignment of goals and resources between the statewide HIE and the Medicaid program, ILHIE governance structure provides a permanent role for Illinois' Medicaid Agency in that the Director of HFS is an ex officio member of the Authority. OHIT staff participates in the federal CMS All-State Calls for State Health IT Coordinators and State Medicaid Directors to facilitate regular information sharing.

Coordination with other Federally-Funded Programs

Regional Extension Centers (RECs)

The ONC has granted Illinois \$15.2 million to fund two RECs. OHIT has established a regular monthly meeting schedule with leaders from both RECs to ensure that efforts to promote EHR adoption and Meaningful Use across multiple program initiatives are effectively coordinated. OHIT staff provides a channel for communications between the RECs and the team involved in developing and executing the State Medicaid HIT Plan. The ILHIE web site includes links to both RECs and the monthly Advisory Committee meetings include a standing report from the RECs to ensure that their key developments and progress are communicated to all health care stakeholders.

Medicare

As indicated earlier in the Strategic Plan, the EHR incentive payments for Meaningful Use are a cornerstone of the Illinois HIE initiative and supporting the ability of Medicare providers to participate in the EHR Incentive Program is a key objective. Illinois' environmental scan and results of statewide HIE planning efforts have indicated that the inclusion of Medicare data in statewide and interstate HIE will be critical to the widespread use and sustainability of HIE. OHIT will continue to implore our federal partners to make this data available.

Illinois' Strategic HIT Advanced Research Project (SHARP) Grant

The Information Trust Institute at the University of Illinois at Urbana-Champaign was recently awarded a \$15 million grant through the Strategic HIT Advance Research Project (SHARP) program to conduct multi-disciplinary research on the security of HIT. This research will address the challenges of

Illinois HIE Strategic & Operational Plan

developing security and risk mitigation policies and the technologies necessary to build and preserve the public trust as HIT systems become ubiquitous.

OHIT is working with the team leaders of this project to determine how best to leverage the work being performed pursuant to this project to support Illinois' efforts to develop a statewide HIE.

CDC-funded Support for Increased Epidemiology and Laboratory Capacity for Infectious Diseases

Illinois was awarded just over \$666,000 in grant funding from the CDC to advance the infrastructure and interoperability of electronic laboratory reporting between clinical data sources and public health agencies. The secure exchange of this data will enhance the ability of public health agencies to identify, diagnose, and monitor infectious diseases for assessment and policy development.

IDPH will build from existing capacity to quickly initiate the activities proposed in its application toward rapid advancement towards the Meaningful Use of EHRs. A dual approach is being proposed for expanding electronic laboratory reporting between public health and clinical care in Illinois. The CDPH and Stroger Hospital both have six years experience in extraction of EHR data for public health reporting. First, I-NEDSS in collaboration with the CDPH and John H. Stroger Jr. Hospital of Cook County will expand electronic laboratory reporting through a successful data warehouse approach. Second, the I-NEDSS will import additional electronic laboratory reporting data through the use of a recently purchased Laboratory Information Management system (STARLIMS™) and the purchase of an integration engine (such as Orion Rhapsody). This work will create an interoperable exchange between the public health laboratory and Illinois hospitals for submission of laboratory orders and receipt of test results.

AHRQ Quality Initiative

A recent Agency for Healthcare Research and Quality grant, Using Clinically Enhanced Claims Data to Guide Improvement of Surgical Care, submitted on behalf of IDPH proposed to augment existing administrative databases with clinical data elements to develop a "clinically-enhanced" database IDPH can utilize for studies of comparative effectiveness and for quality improvement initiatives for hospitals in Illinois. IDPH has also submitted a grant through the Division of Patient Safety and Quality requesting \$1 million in ARRA and CDC funding to reduce and prevent health care associated infections. The Division of Patient Safety will work with the Chicago Health Event Surveillance System and the I-NEDSS to capture electronic laboratory reporting data directly from hospital laboratories, and thus expand and build upon the current work of the CDPH in this area. Capture of electronic laboratory reporting data directly in the National Healthcare Safety Network, the Chicago Health Event Surveillance System, and I-NEDSS will improve reporting of health care associated infections data into public health systems and promote efficiency and accuracy at the hospital level.

HRSA-funded Initiatives to Community Health Centers

Illinois' community health centers (also known as federally qualified health centers, or FQHCs) have made the adoption and Meaningful Use of EHR a high priority. These health centers operate more than 275 traditional clinic sites, another 150 special population sites and serve more than 1.2 million Illinois patients annually. Nearly 80% of health center patients have incomes below the federal poverty level; more than 50% are covered by Medical Assistance programs and 32% are without insurance coverage.

Illinois community health centers were recently awarded a total of \$8.5 million in the two rounds of Health Research Services Administration (HRSA) HIT grants to implement EHR systems. Funding included direct grants to health centers and support for two health center controlled networks: the Alliance of Chicago Community Health Services (Alliance) and the Illinois Primary Health Care Association

Illinois HIE Strategic & Operational Plan

(IPHCA). The Alliance has achieved national recognition for implementation of advanced EHRs including clinical quality reporting and received an HIE planning grant from HRSA to collaborate with Northwestern Memorial Hospital on a local exchange. OHIT is working with the IPHCA and the Alliance to support their efforts to promote the adoption and Meaningful Use of EHR to all of Illinois' community health centers. OHIT is facilitating regular discussions with the IPHCA, the RECs and the Medicaid program to address the challenges and opportunities unique to community health centers for the benefit of Illinois' low-income and underserved patients.

HRSA-funded HIT Initiatives

In addition to the ARRA funded HIT grants to implement EHR systems awarded to Illinois' community health centers, several other health care organizations have also received HRSA funded HIT grants for EHR implementation and HIT planning. OHIT will continue to support these local efforts to accelerate EHR adoption and leverage the significant investments made to date.

CHIPRA Quality Initiative

The State Health IT Coordinator is participating in Illinois' joint-project with the State of Florida to improve child health quality under Medicaid and CHIP. The joint Illinois-Florida project seeks to among other objectives, enable, coordinate and integrate the reporting of child health quality data through a statewide HIE system.

Maternal and Child Health State Systems Development Initiative

The Illinois Department of Human Services (DHS) has received multiple years of HRSA grant funding for infrastructure building services under the State Systems Development Initiative. The goals of the projects are to improve the use, access, and availability of data to monitor health outcomes and improve collaboration between multiple stakeholders within the maternal and child health services delivery system. Illinois will build on its existing capacity in data reporting and formatting to increase its epidemiological infrastructure and utilize the latest data warehouse mining procedures to extract performance measurement data from maternal and child health data sets²⁰.

Engaging the Aging and Long-term Care Community

OHIT has identified two funding opportunities within the Patient Protection and Affordable Care Act that will be available to nursing facilities and long-term care facilities for promoting the implementation of HIT within these care settings to improve quality outcomes. OHIT will monitor interest in Illinois entities wishing to apply for the grants under Sec. 6614. and Sec. 6703. and provide their support.

SAMHSA-funded HIT Initiatives

OHIT will monitor interest in Illinois entities seeking to apply for the fiscal year 2010 State Mental Health Data Infrastructure Grants for Quality Improvements administered by the Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Mental Health Services.

HIT Workforce Development

The Illinois Department of Commerce and Economic Opportunity is actively pursuing workforce development opportunities to encourage statewide economic development and address growing employment demand through a well-trained workforce. Numerous workforce development projects in health care have been funded throughout the state, totaling almost \$6 million. This includes five projects directly targeting workforce development within the HIT sector, totaling almost \$1 million.

²⁰ [HRSA, Maternal and Child Health Bureau Grant Abstract Details, Fiscal Year 2010.](#)

Illinois HIE Strategic & Operational Plan

These opportunities create new HIT education and training programs intended to increase HIT workforce competencies.

The Southern Illinois Healthcare Foundation (SIHF) and Touchette Regional Hospital are converting to EHRs in order to reduce costs while improving quality and patient safety. To accommodate this fundamental technology change, SIHF received \$368,884 for specialized training to provide workers with the ability to support the new system and leverage lean EHR through incumbent worker training.

The National Latino Education Institute (NLEI) received \$105,000 for EHR training. NLEI will partner with Aunt Martha's Healthcare Network (AMHN) to provide customized EHR training to AMHN workers. The result of this training will be job retention, increased skill levels of the training participants, and increased efficiency of operations throughout the network of AMHN clinics.

Fairfield Memorial Hospital Association (FMHA), located in southern Illinois, received \$31,097 in funding for electronic documentation applications. FMHA will upgrade their Patient Care Documentation application. This project will train staff on how to utilize the new software and technology to convert the entire hospital system to electronic medical records. This new upgrade is a fully-integrated, multi-disciplinary clinical application that allows for online patient charting and storage with increased organizational and navigational capabilities. This new application will support the HIE in Illinois making health care information more accessible and up to date.

The Richard J. Daley College, City Colleges of Chicago District #508, Digital Workforce Education Society, the Alivio Medical Center, Advance Records Management, Central States Service Employment Redevelopment, Instituto del Progreso Latino and community-based health care organizations are joining together to implement an integrated program designed to provide classroom and online education to prepare participants for either entry level jobs in medical records management or ICD-10 medical classification and coding for entry level or incumbent workers under the Health Information Technology Workforce Training Program grant for \$300,000. In addition to course participation, the programs will incorporate employment internships designed to offer participants supervised experience in dealing with actual production, management, and maintenance of EHRs.

Jobs For Youth-Chicago Inc received \$175,000 for an Electronic Health Records Job Training and Placement Program. The program will expand Jobs for Youth's Occupational Skills Sector-Based Training Program to include EHR Practice Management Systems. It will address a critical need in preparing low-income youth for careers in the growing HIE in Illinois.

Federally-Funded Telemedicine

OHIT is aware of only one program in Illinois receiving federal telemedicine funding: the Children's Memorial Medical Center Telemedicine Program. Under this program, Children's provides international diagnostic, consultative and educational services in various medical specialties and uses telemedicine to improve ability to diagnose congenital heart disease.

Broadband Development Resources

Several initiatives are currently underway in Illinois to expand broadband connectivity to health care providers in underserved communities. OHIT considers adequate broadband connectivity to all health care providers across the state to be critical for enabling access to the ILHIE, and broad participation in HIE across the state. Illinois' broadband deployment priorities are:

Illinois HIE Strategic & Operational Plan

- Improving broadband connectivity in rural, remote and economically depressed areas.
- Expanding the use of telemedicine applications by hospitals and health care facilities.
- Enriching education, research and supercomputing capabilities.
- Linking law enforcement, homeland security, and other public safety officials.
- Supporting organizations that provide training in 21st Century technology skills.

In 2007, the Illinois Rural HealthNet Consortium received a three-year, \$21 million pilot grant from the FCC to connect 88 rural hospitals and clinics to a fiber optic and wireless network.

The Illinois Broadband Deployment Council, chaired by Governor Quinn, has provided support to more than 140 applications for funding in Rounds 1 and 2 of the Broadband Opportunities Program (BTOP) administered by the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) and the U. S. Department of Agriculture Rural Development, Broadband Initiatives Program (BIP) pursuant to funding made available under ARRA.²¹ The State committed in excess of \$40 million in matching grant support to Round 1 applications, and to date has committed in excess of \$48 million in matching grant support to Round 2 applications. The State contracted with the Partnership for a Connected Illinois (Connect Illinois) to assist qualified Illinois ARRA applicants and develop a map of Illinois' broadband availability.²²

A current Statewide Broadband Inventory Map graphically captures broadband coverage, cities and towns, county boundaries, and detailed road information.²³ In summary the map represents:

- 104 Illinois broadband providers.
- 97.96% of Illinois households have access to terrestrial fixed broadband service of at least 768Kbps downstream and 200Kbps upstream (excluding mobile and satellite services).
- 2.04% of Illinois households are underserved by a terrestrial fixed broadband provider, representing approximately 93,510 underserved households that do not have access to a fixed wireless or wired broadband service offering (excluding mobile and satellite service).
- With mobile broadband service included, 99.71% or 4,578,642 Illinois households have access to broadband service of at least 768Kbps downstream and 200Kbps upstream.

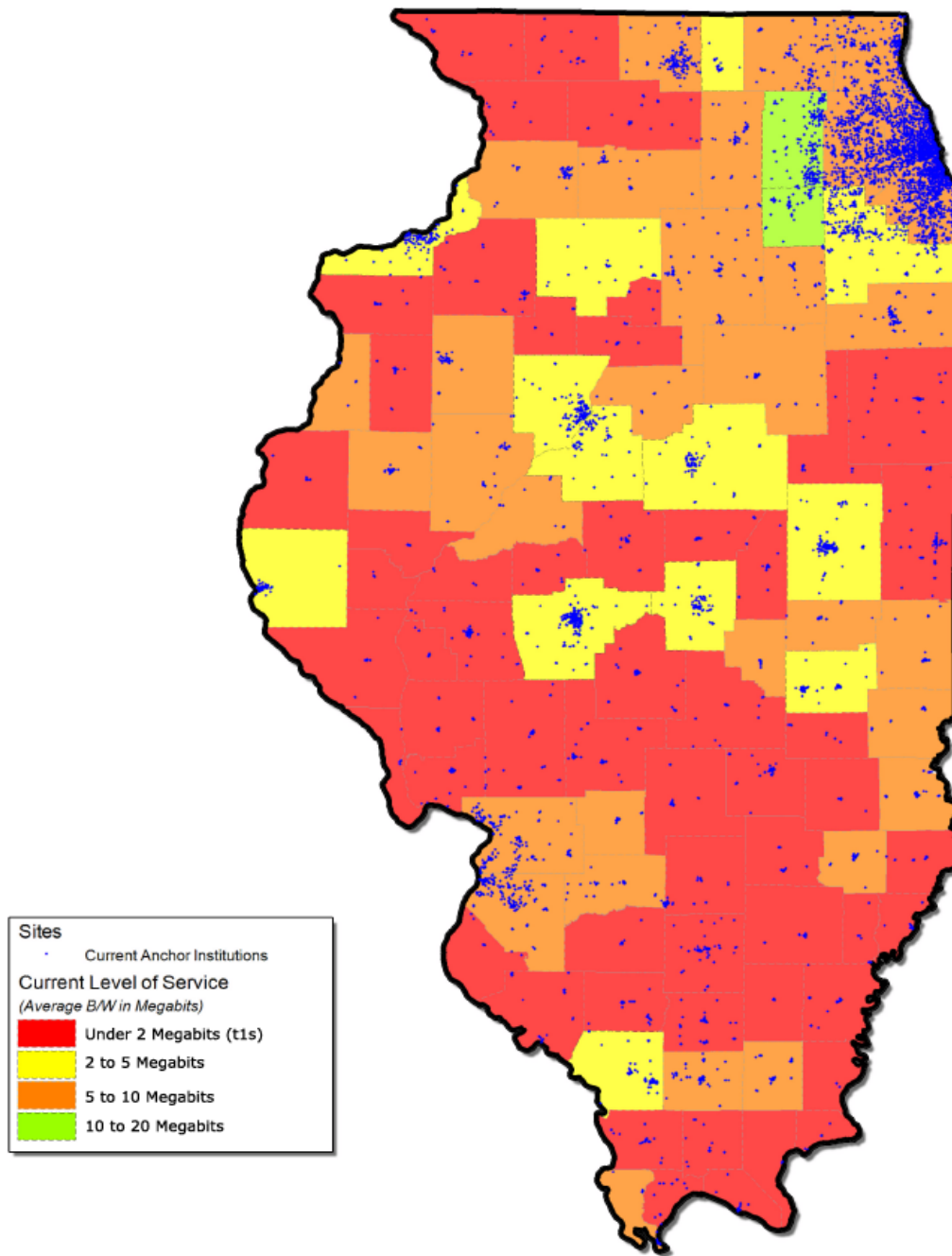
²¹ <http://www2.illinois.gov/broadband/Pages/Governor%27sRound1BTOPLetter.aspx>

²² <http://www.connectillinois.org/>

²³ http://www.connectillinois.org/mapping/Statewide_Broadband_Inventory_Maps.php

Illinois HIE Strategic & Operational Plan

State of Illinois Broadband Coverage Map (Service Levels as of April 2010, by County)



Community “**Anchor Institutions**” include K-12 schools, universities, libraries, hospitals/emergency medical facilities, and public safety facilities.

Illinois HIE Strategic & Operational Plan

In March 2010, the Urbana-Champaign Big Broadband project received a \$22.5 million award through BTOP to work with education, health care, public safety and government service organizations in Central Illinois (Urbana-Champaign and Savoy) to improve access to services and a range of applications for area residents and businesses.²⁴ The project will directly connect 143 anchor institutions, including 17 social service agencies and 14 health care facilities. A majority of the anchor institutions expect to receive their first high-speed Internet connection via this project.

The DeKalb Advancement of Technology Authority (DATA) Broadband project, a partnership between the DeKalb County Government, Northern Illinois University, and DeKalb Fiber Optic, has also received a BTOP award of \$11.9 million.²⁵ The project plans to deploy a 130-mile fiber-optic network across DeKalb County and northern LaSalle County targeted to reach areas with a demonstrated need for high-speed, low-cost broadband access. The project expects to provide high-speed Internet connections to anchor institutions, including 42 schools, 2 hospitals, 5 clinics, and numerous public safety entities and government agencies. The project will also enable broadband providers to interconnect with these facilities to provide broadband to households and businesses in unserved and underserved communities. The DeKalb Advancement of Technology Authority Broadband project also proposes to connect to the Illinois Rural HealthNet, allowing medical facilities connected to this project to collaborate with specialists at larger facilities throughout the state and nation.

The City of Chicago has recognized the significance value broadband access and digital literacy has in advancing neighborhood economic development and improving quality of life, especially for neighborhoods that have not had the similar financial investments in broadband infrastructure as other more affluent Chicago neighborhoods. The Smart Communities program was created as a key component of the City's Digital Excellence Initiative and seeks to close the digital divide by providing grant funding for broadband technology into five underserved communities in Chicago, with a focus on improving health through HIT. The Smart Communities program is the focus of the City's BTOP allocation under the category of Sustainable Broadband adoption that received significant State commitments.

Illinois was recently awarded an additional \$106 million in federal grant funding to expand broadband service throughout the state. In August, 2010, Illinois received additional ARRA awards to support four projects. Nearly \$62 million grant was awarded to the East Central Region of the Illinois Broadband Opportunity Partnership (IBOP) to expand and improve the Illinois Century Network to provide ultra high-speed access in 55 counties. It will also create more than 160 jobs and connect about 400 community institutions. Through the IBOP-Southern Region project, Harrisburg-based Clearwave Communications will use a \$31.5 million grant to connect 232 community institutions and create approximately 150 jobs. The Danville-based Cellular Properties, Inc. project is using a \$12 million grant/loan award to expand 3G wireless broadband service in 11 rural counties. The effort is estimated to create 267 jobs, and serve more than 7,000 businesses and 700 community institutions. Grant and loan awards totaling more than \$783,000 to Utopian Wireless Corporation will build WiMAX infrastructure in communities in rural McDonough and Clay Counties. This project will help more than 350 businesses and 100 community institutions.

Collectively, the broadband deployment projects propose to extend fiber into every county within Illinois and connect the state's 48 community colleges directly with fiber. These efforts will improve the

²⁴ <http://uc2b.net/>

²⁵ http://www.ntia.doc.gov/press/2010/BTOPGrants_IL_100219.html

Illinois HIE Strategic & Operational Plan

state's broadband and bandwidth capacity deemed crucial for public safety, education, health care and business growth in Illinois.

Gap Analysis and Strategy to Meet Meaningful Use

The environmental scan revealed a number of gaps in health information technology and HIE capacity that will be addressed through the Operational Plan as Illinois moves to the implementation phase. The process of analyzing gaps, devising strategies to address them, executing those strategies, assessing impact and revising strategies based on new and more complete information will continue throughout the duration of the Cooperative Agreement program period. OHIT will continually gather and analyze new data over time and revise and enhance strategies accordingly. The initial strategies selected reflect OHIT's focus on developing the capabilities necessary for providers to achieve the Stage 1 Meaningful Use requirements, in particular key exchange related capabilities, and increase EHR adoption. They are:

Current low levels of e-prescribing among independent pharmacies

Stage 1 Meaningful Use requires eligible professions to generate and transmit 40% of all permissible prescriptions electronically using certified EHR technology.

GAP: The number of Illinois pharmacies accepting electronic prescribing and refill requests has increased steadily over the past three years, each year representing at least a doubling effect from the previous year. This trend is expected to continue as the number of physicians with certified EHRs continues to accelerate. Surescripts indicates that 93% of community pharmacies have an e-prescribing module activated, but the number of independent pharmacies receiving electronic submissions is considerably lower at 60%.

STRATEGY: OHIT plans to address this issue by working with the independent pharmacists' professional association to address this level of e-prescribing transactions. We will also convene a series of focus groups to learn more about the obstacles for e-prescribing for independent pharmacies. OHIT will also use data from the 2010 Survey to further identify obstacles and barriers to implementing e-prescribing.

Current levels of exchange of structured laboratory data

Stage 1 Meaningful Use requirements includes a menu objective for eligible professionals or authorized providers of eligible hospitals or CAHs, whose results are returned in a numerical or positive/negative numerical format, to incorporate those results into a certified EHR as structured data. This functionally is dependent on the ability of laboratory service providers to deliver electronic results.

Based on the laboratory survey, 61% of laboratories in Illinois are currently providing electronic results delivery to providers. The barriers to increasing the levels of exchange are the cost to build interfaces to the laboratories and the wide variety of semantic and syntactic standards currently utilized. OHIT will encourage the widespread implementation of electronic results delivery through a combination of technical, policy, and purchasing levers.

GAP: Expensive point-to-point interfaces. The average cost for a provider to interface to a laboratory company is \$25,000, with cost increasing for bi-directional interfacing.

STRATEGY: By consolidating interfaces, HIE reduces the cost to providers and laboratories electronically exchanging results among multiple entities. Since the messaging component for diagnostic results

Illinois HIE Strategic & Operational Plan

delivery through the ILHIE will not be operational until 2012, OHIT will facilitate providers' ability to meet the Meaningful Use requirements through local HIEs throughout Illinois and NHIN Direct. Through its legislative authority to establish and adopt the standards for participation in the ILHIE, the Authority will ensure that local HIEs provide results delivery capability as part of their initial set of capabilities implemented in 2011. For healthcare providers without local HIE services available in their area, the State will facilitate NHIN Direct capabilities, such as provider directories. In addition, the State will utilize its contracting leverage to motivate local and national laboratories to deliver laboratory results electronically.

GAP: Standards-based interfacing. Although laboratory orders and results were among the first transactions to be standardized under HL-7, the format specifications are so broad and so customizable they virtually constitute no standard at all. And there are, literally, hundreds of different laboratory tests and hundreds of different result message formats which adds to the complexity of data exchange; hospitals and commercial laboratories, with automated results reporting, have implemented a wide variety of formats, even for the same test types.

STRATEGY: To encourage the increased adoption of uniform, nationally recognized standards for electronic laboratory reporting and reduce providers' burden in reconciling laboratory tests between disparate laboratory systems, the State will utilize its contracting leverage to motivate local and national laboratories to move away from proprietary solutions and send LOINC codes along with any laboratory tests. OHIT will work with the Regional Extension Centers to align interoperability requirements by identifying standard specifications for electronic laboratory reporting that will be made available as a resource to vendors developing products that support electronic exchange across Illinois providers.

STRATEGY: OHIT and the State Medicaid program are strongly promoting the EHR Payment Incentive Program and the Meaningful Use criteria for labs to Illinois providers as a strategy to use provider demand to drive the laboratory market toward electronic transmission using structured data. If it becomes apparent that additional action is necessary to increase laboratory interoperability and compliance with national standards, the Illinois Medicaid program will consider requiring laboratories to transmit results electronically using standards-based terminologies in order to receive reimbursement from Medicaid.

Current low levels of patient care summary exchange across non-affiliated organizations

GAP: The exchange of full patient care summaries across unaffiliated organizations is not currently occurring in Illinois. The 2009 Survey indicated the degree to which health care providers exchanged data outside their respective hospitals or health systems was limited. The 2009 Survey also indicated that the degree of inter-state HIE was even more limited.

STRATEGY: Stage 1 Meaningful Use requires eligible professionals and eligible hospitals and CAHs to perform at least one test of their certified EHR technology's capacity to electronically exchange key clinical information among providers of care and patient authorized entities. The ILHIE will act as a liaison between un-affiliated providers to assist in establishing relationships for these testing capabilities. Future planning for the ILHIE includes developing a test harness to further assist providers in testing as exchange become more robust. Additionally, three local HIEs from three different regions, the metropolitan Chicago area, Central Illinois, and Southern Illinois, have identified this capability in their planning documentation as a Use Case for 2011 implementation, and intend to provide the ability to exchange care summaries. OHIT will continue to work closely with these developing local HIEs to encourage their implementation of this functionality.

Illinois HIE Strategic & Operational Plan

OHIT acknowledges that these options for exchange of care summaries may not be sufficient to give every provider in Illinois the ability to share care summaries in 2011. Nonetheless, it is the most realistic approach to achieving widespread sharing of patient care summaries throughout the state within the very tight timelines mandated by federal rule. This strategy will produce the first phase of such capacity in the state, from which we intend to build and expand, identify and assess gaps in coverage and fill them in with the development of the statewide HIE.

Current low levels of EHR adoption

GAP: As indicated in the Environmental Scan section of this Plan, it is estimated that the EHR adoption rate is approximately 16% based on the 2009 Survey. EHR Adoption is expected to accelerate rapidly over the next five years based on the CMS incentives for hospitals and physicians to achieve meaningful use. However, it is anticipated that the 2010 Survey will reveal that EHR adoption rates for eligible professionals and eligible hospitals in under-served and rural areas will continue to need to be addressed.

STRATEGY: OHIT intends to address this need for EHR adoption and a comprehensive strategy for Illinois providers to meet Meaningful Use in the following methods: 1) conduct the second annual Statewide Provider Survey utilizing a broad distribution model of statewide stakeholders to assist in identifying geographic areas of EHR adoption, e-prescribing, electronic lab reporting, sharing information electronically outside their enterprise and those that possess a general understanding of meaningful use; 2) based on the 2010 Survey results, coordinate communication and outreach methods with the State Medicaid HIT Plan, Illinois RECs and provider organizations to encourage greater EHR adoption and address the training and education needs that are likely to be identified; 3) routinely survey eligible professionals about their EHR adoption/implementation status as they renew their professional licenses through the Illinois Department of Professional Regulations. Through each of these mechanisms, OHIT will gain a better understanding the status of EHR adoption and readiness for meeting Meaningful Use and HIE and will be able to more accurately tailor strategies to address the needs of these providers.

GAP: OHIT is aware that safety net providers have unique needs regarding EHR and HIE adoption. For example, there are several small independent community hospitals in poorly-resourced areas of the State that have very limited resources to invest in HIT.

STRATEGY: The results of the 2010 Survey will be added to a statewide map which will make it easier to identify geographic areas of the state which are lagging in EHR adoption and HIE activity. OHIT will work to identify focused resources for these providers so that they can participate in the EHR Incentive Program and achieve meaningful use through HIE.

Need for additional broadband deployment in underserved areas

There are multiple federally funded broadband initiatives underway covering underserved areas of the state. Despite the progress that has been made in deploying broadband in underserved areas, these initiatives will take several years to complete and challenges remain.

GAP: Illinois needs to increase its network capacity to support next generation, high-bandwidth applications and business needs.

Illinois HIE Strategic & Operational Plan

STRATEGY: The recommended solution for this gap is to migrate network backbone to State-owned fiber in order to lower costs, increase network availability, increase consistent connectivity options and provide new and improved services.

GAP: Illinois needs to increase options for high speed affordable, last mile connectivity.

STRATEGY: The recommended solution for this gap is to expand the availability of Ethernet-based solutions and support regional network activities by collaborating with telecommunications and cable providers in order to increase speed of services, scalability and lower rates.

As indicated in the Broadband Development Resources section of this Plan, Illinois has a good plan to address the broadband needs of health care providers. OHIT will continue to work closely with the grant entities that are deploying broadband service to monitor progress toward filling existing gaps and assist health care providers in accessing newly developed broadband capacity.

Lack of awareness by providers regarding the EHR Incentive Programs

GAP: Despite statewide efforts to raise awareness of HITECH and the federal strategy to accelerate HIE nationwide there is a general lack of understanding about the specifics regarding the EHR Incentive Programs, particularly among eligible professionals.

STRATEGY: CMS and ONC have anticipated the need for information through the development of on-line resources, webinars and other educational and technical assistance opportunities. OHIT intends to take full advantage of these resources, in conjunction and collaboration with our State Medicaid HIT Plan colleagues, REC partners and the group of diverse and highly engaged HIE stakeholders that OHIT has cultivated over the past three years. These communication and outreach efforts will be coordinated through the State HIT Coordinator and the Illinois HIE Communications Plan.

Need to educate and develop outreach strategies for health care consumers

GAP: The 2010 annual eHealth Initiative National Progress Report indicated that much more education and outreach to consumers about HIT and HIE is required. The report noted, "the value of HIT and HIE needs to be presented in terms meaningful to consumers. Examples from successful engagement models need to be studied and replicated. Insight into the challenges to consumers with disabilities, low health literacy rates, language barriers and cultural differences, and those who serve particular groups of consumers must be a focus of education and outreach initiatives, so that all consumers benefit from the expanding HIT and HIE capacity."²⁶

STRATEGY: OHIT agrees with the findings of this report and will integrate these ideas and concepts into its Communication Plan, in conjunction with the recommendations of the Consumer Education and Public Awareness Work Group.

Communications Plan

The Illinois HIE Communications Plan (Communications Plan) involves three key goals: (1) to inform, educate, and engage health care providers and organizations, the public, and other key stakeholders about the benefits of EHR adoption and use, and HIE-related activities in Illinois, (2) to communicate

²⁶ eHealth Initiative. The State of Health Information Exchange in 2010: Connecting the Nation to Achieve Meaningful Use. 2010.

Illinois HIE Strategic & Operational Plan

messages in a way that helps foster public trust and active participation in the HIE, and (3) to engage key stakeholder organizations that will be instrumental in helping communicate important information to their members and constituents, and assisting with these activities.

The Communications Plan will rely on current ongoing communication activities that have proved to be successful in making information about HIE in Illinois available and accessible to patients, providers, other stakeholders and the health advocacy community. These activities will play an important role in the overall communications strategy for the implementation phase of the HIE. Some of these activities are employed on an “as needed” basis or as opportunities arise.

A variety of key messages and communications will be developed along with methods for information dissemination directed at general and specific stakeholder groups in relation to the five Program domains. The communications and education will be focused on a variety of key stakeholder audiences including the general public audience, policymakers, health plans, hospitals, long-term care facilities, home health agencies, physician organizations, community clinics, public health departments, ancillary service providers (i.e., laboratory, pharmacy, imaging), vendors, consumer advocates, and health care payers, and employers.

Where necessary and appropriate, Illinois will also tailor its educational and outreach messages to more effectively communicate with non-English speakers.

It is important to note that the statewide HIE will also be working closely with the two RECs in Illinois (IL-HITREC and CHITREC) to ensure that all communication, education and outreach related activities for patients and providers are coordinated and consistent. In addition, the Communications Plan will be coordinated to compliment the goals of the State Medicaid HIT Plan.

Communications Tools

Illinois will be employing current communications tools at its disposal but will be broadening the reach of those tools. These include:

- **Illinois HIE Website** – www.hie.illinois.gov
Contains all pertinent information about HIE in Illinois, including the Advisory Committee and Work Groups, HIE Planning Grants, HIE Legislation in Illinois, relevant news items, and links to related sites.
- **Illinois HIE Listserv**
Registration through the HIE Website. When important updates are made on the site, a listserv serve message is disseminated alerting members of the new posted information.
- **Illinois HIE Wiki** – illinois-hie.wikispaces.com
Created as a resource for the HIE Planning Grants and contains information and toolkits on HIE related activities both at the state and national levels. The wiki is open to the public but was originally intended as a one-stop shop for Illinois HIE Grantees to access and share information.
- **Direct Email To Key Stakeholders**
OHIT has a growing distribution list of HIE stakeholders from all related fields and professions who receive regular updates, alerts and newsletters via email about HIE activities in Illinois.

Illinois HIE Strategic & Operational Plan

In addition to these current tools, Illinois will be exploring the use of additional tools to foster greater communication and education among all stakeholders. These may include, but are not limited to:

- Webinars/Podcasts
- Conference Calls
- In-person educational sessions and town hall meetings
- Social Media

Communications Strategies

The purpose of the Illinois HIE Communications Plan is to inform and raise the awareness of consumers and the health care community about the benefits of HIT and HIE. Using the tools mentioned above, Illinois will employ the following strategies to realize our communications goals:

- Use Appropriate Language – OHIT will strive to use culturally appropriate language and limit the use of jargon as it can result in confusion and misinterpretation of the message.
- Establish Credibility – OHIT will strive to be credible communicators with a credible communications approach in order to achieve listeners “buy in” to the overall message.
- Focused Messaging – Disseminating too much information at one time can cause audiences to be confused and overwhelmed. OHIT will ensure that all the information is not only accurate and timely, but also cuts to the heart of the message OHIT is trying to convey. Messages will be designed to be discreet, iterative and repeatable.
- Maintain Consistency in Messaging – Because consistency leads to greater credibility and a more thorough understanding of the intended message OHIT will strive for consistency in messaging.
- Tailor Messages – OHIT will structure specific messages to specific audiences.
- Encourage Feedback – OHIT will listen to feedback and act on it whenever possible and as appropriate.
- Use Face to Face Communication – OHIT will maximize the opportunities for in-person communication as it helps foster a back-and-forth dialogue between parties, and is a good mechanism to gather feedback.

HIE Consumer Education and Public Awareness Work Group

The Advisory Committee currently meets on a monthly basis, and from that committee are several Work Groups that also convene monthly, or in some cases, more frequently. The Consumer Education and Public Awareness Workgroup consists of key stakeholders (including representation from Blue Cross Blue Shield of Illinois, AARP, the City of Chicago, the Metropolitan Chicago Healthcare Council, and the Illinois Public Health Institute), collaborating to help shape the communications strategy for HIE in Illinois. Currently, the Committee is focused on creating educational fact sheets about different facets of EHRs and HIE, and will work to distribute those materials through channels currently in place in the organizations represented on the committee. The full Advisory Committee will also have input into the Illinois HIE Communications Plan.

Feedback and Effectiveness Measurement

Feedback is important to ensuring the ongoing effectiveness of communications. In addition to determining whether people feel the communicators are doing a credible job, feedback will focus on finding the answers to a series of questions, for example, whether people:

- Understand the benefit of the HIE;
- Feel they have been involved in what is happening;
- Feel they have had a chance to voice their opinions;

Illinois HIE Strategic & Operational Plan

- Feel their questions have been answered;
- Feel that they have been appreciated for their participation

Some of the methods and options that may be used to measure effectiveness include:

- A portal and/or discussion forum on the HIE website to solicit stakeholder feedback and encourage communication between stakeholders;
 - Town hall meetings and focus groups may be used to develop and test targeted messages and to evaluate effectiveness.
 - Surveys may be used to evaluate the effectiveness of messages to specific target groups.
- By evaluating feedback on an ongoing basis, continuous quality improvement methods can be applied to the messages and the methods of delivery to assure effective communication and education.

Communications in Illinois HIE Planning Grant Program

The work of the Illinois HIE Planning Grant recipients contributed to the design of OHIT's communications strategy. Specifically two grantees, the Metropolitan Chicago Healthcare Council (MCHC), and Quality Quest for Health of Illinois, have developed well-structured plans for outreach to patients and consumers. Below are initiatives from those plans that are not listed above, but that OHIT will consider utilizing as a part of its ongoing strategy:

- A seal or decal that stakeholders can display indicating their participation in an HIE can be an effective marketing tool to help gain the participation of other stakeholders.
- Encouraging consumers to choose medical providers that support HIE in Illinois.
- Conduct surveys and focus groups specific to different communities to assess the unique needs and readiness of individual regions of Illinois.
- Disseminate educational materials targeted to consumers to be displayed in physician offices.
- Utilize social networking websites to build up support and communicate our message to a larger audience.

Governance

Illinois has made significant progress in the establishment of a long-term governance structure to operate a sustainable HIE, provide oversight and accountability, and protect the public interest. This progress was possible through the dedicated participation of numerous stakeholders and the commitment of Governor Quinn and other state officials to accelerating the use of HIT to improve health care.

Illinois' planning for a statewide HIE began in August 2005, when the Electronic Health Records Taskforce (Taskforce) was convened to plan for the development and utilization of EHR. The Taskforce, comprised of a broad range of health care stakeholders from around the state, issued a final report in December 2006, which recommended legislation to create a statewide HIE and included provisions for governance of the exchange through a public-private partnership. Regrettably, legislation to enact the Taskforce recommendations was amendatorily vetoed by the previous governor in 2007 and did not become law.

To continue necessary stakeholder support, public participation and progress toward a statewide exchange, Illinois reconvened members of the Taskforce in January 2008 as the Advisory Committee.

Illinois HIE Strategic & Operational Plan

The Advisory Committee has served as Illinois primary forum and vehicle for statewide stakeholder involvement in the development of the HIE (see “stakeholder engagement” below).

Creation of Statewide Governance Structure

Since July, 2009, the Advisory Committee has had a Governance Work Group to consider and make recommendations on the governance structure of the Illinois HIE. The Work Group is co-chaired by representatives of Blue Cross/Blue Shield of Illinois and the Illinois Public Health Institute and its members include: the Illinois Academy of Family Physicians, the American Association for Retired Persons, Illinois State Medical Society, Metropolitan Chicago Healthcare Council, Illinois Hospital Association and the Chicago Community Trust. During the summer, fall and winter of 2009, the Governance Work Group helped to craft and subsequently recommended to the full Advisory Committee the legislation creating Illinois’ statewide HIE governance structure. Along with the full Advisory Committee, they advocated with the Illinois General Assembly for its passage. The legislation, HB 6441, passed both houses of the General Assembly unanimously in May 2010.

On July 27, 2010, Governor Quinn signed legislation (Public Act 96-1331) to create the Illinois Health Information Exchange and Technology Act (the Act), which creates the governance structure for Illinois’ statewide HIE [See Appendix F]. The Act creates the Illinois Health Information Exchange Authority (the Authority) and provides for a nine-member Board of Directors to govern the operation of a statewide HIE and to “promote, develop and sustain health information exchange at the State level.” Directors appointed to the Authority must be chosen with regard to a broad geographic representation and represent a wide spectrum of health care stakeholders. The Directors of the Illinois Departments of Healthcare and Family Services, Human Services, Insurance and Public Health and a representative from the Office of the Governor all serve as ex-officio members of the Authority. The primary powers and duties of the Authority are to:

- Establish an HIE to promote and facilitate the sharing of health information within Illinois and with other states
- Foster the widespread adoption of EHR and participation in the statewide HIE
- Administer the HIE using secure and cost-effective systems and processes
- Adopt standards and requirements for the use of health information consistent with all applicable state and federal laws
- Establish minimum standards for accessing the statewide HIE and ensure appropriate security and privacy protections are in place

The Authority accepted nominations to its Board of Directors through the State’s website, www.appointments.illinois.gov. Nominations are currently under review, after which the Board will be appointed, and the Authority will begin administrative operations. Until such a time that it is fully operational and sustainable, OHIT will provide policy and administrative support to the Authority to ensure that the development of a statewide HIE is aligned with the goals and objectives of this Strategic and Operational Plan and consistent with Illinois’ obligations under the HIE Cooperative Agreement with the ONC.

Governance Issues to be Addressed by the HIE

The Act gives the Authority the power to adopt bylaws and policies necessary to carry out its statutory obligations. Once the Authority has been appointed and can convene, it will address the remaining high-priority governance issues through the adoption of bylaws, policies and administrative rules. These include: the interaction of local and enterprise HIEs with the statewide HIE; the adherence to all

Illinois HIE Strategic & Operational Plan

applicable privacy and security laws and standards; and the specific composition of the Advisory Committee.

During the period prior to the appointment and functional operation of the Authority, the Advisory Committee, with support from the Governance Work Group, will serve as an interim governing body to advise OHIT as a representative, stakeholder-driven resource. The work group will develop for recommendations to the Advisory Committee and the Authority draft of goals, objectives and detailed work plan to help launch Authority operations.

Governance and the Illinois HIE Planning Grant Program

The Illinois HIE Planning Grants program was a one-year initiative designed to facilitate long-term planning for HIE in every area of the state. The objectives of the planning program were to develop local capacity for HIE and begin to determine how local exchanges throughout the state could fit into the technical architecture and “plug into” a statewide exchange. For the program, the state was divided into 16 Medical Trading Areas (MTAs) based on medical transactions in each geographic region. A grant was awarded to each area to develop a governance structure for local exchange, build social capital and engage community stakeholders, forge data-sharing agreements among participants in the local exchanges, identify barriers to EHR adoption and begin work to overcome them.

The governance structures developed by the HIE grant recipients were reflective of the program goals to be broad-based, open to all health care stakeholders and transparent. As a result of this program, five HIE planning grant recipients have submitted final reports outlining plans to implement local HIEs. These plans include governance structures for the HIEs with varying degrees of formality and stakeholder composition and all are contemplated as non-profit entities. OHIT is working with all local HIEs to assist their governing bodies as they develop to ensure that a broad range of stakeholders continue to be engaged by these governance structures and that they continue to operate in an open and transparent manner. The Governance Work Group of the Advisory Committee and OHIT will address issues of governance related to the participation of local exchanges in the statewide HIE until the Authority is operational.

Public-Private Partnership in the Authority

In its December 2006 report, the Illinois Electronic Health Records Taskforce (Taskforce) recommended the creation of a public-private entity to govern a statewide exchange. The Advisory Committee Governance Work Group affirmed the Taskforce recommendations that a statewide HIE should include broad stakeholder representation from the public and private sector and have the authority to accept and administer public and private financial resources to operate the HIE.

Stakeholder Engagement

Illinois’ HIE activities have been guided by and developed through the active participation of a broad range of health care stakeholders. In 2008, the Advisory Committee began convening to make recommendations regarding HIT and HIE policy and to create trust and consensus on an approach to the development of a statewide HIE. Membership on the Advisory Committee and its component work groups continues to expand to reflect the increased breadth and depth of interest in HIE in Illinois and the need for representation among all stakeholders including patients, providers, and payers. Illinois HIE Strategic and Operational Plan includes more than 30 letters of support from statewide organizations (including the statewide hospital association, three statewide physician associations, three of the five largest payers in Illinois, and one of the largest consumer advocacy groups) indicating the significant depth and breadth of stakeholder participation in this initiative. [See Appendix L]

Illinois HIE Strategic & Operational Plan

The Advisory Committee has several other work groups [see Appendix H] that reflect the broad range of stakeholders engaged in Illinois' HIE efforts and the depth of interest in relevant issues. These work groups convene regularly to discuss HIE policy issues at a granular level and make recommendations to the Advisory Committee regarding the direction of statewide plans and policies for HIE. The HIE work groups established to date are:

- Behavioral Health
- Consumer Education and Public Awareness
- Financial Sustainability
- Governance
- Medicaid
- Privacy and Security
- Public Health
- Clinical Quality
- Technology and Interoperability
- Telemedicine

All Advisory Committee meetings adhere to the Illinois Open Meetings Act and all meeting notices are posted publicly. In addition, all meeting agendas and minutes are posted on the HIE web site: www.hie.illinois.gov.

Illinois is fortunate to have the commitment of organizations that represent patient and providers along the full continuum of health care, including those in community behavioral and mental health, and substance abuse treatment. There is clear recognition that these providers must be included in long-term planning for HIE, given the highly impactful use cases for the benefit of patient health outcomes. In addition to the privacy and legal challenges that exist surrounding the availability of data from these providers and traditional medical providers, one of the significant barriers addressed during Illinois planning phase was the fact that community behavioral health care organizations were excluded from the definition of "eligible professionals" in the Medicaid and Medicare rate incentives authorized under federal law and are not eligible for technical assistance from the federally funded RECs. While federal legislation is pending to make some behavioral health providers eligible for this federal assistance, the Behavioral Health Work Group will continue to work with representatives from this key stakeholder community to plan for their eventual inclusion in statewide and nationwide HIE.

Similarly, with respect to long-term care providers, stakeholder participation in HIE planning has been impeded by the lack of federal incentives to these providers. As Illinois moves forward with its Strategic and Operational Plan, representatives from the long-term care community will be contacted and encouraged to participate formally in the Advisory Committee and work groups.

Finance

Public Investment in HIE

OHIT and the stakeholders of the Illinois HIE have worked to create an environment in which HIE will move forward and benefit every region of the state. The \$3 million in funding Illinois allocated for its HIE Planning Grant Program in 2009 was the State's first investment in HIE. It enabled the convening of HIE stakeholders and developed a statewide community of interest around facilitating the acceleration of EHR and HIE for public benefit. Each of the Medical Trading Areas were designated for planning

Illinois HIE Strategic & Operational Plan

purposes and provided with a grant to facilitate HIE stakeholder engagement and to encourage a planning process at the local level. This investment increased local awareness and interest in HIE and resulted in a wealth of information about readiness and barriers. It has also triggered commitments of local investment from the health care community in multiple regions throughout the state.

As reflected in the budget submitted with this Plan, Illinois has also met the matching funds requirements for the first nine months of this Cooperative Agreement grant to date. Going forward, the State will secure ongoing in-kind services from stakeholders who are already contributing during the planning phase and the State will appropriate the balance of matching funds necessary to leverage the remaining \$17.8 million federal grant funding allocated to this program for implementation.

Broadband Investment

The State of Illinois has also made significant investments into broadband development over the past three years. More recently, 17 broadband expansion awards have been successfully secured by Illinois entities since February, 2010. These awards represent more than \$350 million of investment in Illinois' technology infrastructure, including nearly \$245 million in federal ARRA funds and a balance of matching funds from public and private sector partners. These projects are collectively expected to expand fiber capacity into every Illinois county with a focus on delivering ultra high-speed Internet access to community anchor institutions, including K-12 schools, universities, libraries, hospitals/emergency medical facilities, and public safety facilities. It is also estimated that more than 3,000 Illinoisans could be employed through these efforts.

Workforce Development

An important third function the State has provided is coordinating and funding workforce development programs. Essential in preparing for the implementation and operation of the HIE is to have the talent pool available to perform the tasks required to work with EHRs systems and interact with the HIE. Illinois is providing the opportunity for potential employees to develop these HIT skill sets by utilizing local workforce investment boards, community colleges, universities, hospital networks and other community stakeholders in Illinois to provide the training. This was facilitated by providing 19 programs across Illinois, in partnership with the federal government, with an investment of more than \$5.75 million.

Future State Investment and Coordination of State Activities

The State will continue to make investments into the development of HIE through its existing programs and agencies and support for EHR adoption and HIE is a high-priority policy for Illinois. An interagency work group is held monthly with staff members participating from eight agencies that have ongoing HIT projects and needs. One of the primary goals of the interagency group is to ensure that policies and resources are coordinated to promote the adoption of EHRs and support widespread participation in HIE. This effort will also ensure that State government health IT systems are ready to participate in the statewide HIE by 2015 as mandated by the new Illinois Health Information Exchange and Technology Act.

Using the State's Purchasing Power

The State is the largest purchaser of health care in Illinois. In addition to the Medical Assistance programs, which cover 2.5 million people, the State purchases health care coverage for more than 400,000 State employees and retirees, local government employees and retirees, and the Illinois Department of Corrections' population. OHIT will use the coordination of this health care purchasing to

Illinois HIE Strategic & Operational Plan

include business requirements in its procurements that encourage the acceleration of EHR adoption and use and facilitate greater participation in HIE.

Legislation in Illinois establishing the Illinois Health Information Exchange Authority allows the statewide HIE to leverage the State of Illinois Procurement Code and procurement infrastructure. Through the use of the State's purchasing process, the statewide HIE will use the competitive bidding process and programs to ensure small business and minority- and women-owned business participation. Finally, Illinois is engaging in two multistate coalitions to address specific issues related to HIE with the intent to further develop those relationships and utilize those strategic partnerships to leverage group purchasing opportunities.

Federal Funding for Meaningful Use Incentives under Medicaid

Illinois' Medicaid program is participating in the EHR Incentive Program for the Meaningful Use of EHR by eligible professionals and hospitals. These payment incentives authorized by the HITECH provisions of ARRA,²⁷ are expected to serve as a powerful catalyst to driving EHR adoption and fostering widespread HIE throughout the four-year Cooperative Agreement program period and beyond. Illinois' Medicaid agency has initiated its intent to participate in the EHR Incentive Program by submitting its Planning-Advanced Planning Document to CMS Region 5. Illinois was approved for \$2.2 million in federal funds to accomplish the necessary planning work associated with the administration of the payment incentives and complete its Medicaid HIT Plan. The timeline developed in that Planning Advanced Planning Document will allow Illinois to begin making incentive payments to Medicaid providers by the Fall of 2011.

In addition, as the Medicaid Program continues to upgrade its MMIS and align system planning to ensure participation in statewide HIE, Illinois will use the 90/10 federal matching funds available to cost-effectively develop its systems to support the Meaningful Use of EHR. These funding resources will contribute significantly to Illinois' efforts to foster widespread adoption of EHR, and accelerate participation in statewide HIE.

Control and Reporting

Illinois has implemented financial policies, procedures and controls that are consistent and compliant with GAAP standards and requirements of the OMB and ARRA. The Chief Financial Officer of OHIT, with the support of the Healthcare and Family Services Bureau of Federal Finance, will be responsible for the submission of all progress and spending reports to the ONC pursuant to the Cooperative Agreement Program.

Illinois Challenges to HIE Sustainability

Every state faces significant challenges in making HIE sustainable. Illinois' plan for financial sustainability will be developed to meet the following:

- EHR Adoption Rate-Revenue is dependent on stakeholder organization sign-up and end user adoption, both of which have been slow nationally and in Illinois.
- Ability to Demonstrate Value and Secure On-going Funding Sources-Very few HIEs have been self-sustaining due to the inability to demonstrate enough value to drive revenue. A key element of this has been the inability to secure funding from payers and over reliance on provider revenue sources.

²⁷ <http://www.cms.gov/EHRIncentivePrograms/>

Illinois HIE Strategic & Operational Plan

- Technical Challenges-Technology implementation in health care has been notoriously difficult, often not delivering on the promised functional performance, resulting in cost overruns and delays.
- Competitive Factors-Early HIEs have faced the challenge of stakeholders who are competitors in the marketplace, and as a result, have a difficult time aligning their mutual interests around a common HIE platform.
- Privacy and Consent-The need to protect patient privacy and to navigate the complex laws surrounding privacy and consent present an operational challenge. It also presents a potential challenge with respect to ensuring the widespread patient and consumer acceptance necessary to achieve the critical mass of participation.

In addition, Illinois faces unique challenges in its large size and diversity. With a very large urban center, many medium size communities, suburbs of all different sizes, rural communities, borders with five states and a geography that stretches 400 miles from one end to the other, Illinois must ensure that the contributions and benefits are in fact and are perceived to be distributed equitably and fairly. Any financial plan must take these factors into account and find ways to meet both the needs and the abilities of every portion of the state.

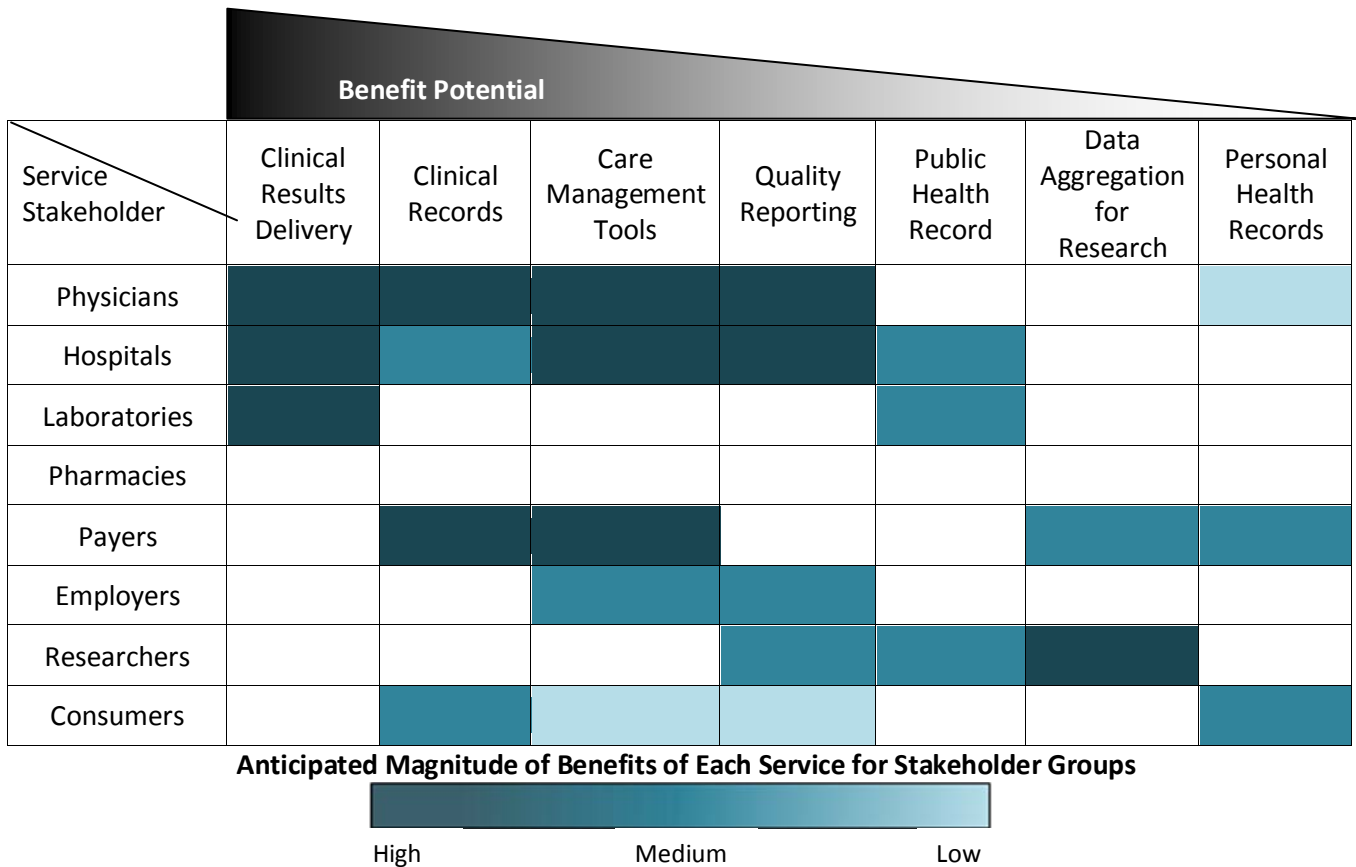
Value Analysis for Illinois

HIE capabilities have the potential to improve quality, safety and efficiency, while reducing overall cost. The lack of accurate patient information at the point of care leads to redundant and inefficient care, and often is responsible for harmful medical errors. Many studies have documented the benefits of HIE. The figure below from the eHealth Initiative HIE 2009 Survey Report²⁸ summarizes the major health care stakeholders and benefits associated with typical HIE services. These findings and other similar studies have informed the background assumptions upon which Illinois financial sustainability approach is based.

²⁸ <http://www.ehealthinitiative.org/sites/default/files/file/2009%20Survey%20Report%20FINAL.pdf>

Illinois HIE Strategic & Operational Plan

Statewide HIE Value & Sustainability Matrix



Source: eHealth Initiative HIE 2009 Survey Report

The State of Illinois, in concert with the local and interstate HIEs, (which are in varying stages of development regarding the planned phase-in of functions or use cases), will develop a statewide HIE that will support a full range of functions (see Technical Infrastructure section for more details). These capabilities will provide benefits to many health care stakeholders, including:

- Consumers/Patients
- Physicians
- Hospitals/Health Systems
- Payers (Private Insurers, Medicaid, Medicare, Self-Insured Entities)
- Employers
- Laboratories
- Pharmacies
- Public Health/Researchers

Benefits are both qualitative and quantitative. The following section describes the benefits of HIE for each major stakeholder.

Illinois HIE Strategic & Operational Plan

Patient and Consumer Benefits

The ultimate goal of the HIE is to provide benefits to patients or consumers. The secure exchange of patient information will improve care quality by making important clinical information available at the point of care to assist caregivers with delivering the best care possible. Examples include:

- Having a patient's drug allergies and medication history available during emergency care will avoid adverse drug events.
- Sharing patient medical history across caregivers, e.g. primary care to specialty will facilitate care coordination, improving quality and convenience to the patient.
- Making patient medical history summary data available to patients will increase empowerment and control over information, as well as facilitate care continuity.
- Patient immunization and medication history information will benefit adults who coordinate and oversee care for children and the elderly, providing convenience and peace of mind.
- Avoidance of unnecessary or redundant tests and procedures will reduce financial burden and lost work productivity.
- Improved efficiency and avoidance of unnecessary care will help to contain health care costs which will ultimately benefit consumers financially.

Physician and Primary Care Provider Benefits

Physicians are perhaps the most critical stakeholder for HIE success since they drive the majority of health care treatment activity. It is a high priority, therefore, to deliver and communicate the benefits of HIE to the physician community.

Physicians will benefit from having the availability of patient information at the point of care. For private practice physicians, this will help with treatment and diagnosis. They will be able to access more complete information such as patient medications and allergies, diagnostic test results, discharge summaries and chronic conditions.

An overarching goal of health care reform is to improve patient care continuity. The HIE will play a vital role in supporting care continuity by allowing the patient information to follow the patient across the system, including primary care, specialty care, emergency care, inpatient care, diagnostic testing, long term care and home health. With the advent of Accountable Care Organizations under the Affordable Care Act and new reimbursement models developing that reward performance, the HIE will be an essential tool for physicians to ensure they are delivering high quality and appropriate care in a coordinated way.

Under the EHR Incentive Payment programs authorized by the HITECH section of ARRA, physicians will receive substantial financial incentives (up to \$63,750 under Medicaid or up to \$44,000 under Medicare) for the adoption and Meaningful Use of EHRs, a component of which includes the ability for electronic exchange of health records. Failure to adopt EHRs will result in Medicare reimbursement penalties.

The HIE also has the potential to reduce cost due to improved efficiencies and time savings associated with retrieval of patient information from hospitals. Physician office staff spends significant time acquiring and managing patient medical records from other sources outside their respective practices. Without electronic access to results and discharge summaries, physician office staff incurs significant time working with transcribed reports. This includes time to call the hospital medical records

Illinois HIE Strategic & Operational Plan

department to request reports; receive and file faxed or mailed reports; print reports from a portal; place reports in charts or scan them into an EHR. An HIE can reduce this staff time significantly.

A recent study by the HIE vendor Medicity indicated that without HIE capabilities in place, physicians or their staff spend:

- 2-3 hours per day scanning and indexing items into an EHR
- 1 hour per day looking or searching for clinical information
- 1-2 hours per day waiting on the phone to schedule appointments

The resulting mean savings per clinic associated with HIE capabilities, per the study, appear in the table below.

HIE Cost Savings for Clinics²⁹

Mean Cost Savings Per Facility	\$23,590 one time savings \$112,626 annual savings
Mean total cost savings per paper based practice	\$18,372 annual savings
Mean total cost savings per EHR practice	\$133,569

Another significant savings for physicians relates to the costs to interface their EHRs to hospital and laboratory systems for electronic exchange of clinical information. Most private practices have relationships with multiple hospitals. Interfacing a single physician practice EHR to a hospital EHR typically costs approximately \$4,000 to \$10,000 per interface. Sometimes these costs are borne by the hospital, but often they are borne by the practice. With the HIE, since it acts as a transaction switch among many practices, hospitals and laboratories, the practice can theoretically connect only once to the HIE, thereby reducing the number of interfaces and associated costs. In some markets the HIE has been able to use its buying power and market clout to drive down the costs per interface, saving additional money for physicians.

Another potential cost saving for physician practices is malpractice insurance. Some malpractice insurance companies have implemented lower premiums for the use of EHRs and for email communications with their patients. As HIEs become more prevalent, there may be premium incentives for the use of HIE.

Primary Care and Safety Net Practices

Quality primary care, particularly in an evolving medical home model, requires coordination of health information across care settings. Studies have demonstrated that missing health information leads to duplicative and inappropriate care in these settings. More complete information available to primary care providers will facilitate earlier and more effective prevention and treatment. For safety net practices in particular, a reduction in duplicative and unnecessary laboratory tests, treatments and medications will allow scarce resources to be spread to cover larger populations in need of health care.

Nurse Benefits

According to the Institutes of Medicine (2004) "...nurses are the health care providers [that patients] are most likely to encounter; spend the greatest amount of time with; and, along with other health care providers, depend on for their recovery." According to the Department of Labor registered nurses

²⁹ http://infosite.medicity.com/Info/Whitepapers_and_Briefs.aspx

Illinois HIE Strategic & Operational Plan

constitute the largest number of health care professionals in the United States, representing approximately 54% of health care workers. Registered nurses are licensed professionals who practice using a body of knowledge and cognitive framework that is unique to, overlaps with, and is supportive of and complimentary to medicine.

Nurses will benefit from the HIE in their role at the center of care coordination across settings. The ability to retrieve and provide clinical information at the point of care will ensure optimal care delivery, and contribute essential data through documentation of vital signs and medications to ensure continuity of care. The integration of data will enable higher standards of HIE across the state to multiple providers.

Nurses add value to the HIE through:

- Effecting change in the development and adoption of interoperable systems across the nation, showing quantifiable impact on national health
- Driving implementations for interoperable systems within healthcare delivery organizations

In general, combined collaboration between all stakeholders is needed to develop, adopt, and integrate standards into practice. Patient centered care is delivered by multidisciplinary teams including physicians, nurses and other clinicians. Patient care invariably requires collaborative interactions among multiple clinicians from a broad array of specialties, often in different locations. As such, Meaningful Use of EHRs should strive for nothing less than an integrated health care community, including the health care consumer, where enabling technologies promote usable, efficient and seamless information flow. Including information-rich, patient-centered documentation provided by nurses that enhances cross continuum communication, thereby enabling improved safety, quality, and processes of care delivery. Technology is an enabler to support care coordination, enhancing the communication between care providers throughout the continuum of care. The health outcomes associated with this priority are focused on provider to provider data sharing and medication reconciliation.

Nurses are critical to the success of the HIE as it continues to expand its focus on Meaningful Use by leveraging the data and information contained in EHRs. The nursing profession performs an instrumental role in the key areas of patient safety, change management, design, and usability of systems as evidenced in quality outcomes, enhanced workflow, and user acceptance. These areas highlight the value of these knowledge-based workers and their role in the adoption of HITs with greater integration across systems to deliver higher quality clinical applications in health care organizations.

Hospital/Health System Benefits

Hospitals and health systems have been primary drivers of HIE activity across the country. Hospitals have pursued connectivity with physicians for many years as a way to improve care coordination and strengthen relationships with them. Several studies have shown the benefits to hospitals in information exchange efficiencies. This category of cost savings is based on the ability of the HIE to deliver diagnostic test results reporting and transcribed clinical reports electronically to physician offices.

Today, most hospitals/health systems have not fully automated access to these reports for community physicians. The level of automation will vary by organization so our model allows organizations to plug in their own metrics in order to measure the benefits.

Savings accrue from:

- Reduced forms and printing cost

Illinois HIE Strategic & Operational Plan

- Reduced labor cost associated with receiving and fulfilling report requests from physician offices

Note that automation means reports may be delivered in one of the following ways, depending on the capabilities of the physician practice:

- Offering web based access to reports via a portal
- Pushing data from the hospital to a paper based physician office – auto-print and web based access to pushed data
- Pushing data from the hospital to a physician office with an EHR – data integrated to physician EHR

Studies at the Cincinnati Health Bridge, Indiana HIE, and the Wisconsin Health Information Network, indicate savings on a per transaction basis as a result of electronic versus paper delivery of results/discharge reporting ranging from \$0.41 to \$5.10.

The table below shows the cost for paper clinical report delivery, as cited by each source.

Source	Cost of Paper Clinical Report Delivery to Hospitals
Cincinnati HealthBridge, 2004 study	\$0.41
Indiana Health Information Exchange, Marc Overage, CEO, 2010	\$0.81
WHIN (1997 study)	\$5.10

HealthBridge, a mature and successful HIE based in Cincinnati, cited an in depth study performed at St. Elizabeth's, a four-hospital, 878-bed health system. That system was delivering approximately 207,000 clinical reports per month in September of 2004. It was estimated that the HealthBridge HIE allowed St. Elizabeth's to eliminate the paper delivery of an average of 140,000 reports per month at a savings of \$0.41 per report (costs of postage, paper, printers and personnel, based on detailed time and material studies). This translated into annual gross savings of \$688,800/yr. (= 140,000 x 12 x \$0.41). The study also estimated a 40% reduction in calls to St. Elizabeth's staff for reports.

Interface Cost Savings

The HIE can generate savings for hospitals/health systems through:

- Reduction in the number of interfaces to be paid for, due to the one to many aspect of the HIE
- Reduction in unit costs per interface via the HIE, due to the HIE's buying power and economies of scale in interfacing to many different systems
- Replacement of existing interfaces with less expensive interface solutions, with potentially lower maintenance costs over time
- Reduction in internal IT staff time associated with analysis and testing of interfaces.

The methodology for computing the savings involves computing planned interface purchase costs vs. anticipated costs with the HIE. In addition, a hospital/health system may wish to evaluate the potential savings from replacing existing point to point interfaces with a "one too many" approach using the HIE.

HITECH EHR Incentive Program

As is the case for individual practitioners, the EHR payment incentives for hospitals authorized under the HITECH Act are now a major driving force behind HIE adoption. The aggressive timelines to meet these criteria are motivating most hospitals to move as quickly as possible on their EHR implementations and HIE initiatives.

Illinois HIE Strategic & Operational Plan

Other Potential Hospital Benefits Anticipated

- Efficiencies in owned physician practices due to electronic access to clinical information.
- Without electronic access to results and discharge summaries, physician practice staff incurs significant time working with transcribed reports. This includes time to call medical records to request reports; receive and file faxed or mailed reports; print reports from a portal; place reports in charts or scan them into an EHR, etc. The HIE can reduce this staff time significantly.
- The reduction in medical errors can have major economic and “reputational” benefits to hospitals due to lower incidence of patient harm and associated settlement costs and damage to a hospital’s reputation.
- Many hospitals struggle with patient flow through the Emergency Department (ED). The HIE can speed clinical decision making and patient disposition, increasing ED throughput.
- Increased margin from fewer cancelled surgeries due to lack of information. Sometimes, scheduled surgeries may be rescheduled or cancelled entirely, due to lack of patient pre-surgery work-up information not being available in a timely or convenient manner. The HIE can speed the sharing of vital patient information and/or ensure it is delivered to the surgeon and other treating providers so the surgery can take place.

Revenue and Margin Impact

The HIE will change provider and patient decision making at the point of care due to the availability of patient clinical information. Studies by the Patient Safety Institute and other HIEs across the country have shown that health care costs will be reduced as a result of several factors, including:

- Reducing inpatient admissions resulting from lack of patient information in the ED and physician practices
- Reducing preventable adverse drug events (ADEs)
- Reducing outpatient ADEs that require additional outpatient visits
- Reducing the number of repeat outpatient visits due to missing patient information
- Reducing ED costs per visit
- Decreasing the number of laboratory tests
- Decreasing the number of radiology tests
- Reducing redundant medication orders

There is significant research available that outlines both the positive and negative impacts of the HIE to a hospital. One potential consequence of eliminating unnecessary testing is that the hospital can, in cases where the care is compensated, lose revenue. However, when the longer term impact is taken into account, the HIE-related savings will more than offset this reduction in revenue. As the HIE penetration into the marketplace expands it is anticipated that there will be disincentives to providers who perform duplicative testing or other types of care that are not necessary. The HIE will support the necessary care coordination and efficiencies demanded by the new payment models.

Payer (Private Insurers, Self-Insured, Medicaid, Medicare) Benefits

The largest financial beneficiaries of the HIE are at-risk health insurance entities and self insured employer organizations. The following study, completed in 2004 by the Patient Safety Institute (PSI)³⁰ was a study designed to estimate the total economic benefits of HIE to payers. The study looked at

³⁰ Patient Safety Institute – Economic Value of a Community Clinical Information Sharing Network, Part 1 Value to Payers, March 2004

Illinois HIE Strategic & Operational Plan

savings associated with providing the following information at each point of care (inpatient and outpatient):

- Patient demographics
- Laboratory results
- Allergies
- Medications
- Transcribed reports
- Problems/diagnoses
- Immunizations

The table below depicts estimates from the PSI study which shows the cost savings potential for payers if HIE is fully implemented across all inpatient and outpatient points of care in the U.S. health care system. The national benefits to payers have been scaled to Illinois by calculating the ratio of Illinois' population to the U.S. to obtain a rough estimate of potential health care cost savings.

<u>Patient Safety Institute (PSI) Study</u> ³¹	National*	Illinois**
Reducing inpatient hospitalizations resulting from lack of patient specific data	\$ 28,850,000,000	\$ 1,287,532,934
Reducing preventable inpatient ADEs	\$ 280,000,000	\$ 12,495,987
Reducing outpatient ADEs that require additional outpatient visits	\$ 10,000,000	\$ 446,285
Reducing number of repeat outpatient visits due to missing patient information	\$ 1,090,000,000	\$ 48,645,092
Lower ED expenditures	\$ 1,120,000,000	\$ 49,983,948
Decrease number of laboratory tests	\$ 3,510,000,000	\$ 156,646,121
Decrease number of radiology tests	\$ 2,350,000,000	\$ 104,877,033
Reduce redundant medication orders	\$ 2,070,000,000	\$ 92,381,046
Total Potential Benefits	\$ 39,280,000,000	\$ 1,753,008,446
Number of individuals in the State of Illinois		13,611,700
Savings Per Person Per Month	\$	10.73
Savings Per Person Per Year	\$	128.79

* National savings per PSI study, 2004

**Calculated by scaling National to Illinois population. Ratio = 0.04463

The PSI study concluded that conservative estimates would result in aggregated annual net savings of \$10-\$14 per person per month. It is clear HIE has significant cost savings potential for payers and self insured employers.

³¹ Patient Safety Institute – Economic Value of a Community Clinical Information Sharing Network, Part 1 Value to Payers, March 2004

Illinois HIE Strategic & Operational Plan

Platform for Quality and Performance Measurement and Reporting

Across public and private health programs, there is increased emphasis on pay for performance, which is dependent on quality measurement and reporting. The statewide HIE can serve as a quality data collection vehicle to enable cooperative efforts between provider and payer organizations to develop clinical best practices and programs to incent their use. Some of the more mature HIEs, such as the Indiana HIE; have implemented programs to assist payers with quality and performance measurement and reporting.

Improved Health Maintenance and Prevention

Some payers have implemented HIE capabilities in the outpatient environment that prompt caregivers to conduct routine health maintenance procedures. For example, by tracking the last time a mammogram or lipid panel was performed, the HIE can provide real time input to the caregiver to ensure preventive tests are performed for early disease detection. Both patients and providers can access patient health information via the HIE for education and on-going support with the treatment of specific conditions and chronic diseases. This has the potential to provide significant benefits in more effective care, improved wellness and reduced cost.

Reduced Cost in Shared IT Infrastructure

Most payer organizations have made investments in HIT to support physician practices. This typically includes administrative transactions such as electronic claims submission, claims status, eligibility verification, referral management and payment remittance advice. The HIE can supplement this infrastructure by enabling access to these functions across all participating payers on a shared basis. This may be particularly useful for those smaller physician practices for which it is not cost-effective for either the payer or the practice to invest in the requisite technology.

Employer Benefits

As indicated above, self insured employers will directly benefit from reduced health care costs for their employees. Employers that are not at-risk should ultimately benefit from a positive effect on premium charged by at-risk payers. Since the HIE will help reduce incidence of illness and improve efficiency at various points of care, it has the potential to improve employees' health and reduce their sick time, thereby increasing productivity. Employers who support and promote the use of HIE for their employees will generate higher employee satisfaction.

The HIE may also serve as a vehicle to deliver patient disease management, wellness and education services. Employers and their care management teams can develop their own content which could be disseminated over the HIE in a secure and customized way to patients. This can facilitate medication management, health maintenance reminders, patient inquiries and education.

Sustainability Strategy

Research indicates that there is no silver bullet in terms of a sustainability model. However, Illinois has formulated the following key principles for HIE sustainability:

- Self Sustainability with Revenue Aligned with Cost and Value. The Illinois HIE Authority will be a financially self sustaining entity that provides services that generate revenue aligned with the value to participants.
- Leverage Existing Infrastructure. The Illinois HIE Authority will leverage existing private and public HIT and HIE investments, and to the extent possible not duplicate these existing or planned investments.

Illinois HIE Strategic & Operational Plan

- Sustainability via Quantifiable Improvements. Economic justification and sustainability will come from quantifiable improvements for the users of the services.
- Requirement for Funding Prior to Breakeven. The statewide HIE will prudently utilize ONC start-up funding for planning, statewide HIE facilitation, development of HIE infrastructure and local HIE's that provide exchange options for eligible professionals and for hospitals to meet Meaningful Use. Our goal is to achieve breakeven and financial self sustainability independent of federal sources by the end of the four year Cooperative Agreement period.
- Fees Based on Value, Utilization, and Adoption. The HIE will balance fees charged for services on three dimensions: value provided to users, utilization of services provided, and adoption of services. The HIE will assess fees for its services to promote rapid adoption and to encourage utilization so as to quickly move to critical mass.
- Revenue Sources from Payers. Many payers operate on an inter-state basis as well as participating in local and statewide HIEs. These entities are a major source of potential funding.

The essence of the Illinois sustainability strategy will be to align stakeholder value with financial commitment. It is expected that those who benefit from HIE will pay for HIE. Ideally, they will pay in proportion to the level of benefits they receive, with consideration given to each stakeholder's ability to pay. The following summarizes the discussions and considerations that have informed OHIT's approach and outlines the thinking that resulted in the next steps to be taken in the Operational Plan to achieve financial sustainability.

All stakeholders stand to benefit from the HIE and are therefore, potential funding sources. Major stakeholders include:

- Patients/Consumers
- Physicians
- Hospitals/Health Systems
- Payers (Private insurers, Self-Insured Entities, Medicaid, Medicare)
- Employers
- Laboratories
- Pharmacies
- Public Health/Researchers

There are key questions that must be addressed in order to further define and implement the sustainability strategy:

- What are projected HIE statewide start-up and ongoing costs?
- How much should each beneficiary/stakeholder be expected to pay for HIE services at both the local and state level?
- How will entities that are critical to the success of the exchange but lack financial resources be able to participate?

Based on the preliminary benefits projections identified in the value section of this plan, estimated savings of over \$10 per member per month are expected. One example, the planned Metro-Chicago HIE, covers a population area of approximately eight million people. The HIE plan for that area estimates costs in the third year of operation (with about 50% market penetration) at approximately \$9.8M - \$14M per year. At the high end, this equates to \$2.62 per member *per year*, or only 22 cents per month. If even a fraction of the expected benefits are realized, this would pay for HIE operations many times over.

Illinois HIE Strategic & Operational Plan

Based on the magnitude of potential benefits, a combination of multiple stakeholder revenue sources can cover local and statewide HIE ongoing operational costs by distributing benefits and costs fairly and reasonably among participants. The key objective is to obtain critical mass of utilization so that benefits are realized. The sustainability strategy will be carried out via the following steps:

Sustainability Research

Illinois will continue to research emerging HIE sustainability models as they evolve and incorporate best practices and applicable concepts. Research to date indicates that there is no silver bullet in terms of a sustainability model. However, research does indicate that several local HIEs in other states have achieved self-sustainability, including those in Ohio, Indiana, New York and Massachusetts.

A review of other states' activity indicates that statewide HIEs are generally less mature. Statewide models that were examined tended to be much smaller states and are not comparable to Illinois. States such as Florida, New York, Pennsylvania and California would serve as better comparisons to Illinois given the mix of large urban areas combined with mid-sized cities and rural areas, but HIE deployments there are not far enough evolved to serve as a model for Illinois. Our strategy draws on sustainability concepts developed at the local HIE level as well as select statewide HIE plans already submitted to ONC. By assessing the strengths and weakness of each of these plans, and as more statewide sustainability plans emerge, Illinois will design and refine over time a model that fits its particular needs and resources.

Payer/Employer Strategy

OHIT staff is in active negotiations with the five largest commercial insurers in the State of Illinois and is beginning discussions with the state's self-insured employers to begin determining potential return on investment in HIE and common goals. Under this Strategic and Operational Plan, Illinois will conduct financial modeling research to validate the assumptions regarding financial benefits discussed earlier in the Finance section with Illinois-specific data. Based on this information, it is expected that an equitable revenue model can be determined that is acceptable to payers. This is a high priority element of the entire HIE initiative and therefore will be expedited. This modeling will also be used to quantify potential value on a per-employee and/or aggregate basis for self-insured and other large employers and determine the climate for investment from that group of stakeholders as well. The State of Illinois is itself a large, self-insured employer that stands to benefit from the statewide HIE. This potential will be explored in the sustainability research and revenue modeling and leveraged in discussions with other large employers.

Additional Steps

Through the Operational Plan, Illinois will also determine the mechanism for collection and funds flows, including:

- Cost Estimation - The Preliminary Budget Estimate section of the plan outlined Illinois' approach to obtain budgetary costs. Once this is determined, we will be able to develop a pro forma budget statement outlining sources and uses of funds.
- Consideration of Local HIE Seed Funding - Given the importance of establishing the local HIEs to demonstrate value and rapidly build critical mass, the State of Illinois will consider seed funding for local HIEs. This will be determined early in the implementation phase in order to meet the Meaningful Use requirements for HIE and timetable, while other elements of the strategy are carried out in parallel.
- Establish Benefits Realization Measurement Approach - In order to refine the shared value model, we plan to establish a benefits realization approach that will assess actual benefits to key

Illinois HIE Strategic & Operational Plan

stakeholders as a result of HIE. It will serve to demonstrate to all stakeholders that they are receiving fair value for their investment, thereby solidifying financial viability for the HIE.

- Establish Benefits Realization Measurement Approach - In order to refine the shared value model, Illinois will establish a benefits realization approach that will assess actual benefits to key stakeholders as a result of HIE. Feedback from the benefits realization will assist Illinois HIE and local HIEs in refining fee structures and cost sharing to ensure equity and access to all providers. It will also serve to demonstrate to all stakeholders that they are receiving fair value for their investment, thereby solidifying financial viability for the HIE.

Expanding Work Group and Stakeholder Engagement for Sustainability

The Finance and Sustainability Work Group will examine the core issues of cost and benefit among the key participants in the statewide HIE. The membership of the work group currently includes representation from payers, local HIEs, hospitals- large and small, rural and urban and clinics with a diversity of size, location and type of care provided. Strengthening the membership of this group is a priority of the Strategic Plan and is addressed in the tasks outlined in the Operational Plan.

Illinois made building stakeholder support for the HIE a major focus of its planning efforts. As Illinois moves into the implementation phase, it will develop concrete financial models and examine the issues related to sustainability for the HIE the process of outreach to stakeholders must continue and expand. Representatives from the large payers in Illinois have been in discussions with OHIT regarding their plans for participation in the statewide HIE and more specific discussions regarding actual costs and benefits will take place as the Authority becomes operational. OHIT will recruit more representatives from the business community, particularly large employers, to expand the base of stakeholders who stand to gain the most in cost savings from the full operation of the statewide HIE.

In order to move forward with financial solutions a strong and close relationship exists between the Technology Infrastructure the Finance domain, as these two functions of the HIE are tied very closely. Services offered, system architecture, and maintaining and operating the system, drive the financial issues of rates, fees and investment in the HIE.

Technical Infrastructure

The technical architecture of the statewide HIE will be developed in a manner consistent with the overall goals and objectives of this Strategic and Operational Plan. It will facilitate HIE for all providers and payers seeking to achieve Meaningful Use and support the obligations of the Authority under the Illinois Health Information Exchange and Technology Act.

The exchange of health information is a new technology that is developing rapidly. The standards for HIE are still being developed and the national goals (as expressed in the HITECH Act and the various stages of adoption expressed in the associated implementing regulations) are expected to evolve over time. It is fair to say that HIE in 2021 will look very different from HIE in 2011. In its most recent guidance, the ONC has expressly indicated that it does not favor statewide HIE solutions which impose participation mandates on providers or hospitals and which “might inappropriately limit provider choices in the full array of information exchange alternatives”. OHIT’s role is to promote the creation and interoperability of various HIE alternatives in Illinois, which may operate at various levels (local and state) and which over time, may compete and will evolve.

Illinois HIE Strategic & Operational Plan

OHIT expects that over time certain solutions offered on the market in 2011 may no longer be viable by 2021. Thus, Illinois statewide HIE must be designed for sufficient flexibility and the capability of growing and adapting over time. In light of this expectation, OHIT is directing its focus on getting started, engaging private and public stakeholders, mobilizing stakeholder resources to multiply the impact of federal and state funding, delivering initial capabilities required for Stage 1 Meaningful Use and laying the foundation for future development.

As HIE technology adoption, provider implementation, and public understanding of and confidence in HIE increase over time; similarly, Illinois' statewide HIE delivery model will evolve and adapt over time to expand the array of services offered and optimize use of HIE technology. Also, we expect that market forces will drive the evolution of HIE in Illinois, surrounding states, and nationwide. Illinois' HIE implementation strategy is designed with these thoughts in mind. This Strategic and Operational Plan represents Illinois' current vision for planning and implementing a statewide HIE. This Plan is subject to revision as the State continues to work with the component local HIEs, other state HIEs as they develop, and through our dynamic strategic planning process to facilitate a comprehensive and effective statewide HIE.

Meaningful Use

Illinois will align HIE implementation and priorities with the current federal definition of Meaningful Use to ensure that its eligible providers can receive the maximum incentive reimbursement and avoid future reimbursement penalties.

Specifically, OHIT and the Authority will work to achieve the key deliverables for state HIEs specified in ONC-HIE-PIN-001 to ensure that eligible Illinois professionals and hospitals have at least one option to exchange information to meet the Stage 1 - Meaningful Use requirements in 2011. The key exchange-related capabilities required for physician providers in 2011 are:

- 1) E-prescribing
- 2) Receipt of structured laboratory results
- 3) Sharing patient care summaries across unaffiliated organizations

E-Prescribing

To meet Meaningful Use requirements in the Final Rule, eligible professionals are required to transmit at least 40% of all permissible prescriptions written by the eligible professional using certified EHR technology. To accomplish this, the eligible professional must acquire and implement a certified EHR system with e-prescribing capability, contract with an e-prescribing service that interfaces with their EHR system and must have sufficient pharmacies in the area that are capable of receiving prescriptions electronically to meet the 40% requirement.

The Meaningful Use requirements governing ambulatory EHR systems require that the system be capable of transmitting prescriptions electronically so by implementing a certified system, eligible professionals will be facilitating EHR adoption OHIT is working cooperatively with the RECs and Medicaid program to encourage eligible professionals to implement certified systems.

Ambulatory EHR system vendors generally package their systems with interfaces to e-prescribing service vendors, thereby ensuring that a mechanism is available for eligible professional to transmit their prescriptions electronically. OHIT will work with the RECs to ensure that eligible professionals successfully contract with e-prescribing service vendors and implement their interfaces.

Illinois HIE Strategic & Operational Plan

Of the more than 3,193 pharmacies in Illinois, 2,842 are thought to be capable of receiving prescriptions electronically, with independent pharmacies having lower levels of adoption for e-prescribing capabilities. OHIT plans to address this issue by working with the independent pharmacists' professional association to determine a strategy to address this level of e-prescribing transactions by convening a series of focus groups to learn more about the obstacles for e-prescribing for independent pharmacies. OHIT will also use data from the 2010 Survey to further identify obstacles and barriers to implementing e-prescribing.

Receipt of Structured Laboratory Results

To meet Meaningful Use requirements, eligible professionals must have 40% of laboratories, ordered electronically, whose results are returned in a numerical or positive/negative format and must be stored in certified EHR system as structured data. To do this the eligible professional must either receive these results electronically from the performing laboratory and accept them into their EHR system through an interface or manually transcribe the data into the EHR. Manual transcription would introduce the risk of errors and would be very expensive and time consuming.

Most eligible professionals transact with multiple laboratories (e.g. hospitals, payer-dictated laboratories), developing very expensive and time consuming point-to-point interfaces between the laboratory and the eligible professional. By consolidating interfaces, HIE reduces the cost to providers and laboratories electronically exchanging results among multiple entities. Since the messaging component for diagnostic results delivery through the ILHIE will not be operational until 2012, OHIT will facilitate providers' ability to meet the Meaningful Use requirements through local HIEs throughout Illinois and NHIN Direct. Through its legislative authority to establish and adopt the standards for participation in the ILHIE, the Authority will ensure that local HIEs provide results delivery capability as part of their initial set of capabilities implemented in 2011. For healthcare providers without local HIE services available in their area, the State will facilitate NHIN Direct capabilities, such as provider directories. . In addition, the State will utilize its contracting leverage to motivate local and national laboratories to deliver laboratory results electronically.

Sharing Patient Care Summaries across Unaffiliated Organizations

Hospitals and eligible professionals with installed certified EHR technology systems must successfully test their ability to send and receive a Continuity of Care Document. Hospitals and eligible professionals will need a testing partner and therefore, the ILHIE will ensure that local HIEs provide a testing capability and report successful testing. While health information exchange is a Stage 2 – Meaningful Use requirement, the ILHIE will assist providers in meeting Stage 1 – Meaningful Use by acting as a liaison between non-affiliated providers to assist in establishing relationships for testing capabilities. Future planning includes developing a test harnesses to further assist providers in testing as exchange becomes more robust. Also, three local HIEs from three different regions, the metropolitan Chicago area, Central Illinois, and Southern Illinois, have identified this in their planning documentation as a Use Case for 2011 implementation, and intend to provide the ability to exchange care summaries. OHIT will continue to work closely with these developing local HIEs to encourage their implementation of this functionality.

OHIT acknowledges that these options for exchange of care summaries may not be sufficient to give every provider in Illinois the ability to share care summaries in 2011. Nonetheless, it is the most realistic approach to achieving widespread sharing of patient care summaries throughout the state within the very tight timelines mandated by federal rule. This strategy will produce the first phase of such capacity in the state, from which we intend to build and expand, identify and assess gaps in coverage and fill them in with the development of the statewide HIE.

Illinois HIE Strategic & Operational Plan

Public Health

Meaningful Use requires that hospitals and eligible professionals submit immunizations and surveillance data to public health entities – if the entities have the capability to receive them. Since the IDPH does not currently have mechanisms in place to receive immunization and laboratory surveillance data submitted online by providers, this Meaningful Use requirement will apply and hospitals, laboratories and eligible professionals will be obligated to at least test their EHR system's ability to submit their data either directly to IDPH or via local HIEs in 2011.

Leveraging Existing Local, Regional and National Efforts

Local Efforts

Pursuant to Illinois' HIE Planning Grant Program; the State was divided into 16 Medical Trading Areas based on utilization patterns and medical transactions in a geographic region. Currently, five local HIEs have organized among the Medical Trading Areas and are in the process of developing formal governance structures and data-sharing agreements. In addition, hospitals and physician providers organized as integrated delivery networks are developing internal HIE-like exchange capabilities between the delivery network components – so-called enterprise HIEs.

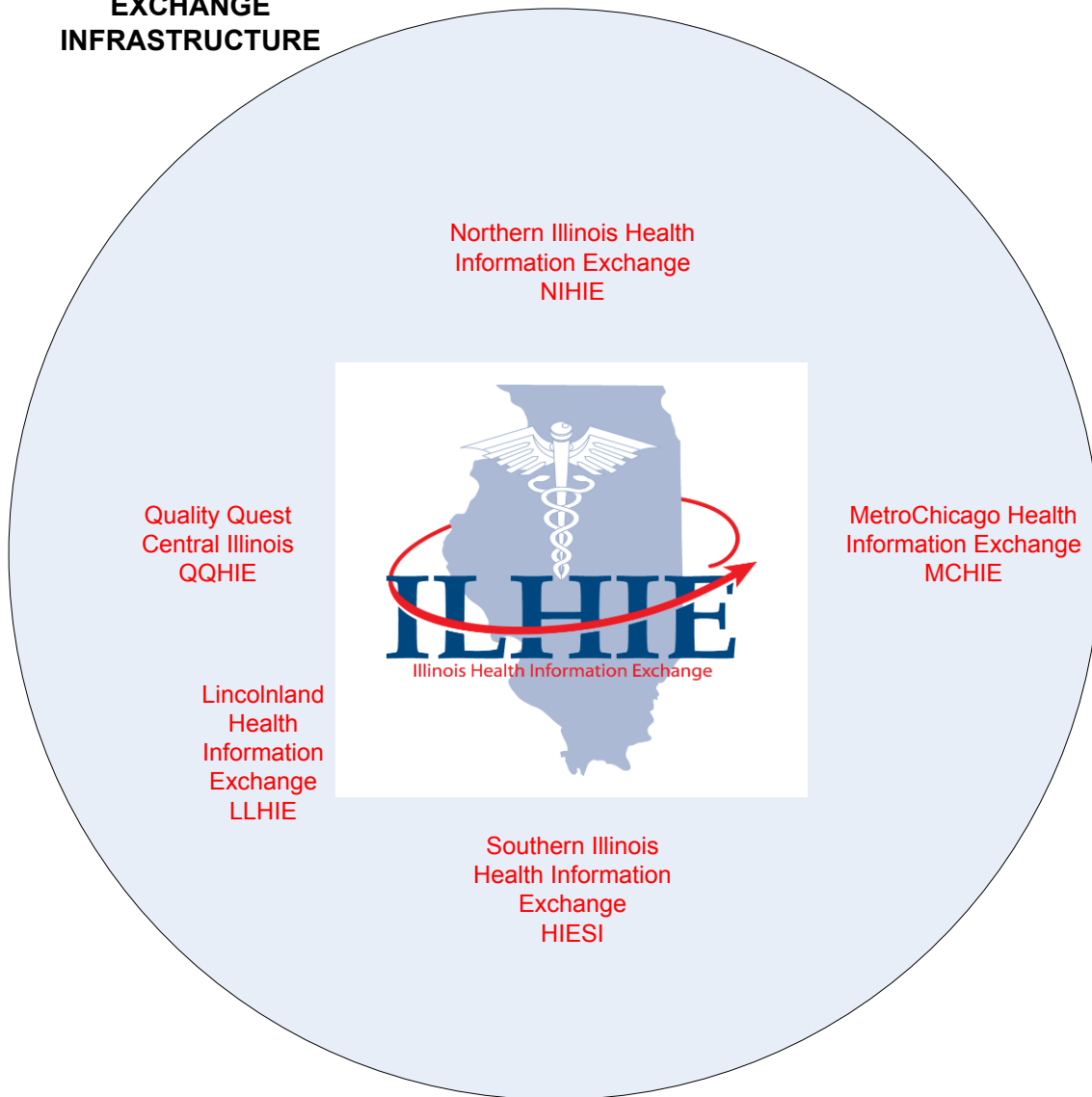
Given the aggressive timelines for achieving Meaningful Use and implementing statewide HIE in Illinois, we believe that it is essential to build Illinois' HIE strategy around engagement of stakeholders and leverage this existing and planned capacity. Therefore, the ILHIE will initially build on the stakeholder engagement generated by the Illinois HIE Planning Grant Program - from the past year in order to speed adoption and implementation of HIE in Illinois. Involving providers and other stakeholders directly in HIE implementation will have a multiplier effect allowing state and federal resources to act as a catalyst for change by mobilizing and engaging stakeholder staff resources, technical expertise and financial resources. Capitalizing on existing initiatives already underway in advance of the Authority and ILHIE becoming operational allows greater flexibility to experiment with different HIE models; this approach allows more efficient use of the limited resources available under the State Cooperative Agreement Program.

It is also clear from the results of the HIE Planning Grant Program and the statewide environmental scan that current and planned local and enterprise HIEs are not contemplated to cover the entire state and enable HIE capacity for all Illinois providers. Illinois has determined, therefore, that the most effective way to proceed with plans to ensure that every provider has an option for HIE, is to leverage existing and planned HIE capacity, work closely with those entities to ensure conformity to state and national standards under the statutory provisions of the Illinois HIE Authority, and develop a statewide HIE infrastructure based on core services that are most efficiently developed at a statewide level in a manner that facilitates use by local and enterprise HIEs to ensure seamless exchange of data.

Two local efforts are moving rapidly to select vendors and implement HIE technology. OHIT is working closely with each of these efforts, with the goal to maximize flexibility, efficiency and statewide participation. The overall goal of the statewide HIE is to provide a pathway for every provider in the state to participate in HIE. The following diagram displays the planned statewide HIE and the local HIEs organized today:

Illinois HIE Strategic & Operational Plan

ILLINOIS STATEWIDE LOCAL HEALTH INFORMATION EXCHANGE INFRASTRUCTURE



In promoting the development and implementation of local HIEs, OHIT strategy will be effective because it will motivate hospitals participating in HIEs to actively engage their medical staffs to connect via an HIE that the hospital is committed to. This will accelerate the process of getting physicians connected and generate stakeholder commitment because they will have a sense of ownership and control in the HIE serving them.

Additionally, stakeholder reluctance of sharing data will be minimized because they will have local control and data will be tightly tied to stakeholder benefit and instill public confidence in Illinois' HIE efforts. Stakeholder administration of data implies that the use of health care information being exchanged will be more visibly tied to direct patient care purposes. Lastly, this strategy will allow different regions of the state to proceed at their own pace - adapting to local readiness and conditions.

Illinois HIE Strategic & Operational Plan

Statewide Efforts

Currently the State of Illinois has several initiatives under way, including modernizing the Medicaid Management Information System (MMIS), re-procuring its Medical Data Warehouse (MDW), and upgrading the MMIS capabilities (for the current and future system) to monitor Medicaid providers Meaningful Use of EHRs and related technology.

The current efforts to coordinate health and health-related data through integration into the MDW from multiple agencies will be expanded. This includes:

- The I-CARE immunization registry at the Illinois Department of Public Health (IDPH)
- The Cornerstone repository at the Illinois Department of Human Services (DHS)
- The SACWIS system at the Illinois Department of Children and Family Services (DCFS)

The MMIS will also need to absorb clinical data from Medicaid patient encounters with providers. As a result, a general interface for the new MMIS will be built that can accept claims data through current data information exchanges as well as newer claims and clinical data that will come in through the statewide HIE. The MMIS Interface will route data to either the new claims or clinical data interfaces. Claims data will then be fed into the upgraded MMIS. Clinical data will go to the MDW. All of these data flows will be two-way. This will enable audit trails, error reporting, status reporting and potential decision support information to be sent back to providers. It will also facilitate public health surveillance and reporting and a variety of other services to government agencies and health providers to better promote population health.

Since the MMIS is responsible for processing payments, it will also process incentive payments for Meaningful Use of EHRs. The “meaningful use monitoring” circle in the diagram indicates this will be a distinct module directly interfacing to the upgraded MMIS. It will use clinical data from the MDW as its most significant source of data, though there may be ways to deduce some Meaningful Use measures from claims data. This will be determined during the planning phase of the Medicaid HIT plan and will evolve as the system evolves due to experience and technological change.

This planning process is expected to prevent any redundant use of federal funds as well as to eliminate any duplicative functionality. Developing clear specifications for the interfaces between systems as well as a division of labor between the different domains is the best way to ensure clarity, transparency and efficiency.

Broadband Deployment

The Illinois Department of Central Management Services has been providing broadband services to more than 7,000 community anchor institutions for more than 10 years via the Illinois Century Network (ICN), an Internet2 Sponsored Educational Group Provider, which is the gateway for K-12 schools, libraries, and non-research higher education institutions to access Internet2.³² Through the Illinois Broadband Opportunity Partnership, the State of Illinois has assembled a team of fiber and broadband resources to assist with the network design and implementation.³³ These fiber experts include representatives from the Illinois State Toll Highway Authority, Northern Illinois University, University of Urbana-Champaign, Illinois State University, Metropolitan Research & Education Network, and the

³² <http://www.illinois.net/about/default.htm>

³³ <http://www2.illinois.gov/broadband/Pages/BroadbandDeploymentCouncil.aspx>

Illinois HIE Strategic & Operational Plan

Illinois Wired/Wireless Infrastructure for Research and Education. Collectively, these resources have installed and operated more than 1,000 miles of fiber.

Efforts to continue leveraging existing infrastructure as well as public and private funding opportunities persist. Under the federal Broadband Technology Opportunity Program, a metropolitan broadband network – Central Illinois Regional Broadband Network – recently received nearly \$62 million grant to expand and improve the Illinois Century Network to provide ultra high-speed access in 55 counties. This collaboration of education, healthcare, public safety, government, not-for-profit, and commercial institutions will provide high-speed, low-cost connectivity to various organizations and communities throughout Bloomington-Normal and various communities throughout greater McLean County in Central Illinois.³⁴ Once implemented, Illinois State University and the founding members of the Central Illinois Regional Broadband Network plan to form a non-profit, Limited Liability Company to assume ongoing operations of the community fiber network.

In 2004, Northern Illinois University in partnership with the Illinois Municipal Broadband Communications Association began a build out of a 175-mile fiber optic ring named NIUNet.³⁵ The goal of the network was to create a high-speed fiber optic network to link the main NIU campus in DeKalb with Outreach Centers in Rockford, Naperville and Hoffman Estates. Using a combination of new and existing fiber lines, NIUNet enhances NIU's own research mission while advancing state-of-the-art health care technology, area education and economic development efforts around the state.

In March 2010, the Urbana-Champaign Big Broadband project received a \$22.5 million award through BTOP to work with education, healthcare, public safety and government service organizations in Central Illinois (Urbana-Champaign and Savoy) to improve access to services and a range of applications for area residents and businesses.³⁶ The Project plans include the construction of a 187-mile fiber-optic broadband network to provide at least 100 Mbps connectivity to area community anchor institutions and support fiber-to-the-home services in four low-income neighborhoods. The project will directly connect 143 anchor institutions, including 17 social service agencies and 14 healthcare facilities. A majority of the anchor institutions expect to receive their first high-speed Internet connection via this project.

The DeKalb Advancement of Technology Authority Broadband project, a partnership between the DeKalb County Government, Northern Illinois University, and DeKalb Fiber Optic, has also received a BTOP award of \$11.9 million.³⁷ The project plans to deploy a 130-mile fiber-optic network across DeKalb County and northern LaSalle County targeted to reach areas with a demonstrated need for high-speed, low-cost broadband access. The project expects to provide high-speed Internet connections between 10 Mbps to 10 Gbps to anchor institutions, including 42 schools, 2 hospitals, 5 clinics, and numerous public safety entities and government agencies.

The project will also enable broadband providers to interconnect with these facilities to provide broadband to households and businesses in underserved communities. The project design includes five networks overlaid on the fiber optic system— each network will be designed to meet the needs of a

³⁴ <http://www.illinois.net/IBOP.htm>

³⁵ <http://www.niunet.niu.edu/niunet/applications/index.shtml>

³⁶ <http://uc2b.net/>

³⁷ http://www.ntia.doc.gov/press/2010/BTOPGrants_IL_100219.html

Illinois HIE Strategic & Operational Plan

specific community: education and libraries, healthcare, the farming community, government and emergency services, and business and economic development.

The DeKalb Advancement of Technology Authority Broadband project also proposes to connect to the Illinois Rural HealthNet, allowing medical facilities connected to this project to collaborate with specialists at larger facilities throughout the state and nation.

Through the IBOP-Southern Region project, Harrisburg-based Clearwave Communications will use a \$31.5 million grant to connect 232 community institutions and create approximately 150 jobs.

The Danville-based Cellular Properties, Inc. project is using a \$12 million grant/loan award to expand 3G wireless broadband service in 11 rural counties. The effort is estimated to create 267 jobs, and serve more than 7,000 businesses and 700 community institutions. Grant and loan awards totaling more than \$783,000 to Utopian Wireless Corporation will build WiMAX infrastructure in communities in rural McDonough and Clay Counties. This project will help more than 350 businesses and 100 community institutions.

Functionality to be Included in the Statewide HIE

A financially sound incremental approach to implementing the statewide HIE represents Illinois' vision. The statewide HIE is being designed for sufficient flexibility and the capability of growing and adapting within the next 4-10 years. The key principle driving the implementation of Illinois' technical architecture is to improve the health of the people of Illinois through the collaborative use of health information. The infrastructure design facilitates and supports the exchange of electronic health information among clinical and public health settings. Illinois has developed a set of principles that guide the design and implementation of the statewide HIE:

Illinois Technical Architecture Guiding Principles

1. The ILHIE will provide a leadership role for HIE in Illinois by facilitating HIE through convening, organizing, standards setting and requiring certification and compliance in order to connect.
2. The statewide HIE will only integrate technology that is compliant with national standards.
3. The ILHIE will focus on providing HIE core services that local and enterprise HIEs and providers will utilize in implementing HIE services. Each service listed below will be web services accessible to authorized HIEs, payer and provider systems serving as a single "source of truth" for health exchange activities in Illinois:
 - Master Patient Index
 - Record Locator Service
 - Provider Directory
 - Payer Directory
 - Public Health Entity Directory
 - Authentication Services
 - Consent Management
 - Auditing Services
 -
4. The ILHIE will initially focus on serving as a secure communications/message routing hub ensuring connectivity among multiple local and enterprise HIEs; other state HIEs; NHIN; providers and other stakeholders that chose to use NHIN Direct rather than an HIE to exchange messaging data; Public Health Agencies (i.e., IDPH, local health departments); CDC; state and national data sources (i.e., payers

Illinois HIE Strategic & Operational Plan

for claim data, pharmacy benefit managers; Medicaid; national laboratory vendors) We expect that the local HIEs will segment traffic that can stay within the ILHIE and only route core transactions to the ILHIE that must cross all HIEs.

5. The ILHIE will develop, assemble and maintain several statewide databases that will serve as resources intrastate and interstate to enrich services to participating providers for document look-up and retrieval (i.e., paid claim database, filled prescription database).

Illinois Statewide HIE Architecture

The statewide HIE technical architecture is designed with a layering approach to achieve exchange and interoperability through local level data exchange and statewide facilitation. The statewide HIE will leverage Illinois' existing HIE investments and create a technology model that enhances what the local HIEs have either implemented or are implementing.

The statewide HIE infrastructure is a hybrid model, utilizing the local HIEs exchanging clinical data in a coordinated manner among autonomous components - while the ILHIE will serve as a centralized, secure communications/message routing hub ensuring connectivity among multiple local and enterprise HIEs; other state HIEs; NHIN and providers. This standards based model will facilitate and support data exchange among the local HIEs and other clinical and population settings.

The local HIEs will serve as a frontline for engagement and connection of hospitals and physician providers and will operate with the expectation that all providers, that request HIE service, will be allowed to connect locally – facilitated through the ILHIE, which will serve as the highway for data exchange intrastate, interstate and nationally – allowing standardized data flow. Local HIEs will be required to provide HIE services to any hospital or physician provider in Illinois, regardless of location, in order to help ensure that hospitals and providers will have at least one HIE option available. Hospitals and physicians will be encouraged to connect through the closest local HIE but will have the ability to select the option that makes the most sense for them.

Since the local HIEs are central to the statewide HIE architecture, it is critical that a set of criteria be defined to designate an organization as an Illinois local HIE. This designation will allow the local HIE to exchange information statewide. Data exchange standards, rules and policies, based on federal and state laws and national standards developed by ONC and the NHIN, will be developed and implemented by the ILHIE and the local HIEs will be required to adopt them in order to participate in the statewide HIE. In connection with the establishment of interoperability standards, the ILHIE will also certify compliance of ILHIE participants with such standards. It is proposed that a participant so certified by the ILHIE will be entitled to publicly promote its certification and display a compliance certification symbol, which would be trademarked and controlled by the ILHIE.

A complete set of syntactic and semantic standards will be specified. Any service or software that is an external source of statewide data will ensure the data provided conforms to all semantic and syntactic standards before released by the ILHIE.

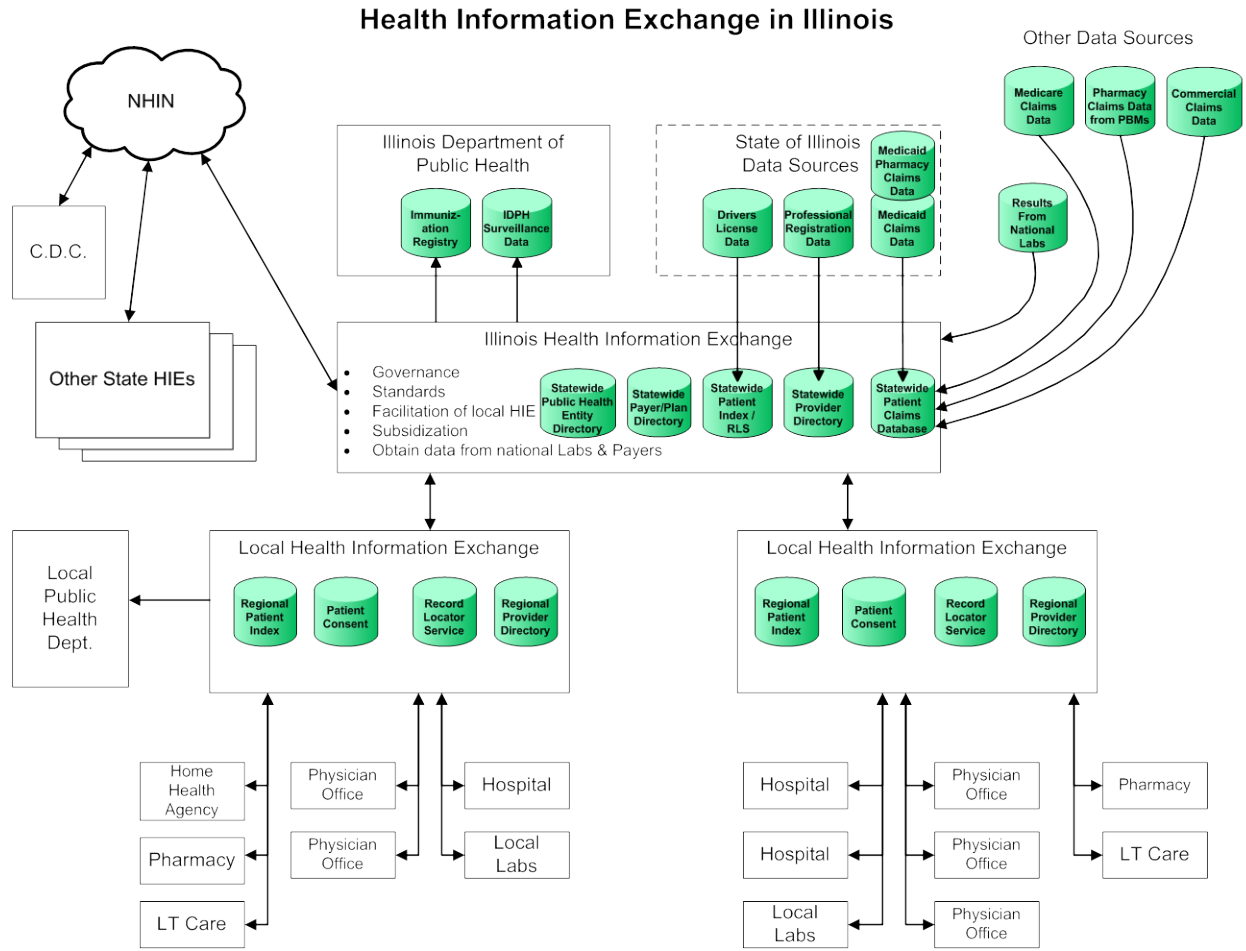
The statewide HIE structure is expected to evolve over time as HIE models and HIE technology evolves, as the public gains confidence in HIE and as hospitals and eligible professionals become sophisticated users of HIE. This evolution may include consolidation of local HIEs into a single layer model with one statewide organization serving the Illinois market. In such a model all hospitals and physician providers would *connect directly* to the statewide infrastructure. Alternatively, the market may determine that locally focused HIEs *connected* to the ILHIE is a more efficient model for the patients, providers, and

Illinois HIE Strategic & Operational Plan

payers. In this event, the current dual layer model, initially planned, will continue. The purpose of this is not to supplant local HIEs but to provide options to attain critical mass of HIE utilization in Illinois.

The following diagram illustrates the statewide HIE's initial infrastructure design which is vendor and technology agnostic and focuses on technical standards, protocols and architectural patterns: [See Appendix B; Figure 2]

Illinois Statewide HIE Architecture



The distributed model depicted above ensures that data will be held where it is created which avoids the negative perceptions and potential privacy and security concerns inherent in storing patient information in a centralized health information repository. To achieve statewide coordination and interoperability, the distributed data will be connected by a series of common tools including the Master Patient Index, Record Locator Service, and Provider/Payer Directories as explained in further detail below.

Master Patient Index

Patient Identity Management is a key requirement for any HIE. Patient Identity Management is the ability to ascertain a distinct, unique identity for a patient, as expressed by an identifier that is unique

Illinois HIE Strategic & Operational Plan

within the scope of the exchange network, given characteristics about that individual such as his or her name, date of birth, gender, address or prior addresses, and identifiers such as medical record numbers or driver's license number.

The ILHIE will ensure the integrity of its patient database by utilizing a Unique Identifier (UID) for each patient. This UID will be the basis for providers to match their patients with available records. The ILHIE - Master Patient Index (MPI) will be initially populated from various sources including State Driver's License Files, Medicaid Claims data, and Commercial Claims data. The data uploaded into the MPI will be metadata and not clinical data. Subsequent patient identifier data will be added through provider transactions.

The ILHIE envisions delivering a MPI service that follows the standard established by Integrating the Healthcare Enterprise® (IHE) termed the "Patient Identifier Cross Referencing (PIX) Profile". IHE is an initiative started by healthcare professionals and industry professionals to improve the way computer systems in healthcare share information. The PIX Profile was adopted by the Healthcare Information Technology Standards Panel (HITSP) as Transaction Package 22, and recognized by the Secretary of HHS as a Federal Interoperability Standard in January 2009.

The IHE PIX approach to patient matching is designed to minimize both false positives and false negatives. The PIX manager is a layer on an MPI that is operated within the exchange and each record in the PIX contains cross references to the MRN located at participating institutions, which translates the MRN of one provider to the MRN of another provider. The initial link between a provider MRN and an existing PIX record is accomplished through statistical matching. Errors are mitigated through probabilistic or deterministic matching.

The patient UID will maximize the positive identification of subject patients while minimizing both false positives and false negatives. By 2Q, 2011, the Authority will establish business and technical requirements for a request for proposal that will address performing deterministic matching of patient identities, such as confidence intervals for asserting a matched identity. These requirements will include how ambiguous matches are handled, and how erroneous data can be corrected in the ILHIE MPI.

Record Locator Service

A Record Locator Service (RLS) provides determination of where a patient record may be found. The MPI and the RLS are coordinated software applications. Once a patient has been successfully identified and requests for data are authorized, providers can use the RLS to retrieve a copy of the patient records stored in decentralized provider systems. The RLS contains pointers to locations of information for a patient. The RLS facilitates the exchange of secure messages and documents between a patient's providers, but does not store any of the information contained in the records.

The ILHIE envisions delivering a Record Locator Service that follows the specifications for the Document Registry actor of the IHE Cross-Enterprise Document Sharing (XDS) Profile, adopted as HITSP Transaction Package 13 and recognized by the Secretary of HHS. The Record Locator Service will also serve as a gateway to locate patient records held in local and enterprise HIEs, and in other state or federal (DOD, VA, IHS) HIEs.

Web-Service Enabled Directories

The ILHIE will utilize web-service enabled directories to manage the exchange's user and workgroup registration, access rights, and security. These directories provide the mechanism to identify providers,

Illinois HIE Strategic & Operational Plan

health plans, laboratories, and pharmacies, determine credentials, and map access authorization within the HIE. These directories also support the ability to monitor HIE participation levels, enable direct messaging between participants, and communicate important information about e-Health to HIE participants. Examples of these directories include:

- Provider Directory - a directory of all physician practices, hospitals, long term care providers, and laboratories, including electronic routing information to allow messages to be routed to listed providers. One of the sources of data will be the Department of Professional Regulation's database of licensed professionals. Another will be provider files from payers – including Medicaid.
- Payer Directory - a directory of all payers operating in Illinois. Includes electronic routing information to allow messages to be routed to listed payers
- Public Health Entity Directory - a directory of all public health entities operating in Illinois. Includes electronic routing information to allow messages to be routed to listed entities
- Authentication Services – a directory and management system for public encryption keys to allow secure communication to participants in the ILHIE.

Authentication Services

One of the services that the ILHIE will provide will be authentication of individual users, provider systems, public health systems and local exchange systems that are authorized to access the web services provided by the ILHIE. Local exchanges will be expected to manage authentication services for physician, hospital and other stakeholder systems connecting to the local exchange. Authentication standards will be required to match the standards established by ONC in order to allow participation in interstate data exchange via the NHIN. Once these standards are fully defined, the ILHIE will enforce these standards in Illinois using its ability to regulate connection to the ILHIE and other regulatory capabilities in the legislation creating the IL HIE Authority.

Another service may be the authentication of data exchange partners exchanging information via the NHIN Direct protocols. The scope of this service will be determined by the specifications for NHIN Direct that ONC is currently developing.

Consent Management

The requirements of applicable State statute and HIPAA regulations will ultimately define the approach to consent management. The patient's decision to "opt-in" (patient agreement to include data in HIE); or "opt-out" (patient demands to exclude data from HIE) will drive what information may be transmitted through the HIE, with direct implications for the design and operation of the infrastructure. The various aspects of consent management options will be considered in conjunction with the privacy and security policies adopted by the Authority.

Knowledgeable observers suggest that the presumed inclusion of all patient information in the HIE, with the ability of a patient to "opt-out" if desired, is the critical success factor in achieving a critical mass of patient data quickly and making an HIE viable. However, under both federal and Illinois law, certain categories of information are "sensitive" requiring affirmative patient consent ("opt-in") to disclose PHI.

Consistent with guidance of the Advisory Committee, the statewide HIE will seek to maximize the patient information including "sensitive" PHI, available to the statewide HIE while fully conforming to the requirements and standards of federal and Illinois law; the standards set by - NHIN and NHIN Direct

Illinois HIE Strategic & Operational Plan

on architecture - including privacy and security; final Meaningful Use regulations; and the privacy and security policies of Authority.

Links to Personal Health Record Systems

The proposed architectural model will allow for the secure transfer of a defined set of clinical information between Illinois participants. A patient registry links this clinical information about an individual across disparate source systems, needed to create an accurate, real-time record locator service.

An important component of Illinois' long term vision is to empower consumers to more actively participate in managing their health through use of a Personal Health Record (PHR). PHRs provide consumers with the ability to manage a PHR where they have control over the flow of their health information, including receiving copies of their medical records from multiple providers, insurance explanations of benefits, etc. Consumers may use the PHR to record personal health and wellness information not typically captured in medical records, and to manage their health care preferences and consents. Consumers are also able to grant their health care provider(s) access to specific information in their PHR.

In accordance with medical practice, health information provided by the consumer will be reviewed and validated by a healthcare provider before being integrated into the clinical record of the provider.

There is a wide variety of business and technical models for PHR systems, and the market is evolving rapidly, but Illinois HIE is committed to providing standards-based interfaces to them. PHR vendors connecting to the HIE will be required to be certified to the requisite interoperability standards, and to have established authentication procedures for consumers when accessing their data.

Electronic Eligibility and Claims Transactions

The ILHIE will leverage the existing statewide web portal in the Medicaid program for electronic eligibility, claims status and claims transactions. Mechanisms will be developed collaboratively between the ILHIE and the State Medicaid program to enable users of both systems to easily access appropriate functionalities on either system. The ILHIE will enable a bi-directional real-time interface with HFS to facilitate access to eligibility information, resolve data integrity issues across systems, and improve claims payment accuracy. Every attempt will be made to support inter-agency coordination to provide appropriate and cost effective care management services.

Public Health Reporting

The ILHIE will provide a portal for the crucial link between healthcare providers and the various local, state, and national public health agencies for the purposes of early identification of communicable diseases and acute or long-term population health threats. These vital functions of a mature HIE are recognized in the Meaningful Use regulations requiring reporting to public health agencies.

Illinois has defined regulations governing public health reporting for a number of infectious or communicable diseases. Currently providers are required to submit information to public health officials for monitoring and reporting purposes with variable requirements on the reporting timeframe.

It is anticipated that the ILHIE will include a bi-directional interface with the IDPH that would allow providers to communicate reportable conditions to IDPH and receive public health alerts from IDPH through the statewide messaging functionality. Further functionalities include reporting to the CDC and

Illinois HIE Strategic & Operational Plan

NHIN. The ILHIE is in the process of developing specific use cases for public health data exchange. These will include syndromic surveillance, immunization registry, newborn screening and other epidemiological concerns.

In addition, the ILHIE Public Health Work Group will provide recommendations regarding core public health data elements/indicators that can be exchanged within a statewide HIE that reflect the needs and priorities of public health to achieve the goal of improved clinical and population health. The Public Health Work Group has created three subcommittees structured around the Meaningful Use criteria as related to public health and aligning public health reporting requirements and systems with the statewide HIE: 1) Use Cases Inclusion for Public Health Data; 2) Public Health Technical Infrastructure Requirements; and 3) Policy Guidance for Achieving Meaningful Use.

Clinical Quality Integration

HIEs allow clinical data from a variety of sources to be aggregated and analyzed for assessment of the quality of care of individual providers, health systems and populations. While a major advantage of electronic health records and HIE is the ability to improve the processes and outcomes of care for the patients and communities within Illinois, the challenges inherent in utilizing an HIE to transmit quality data are multiple. Data exists in multiple different formats, and there is neither a method of standardization to verify data validity nor a standardization of measures. The result of having electronic health records in health care provider settings and being able to electronically exchange information will enable Illinois to rapidly advance quality performance improvements and identify opportunities to reduce variation in practices and outcomes of care.

Specifically, the quality and patient safety improvements to be achieved through EHR and HIE include:

- Identifying and reducing variations in standard practices and processes of care such as – management of heart failure, diabetes, AIDS and countless diseases that benefit from managed practices through evidence based standards
- Developing rapid cycle improvements and transferring that knowledge through electronic interventions and deployment thereby reducing the time it takes currently to know about and implement best practices
- Implementing measurements electronically to develop expected patient outcomes and measures, actual outcomes against expectations – including functional status before and after treatment
- Identifying best practices that lead to reduced variation and are cost effective

To achieve the primary goals of improving health care outcomes and patient safety, it is anticipated that the following challenges will be addressed by the Clinical Quality Work Group of the Advisory Committee:

1. Define “quality reporting” and “quality measures” and identify which specific measures should be collected
2. Develop a method of standardizing or harmonizing quality measures
3. Develop a standard process for validating and cleaning data so that it is in a sharable format

Illinois HIE Strategic & Operational Plan

4. Determine whether data will be analyzed for compliance with performance measures at the provider level or will raw data be transmitted from the provider to the HIE and analyzed at a central site
5. Define the role of the HIE in data analysis for population health management
6. Identify what types of reports will be created from data exchange and analysis, where they will be stored and a catalog of reports made available to users
7. Determine if there is to be a public reporting component in the HIE design. If so, determine how that will be accomplished
8. Identify level of access to reports with personal identifiers of providers, health care facilities, and public health
9. Determine incentives for data collection and sharing by providers and health care facilities and whether this will be limited to publically reportable measures
10. Identify means of interfacing cost and quality data at individual sites and between sites

The Clinical Quality Work Group will work to achieve consensus on the details of how to meet these objectives by the time the ILHIE is launched. This work will be informed by the experience and best practices of other HIEs in the US and globally; current and anticipated future private and public payer reporting requirements and technical feasibility. Milestones and timelines associated with these clinical goals and objectives are contained in the Operational Plan section of this document.

Laboratories

The ILHIE envisions being a gateway/distribution mechanism for electronic reports from national, local, and hospital laboratories to healthcare providers and (when appropriate) consumers' PHR systems. This capability will be the subject of targeted pilot projects prior to full statewide capability.

Pharmacy

Functionality will be aligned with the incentives available under the ARRA and will be implemented permanently.

Interface between Statewide and Local Exchanges

Illinois' HIE Advisory Committee discussions to date reflect a consensus that a statewide HIE must be built upon approved standards to not only avoid vulnerability to vendor selection issues and risks, but to ensure compatibility with other HIEs and federal initiatives. Therefore, the technical design of the statewide HIE will be based on the final NHIN Connect and NHIN Direct standards and integration protocols that bridge proprietary boundaries. Further, building the statewide HIE consistent with national standards mitigates a wide range of technology challenges for providers in Illinois and establishes the framework for eventual connectivity intrastate and interstate.

Demonstration of Adherence to National Standards and Certifications for HIE

The Advisory Committee serves as the multi-disciplinary stakeholder group that is tasked to identify widely accepted and useful standards for the statewide HIE and all standards defined by HHS. Further, the Advisory Committee will support widespread interoperability among Illinois participants and with the NHIN. In addition to the Advisory Committee, the Technology and Interoperability Workgroup, in support of OHIT's Chief Technology Officer, is charged with ensuring that statewide technology and interoperability planning supports the State's overall priority of improving healthcare outcomes and lowering costs through HIE by:

- Assisting in Defining the Role of the statewide HIE

Illinois HIE Strategic & Operational Plan

- Ensuring Adherence to Federal Data Exchange Standards Throughout the Planning Process
- Providing Input to the Strategic and Operating Plan
- Identifying Core Requirements for Interoperability
- Developing/Selecting Uses Cases for the statewide HIE
- Assisting in developing RFI/RFP Requirements
- Infrastructure Development – Today, Tomorrow, Future
- Supporting the Effective Use of EHR Technology

One of the Illinois Technical Architecture Guiding Principles is to only integrate technology that is compliant with HHS standards. To assure compliance, the ILHIE will contract with independent third-party vendors to perform regular audits of the implemented technology that will focus on the financial, operational, and technical standards (HHS published standards compared to the statewide implemented standards). The accountability for addressing any deviations identified in the audit will be the responsibility of the ILHIE.

The ILHIE will follow standards common to HIE infrastructures implemented nationwide including but not limited to:

- Messaging
- Content
- Vocabulary
- Transport
- Workflow

More detail is provided in the Operational Plan.

Business and Technical Operations

OHIT will drive the policies and perform or facilitate the business and technical operations functions associated with Illinois' Strategic and Operational Plan. It will continue to serve as the coordinating body for all activities related to the State's efforts to facilitate statewide HIE, build HIT capacity and accelerate the adoption of EHR. The actual execution of many core business and technical operations of the statewide HIE will be the primary responsibilities of the Authority created under state statute and will be conducted in accordance with bylaws and policies it will adopt and all applicable state and federal laws.

Technical Assistance to Local Exchanges and Others to Build HIE Capacity

The Authority will, under its statutory obligations to foster the widespread adoption and Meaningful Use of EHRs and facilitate statewide HIE, provide technical assistance to planned participants in the HIE. OHIT and the Authority will work with Illinois' two RECs to maximize the impact of their technical assistance for individual providers to ensure that the building blocks of EHR adoption are in place as HIE capacity develops. OHIT and the Authority will provide standards and specifications for participation in the statewide HIE architecture to assist local and enterprise exchanges in planning and implementation.

Leveraging Existing Public Health Initiatives and Plans

OHIT plans to coordinate with public health agencies' existing initiatives efforts to ensure a consistent approach to encouraging the Meaningful Use of HIT and develop public health systems' capacity to electronically accept immunization data, notifiable diseases, and syndromic surveillance reporting from providers.

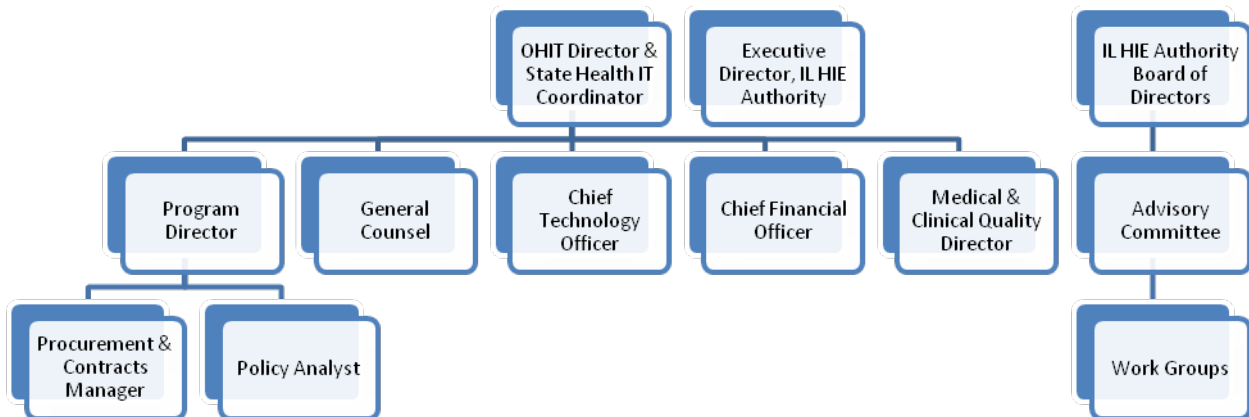
Illinois HIE Strategic & Operational Plan

Several current HIT initiatives identified in the Environmental Scan and Coordination with Other Federally Funded Programs sections of this Plan, and specifically the CDC funded interoperability of EHRs and immunizations registries and the electronic laboratory reporting grants, represent opportunities for the State to maximize federal funding for enhancing the electronic exchange and interoperability of the immunization database and the electronic laboratory infrastructure. The State will utilize existing capabilities at the city, county, and state health departments to promote the exchange of data between the public health system and providers, supporting providers ability to achieve the Meaningful Use requirements and build out HIE capacity.

Staffing Plan for OHIT and the Authority

OHIT has been established within the Office of the Governor and consistent with the planning budget approved in the HIE Cooperative Agreement with the ONC, has hired its Program Director, General Counsel, Chief Technology Officer, Chief Financial Officer, Procurement and Contracts Manager and Policy Analyst. OHIT plans to hire a Medical/Clinical Quality Director and an administrative support person to fulfill its responsibilities. OHIT is also leveraging existing State staff to assist in carrying out its mission and duties, and is utilizing a several unpaid interns to provide additional staff support. Until the Authority is operational and sustainable, OHIT will provide policy and administrative support to the Authority to ensure that the development of a statewide HIE is aligned with the goals and objectives of this Strategic and Operational Plan and consistent with Illinois' obligations under the HIE Cooperative Agreement. It is anticipated that this team will be able to meet all staffing needs throughout the first two years of the project. Staffing levels will be reassessed annually to determine the need for appropriate resources throughout the duration of the four-year Cooperative Agreement program.

Illinois HIE Authority and OHIT



State Program, Project, and Vendor Management Processes

OHIT and the Authority will utilize Illinois' procurement process and infrastructure, including the framework for development and processing of requests for proposals and their public posting on the State's procurement website. That infrastructure also includes access to the Business Enterprise Program, which encourages the participation of small and minority-owned firms. CMS is the agency responsible for administering the State procurement process and supports the standardization of IT and telecommunications services across State agencies. CMS has adopted various policies and procedures around program and project management specifically to define viable, technology-enabled business solutions.

Illinois HIE Strategic & Operational Plan

The CMS framework is designed as a first gate to ensure that proposed technology is driven by program requirements and aligned with enterprise architecture and associated technology standards. The Enterprise Program Management (EPM) Framework components represent best practices for project conceptualization, initiation, planning, execution, and transition efforts.



OHIT is working with CMS to apply similar EPM Framework principles and methodology to the State's HIE initiatives. These project management activities will help OHIT ensure that commitments are accurately captured, aligned, and managed via project-specific milestones. Project status reports will be generated on a predetermined basis to not only provide insight on milestone progress, but also to provide immediate feedback on project plan assumptions. The budget planning and forecasting activity will further aid in coordinating resource and infrastructure capacity to accommodate HIE initiatives undertaken by OHIT.

To address State agency and program support for EHR adoption and HIE, an interagency group was formed in January, 2009 with representation from eight agencies that have ongoing HIT projects and needs. As such, this group is expected to utilize EPM methods to ensure that the State coordinates policies and resources to promote the adoption of EHRs and support widespread participation in HIE.

As of July 2010, significant revisions to the Illinois Procurement Code became effective (refer to Public Act 96-0795). The Executive Ethics Commission has been charged with updating the State's Standard Procurement processes to adopt new disclosure and transparency provisions, subcontractor requirements, and restrictions on vendor assistance in developing specifications for solicitations. Specific terms and conditions as well as contract reporting and monitoring responsibilities have already been incorporated into template solicitation documents to continue protecting the State's investments.

A State Supplier Relationship Management program currently exists to facilitate discussions around contract goals for cost, quality and/or service. This high level vendor management function is conducted via quarterly review meetings, offering the State and its suppliers with guidelines to address performance concerns and to develop action plans that realign expectations consistent with contract terms. It is anticipated that the State's newly appointed Chief Procurement Officer will assume ownership over this program. Once instituted, OHIT will ensure that these vendor management processes are employed for the State's HIT contracts.

Risk Management

OHIT recognizes the importance of risk management in the successful development of a statewide HIE. Through the use of standard project management principles, OHIT has identified and assessed the impact of domain-specific risks. These risks have been prioritized (based on likelihood and impact) to formulate mitigation strategies. While every attempt to avoid risks will be exercised, OHIT will engage change control processes to monitor and further mitigate any consequences of a risk event. The

Illinois HIE Strategic & Operational Plan

Operational Plan portion of this document addresses specific tasks, timelines for completion and risk mitigation strategies.

Budget and Resource Allocation

The allocation of resources between and among OHIT, the Authority and other State agencies providing support for the attainment of the goals set forth in this Plan will be determined by the Director of OHIT/State Health IT Coordinator, in consultation with the ONC, as necessary and appropriate. Such allocations will be made in accordance with state budget statutes and regulations. OHIT's and the Authority's accounts and books will be set up and maintained in accordance with Generally Accepted Accounting Principles and the Illinois Office of the Comptroller's requirements. The Authority's Executive Director will be responsible for the approval of recording of receipts, approval of payments, and proper filing of required reports for the public accounting of its finances. It is anticipated that in connection with the formation of the Authority, an interagency agreement will be finalized between OHIT and the Authority to formalize budgetary procedures. The budget for the State HIE Cooperative Agreement Program is contained in Appendix K.

Communications Plan

The Illinois HIE Communications plan as described above ("Communications Plan") identifies key strategies to inform, educate, and engage health care providers and organizations, the public, and other key stakeholders about the benefits of EHR adoption and use, and HIE-related activities in Illinois. Key stakeholder organizations will be identified and engaged to assist with these activities.

The statewide HIE is expected to work closely with the two RECs in Illinois (IL-HITREC and CHITREC) to ensure that all communication, education and outreach related activities for patients and providers are coordinated and consistent. In addition, the communications plan will be coordinated to meet the goals of the State Medicaid HIT Plan. Continuous quality improvement methods for the communications plan will be derived from the ongoing evaluation of feedback to assure the messages and the methods of delivery help foster public trust and active participation in the HIE.

Plan for Annual Evaluation and Update of Strategic and Operational Plan

OHIT will conduct an annual evaluation of Illinois Strategic and Operational Plan, utilizing the technical assistance resources provided in conjunction with the State Cooperative Agreement program. OHIT will also monitor Illinois progress toward meeting key milestones on a more regular basis and revise strategies and redirect resources as necessary to meet the timelines outlined in the Operational Plan.

Outcomes and Performance Measurement

In furtherance of the Authority's incremental policy development, it is anticipated that OHIT will propose a work plan for the Authority which includes focus on the adoption of a strategic plan and its periodic review, involving broad stakeholder input. Performance measures based on standards set forth by the ONC will be tracked and presented for evaluation by the Authority on a quarterly basis. OHIT anticipates that the Authority will implement a program for annually evaluating Illinois HIE progress, gaps and outcomes.

Continuous Improvement

In order to institute an effective continuous improvement (CI) plan, stakeholder involvement will need to be secured. It is expected that the Authority will designate personnel responsible for continuous improvement of ILHIE operations to undertake the following steps:

- Conduct a self-assessment of current alignment with Strategic and Operational Plan document.

Illinois HIE Strategic & Operational Plan

- Identify and prioritize improvement opportunities
- Set goals to enact high priority improvements
- Develop CI strategies to support the goals
- Finalize an action plan to deploy CI strategies
- Develop a budget and allocate resources
- Monitor and evaluate action plan status

Annual Update of Plan to Align with Other Federal Programs

As discussed above (“Coordination with Other Federally Funded Programs”), OHIT is currently involved either directly or indirectly with most of the programs identified. As additional programs are awarded federal funding, OHIT will leverage existing State resources and the Authority to help identify program synergies and to associate those programs with HIE initiatives.

Annual Participation in Nationwide HIE Program Evaluation

The ONC has noted that details for a nationwide HIE program evaluation are forthcoming. OHIT understands that this Strategic and Operational Plan will need to be flexible enough to allow adoption of future federal program guidelines and performance measures. Therefore, OHIT plans to participate in the ONC’s national performance evaluation program at every opportunity.

Legal and Policy

In order to successfully develop and implement statewide HIE in Illinois as envisioned by this Plan, Illinois will need to possess the appropriate legal and policy environment which enables the creation of the necessary vehicles for HIE stakeholder engagement, mechanisms and structures for HIE governance, and tools for policy and implementation. Illinois enjoys a legal and policy environment which is conducive to a statewide HIE in Illinois as envisioned by this Plan. The foundations for stakeholder engagement and HIE governance have been established by action of the Illinois General Assembly, allowing for the further incremental development of a set of common policies, rules and standards which will foster a statewide HIE, while protecting the privacy and security interests of Illinois healthcare consumers, support the State’s public health initiatives and promote the delivery of quality healthcare to vulnerable and underserved populations.

The following sections describe the State’s actions in establishing its HIE legal and policy foundations, the resulting tools now available for implementation of the Plan, and the plan for leveraging private sector HIE stakeholders in addressing and resolving the remaining legal and policy challenges for developing and implementing the statewide HIE.

Illinois HIE Development History

Participation in HISPC

Participation in the Health Information Privacy and Security Collaborative (HISPC) phases I (2006-2007), II (2007) and III (2008-2009) provided the State of Illinois an opportunity to examine privacy and security law and regulations in Illinois that affect intrastate and interstate exchange of health information. The reports and deliverables from the work of HISPC-Illinois are publicly available on the website of the IDPH.³⁸ The participation of the State of Illinois in the initial phases of HISPC coincided with the work of

³⁸ <http://www.idph.state.il.us/hispc2/reports.htm>

Illinois HIE Strategic & Operational Plan

the Electronic Health Records Taskforce, created by the Illinois General Assembly in 2005,³⁹ which recommended the creation of a statewide HIE under the governance of a not-for-profit organization⁴⁰. The Illinois Health Information Network Act,⁴¹ creating such an HIE, was passed by both houses of the Illinois General Assembly in 2007, but failed to obtain the assent of the then current Governor.

As part of HISPC-Illinois II (2007), a Privacy and Security Work Group was formed, offering recommendations in 12 privacy and security areas, which subsequently have been mostly addressed at the federal or state level. A Legal Work Group was also formed, which developed three uniform model consent forms for possible use by the statewide HIE, clinicians, health care facilities and other providers.

The Advisory Committee

Despite the failure to enact legislation in 2007 enabling the formation of an Illinois HIE, an Advisory Committee of HFS, the State Medicaid agency, continued the examination and discussion by Illinois stakeholders of HIT implementation.⁴² That Advisory Committee continues to operate today under the auspices of OHIT, and is a valuable resource for Illinois stakeholder engagement. It is anticipated that the Advisory Committee will continue to function under the auspices of OHIT until such time as the Authority constitutes an "Illinois HIE Advisory Committee" in accordance with the provisions of the Authority's enabling legislation.⁴³

The Advisory Committee includes representation from hospitals and universities, businesses, FQHCs, physicians, nursing homes, insurers, advocates, pharmacies, rural health providers, legislators, the City of Chicago Public Health Department, state agencies and the Governor's Office. The goal of the Committee is to advise the State on matters relating to statewide HIE and to support progress toward a statewide HIE. Membership and participation in the Advisory Committee continues to expand to reflect the increased breadth and depth of interest in statewide HIE and the need for representation among all stakeholders.

Principal State of Illinois HIE Resources

The Authority

In the spring of 2010, both houses of the Illinois General Assembly passed legislation for the formation of an Illinois Health Information Exchange Authority (Authority).⁴⁴ The 2010 legislation places the governance of an Illinois HIE under a new agency of the State of Illinois, with the flexibility to explore public-private partnerships and funding sources. The enabling legislation was signed by Governor Quinn in July, 2010.

Purpose

The Illinois General Assembly has stated that the State of Illinois should create a statewide HIE in order to:

- Provide a framework for the exchange of health information and
- Encourage the widespread adoption of electronic health systems and the use of EHRs among health care providers and patients.

³⁹ Created by Public Act 94-646, effective Aug. 22, 2005.

⁴⁰ http://www.idph.state.il.us/ehrtf/Draft%20Report/EHR%20Taskforce%20Report_Plan%20Dec%202006.pdf

⁴¹ Illinois Health Information Network Act, HB 1254 (2007)

⁴² <http://www.hie.illinois.gov/advcomm.html>

⁴³ Illinois Health Information Exchange and Technology Act, HB6441 (2010) [The IHiet Act], sec. 15(f).

⁴⁴ The IHiet Act

Illinois HIE Strategic & Operational Plan

Governance

The Governor of the Illinois, with the advice and consent of the State Senate, is to appoint an Executive Director of the Authority, and eight members of the Authority's Board of Directors. In addition, the Board shall have five ex-officio members from designated State agencies, which include the State agencies administering the State's Medicaid and public health programs [See Appendix B; Figure 3].⁴⁵ It is anticipated that the Executive Director and Board of Directors will be nominated in November 2010.

Powers and Duties

The Authority has been delegated regulatory powers, which are to be exercised in accordance with the procedures applicable to Illinois state agencies under the Illinois Administrative Procedure Act. Specifically, the Authority has the following declared powers and duties:

- Create and administer the Illinois HIE using information systems and processes that are secure, are cost effective, and meet all other relevant privacy and security requirements under State and federal law.
- Establish and adopt the standards and requirements for the use of health information and the requirements for participation in the Illinois HIE by persons or entities, including health care providers, payers, and local HIEs.
- Establish minimum standards for accessing the Illinois HIE to ensure that the appropriate security and privacy protections apply to health information, consistent with applicable federal and state standards and laws.
- Suspend, limit or terminate the right to participate in the Illinois HIE for non-compliance or failure to act, with respect to applicable standards and laws, in the best interests of patients, users of Illinois HIE or the public, and seek all remedies allowed by law to address any violation of the terms of participation in the Illinois HIE.
- Identify barriers to adoption of EHR systems, including researching the rates and patterns of dissemination and use of EHR systems throughout Illinois.
- Address gaps in the delivery of care, and evaluate such gaps and provide resources where available, giving priority to health care providers serving a significant percentage of Medicaid or uninsured patients and in medically underserved or rural areas.
- Prepare educational materials and educate the general public on the benefits of EHR, the Illinois HIE and the safeguards available to prevent unauthorized disclosure of personal health information.

Public-Private Funding

The Authority has the power to charge and collect fees from any health care provider or entity, and to solicit and accept grants, loans, contributions, or appropriations from any public or private source. Moneys collected by the Authority are to be held in a special HIE Fund, which is a separate fund outside the State treasury, and such moneys are not subject to appropriation by the General Assembly. It is anticipated that the Authority will seek significant resources from the private sector for the creation of the Illinois HIE, and will explore with the Illinois Finance Authority potential capital market opportunities for supporting the implementation of the statewide HIE and the adoption in Illinois of EHR systems.

⁴⁵ The IHIE Act sec. 15(d). The five ex-officio Directors are: the directors of the Illinois Department of Healthcare and Family Services, the Illinois Department of Public Health, and the Illinois Department of Insurance, the Secretary of the Illinois Department of Human Services, or their designees, and a designee of the Office of the Governor.

Illinois HIE Strategic & Operational Plan

State Agency Participation

Illinois State agencies are required to provide patient-specific data to the Illinois HIE and otherwise participate in the exchange of health information with the Illinois HIE by no later than Jan. 1, 2015. An inter-agency task force has been established to facilitate the exchange of information regarding the deployment of HIT.

Liability and Disclosure

The Authority's enabling legislation grants certain users of the Illinois HIE immunity from liability from damages arising from the user's reliance on the Illinois HIE. Specifically, the legislation provides that any health care provider who relies in good faith upon any information provided through the Illinois HIE in his, her, or its treatment of a patient shall be immune from criminal or civil liability arising from any damages caused by such good faith reliance. This immunity does not apply to acts or omissions constituting gross negligence or reckless, wanton, or intentional misconduct.

The IL HIE Act expressly protects the confidentiality of certain health information provided to the HIE from discovery in civil litigation or from disclosure in response to a Freedom of Information Act request. All health information which is collected by the HIE for public health purposes is deemed by the IL HIE Act to be "privileged and confidential" under the Illinois Code of Civil Procedure, and all health information in the possession of the Authority is expressly exempt from inspection and copying under the Freedom of Information Act.⁴⁶

OHIT Staff Resources

In February, 2010, Governor Quinn created OHIT within the Office of the Governor to promote the development of HIT, increase the adoption and Meaningful Use of EHRs, assure the privacy and security of electronic health information, and direct Illinois' HIE planning efforts. The State's HIT Coordinator was named the Director of OHIT, which now serves as the focal point for the coordination of all HIT efforts throughout Illinois. While maintaining a close working relationship with HFS and other Illinois State agencies, OHIT has hired its own finance, technology and legal subject matter experts and staff, whose primary responsibility is to facilitate the development and implementation of HIE in Illinois. It is anticipated that until such time as the Authority becomes fully operational with its own staff resources, OHIT will provide the Authority subject matter expertise and administrative assistance pursuant to an inter-agency agreement.

Privacy and Security Work Group

The Advisory Committee has several work groups, including the Privacy and Security Work Group. The current Privacy and Security Work Group is a successor to the HISPC-Illinois II Privacy and Security Work Group and the Legal Work Group, which concluded their work 2007. Since 2007, the environment for the development and implementation in Illinois of HIE has significantly changed. Principal developments include:

- the creation by the State of Illinois of 16 defined Medical Trading Areas throughout Illinois and the initiation within each Medical Trading Area, through the awarding by the State in 2009 of \$3 million in grants, of dialogue among the local HIE stakeholders regarding the creation of a local and/or statewide HIE;
- the commitment of the federal government to the national development of HIE through the passage of the HITECH Act (within the American Reconstruction and Reinvestment Act of 2009),

⁴⁶ The IHIE Act sec. 20(11)-(12)

Illinois HIE Strategic & Operational Plan

including the creation of financial incentives for the adoption and Meaningful Use by health care providers of EHRs and the electronic exchange of health information;

- the introduction of significant national health care system reform with the passage by the US Congress in 2010 of the America's Affordable Health Choices Act;
- the creation of the Illinois HIE Authority in 2010;
- the reduction in Illinois State government budgetary resources, and the resulting heightened interest in utilizing State resources more efficiently and the leveraging of private sector resources in public-private joint initiatives;
- advances in information technologies affecting the nature and cost of data storage and transmission systems; and
- Heightened public awareness of the benefits and risks of Internet-enabled services and the storage and transmission of personally identifiable information.

The Privacy and Security Work Group has undertaken to:

- Review the alignment of Illinois law with the new requirements for privacy and security included in the HITECH Act and subsequent federal regulations;
- Review the State's privacy and security principles in relation to the development and implementation of a state-level exchange, operating within a national (NHIN) and interstate exchange environment with evolving technologies;
- Consider what revisions to Illinois law or regulations may be necessary or desirable with respect to privacy and security;
- Consider what revisions may be necessary or desirable to the three uniform model consent forms developed as part HISPC-Illinois II; and
- Consider the form of a data use and reciprocal support agreement (DURSA) for use by the Illinois HIE and its participants.

It is anticipated that the Privacy and Security Work Group of the Advisory Committee will continue to function under the auspices of OHIT until such time as the Authority constitutes an "Illinois HIE Advisory Committee" in accordance with the provisions of the Authority's enabling legislation.⁴⁷ The Advisory Committee of the Authority will likely form several work groups, including one addressing privacy and security issues.

The Privacy and Security Work Group is a valuable resource for Illinois stakeholder engagement, and includes representation from health care providers, attorneys, IT consultants, universities, businesses, insurers, advocates, Illinois State agencies and the Governor's Office.

Legal Overview

The development and implementation of a statewide HIE in Illinois is affected by federal and state laws and regulations which impose disclosure restrictions on certain custodians of health information data (specifically, "covered entities" and "business associates"), and require advance patient consent (authorization) to exchange health information through an HIE in certain circumstances. Such laws can affect the architecture and operation of HIEs in Illinois, including influencing what type of providers can participate in the HIE, what type of health information can be sent to or retrieved from the HIE, and for what purpose health information can be exchanged. The implementation to date of HIEs has been limited in Illinois and principally implemented among affiliated parties; the practical application of

⁴⁷ The IHIE Act sec. 15(f).

Illinois HIE Strategic & Operational Plan

current federal and state laws and regulations to the development and implementation in Illinois of HIEs with unaffiliated third parties is being currently explored.

General Privacy Protection of Health Information: Federal Law

Under the federal Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule,⁴⁸ disclosure of “individually identifiable health information” is generally prohibited without the patient’s authorization.⁴⁹ Use or disclosure of protected health information (PHI) is, however, permitted without the need to obtain the patient’s authorization for: treatment, payment or health care operations (TPO)⁵⁰ A health care provider may use or disclose PHI without patient consent to avert a serious threat to health or safety,⁵¹ or to a “business associate” from whom it has received satisfactory written assurances that the business associate will appropriately safeguard the information.⁵² Depending on the business and technical nature and functions of the HIE, it may be possible to implement HIE through an HIE for certain data without needing to obtain in advance express patient authorization for the exchange of such health information through the HIE.

Specially-Protected Health Information: Federal Law

Federal law accords heightened privacy protection for certain types of health information (“specially-protected health information”). Specifically, federal substance abuse treatment regulations, which govern health care providers that are federally-assisted substance abuse treatment programs, set restrictions on the exchange of health information without patient authorization, even for treatment purposes.⁵³ In addition, under HIPAA a patient’s authorization is generally required to use or disclose psychotherapy notes.⁵⁴ The exchange of such specially-protected health information through an HIE will generally require advance patient authorization to comply with federal law.

General Privacy Protection of Health Information: Illinois Law

The Illinois Medical Patient Rights Act,⁵⁵ which dates back to 1989, prior to the HIPAA Regulations, provides that a custodian of health information shall “refrain from disclosing the nature or details of services provided to patients” without the patient’s authorization. The Medical Patient Rights Act contains certain exceptions to this restriction which are conceptually similar to the HIPAA Privacy Rule’s “TPO” exceptions, but are arguably drafted in a more limiting manner. The Medical Patient Rights Act does not expressly recognize the existence and role of “business associates” and their non-medical ancillary/agency role in the delivery of health care. While the HIPAA Regulations provide an express basis for invoking a “TPO” and “business associate” exception to justify the disclosure of non-specifically-protected PHI without prior patient authorization to an HIE, the potential availability of similar exceptions under current Illinois law is less clear, and will depend on the business and technical nature and functions of the HIE.

⁴⁸ 45 C.F.R. Part 160 and Subparts A and E of Part 164

⁴⁹ 45 C.F.R. § 164.508(a)(1).

⁵⁰ 45 C.F.R. § 164.506

⁵¹ 45 C.F.R. § 164.512(j)

⁵² 45 C.F.R. § 164.502(e). In the pending proposed amendments, the definition of a “business associate” (§ 160.103) is amended to expressly include a “Health Information Organization” (referred to in the HITECH Act as a “Health Information Exchange Organization”).

⁵³ 42 U.S.C. § 290dd-2d, 42 C.F.R. Part 2; Substance Abuse & Mental Health Services Administration (SAMHSA), Frequently Asked Questions - Applying the Substance Abuse Confidentiality Regulations to the Health Information Exchange (HIE), posted June 17, 2010, <http://www.samhsa.gov/HealthPrivacy/docs/EHR-FAQs.pdf>.

⁵⁴ 45 C.F.R. § 164.508(a)(2).

⁵⁵ 410 ILCS 50/0.01 et seq.; see also Hospital Licensing Act, 210 ILCS 85/ 6.17d.

Illinois HIE Strategic & Operational Plan

Specially-Protected Health Information: Illinois Law

The State of Illinois, like many other states, has state laws that provide heightened privacy protection for certain types of health information. Specifically, Illinois, by statute, imposes specific patient consent requirements with respect to the disclosure of health information relating to alcoholism and drug abuse treatment, mental health and developmental disability services, testing for and treatment of HIV/AIDs/sexually-transmissible diseases, genetic information testing, treatment of child abuse or neglect, and treatment of sexual assault and abuse.⁵⁶ Because these statutes impose higher privacy standards than those imposed by the HIPAA Regulations, the Illinois statutory consent requirements must be complied with even when the disclosure of information would otherwise be permitted under the HIPAA Regulations without patient consent or authorization.

Security Standards

Under the HIPAA Security Rule,⁵⁷ a “covered entity” or “business associate” must comply with specific security standards regarding the confidentiality, integrity, and availability of stored PHI data, precautionary measures regarding reasonably anticipated threats and misuse, and workforce compliance measures. In addition to the security standards, specific rules address administrative safeguards, physical safeguards, technical safeguards, organizational requirements, policies and procedures and documentation requirements. The comprehensive federal standards include security “breach notification” response and reporting obligations. In general, Illinois law does not impose security standards in excess of the federal standards.

Removing Regulatory and Policy Barriers Identified in the Analysis

With the enactment of the Illinois Health Information Exchange and Technology Act,⁵⁸ the Illinois General Assembly has committed the State of Illinois to providing a framework for the exchange of health information in Illinois, encouraging the widespread adoption of electronic health systems and encouraging the use of EHRs among health care providers and patients. The focal point for these efforts will be a new State agency, the Authority, which will develop and implement the Illinois HIE, and promulgate standards for the exchange of health information in Illinois. Specific plans to attain these goals, including plans for addressing regulatory and policy barriers to the successful implementation of a statewide HIE, rest fully within the discretion of the Authority, which is in formation.

In the near term, until such time as the Authority becomes fully operational with its own staff resources, it is anticipated that OHIT will provide the Authority subject matter expertise, including strategic plan proposals. In the near term, this Strategic and Operational Plan with respect to the Legal and Policy domain includes the following actions.

Inaugurate Authority

OHIT is supporting the formation of the Authority’s Board of Directors and its Advisory Committee.

Identify Barriers

Identify regulatory and policy barriers to the successful implementation of a statewide HIE, utilizing the State and private sector resources discussed above; and

⁵⁶ e.g., Alcoholism and Other Drug Abuse and Dependency Act, 20 ILCS 301/30-5; AIDS Confidentiality Act, 410 ILCS 305/; Genetic Information Privacy Act, 410 ILCS 513/; Illinois Sexually Transmissible Disease Control Act, 410 ILCS 325/; Mental Health and Developmental Disabilities Confidentiality Act, 740 ILCS 110/.

⁵⁷ 45 C.F.R. § 164.306-16.

⁵⁸ The IHET Act

Illinois HIE Strategic & Operational Plan

Identify Remedies

Explore the routes potentially available in Illinois to formally address such regulatory and policy barriers, including:

- The clarification of the interpretation of current Illinois law through the issuance of guidance by the Authority, the Illinois Attorney General, or other appropriate State officials;
- The issuance by the Authority of regulations, in accordance with the procedures provided in the Illinois Administrative Procedure Act;
- The leveraging of the State's purchasing power, such as establishing contractual requirements for entities reimbursed by the State to participate in HIE, including e-prescribing, electronic laboratories results delivery and electronically sharing care summaries across unaffiliated organizations;
- The preparation of interstate compacts for enactment by the Illinois General Assembly regarding interstate cooperation mutually agreed with neighboring states with respect to health information exchange, including with respect to the enforcement of privacy and security laws in relation to violations that affect several states; and
- The enactment by the Illinois General Assembly of legislation amending current Illinois law.

While no current plans exist to modify or write new legislation specific to HIE in Illinois, future modifications are not precluded. Future legal analysis, modifications to existing state law/regulations and/or new legislation will be considered as necessary and advised by legal counsel as issues of concern arise and/or requirements dictate.

The Advisory Committee has expressed its belief that the most effective way to establish an HIE is to have as much participation and data as possible. The Advisory Committee has recommended that the Authority, while protecting patient privacy and security, adopt policies (including consent policies), that ensure maximum participation in the HIE. Further to such guidance from the Advisory Committee, OHIT proposes to examine in detail the latest research and evidence relevant to the various aspects of consent management, including empirical evidence regarding the effects of "opt-in" and "opt-out" consent policies on the development of HIEs, and report to the Advisory Committee and the Authority the results of the review. In connection with such research, OHIT may arrange one or more public forums for the purpose of collecting relevant data, stakeholder viewpoints and public comment.

The State of Illinois' privacy and security framework will be consistent with applicable federal law and policies, including all of the principles outlined in the HHS HIT Privacy and Security Framework, including: Individual Access; Correction; Openness and Transparency; Individual Choice; Collection, Use and Disclosure Limitation; Data Quality and Integrity; Safeguards; and Accountability. The Illinois General Assembly has expressly committed the Authority to administer the Illinois HIE "using information systems and processes that are secure, are cost effective, and meet all other relevant privacy and security requirements under State and federal law".⁵⁹ In addition, the General Assembly expressly noted that it created the Illinois HIE "to ensure that Illinois' health care providers can achieve the Meaningful Use of electronic records, as defined by federal law, and participate fully in HIT incentives available from the federal government under the Medicare and Medicaid programs".⁶⁰ In anticipation of the need to revise Illinois law and regulations to be consistent with applicable federal law and policies, the General Assembly expressly granted the Authority a limited exception to adherence to certain rulemaking procedures required by the Illinois Administrative Procedure Act with respect "to the

⁵⁹ The IHIE Act, sec. 20(2).

⁶⁰ The IHIE Act, sec. 5.

Illinois HIE Strategic & Operational Plan

adoption of any rule required by federal law when the Authority is precluded by that law from exercising any discretion regarding that rule”.⁶¹

At present the following developments are anticipated to occur in the near future at the federal level, which are near term dependencies in the State’s plan (and timeline) for the development of specific policies, accountability strategies, architectures and technology choices to ensure the full protection of health information through necessary or desirable modifications to Illinois law:

- Issuance of final standards regarding the National Health Information Network (NHIN) and the recently announced NHIN Direct Project (NHIN Direct); and
- Issuance of the final rule regarding “Modifications to the HIPAA Privacy, Security, and Enforcement Rules under Health Information Technology for Economic and Clinical Health Act”.

As noted above, the Illinois General Assembly has expressly committed the State to a policy “to protect and keep health information secure”, for HIE in Illinois to occur “in a secure environment”, and for the Authority to establish standards “to ensure that the appropriate security and privacy protections apply to health information, consistent with applicable federal and State standards and laws”.⁶² The statewide architecture and standards for health information will encompass principles fully consistent with the HHS’ 2008 “Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information”, including: individual access; correction; openness and transparency; individual choice; collection, use and disclosure limitation; data quality and integrity; safeguards; and accountability.

Strategies to Overcome Legal and Policy Challenges for Providers in Achieving Meaningful Use

In the near term, OHIT will pursue the following strategies to further the development and implementation of health information exchange in Illinois:

Leverage private sector engagement

With limited fiscal resources, the State of Illinois necessarily must engage with private sector stakeholders in HIE to address and resolve the challenges of developing and implementing a statewide HIE. Through the work groups of the Advisory Committee, appropriate forums exist for the exploration of cooperative solutions. With respect to the Legal and Policy domain, OHIT will continue to support the projects of the Privacy and Security Work Group, including projects underway to update the three uniform model consent forms developed as part HISPC-Illinois II, and the exploration of a data use and reciprocal support agreement (DURSA) for use by the Illinois HIE and its participants.

Coordinate State Resources

The Authority’s enabling legislation provides that agencies of the State are required to provide patient-specific data to the Illinois HIE and otherwise participate in the exchange of health information with the Illinois HIE by no later than Jan. 1, 2015. As discussed above, the HFS, IDPH, and DHS, are significant stakeholders in a statewide HIE. With respect to the architecture of a statewide HIE, OHIT will continue to work closely with HFS in its development and implementation of its State Medicaid HIT Plan and its exploration with CMS of proposals for cooperative planning and procurement activities within CMS Region 5. With respect to the Legal and Policy domain, OHIT will encourage the continued involvement of the State agencies in the deliberations of the work groups, including the Privacy and Security Work Group.

⁶¹ The IHiet Act, sec. 35.

⁶² The IHiet Act, sec. 5, 10(1), 20(3).

Illinois HIE Strategic & Operational Plan

Prepare Foundation for Educational Outreach and Debate

Any proposed changes to Illinois laws or regulations which may affect, or which may be perceived as affecting, the privacy and security of any patient health information, would require public scrutiny and debate, and would most likely require the involvement of publicly-elected officials. OHIT can facilitate the process of finding a common ground for the balancing of legitimate concerns of privacy protection and of optimizing the functioning of HIEs to drive quality of care improvements, efficiency and cost savings. Through the creation of opportunities for dialogue among all relevant stakeholders, and the preparation and publication of appropriate empirical information, OHIT can help inform the anticipated public debate.

Legal Framework to Facilitate HIE in Illinois

Illinois HIE Authority

As discussed above, with the enactment of the Illinois Health Information Exchange and Technology Act,⁶³ the Illinois General Assembly has provided for the creation of the Illinois HIE Authority which will develop and implement the Illinois HIE, and promulgate standards for the exchange of health information in Illinois.

General and special privacy protection of health information

As discussed above, both federal and Illinois law accord privacy protection to patient health information, requiring in respect of “specially-protected” health information patient authorization to the use and disclosure of such information. The practical application of current federal and state laws and regulations to the development and implementation in Illinois of HIEs with unaffiliated third parties is being currently explored.

Uniform forms and agreements

As discussed above, the Privacy and Security Work Group is presently exploring how development and implementation of health information can be facilitated through the development of model patient consent forms for use by health care providers in Illinois, and the development of a uniform data use and reciprocal support agreement (DURSA) for use by the Illinois HIE and its participants. The DURSA will be an integral component of the State’s trust framework to enable the secure flow of information among the Illinois HIE and its participants.

Framework to Develop Incremental Policy Development as Necessary Over Time

As discussed above, future policy development with respect to HIE in Illinois has been principally entrusted to the Authority. The current framework contains several safeguards to ensure that the development of privacy and security policy will occur in a transparent fashion.

Statutory Transparency Requirements

As an agency of the State of Illinois, the Authority’s policy development activities will be open to public involvement and subject to public scrutiny to the extent mandated by the Illinois Administrative Procedure Act, the Illinois Open Meetings Act and the Illinois Governmental Ethics Act.⁶⁴ In general, in connection with any rulemaking, the Agency will need to provide 45-days notice to the general public and to the Joint Committee on Administrative Rules of the Illinois General Assembly, and host public hearings in certain cases regarding the proposed rules.

⁶³ The IHIE Act

⁶⁴ 5 ILCS 100/; 5 ILCS 120/; 5 ILCS 420/.

Illinois HIE Strategic & Operational Plan

Stakeholder and General Assembly Engagement

The Authority's enabling legislature also includes several structural mechanisms to promote the Authority's ongoing engagement with relevant stakeholders and ongoing justification of its existence. The members of the Authority's Board of Directors will be appointed by the Governor (with the advice and consent of the Senate) for only three-year terms, on a staggered basis, so that fresh appointments to the Board are anticipated annually, with resulting annual engagement of the Illinois Senate. The Board is to select the members of an Advisory Committee, who are to be reimbursed their reasonable travel and meeting expenses of participating in the Committee's deliberations, for only two-year terms. Finally, the enabling legislation provides that the Authority will be subject to automatic "sunset" elimination in ten years, unless sufficient support is found in the Illinois General Assembly to enact new legislation extending the Authority's mandate.

Public-Private Partnership

To the extent that the Authority is successful in attracting private sector investment for the development and implementation of the Illinois HIE, such private sector participation will likely be conditioned upon the involvement of such investors in the governance and management of any joint projects. Such private sector involvement would create an additional set of stakeholders actively engaged in any incremental policy development of the Authority that impacts any joint projects.

Strategic Plan Periodic Review

In furtherance of the Authority's incremental policy development, it is anticipated that OHIT will propose a work plan for the Authority which includes attention to the adoption of a strategic plan and its periodic review, involving broad stakeholder input.

Plan to Ensure Adherence to Legal and Policy Requirements

OHIT anticipates that the Authority will establish an enforcement function within the Authority, under the direction of an experienced privacy and security professional. It is anticipated that within its first year of operation, the Authority will establish by inter-agency agreement the respective enforcement obligations of the Illinois Attorney General, the HFS Inspector General and the Authority in relation to the investigation and prosecution of violations of federal and state laws and regulations regarding privacy and security of protected health information. (Under the HITECH Act, the State Attorneys General were granted jurisdiction to prosecute in federal courts certain breaches of the federal HIPPA Regulations.⁶⁵)

OHIT anticipates that the Authority will establish a communication plan for informing the public of a person's rights and remedies with respect to the protection of PHI, as well as establishing a method for receiving complaints from the public regarding potential violations of PHI privacy and security. In addition, OHIT anticipates that the Authority will implement a program within which each participant in the Illinois HIE will need to annually certify its compliance with applicable privacy and security standards. The Authority might require such certification to be secured by each participant from an approved independent third party auditor. It is anticipated that the Authority will also conduct periodic privacy and security audits of all Illinois HIE participants.

Risk mitigation

The Authority will adopt breach notification and other policies designed to mitigate the potential harm to patients from the unauthorized use or disclosure of their health information.

⁶⁵ Pub. L. 111-5, §13410(e).

Illinois HIE Strategic & Operational Plan

Enforcement of contractual obligations of the Authority

In order to gain access to the Illinois HIE, each participant will need to enter into a data use agreement. It is anticipated that privacy and security requirements will be reflected in the contractual arrangements under which participants are allowed to utilize the Illinois HIE, and that the Authority may also pursue civil enforcement proceedings in response to breaches of such contractual provisions.

Annual evaluation of policies and legal agreements related to HIE

OHIT anticipates that the Authority will implement a program for annually evaluating the internal privacy and security policies of Illinois HIE participants, including review of the agreements of such participants with “business associates” with whom patient health information has been shared.

Interstate issues

It is estimated that ten percent (10%) of the patient health information generated in Illinois is delivered to patients and providers outside of the State⁶⁶. Illinois is therefore keenly aware of the need to develop and implement a statewide HIE which will facilitate interstate exchange, particularly with recipients in Illinois’ neighboring States of Indiana, Wisconsin, Iowa, Missouri and Kentucky. The interstate exchange of protected patient health information raises legal issues under the laws of both Illinois and the laws of other States significantly involved in the exchange transactions. Illinois has already established contact with the State HIT Coordinators in the surrounding states to discuss general strategy to achieve HIE and signal intent to work cooperatively with them in the future on interstate exchange. Although the specific strategies, timelines and technical requirements of other states are not yet known in advance of the completion of their Strategic and Operational Plans, Illinois will review those plans and begin discussions with bordering states in the near future about how to align and coordinate appropriate activities and resources. Illinois looks forward to participation in regional meetings and technical assistance opportunities facilitated by the ONC to address these critical interstate issues.

Cooperation with CMS Region 5 Member States

OHIT is working closely with HFS on the development of the State Medicaid HIT Plan. The two entities share a common vision to accelerate adoption and Meaningful Use of EHR among Medicaid providers and improve the quality and efficiency of health care for the 2.5 million Illinois patients covered by Medical Assistance programs. HFS, with OHIT involvement, has been actively exploring with CMS cooperative planning and procurement activities involving the States of CMS Region 5 (IL, IN, MI, MN, OH, WI), with implications for the development and implementation of interstate HIE. OHIT proposes to continue and develop ongoing discussions with other CMS Region 5 States regarding interstate HIE, including relevant legal and policy issues affecting interstate exchange.

Participation in State Health Policy Consortium (SHPC) Proposals

The State of Illinois, through OHIT, has agreed to participate in a State consortium group involving six “Upper Midwest” States (IA, IL, MN, ND, SD, WI) in applying for technical assistance resources from the ONC to resolve policy issues, in particular privacy and security issues, to exchange health information across States. Regardless of the outcome of the SHPC award process, OHIT proposes to continue and develop ongoing discussions with other “Upper Midwest” SHPC States regarding legal and policy issues affecting interstate exchange.

⁶⁶ NORC at the University of Chicago, “Health IT Adoption & HIE Participation in Illinois”, Aug. 21, 2009.

Illinois HIE Strategic & Operational Plan

Bilateral State Contacts

The Director of OHIT and other members of OHIT's staff have had contacts with their counterparts from other states engaged in HIT policy and planning. OHIT proposes to leverage existing relationships and continue and develop discussions with other states regarding interstate HIE, including relevant legal and policy issues affecting interstate exchange.

NHIN

The State of Illinois looks forward to the further development of the NHIN and the recently announced NHIN Direct Project (NHIN Direct). OHIT welcomes and encourages the development of national standards and a national architecture for the exchange of health information. OHIT looks forward to the clarification of the role of NHIN and NHIN Direct as an "entry level" exchange option, which is "meant to enhance, not replace, the capabilities offered by other means of exchange" ("There is No 'One-Size-Fits-All' in Building a Nationwide Health Information Network", A Message from Dr. David Blumenthal, May 14, 2010⁶⁷).

To the extent that the further development of NHIN and NHIN Direct may lead to the promulgation of new federal regulations, standards or guidelines, their interaction with the laws and regulations of the State of Illinois and with the policies of OHIT, the Authority, and other Illinois State agencies will be promptly reviewed and addressed. In the event that the Authority may need to engage in rulemaking to comply with federal law, the Authority's enabling legislation expressly envisions such a possibility, and provides that such rulemaking by the Authority is exempt from the procedures for rulemaking provided for under the Illinois Administrative Procedure Act⁶⁸.

⁶⁷

http://healthit.hhs.gov/portal/server.pt?open=512&objID=1959&parentname=CommunityPage&parentid=4&mode=2&in_hi_userid=10741&cached=true

⁶⁸ The IHIE Act, sec. 35.

Operational Plan

Illinois HIE Strategic & Operational Plan

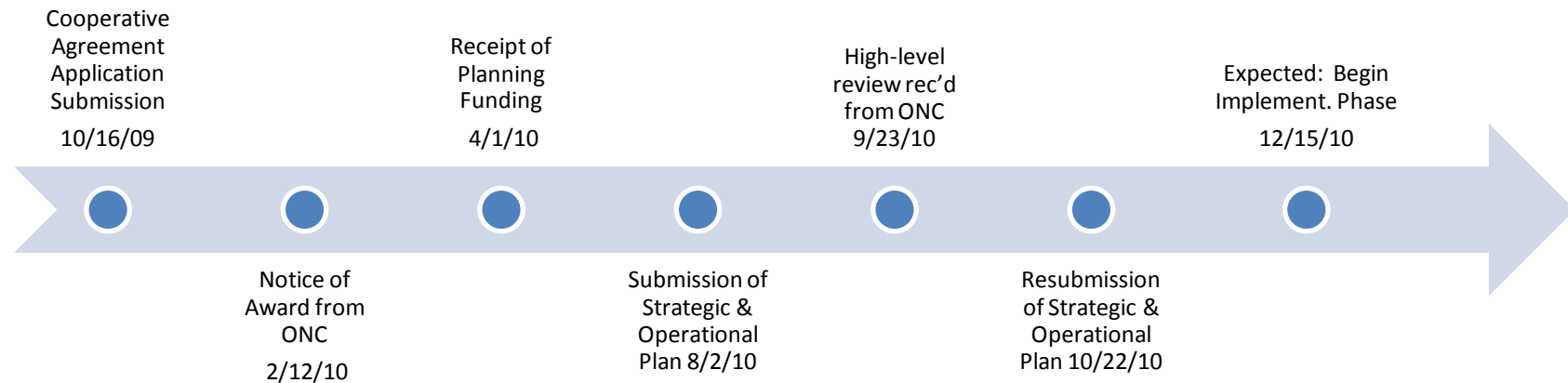
Operational Plan

The following Operational Plan describes the overall timeline for the key activities, milestones and tasks associated with Illinois' Strategic Plan to achieve statewide HIE. Timelines and tasks are most specific in the early phases of the four-year Cooperative Agreement period and more general in later years, which reflects Illinois' intent to continually evaluate, revise and update the Operational Plan accordingly to achieve the goals and objectives identified in the preceding Strategic Plan.

The implementation of statewide HIE in Illinois will be largely driven by the federal framework and timelines established by the HITECH provisions of ARRA, including activities to support and facilitate the EHR Incentive Program for Medicaid and Medicare providers, goals for inter-state exchange, and participation in the Nationwide Health Information Network (NHIN).

Timeline

Illinois began the planning phase of the State HIE Cooperative Agreement Program upon receipt of the planning funds on April 1, 2010. The timeline below reflects key dates of Illinois' participation in the Program:



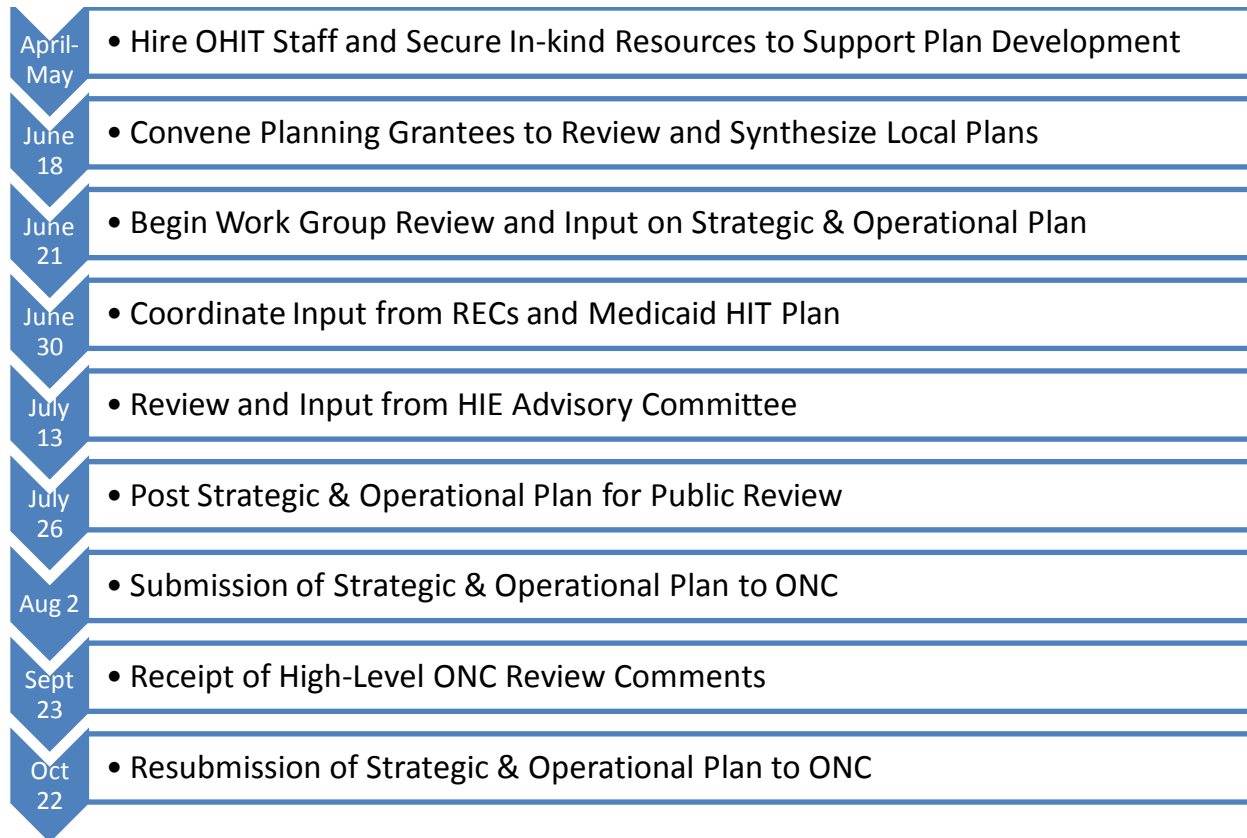
Due to the condensed timeline between the receipt of funds in April and the deadline for submission of the Strategic and Operational Plan in July, OHIT elected not to engage a strategic planning vendor to assist with the development of the Strategic and Operational Plan as had been planned in the State's October 2009 State Cooperative Agreement Program application submission. It was determined that the most efficient and cost-effective way to conduct the process in the time allotted was to utilize OHIT staff and existing resources of the statewide HIE Advisory Committee and HIE Planning Grant Program to complete this process.

Illinois HIE Strategic & Operational Plan

Process

The figure below depicts the process and timeline OHIT developed to complete the Strategic and Operational Plan:

Illinois HIE Strategic & Operational Planning Process April 1 – October 22, 2010



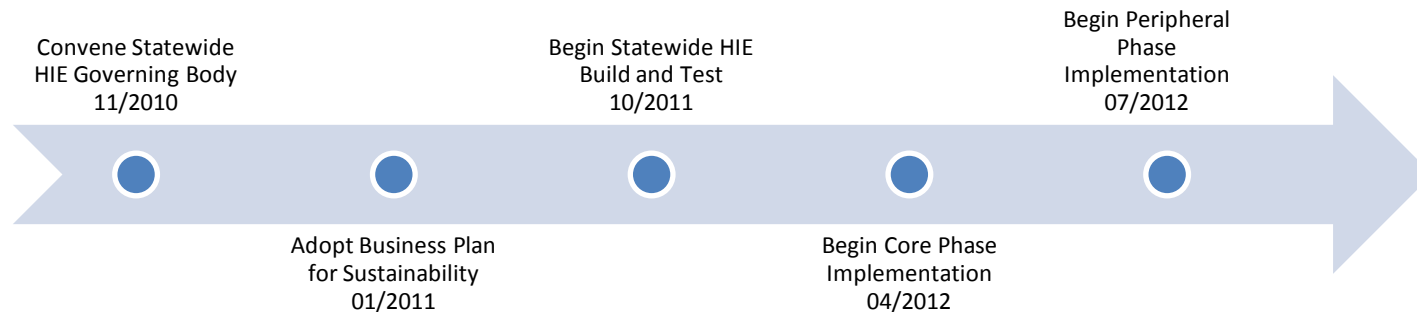
Illinois HIE Strategic & Operational Plan

Illinois' Operational Plan was developed based on the guidelines issued by ONC through the State HIE Cooperative Agreement Program. The approach to developing the Operational Plan was guided by the following principles:

- 1) Implementation must be incremental
- 2) Plans must be flexible to adapt to evolving federal framework and standards
- 3) Process must be transparent and open to all interested parties
- 4) Statewide HIE must demonstrate and deliver value
- 5) Costs must be shared across beneficiaries
- 6) Statewide HIE must maintain consistency and interdependence with other health care transformation efforts

Following this approach, the Operational Plan addresses program requirements outlined in the State HIE Cooperative Agreement Program Funding Opportunity Announcement across the five domains. It reflects the high level of interdependency among the many strategies and tasks that cross multiple domains. Plans for coordinated activities with other states also are distributed in relevant tasks across the five program domains.

Illinois HIE Implementation Timeline



Illinois HIE Strategic & Operational Plan

Risk Mitigation

Illinois' Operational Plan supports and is predicated largely upon the federal framework and investment in HIT authorized under the HITECH provisions of ARRA. If the EHR incentive payments and federal funding for HIE infrastructure are not expended as planned, it will put Illinois' plan to facilitate statewide HIE at significant risk. Illinois' development of a long-term governance and financial sustainability model is intended to mitigate the risk of eventual decline of federal investment in HIT, but the support provided by the State HIE Cooperative Agreement Grant Program, Regional Extension Center Program and EHR Incentive Program are crucial to enabling the successful development of HIE infrastructure and accelerating the widespread adoption of EHR. Other risk mitigation strategies and associated tasks are distributed throughout the remainder of this document with the relevant program domains.

Strategies

The tables labeled "Tasks and Timeline" in the sections that follow detail the tasks associated with relevant strategies across the five program domains, including the resources that will be deployed to achieve them and the timelines for completion. The multiple interdependencies between and among domains are detailed throughout the task list and timeline. They are labeled as such in the resources column along with the interdependent domain (e.g. "Interdependent – Legal & Policy"). A list of abbreviations is included at the end of the Operational Plan document.

Communications

Purpose: To increasing public awareness of the HIE initiative, and facilitate transparency and public participation.

Goals:

- Inform, educate, and engage health care providers and organizations, the public, and other key stakeholders about the benefits of EHR adoption and use, and HIE-related activities in Illinois
- Communicate messages in a way that helps foster public trust and active participation in the HIE
- Engage key stakeholder organizations and work cooperatively with them to communicate important information to their members and constituents

A comprehensive strategy for communications, education and outreach will be critical to the development of the Illinois HIE. The HIE will be successful only by gaining the trust and buy-in of consumers and having them actively participate in the process.

Illinois HIE Strategic & Operational Plan

COMMUNICATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
INCREASING PUBLIC AWARENESS OF HIE INITIATIVE, FACILITATE TRANSPARENCY & PUBLIC PARTICIPATION				
1	Launch Illinois HIE Website and Listserv to increase public awareness of the HIE initiative, and facilitate transparency and public participation (www.hie.illinois.gov)	HFS	March, 2009 Status: COMPLETED	100
2	Build listserv and regularly disseminate key information to stakeholder groups regarding HIE in Illinois and nationwide	HFS; OHIT; Stakeholders	March, 2009 – January, 2014 Status: IN PROGRESS	20
3	Launch Illinois HIE Wiki as a resource for Illinois HIE Planning Grantees (illinois-hie.wikispaces.com)	HFS	June, 2009 Status: COMPLETED	100
4	Communicate with Illinois HIE Planning Grantees via semi-weekly email updates, webinars and conference calls regarding the 6 domains of the Illinois HIE Planning Grants. Subject matter includes stakeholder engagement strategies, financial sustainability models, etc.	HFS; Illinois HIE Planning Grantees	June, 2009 – June, 2010 Status: COMPLETED	100
5	Post Illinois HIE Advisory Committee meeting notices, agendas and minutes to HIE website to ensure an open and transparent process and foster public participation and trust	OHIT; IL HIE Authority	July, 2009 – January, 2014 Status: IN PROGRESS	20
6	Build awareness of HIE initiative through participation in public presentations, conferences, and webinars	OHIT	July, 2009 – January, 2014 Status: IN PROGRESS	20
7	Establish the Consumer Education and Public Awareness Work Group and develop work group purpose, goals, and objectives	OHIT	July, 2010 – January, 2014 Status: IN PROGRESS	100

Illinois HIE Strategic & Operational Plan

COMMUNICATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
INCREASING PUBLIC AWARENESS OF HIE INITIATIVE, FACILITATE TRANSPARENCY & PUBLIC PARTICIPATION				
8	Develop and implement a strategic messaging plan integrated with the efforts of the Regional Extension Centers and consistent with the State Medicaid HIT Plan, and in cooperation with local exchanges	OHIT; Consumer Education and Public Awareness Work Group; IL-HITREC; CHITREC	July, 2010 – January, 2014 Status: IN PROGRESS	50
9	Develop and implement a institutional message delivery system through collaboration with stakeholder partners	OHIT; Consumer Education and Public Awareness Work Group; Stakeholders	August, 2010 – January, 2014 Status: NOT STARTED	50
10	Create and maintain a web page for the Office of Health Information Technology on Facebook or related social networking sites	OHIT	October, 2010 – January, 2014 Status: NOT STARTED	-- --
11	Begin monthly webinars and/or conference calls for all interested stakeholders/consumers, each covering a different topic or domain	OHIT; Stakeholders; IL-HITREC; CHITREC	October, 2010 – January, 2014 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

Governance

Purpose: To create and implement a long-term governance structure that will establish oversight and accountability and facilitate participation in the statewide HIE in a manner that protects the public interest.

Goals:

- To oversee and facilitate, through the IL HIE Authority, multi-stakeholder participation in the governance of the statewide HIE
- To conduct the business of the IL HIE Authority in an open and transparent manner to foster public trust and buy-in
- To facilitate Illinois participation in interstate exchange and NHIN to ensure consistency with national standards and protocol

Risk Mitigation

The primary risks associated with the creation of a long-term governance structure relate to the timing, in advance of a statewide election, and the unprecedented financial and resource challenges that state government is facing. Illinois has attempted to mitigate these risks by creating the State Authority as a public-private entity in statute and by securing bi-partisan and unanimous support for the legislation that created it. The new statute also requires a large, multi-stakeholder advisory committee as a component of the State Authority to ensure continuation of and a sense of ownership in the state’s Strategic and Operational Plan from the private, as well as the public sector.

GOVERNANCE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
CREATION OF GOVERNANCE STRUCTURE FOR STATEWIDE HIE				
1	Appoint State HIT Coordinator to coordinate state participation in HIE, maintain active communication with federally funded HIT programs	Office of the Governor	September, 2009 Status: COMPLETED	100
2	Update EHR Taskforce of 2006 recommendations for statewide governance structure through multi-stakeholder process	IL HIE Advisory Committee; Governance Work Group	July – December, 2009 Status: COMPLETED	100

Illinois HIE Strategic & Operational Plan

GOVERNANCE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
CREATION OF GOVERNANCE STRUCTURE FOR STATEWIDE HIE				
3	Draft HIE governance legislation, the Illinois Health Information Exchange and Technology Act to provide a long-term governance structure for statewide HIE	HFS; Governance Work Group	January – February, 2010 Status: COMPLETED	100
4	Secure passage of HIE governance legislation by the Illinois General Assembly	OHIT; IL HIE Advisory Committee	February – April, 2010 Status: COMPLETED	100
5	Secure gubernatorial approval of HIE legislation, creating the HIE Authority to provide oversight and accountability of the HIE and foster public trust	Office of the Governor; OHIT	July, 2010 Status: COMPLETED	100
IMPLEMENTATION OF GOVERNANCE STRATEGY				
1	Publish all information regarding IL HIE Authority appointment process, meetings, policies and decisions on Illinois HIE website to encourage public participation and foster public trust	OHIT; IL HIE Authority	July, 2010 – January, 2014 Status: IN PROGRESS	7
2	Accept nominations for IL HIE Authority Board of Directors in an open and transparent manner (via www.appointments.illinois.gov)	OHIT; Office of the Governor	July – August, 2010 Status: COMPLETED	100
3	Engage additional stakeholder participation from patients, consumers, nursing, long-term care community on IL HIE Advisory Committee and Work Groups	OHIT	July, 2010 – January, 2014 Status: IN PROGRESS	10

Illinois HIE Strategic & Operational Plan

GOVERNANCE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
IMPLEMENTATION OF GOVERNANCE STRATEGY				
4	Accept nominations for IL HIE Advisory Committee in an open and transparent manner (via appointments.illinois.gov)	OHIT; IL HIE Authority Board of Directors	July, 2010 – September, 2010 Status: COMPLETED	100
5	Provide recommendations to IL HIE Authority regarding composition and representation of Advisory Committee	Governance Work Group; OHIT	August – September, 2010 Status: IN PROGRESS	50
6	Appoint IL HIE Authority Board of Directors representing broad-based stakeholders and the broad geography of the state	Office of the Governor	September – October, 2010 Status: IN PROGRESS	25
7	Appoint IL HIE Advisory Committee representing broad-range of diverse stakeholders to ensure accountability and foster public trust	IL HIE Authority Board of Directors	November, 2010 Status: NOT STARTED	-- --
8	Establish and update bylaws and policies for operation of HIE Authority to establish procedures for carrying out its statutory responsibilities including: safeguarding privacy and security of HIE; ensuring accountability and maintaining fiscal integrity of the HIE	IL HIE Authority Board of Directors INTERDEPENDENCY: LEGAL & POLICY	November, 2010 Status: NOT STARTED	-- --
9	Adopt standards for participation in the statewide HIE in accordance with State and federal laws and guidelines to facilitate widespread, interoperable HIE, participation in interstate exchange and NHIN developments to ensure consistency with national standards and protocols	IL HIE Authority Board of Directors INTERDEPENDENCY: LEGAL & POLICY TECH INFRASTRUCTURE BUSINESS & TECH OPS	November, 2010 – January, 2014 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

Finance

Purpose: To develop a business plan that will sustain the statewide HIE and provide necessary funding to operate and grow the ILHIE.

Goal: To produce a business model that will sustain the ILHIE with funding from participants and others who will use its functionality in such a way that provides a return on investment in the statewide HIE, thus encouraging adoption and full participation across the state.

The short-term (through 2011) financial needs of the statewide HIE will be met largely through the ongoing contributions of the State, in-kind contributions from statewide stakeholder organizations and the resources provided by the State HIE Cooperative Agreement Program. These resources will be coordinated and administered by OHIT. The long-term sustainability of the statewide HIE, including public and private resources, will be determined and administered by the IL HIE Authority, with support from OHIT, according to a well-researched and consensus business model. The table below details the tasks, resources and timelines associated with developing and implementing the sustainable HIE business model. Illinois' budget for the State HIE Cooperative Agreement program is attached as Appendix K.

Finance and Sustainability Work Group

The Finance and Sustainability Work Group of the ILHIE Advisory Committee will be a key resource in developing a business plan to financially sustain the statewide HIE. The work group is comprised of an expanding body of subject matter experts that have experience in various fields of finance including representatives from the payer community, large and small hospitals in both rural and urban settings, representation from the local HIE's, as well as clinical and technical staff. The work group has a regular meeting schedule and will be working to insure that timelines are met.

Risk Mitigation

Illinois will develop a sound business plan to support the long-term financial sustainability of the statewide HIE. While much of the value and revenue analysis will not be known until the process below is complete, Illinois intends to mitigate the risk of unknown financial figures by developing the infrastructure and technical services in an incremental way and maintain only those that deliver value to HIE participants and can be supported by identified revenue.

Illinois HIE Strategic & Operational Plan

FINANCE AND SUSTAINABILITY TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
DEVELOPING THE BUSINESS PLAN FOR THE STATEWIDE HIE				
1	Establish Finance and Sustainability Work Group and develop work group purpose, goals and objectives	OHIT	July – October, 2010 Status: COMPLETED	100
2	Expand the Finance and Sustainability Work Group to include subject matter experts to develop sound recommendations on revenue strategy	OHIT; IL HIE Authority	July – October, 2010 Status: IN PROGRESS	20
3	Complete a value analysis for all planned participants in the statewide HIE and forecast potential value for participants	OHIT; Finance and Sustainability Work Group ; IL HIE Authority; Vendor INTERDEPENDENCY: BUSINESS & TECH OPS	September – December, 2010 Status: IN PROGRESS	5
4	Determine operating costs of the statewide HIE beginning with implementation of core services and planned incremental phase-in of additional services	OHIT; IL HIE Authority INTERDEPENDENCY: TECH INFRASTRUCTURE	September – December, 2010 Status: IN PROGRESS	5
5	Conduct an analysis of financial models in use across the nation to determine the best practices and how they can be applied to the statewide HIE	OHIT; Finance and Sustainability Work Group ; IL HIE Authority; Vendor INTERDEPENDENCY: BUSINESS & TECH OPS	September – December, 2010 Status: IN PROGRESS	5
6	Develop a recommendation to the IL HIE Authority to define the fiscal relationship between the local and enterprise HIEs and the statewide HIE	OHIT; Finance and Sustainability Work Group ; IL HIE Authority	December, 2010 – January, 2011 Status: NOT STARTED	-- --
7	Review the recommended business plan and approve for public comment	IL HIE Authority	December, 2010 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

FINANCE AND SUSTAINABILITY TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
DEVELOPING THE BUSINESS PLAN FOR THE STATEWIDE HIE				
8	Solicit input from the public, stakeholders and others on the proposed business plan	OHIT, Stakeholders, Public	December, 2010 – January, 2011 Status: NOT STARTED	-- --
9	Refine the business plan and submit all components of the plan to the IL HIE Authority for approval	OHIT; IL HIE Authority	January, 2011 Status: NOT STARTED	-- --
10	Approve the business plan	IL HIE Authority	January – March, 2011 Status: NOT STARTED	-- --
11	Review the financial model quarterly to evaluate the performance of the plan to determine its ability to produce revenue and participation at desired levels.	IL HIE Authority	March, 2011 – January, 2014 Status: NOT STARTED	-- --
BUDGET				
1	Develop a comprehensive four year budget reflecting the planning and implementation phases as well as the remaining years and include within the four year budget a restructured FY 2011 Budget. (Please see Appendix K)	OHIT; IL HIE Authority	July, 2010 Status: COMPLETED	100
2	Develop a comprehensive four year budget reflecting the planning and implementation phases as well as the remaining years and include within the four year budget a restructured FY 2011 Budget. (Please see Appendix K)	OHIT; IL HIE Authority	September – October, 2010 Status: IN PROGRESS	65
3	Execute an interagency agreement between OHIT and the IL HIE Authority to formalize procedures needed to allocate budget and resources.	OHIT; IL HIE Authority	October – November, 2010 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

FINANCE AND SUSTAINABILITY TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
BUDGET				
4	Re-evaluate the proposed budget and develop adjustments required to meet the needs of OHIT and the IL HIE Authority for Federal FY 2012	OHIT; IL HIE Authority	July, 2011 Status: NOT STARTED	-- --
5	Re-evaluate the proposed budget and develop adjustments required to meet the needs of OHIT and the IL HIE Authority for Federal FY 2013	OHIT; IL HIE Authority	July, 2012 Status: NOT STARTED	-- --
6	Re-evaluate the proposed budget and develop adjustments required to meet the needs of OHIT and the IL HIE Authority for Federal FY 2014	OHIT; IL HIE Authority	July, 2013 Status: NOT STARTED	-- --
7	Evaluate the fiscal needs for the IL HIE Authority quarterly to determine if those needs are being met by current funding and develop an annual budget when required	IL HIE Authority	November, 2010 – January, 2014 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

Technology Infrastructure

The technical architecture of the statewide HIE will be developed to facilitate HIE for all providers and payers seeking to achieve Meaningful Use and support the obligations of the IL HIE Authority under the Illinois Health Information Exchange and Technology Act. The exchange of health information is a new technology that is developing rapidly. The standards for HIE are still being developed and the national goals (as expressed in the HITECH Act and the various stages of adoption expressed in the associated implementing regulations) are expected to evolve over time. Thus, the ILHIE must be designed for sufficient flexibility and the capability of growing and adapting.

Purpose: To guide the design and development of the architecture and infrastructure of the statewide HIE.

Goals: To ensure that statewide technology and interoperability planning supports the State's overall priority of improving healthcare outcomes and lowering costs through health information exchange.

Objectives:

- Assist in explaining the role of the IL HIE Authority and statewide HIE
- Support the effective use of EHR technology
- Provide support for other statewide HIE work groups
- Ensure adherence to federal data exchange standards throughout planning
- Provide input for Strategic and Operating Plan
- Identify core requirements for interoperability
- Assist in developing and defining data standards
- Develop and select uses cases specific to the statewide HIE
- Assist in developing business requirements
- Infrastructure development – Today, Tomorrow, Future

Risk Mitigation

At the end of each phase, progress will be reviewed and tasks and timelines will be adjusted as appropriate. This will allow for the adjustment of strategies as necessary based on experiences and new circumstances. The overall technology deployment plan will include a risk assessment and risk mitigation plan that will be re-assessed at the completion of each phase. The IL HIE Authority will approve all risk assessments and mitigation plans.

The overall project plan will include a “*trace back*” document that shows the requirements (directly or indirectly) that each task is addressing. Implementation Plans will include both User Acceptance Testing and Standards Compliance Testing that will be created in conjunction with

Illinois HIE Strategic & Operational Plan

OHIT, stakeholders and local HIEs to ensure that the ILHIE meets requirements statewide. Ongoing evaluation will identify “lessons learned” that will be applied to subsequent implementation phases, and, be reported to the ONC.

Technology and Interoperability Work Group

The Technology and Interoperability Work Group of the ILHIE Advisory Committee will provide a key resource to guide the design and implementation of the statewide HIE architecture. This work group is comprised of subject matter experts in information technology, technical architecture and EHR implementations. The work group also has a broad range of health care stakeholders representing patients and providers along the full continuum of health care. This work group convenes regularly to ensure that issues are addressed and goals and timelines are met.

Technology Architecture

The state of Illinois has initiated an RFI (see Appendix I) for the purpose of obtaining information from vendors related to the provision of products and services that can fulfill the requirements of a statewide Health Information Exchange. Responses from the RFI will allow OHIT to:

- Develop the “hows” related to the proposed core services functionality
- Identify any circumstances outside the ILHIE’s span of control and process to mitigate
- Assess vendor capability and scalability to meet the goals of the statewide HIE
- Revise, if appropriate based on findings, proposed timelines based on resource needs
- Reprioritize, if appropriate based on findings, implementation of core services

The subsequent RFP and contract award will identify:

- Vendor tasked with delivering the core services and their capacity to do so
- Prioritizations and timelines for proposed core services
- Resources required for developing, testing, and implementing these services

The proposed model for the statewide HIE infrastructure is a hybrid model, utilizing the local HIEs exchanging clinical data in a coordinated manner among autonomous components - while the ILHIE will serve as a centralized, secure communications/message routing hub ensuring connectivity among multiple local and enterprise HIEs; other state HIEs; NHIN; providers and other stakeholders that chose to use NHIN Direct rather than an HIE to exchange messaging data; Public Health Agencies (i.e., IDPH, local health departments); CDC; state and national data

Illinois HIE Strategic & Operational Plan

sources (i.e., payers for claim data, pharmacy benefit managers; Medicaid; national lab vendors). We expect that the local HIEs will segment traffic and stay within their HIE and only route core transactions to the ILHIE. The ILHIE will then route across all HIEs.

The first phase of implementation will focus on providing overall centralized HIE core services that will meet appropriate federal privacy and security standards. With a focus on Meaningful Use – Stage 1, the Master Patient Index, Record Locator and Provider Directory will be a priority for implementation as core resources to providers. Local and enterprise HIEs and providers will utilize these core services in implementing their health information exchange services. Each service listed below will be web-based services - accessible to authorized HIEs, payer and provider systems serving as a single “source of truth” for health exchange activities in Illinois:

- Master Patient Index
- Record Locator Service
- Provider Directory
- Payer Directory
- Public Health Entity Directory
- Authentication Services
- Consent Management
- Audit Services

HIE in Illinois is expected to evolve over time. The operational plan, therefore, takes an incremental, phased-in approach to implementation. Different components will become operational at different times. This will require that all components (e.g. provider systems, payer systems, local exchanges, ILHIE) must be designed with the ability to function independently if other components are not ready upon implementation. They must also be designed with the capability to plug into the other components of the exchange as they become operational. For example, a local HIE that goes live before the ILHIE becomes operational must provide MPI services to its affiliated provider systems. Once the ILHIE MPI becomes operational, that same local HIE must implement the capability to query the ILHIE MPI as part of providing MPI services to its affiliated provider systems. Compliance with these standards will be a requirement of participation in the statewide HIE.

Recognizing that standing up the full HIE model that ILHIE is proposing will require a timeline that extends into 2012, the ILHIE will undertake some short-term activities to address the health information exchange needs of eligible providers and eligible hospitals in 2011. These activities are intended as short term measures that will give providers a way to ease into health information exchange while they are implementing their own EHRs and waiting for local HIEs to come on line. They are also intended as a means of reaching out to some of the key players (pharmacies and laboratories) who do not receive EHR incentives directly and engaging them in the health information exchange effort.

Illinois HIE Strategic & Operational Plan

In summary, the primary areas of focus for **Year One** include:

- Collaborating with local and regional HIEs to help foster their growth, ensure statewide coverage, standardization of uses cases and implementation of transaction standards
- Procurement activities related to implementing ILHIE's full health information exchange capabilities
- Engaging Pharmacies to encourage them to develop their capability to participate in e-prescribing networks
 - a. Work with independent pharmacists' association to determine a strategy to address level of e-prescribing transactions
 - b. Utilize data from 2010 EHR Survey to further identify obstacles and barriers to implementing e-prescribing
- Engaging laboratories to encourage them to develop their capability to accept orders and to deliver lab results using the standards adopted under ARRA and its implementing regulations
 - a. The IL HIE Authority will ensure that the local HIEs provide results delivery capability as part of their initial set of capabilities implemented in 2011
 - b. For healthcare providers without local HIE services available in their area, the State will facilitate NHIN Direct capabilities, such as provider directories.
 - c. The State will utilize its contracting leverage to motivate local and national laboratories to deliver results electronically

OHIT's plan is not to compete with other exchange entities operating in the state. However, due to aggressive implementation timelines from the ONC, the local HIEs may be operational before the ILHIE. As a result, certain core services (e.g., MPI, RLS) may be duplicated. Duplication of certain functionality between the local HIEs and ILHIE is anticipated in the early phases of deployment. It is probable that a few of the local HIEs will be operational before the IL HIE. This approach allows activation of local core services independent of ILHIE activation. The ILHIE will focus on linking the local HIEs and will offer liaison services to providers when an HIE is not available in the providers' area. OHIT believes that this strategy will minimize competition and overlap of core services between the ILHIE and the local HIEs.

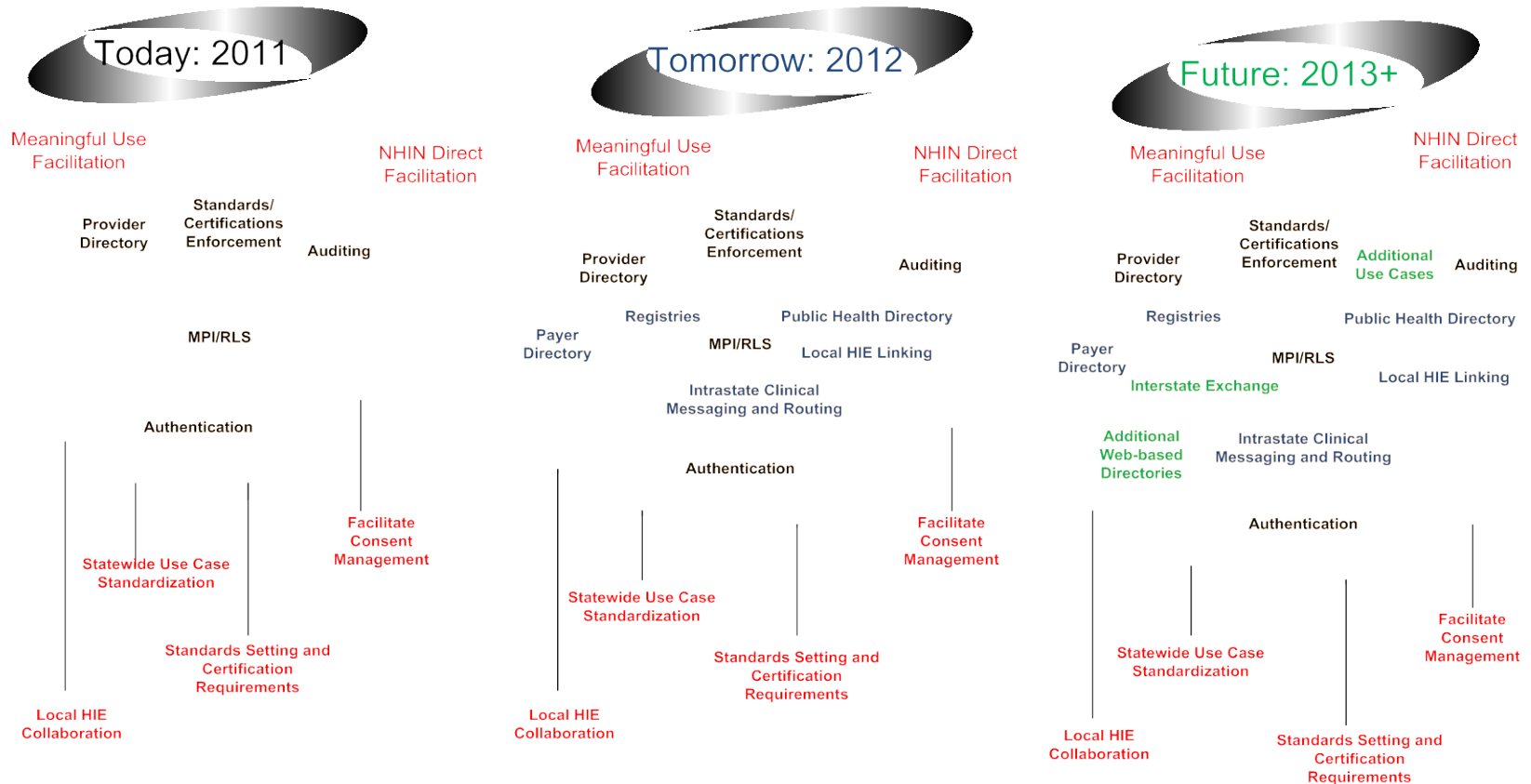
This implementation strategy has been reviewed with all ILHIE Work Groups and specifically with each Local HIE during their planning and developments phases to ensure collaboration and endorsement of the statewide approach.

The ILHIE has initiated an RFP (see Appendix J) to obtain a vendor to assist in developing the business model for the Statewide HIE. The Finance and Sustainability Workgroup of the Illinois Advisory Board is comprised of stakeholders, including representatives from the five local HIEs to ensure collaboration and agreement on both the ILHIE and local HIE approaches to sustainability.

The diagram below depicts a summarization of the planned implementation of ILHIE services. This diagram is meant to demonstrate that ILHIE proposed services will be provided and managed by a cloud-based service provider and implemented incrementally. Further, the diagram represents that the IL HIE Authority will have statewide oversight for convening, organizing, collaboration, standards setting, and certification to facilitate health information exchange in Illinois:

Illinois HIE Strategic & Operational Plan

Illinois Statewide HIE Evolution Plan



Tasks in Red = Authority Oversight

Illinois HIE Strategic & Operational Plan

Master Patient Index

Patient Identity Management is a key requirement for any HIE. Patient Identity Management is the ability to ascertain a distinct, unique identity for a patient, as expressed by an identifier that is unique within the scope of the exchange network, given characteristics about that individual such as his or her name, date of birth, gender, address or prior addresses, and identifiers such as medical record numbers or driver's license number.

The ILHIE will ensure the integrity of its patient database by utilizing a Unique Identifier (UID) for each patient. This UID will be the basis for providers to match their patients with available records. The ILHIE - Master Patient Index (MPI) will be initially populated from various sources including State Driver's License Files, Medicaid Claims data, and Commercial Claims data. The data uploaded into the MPI will be metadata and not clinical data. Subsequent patient data will be added through provider transactions.

The IHE PIX approach to patient matching is designed to minimize both false positives and false negatives. The PIX manager is a layer on an MPI that is operated within the exchange and each record in the PIX contains cross references to the medical record number (MRN) located at participating institutions, which translates the MRN of one provider to the MRN of another provider. The initial link between a provider MRN and an existing PIX record is accomplished through statistical matching. Errors are mitigated through probabilistic or deterministic matching. This approach is similar to deploying a record locator service; however, it leverages an independent MPI and independent Registry to separate the functions.

An example of the work flow and functionality is provided here:

When patients register at a hospital or physician provider's office, the EHR system will consult its internal MPI to determine whether the patient has previously been seen at that facility and a record exists in the internal MPI. If no record is found, the EHR system will transmit a query to the local HIE's MPI to determine if the patient is known to the local HIE. If the patient is known, the local HIE's Unique Record Number (URN) is returned to the inquiring EHR system along with known demographic data.

If the patient is not known to the local HIE's MPI, the local HIE's MPI will query the ILHIE MPI to determine if the patient is known at the state level. If the patient is known to the ILHIE MPI, the statewide UID is returned to the local HIE MPI along with known demographic data. If the patient is not known at the state level, a new record will be created with a UID and the result will be returned to the local HIE's MPI which in turn will create a new record and assign a regional URN.

The local HIE URN will be returned to the inquiring EHR system to be stored in the EHR system's MPI. This will occur real-time during the registration process in the hospital or physician provider's office.

Duplication of the MPI function between the local HIE and ILHIE is intentional in the early phases of deployment. It is probable that some of the local HIEs will go live before the IL HIE goes live and this approach allows local activation independent of ILHIE activation.

Illinois HIE Strategic & Operational Plan

The ILHIE - MPI will keep records of patient ID numbers from each system that registers a patient enabling the ILHIE to serve as a skeleton record locator system that can be used to guide inquiries from provider EHRs for patient records across local HIEs. Registration records sent to the ILHIE - MPI for each encounter will support reporting of surveillance data to IDPH/local public health departments giving them a source of de-identified activity data with visit reason-coding.

Record Locator Service

A Record Locator Service (RLS) provides determination of where a patient record may be found. The MPI and the RLS are coordinated software applications. Once a patient has been successfully identified and authorized, providers can use the RLS to retrieve a copy of the patient records stored in decentralized provider systems. The RLS contains pointers to locations of information for a patient. The RLS facilitates the exchange of secure messages and documents between a patient's providers, but does not store any of the information contained in the records.

Based on registration records submitted to the ILHIE - MPI, (see scenario in above MPI section), the ILHIE will be able to respond to on-line inquiries from HIEs and providers with a listing of providers that have previously registered the patient and therefore may be presumed to have health records available that are associated with that patient. Those providers can then be queried for a Continuing Care Document summarizing information on that patient via the local HIE or the ILHIE if the record is maintained by a provider that is associated with another intrastate or interstate HIE.

Web-Enabled Directories

The ILHIE will utilize directories to manage the exchange's user and workgroup registration, access rights, and security. Directories provide the mechanism to identify providers, health plans, labs, pharmacies, etc., determine credentials, and map access authorization within the HIE. Directories also provide the ability to monitor HIE participation levels, enable direct messaging to and from participants, and communicate important information about e-Health to HIE participants. Examples of these directories include:

- **Provider Directory:** provide a web-service that will be a directory of all physician practices, hospitals, long-term care providers, labs, etc. including electronic routing information to allow messages to be routed to listed providers. One of the sources of data will be the Department of Professional Regulation's database of licensed professionals. Another will be provider files from payers – including Medicaid and it is strongly hoped that a Medicare directory will be made available to the States for this purpose.
- **Payer Directory:** provide a web-service that will be a directory of all payers operating in Illinois. Includes electronic routing information to allow messages to be routed to listed payers.
- **Public Health Entity Directory:** provide a web-service that will be a directory of all public health entities operating in Illinois. Includes electronic routing information to allow messages to be routed to listed entities.

Illinois HIE Strategic & Operational Plan

Authentication Services

One of the services that the ILHIE will provide will be authentication of individual users, provider systems, public health systems and local exchange systems that are authorized to access the web services provided by the ILHIE. Local exchanges will be expected to manage authentication services for physician, hospital and other stakeholder systems connecting to the local exchange. Authentication standards will be required to match the standards established by ONC in order to allow participation in interstate data exchange via the NHIN. Once these standards are fully defined, the ILHIE will enforce these standards in Illinois using its ability to regulate connection to the statewide HIE and other regulatory capabilities in the legislation creating the IL HIE Authority.

Another service may be the authentication of data exchange partners exchanging information via the NHIN Direct protocols. The scope of this service will be determined by the specifications for NHIN Direct that ONC is currently developing. The Technology and Interoperability Work Group will address this topic during the detail design phase of the project.

Consent Management

The requirements of applicable State statute and HIPAA regulations will ultimately define the approach to consent management. The patient's decision to "opt-in" (patient agreement to include data in HIE); or "opt-out" (patient demands to exclude data from HIE) will drive what information may be transmitted through the HIE, with direct implications for the design and operation of the infrastructure. The various aspects of consent management options will be considered in conjunction with the privacy and security policies adopted by the IL HIE Authority.

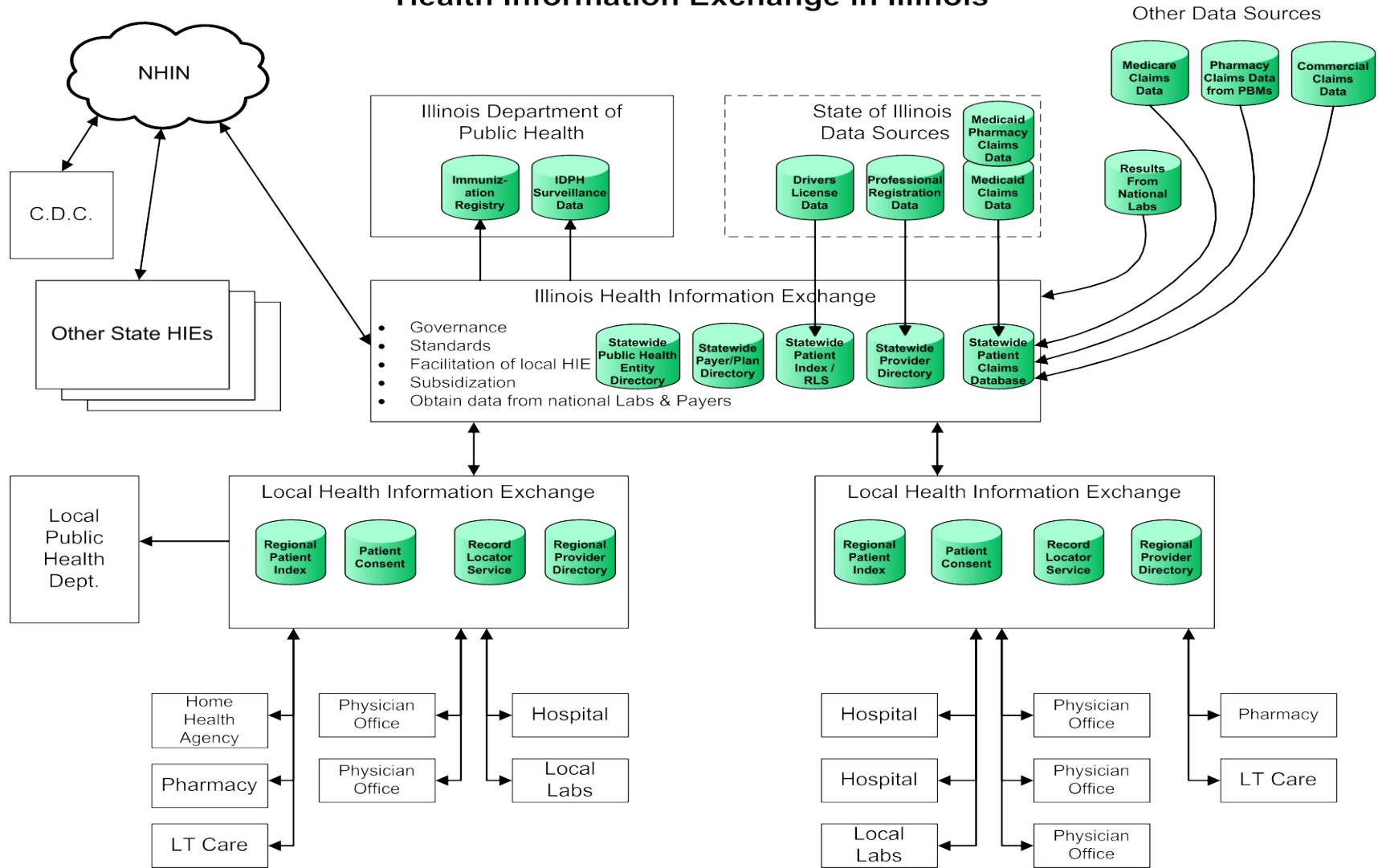
Knowledgeable observers suggest that the presumed inclusion of all patient information in the HIE, with the ability of a patient to "opt-out" if desired, is the critical success factor in achieving a critical mass of patient data quickly and making an HIE viable. However, under both federal and Illinois law, certain categories of information are "sensitive" requiring affirmative patient consent ("opt-in") to disclose PHI.

Consistent with guidance of the Advisory Committee, the statewide HIE will seek to maximize the patient information including "sensitive" PHI, available to the statewide HIE while fully conforming to the requirements and standards of federal and Illinois law; the standards set by - NHIN and NHIN Direct on architecture - including privacy and security; final Meaningful Use regulations; and the privacy and security policies of IL HIE Authority.

Illinois HIE Strategic & Operational Plan

The following diagram illustrates the statewide HIE's initial infrastructure design: See Appendix B, Figure 2 for full size diagram.

Health Information Exchange in Illinois



Illinois HIE Strategic & Operational Plan

Illinois Statewide Use Case Development

Use case development in Illinois is based on stakeholder value and prioritized by each Local HIE guided by a patient centered focus. Use Case development will be an iterative process that requires validation during the stages of health information exchange implementation throughout the state. The following illustrates planned Use Case deployment with some mapped to Meaningful Use criteria for each of the five established local exchanges.

Southern Illinois Health Information Exchange (HIESI)

Priority Rank	Use Case	MU Criteria met	Expected Implementation Date
1	Problems/Diagnosis	Care coordination-Patient Summaries	6/2011 - 9/2011
2	Allergies	Care coordination-Patient Summaries	6/2011 - 10/2011
3	Laboratory results	Lab Orders & Structured Results	6/2011 - 11/2011
4	Medications	e-prescribing-Formulary & Pharmacy	6/2011 - 12/2011
5	Imaging results	Image Orders & Results View	6/2011 - 1/2012

Illinois HIE Strategic & Operational Plan

Lincoln-Land Health Information Exchange (LLHIE)

Priority Rank	Use Case	MU Criteria met	Expected Implementation Date
1	Results delivery for non-interfaced EMR or paper-based environments	Not Applicable	Early 2011
2	Results and reports collection from source systems to provider EMRs	Care coordination-Patient Summaries	Early 2011
3	Order Generation	Lab Orders & Structured Results	Mid 2011
4	Physician to Physician Referrals	Care coordination-Patient Summaries	Late 2011-2012
5	Clinical Registries	Generate Lists of patients for quality improvement, reduction of disparities, research or outreach	2012

Metro Chicago Health Information Exchange (MCHIE)

Priority Rank	Use Case	MU Criteria met	Expected Implementation Date
1	Results Delivery	Care coordination-Patient Summaries	2 nd Q 2011
2	Clinical Summary	Care coordination-Patient Summaries	2 nd Q 2011
3	CCD	Care coordination-Patient Summaries	Mid 2011
4	Medications/Allergy List	Medication Reconciliation	3 rd Q 2011
5	Registry	Public Health – electronic immunization data submission to registries	4 th Q 2011

Illinois HIE Strategic & Operational Plan

Northern Illinois Health Information Exchange (NIHIE)

NIHIE is working with their Governance and Leadership Committees to detail Use Cases. Progress towards specifying Use Cases for the NIHIE is as follows:

- Use Cases will focus on the distribution and summary level consumption of summary level reports between different participants.
- NIHIE will be sharing continuing care summary documents (Acute Care, Ambulatory Care, and ED) with participants in the HIE that will be consumed by their source systems
- On the private HIE component; NIHIE is investigating use cases for reconfiguring lab results to our 148 reference lab sites. Currently this is being done using WebMD but alternatives are being investigated
- NIHIE is currently sending lab results outbound to three different EMR's and is also privately doing an HIE Demonstration Project using a Demonstration Grant from Cisco Systems

Quality Quest Health Information Exchange (QQHIE-Central Illinois)

The Central Illinois planning group has identified priorities for functionality which will drive Use Cases. The summary list provided below will be used as a guide during the planning stages. QQHIE's intention is to select a vendor/HIE product that would include ALL of the clinical elements at the point of launch. QQHIE is currently at the RFI stage to select our vendor, so expected implementation is dependent on that process.

QQHIE 2011 Priorities

- Display of an integrated list of current medications
- Display of an integrated list of current medical diagnoses
- Display of an integrated list of current allergies
- Display of emergency department episode information
- Transfer of documents between organizations
- Display Continuity of Care Document
- Display an integrated list of current prescriptions and refill requests
- Display inpatient discharge summaries
- Display outpatient episode information
- Display an integrated list of electronic clinical laboratory orders & results
- Display of an integrated personal health record to the patient

QQHIE 2012 Priorities

- Generate quality performance reports
- Generate pay for performance benchmarking reports

Illinois HIE Strategic & Operational Plan

Technology Deployment

The Technology and Interoperability Work Group is performing the tasks to begin the process of designing, building and implementing the statewide HIE:

- Refine the design requirements for the statewide HIE system architecture based on examination of use cases
- Examine vendor capability information gathered through the RFI process used by other stakeholder groups such as local HIEs
- Develop business and technical requirements for the ILHIE RFP which will include:
 - a. software
 - b. hardware
 - c. ongoing operation and management of the ILHIE systems
 - d. standards and certification for connecting to the ILHIE
 - e. implementation services
 - f. training services
 - g. help desk services (including escalation standards)
 - h. integration services (links with stakeholder systems)
 - i. outreach services (promoting connection to the ILHIE)
- Evaluate vendor responses
- Formulate vendor(s) recommendation to the IL HIE Authority and State Chief Procurement Officer
- Supervise implementation

The Technology and Interoperability Work Group will draw extensively on stakeholder participation to provide manpower and technical expertise in the design and evaluation processes. This approach will take maximum advantage of available expertise and resources as well as building stakeholder consensus on the eventual system selection and implementation.

The ILHIE vendor(s) will be selected through the RFP process to deploy all or portions of the ILHIE. The guiding objectives for RFP assessment and decision will be:

- Risk – build versus buy
- Experience – mature solutions versus new solutions
- Scalability – as the volume of data exchange increases, the HIE infrastructure will need to be able to adjust without the need to define a new architecture or move to a new platform
- Time to Market – the “Hub” is critical to the foundation for statewide HIE functionality, rapid deployment will be required
- Operating Costs – state level data management versus service oriented architecture – levels of economy

Illinois HIE Strategic & Operational Plan

The ILHIE implementation will be introduced in two phases – the core phase (2012) and the peripheral phase (2012 and beyond). The Technology and Interoperability Work Group will define and select that functionality to be deployed within each phase with approval from the IL HIE Authority.

Standards and Certifications

The ILHIE Advisory Committee and the Authority will serve as the multi-stakeholder group for the purposes of identifying a widely accepted and useful set of standards for the statewide HIE. All standards planned for deployment by the statewide HIE have already been accepted by HHS and will support widespread interoperability among providers in Illinois and with NHIN. The IL HIE will enable an environment of interoperable services that are both flexible and adaptable.

The statewide HIE will follow standards common to HIE infrastructures implemented nationwide in these categories, which can be viewed as building on one another, and which are recognized in federal regulations and/or industry-consensus implementation guides:

Vocabulary/Terminology – Fundamental Healthcare - related Concepts

- Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT®)
- Logical Observation Identifiers Name and Codes (LOINC®)
- International Classification of Diseases (ICD-9, ICD-10, and ICD-O)

Data Format/Content – Information Structures for Composing Larger Units of Meaning from Concepts and Their Relationships

- Health Level Seven (HL7) v2 and v3
- HL7 Clinical Document Architecture (CDA)
- HL7/ASTM Continuity of Care Document (CCD)
- Healthcare IT Standards Panel (HITSP) C32 (CCD) and C83 (CDA Modules)
- Digital Imaging and Communications in Medicine (DICOM)
- ASC X12 Electronic Data Interchange (EDI X12)
- National Council on Prescription Drug Plans (NCPDP)
- American National Standards Institute Accredited Standards Committee x12 (ANSI ASC X12)

Message Exchange – Reliable Communication of Data Content between Systems

- HL7 v2 and v3, DICOM, X12, NCPDP
- Electronic Business using XML (ebXML)
- Web Services using Standard Object Access Protocol (SOAP)
- Secure Socket Layer (SSL)
- Transport Layer Security (TSL)
- Secure email
- NHINDirect

Illinois HIE Strategic & Operational Plan

Workflow – Application of Messages to Specific Healthcare Processes and Use Cases

- Integrating the Healthcare Enterprise (IHE®) Integration Profiles
- HITSP Interoperability Specifications

Data exchange standards, rules and policies, based on national standards developed by ONC and the NHIN, will be developed and implemented by the ILHIE and the local HIEs will be required to adopt them in order to participate in the statewide HIE. A formal certification process will be implemented for the local HIEs before connection to the IL HIE is allowed. Enterprise HIEs and individual providers wishing to connect directly to the IL HIE will also be required to adhere to the same standards. Also, a complete set of syntactic and semantic standards will be specified. Any service or software that is an external source of ILHIE data will ensure the data provided conforms to all semantic and syntactic standards before released by the ILHIE.

The ILHIE is monitoring the work of ONC's Health IT Policy and Standards Committee to ensure that the technical infrastructure follows the standards endorsed by the Secretary of HHS. Lessons learned regarding the technical infrastructure and other aspects of data sharing will be communicated directly with ONC and through collaboration with the Regional Extension Centers.

Protection and Security of Data

The statewide HIE will comply with all of the requirements for the security and protection of health information established by the HIPAA of 1996 and amended by the HITECH act as well as their associated implementing regulations. The statewide HIE will also comply with all of the standards established by ONC through the HIT Standards Committee and the NHIN DURSA. The Technology & Interoperability Work Group will address the specific application of these regulations and requirements to the statewide HIE and to the exchange of health information between stakeholders, local exchanges and the ILHIE during the detailed design phase. The resulting design requirements will be incorporated into contracts with any vendors selected to implement the ILHIE or portions thereof.

Topics that will be addressed during this process will include:

- Physical security standards for data centers involved in hosting components of the ILHIE
- Encryption of data being transmitted
- Firewalls and other network defense infrastructure
- Role-based user access controls to limit access to those who have been authorized to see the data
- Anti-virus and anti-malware programs
- Transaction logging and auditing to identify inappropriate/unauthorized access

Illinois HIE Strategic & Operational Plan

The security standards will be required to match the standards established by ONC in order to allow participation in interstate data exchange via the NHIN. Once these standards are fully defined, the ILHIE will enforce these standards in Illinois using its ability to regulate connection to the ILHIE and other regulatory capabilities in the legislation creating the IL HIE Authority.

Disaster Recovery

Since the ILHIE is expected to participate on a real-time basis in the exchange of health information in Illinois, the ILHIE core system and the databases it supports must be designed and deployed using a fully redundant architecture that avoids single points of potential failure. This will ensure that IL HIE services are continuously available. Redundant copies of software applications, data processing capabilities and databases will be distributed to widely separate locations and configured to permit automatic failover in the event a processing node fails.

Wherever possible, multiple communication paths will be used to help ensure that a single event does not disable HIE. Data and transaction logs will be backed up to ensure recovery in the event that the redundant capabilities prove to be inadequate to survive a major catastrophe. One of the evaluation dimensions for vendor RFPs will be their ability to implement a redundant architecture. A well-designed “cloud computing” environment may be particularly valuable to the accomplishment of this requirement.

Enabling Meaningful Use

Illinois will align its HIE implementation and priorities with the current federal definition of Meaningful Use to ensure that its eligible providers are able to demonstrate Meaningful Use and are positioned to receive the maximum incentive reimbursement and avoid future reimbursement penalties.

Specifically, OHIT and the IL HIE Authority will work to achieve the key deliverables for state HIEs specified in ONC-HIE-PIN-001 to ensure that eligible Illinois physician providers and hospitals have at least one option to exchange information to meet the Stage 1 - Meaningful Use requirements in 2011. The key exchange-related capabilities required for individual providers in 2011 are:

- 1) E-prescribing
- 2) Receipt of structured lab results
- 3) Sharing patient care summaries across unaffiliated organizations

E-Prescribing:

To meet Meaningful Use requirements in the Final Rule, eligible professionals (EPs) are required to transmit at least 40% of all permissible prescriptions written by the EP using certified EHR technology. To accomplish this, the EP must acquire and implement a certified EHR system with e-prescribing capability, contract with an e-prescribing service that interfaces with their EHR system and must have sufficient pharmacies in the area that are capable of receiving prescriptions electronically to meet the 40% requirement.

Illinois HIE Strategic & Operational Plan

Meaningful Use requirements governing ambulatory EHR systems require that such systems be capable of transmitting prescriptions electronically. Most EHR vendors that offer an e-prescribing capability also offer an e-prescribing service vendor either directly or through a marketing alliance. Since these capabilities are well developed in the market, there does not seem to be a role for the ILHIE in offering a competing e-prescribing service. Rather, ILHIE's task is to facilitate the adoption by EPs of e-prescribing-capable EHRs. OHIT will work with the Regional Extension Centers (RECs) to encourage EPs to implement certified systems and ensure that EPs successfully contract with e-prescribing service vendors and implement their interfaces.

Of the over 3,194 pharmacies in Illinois, 2,842 are thought to be capable of receiving prescriptions electronically. OHIT plans to address this issue by working with the independent pharmacists' professional association to determine a strategy to address this level of e-prescribing transactions by convening a series of focus groups to learn more about the obstacles for e-prescribing for independent pharmacies. OHIT will also use data from the 2010 EHR Provider Survey to further identify obstacles and barriers to implementing e-prescribing.

Receipt of Structured Lab Results:

To meet Meaningful Use requirements, EPs must have 40% of labs, ordered electronically, whose results are returned in a numerical or positive/negative format and must be stored in certified EHR system as structured data. To do this the EP must either receive these results electronically from the performing lab and accept them into their EHR system through an interface or manually transcribe the data into the EHR. Manual transcription would introduce the risk of errors and would be very expensive and time consuming.

Most EPs transact with multiple labs (hospitals, payer-dictated labs, etc), developing very expensive and time consuming point-to-point interfaces between the lab and the EP. By consolidating interfaces, an HIE provides a cost effective way for labs to deliver results to multiple EPs and for EPs to receive results from multiple labs. OHIT will ensure that local HIEs provide result delivery capability as part of their initial set of capabilities implemented in 2011; utilize state contracting leverage to motivate local and national labs to deliver lab results electronically and work with Medicaid to motivate hospitals to implement electronic lab results delivery during 2011.

Sharing Patient Care Summaries across Unaffiliated Organizations:

The Meaningful Use regulations require that hospitals & EPs be capable of exchanging patient care summaries with other unaffiliated providers when patients transition to a different level of care or venue. Specifically, EPs and hospitals will be required to demonstrate that they have tested the ability to generate and receive a Continuity of Care Document (CCD). Hospitals and EPs will need a testing partner that can participate in a test in order to meet this requirement. The logical candidate to offer this testing service is the HIE that the hospital or EP will be exchanging data within the future. Therefore, the ILHIE will ensure that local HIEs provide a testing capability and report and confirm successful testing as needed. While health information exchange is a Stage 2 – Meaningful Use requirement, the ILHIE will assist providers in meeting Stage 1 – Meaningful Use by acting as a liaison between non-affiliated providers to assist in establishing relationships for testing capabilities. Future planning includes developing a test harnesses to further assist providers in testing as exchange becomes more robust. Also, three local HIEs from three different regions have identified this in their planning documentation as a Use Case for 2011 implementation and intend to

Illinois HIE Strategic & Operational Plan

provide the ability to exchange care summaries. OHIT will continue to work closely with these developing local HIEs to support their implementation of this functionality. OHIT acknowledges that these options for exchange of care summaries will not be sufficient to give every provider in Illinois the ability to share care summaries in 2011. It is, however, the first phase of such capacity in the state, from which we intend to build and expand, identify and assess gaps in coverage and fill them in with the development of the statewide HIE.

Public Health

IDPH will build from existing capacity to quickly initiate all activities proposed towards the advancement of Meaningful Use. Meaningful Use requires that hospitals and EPs submit immunizations and surveillance data to public health entities – if the entities have the capability to receive them. Since IDPH does not currently have mechanisms in place to receive immunization and laboratory surveillance data submitted online by providers, we expect that this Meaningful Use requirement will be active and that hospitals and EPs will be required to test the capability and to actually submit data during the demonstration period.

The I-NEDSS application has been operational for seven years with ELR functional for six of those years. IDPH's INEDSS and the Laboratory Information Systems (LIMS) application are compliant with CDC's Public Health Information Network certification standards and use standard coding and vocabulary management, integration engines, and public health messaging architecture.

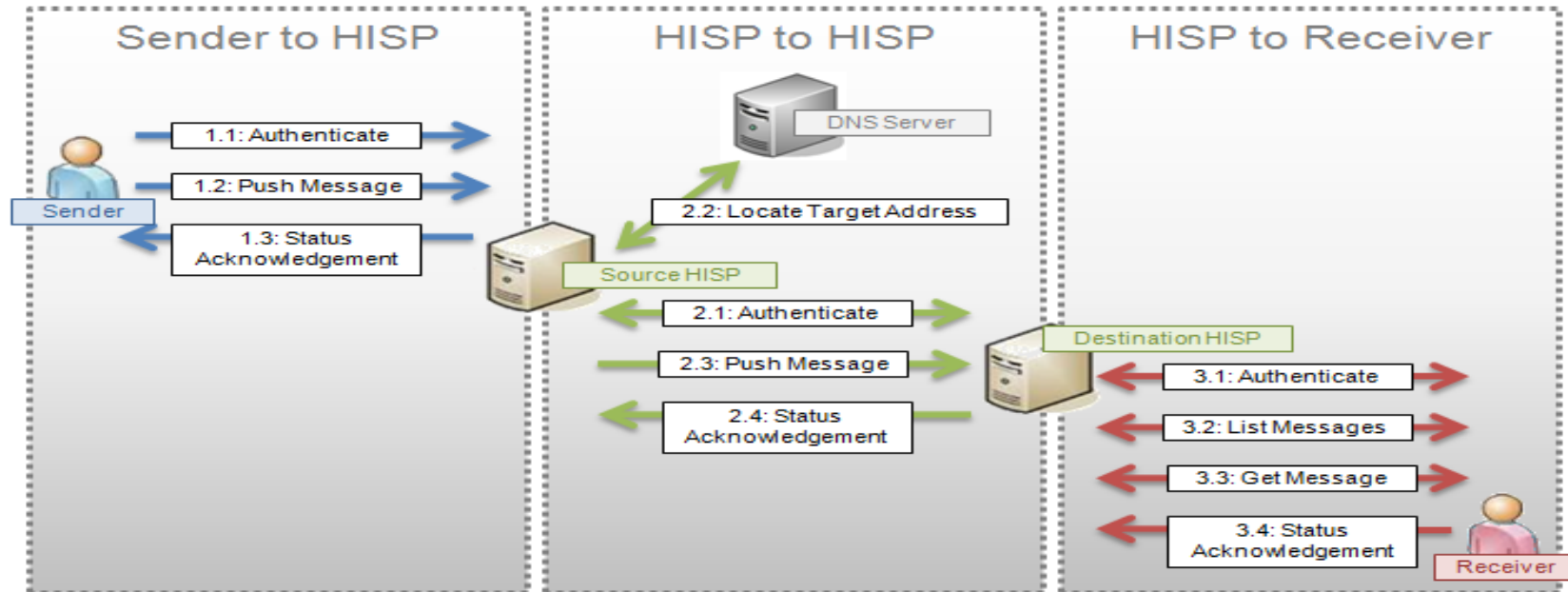
Hospitals, labs and eligible professionals are obligated to at least test their EHR system's ability to submit their data either directly or via local HIEs in 2011.

Alignment with NHIN

The state of Illinois has a two pronged approach to ensure that exchange in Illinois is aligned with NHIN. To assist providers in meeting Meaningful Use – Stage 1, the ILHIE will begin investigating the feasibility of implementing a NHIN Direct-compliant clinical exchange capability using the NHIN Direct Abstract Model as a template. The ILHIE will investigate a plan to provide a grant to a local HIE or utilize the RECs to contract with a cloud-based provider to provide a secure e-mail based messaging system dedicated to the exchange of clinical messages between registered providers and hospitals. Through the grantee or REC, all providers and hospitals registered in Illinois will be invited to register for the service. After validating their registration, the grantee or REC will set up an account in the secure e-mail system and publish their participation in a directory listed on a website. When a registered provider or hospital identifies a need to transmit a clinical message (such as a referral CCD, lab result, consult report, etc.) to another registered provider or hospital, they would sign onto the messaging system, and upload the file to secure storage in the cloud. The messaging system would generate a notice to the receiving provider or hospital indicating that a secure message was waiting for them on the system in their mailbox. The receiving provider or hospital would then log into the system, download the file and take whatever action is appropriate based on the content and purpose of the message. The assumption is that the providers or hospitals will use their certified EHR technology to generate the message content (such as a human-readable CCD file or care summary) and store incoming content.

Illinois HIE Strategic & Operational Plan

In this example, the cloud-based secure messaging system would serve as the HISP in the NHIN Direct Abstract Model below.



This is not a long-term solution but rather a short term strategy necessary to facilitate meaningful use in 2011. Through the RFI process, a long-term solution will be identified to enable options for statewide secure messaging via NHIN Direct. Responses from the RFI will allow the state to:

- Identify vendor options to determine which will serve as the HISP for point-to-point exchange
- Identify options to assist senders in identifying receivers - such as through a vendor managed directory service that providers can use for NHIN Direct certification standards
- Identify a transport format that Illinois will utilize to facilitate the sharing of information
- Identify vendor options for ensuring alignment with existing state laws to accommodate NHIN Direct

Illinois HIE Strategic & Operational Plan

The State will develop a plan that brings together representatives from the bordering states, local HIE's and other stakeholders to ensure that the technologies being deployed will deliver the ability to effectively meet the needs of the HIE community and be interoperable with the national infrastructure in compliance with NHIN requirements.

Connection to NHIN will facilitate communication with the Social Security Administration, Department of Defense, Veteran's Affairs, the Centers for Disease Control, the Centers for Medicare and Medicaid Services and other statewide HIEs. Data exchange through NHIN will be important for the ILHIE to facilitate quality data reporting for provider Meaningful Use incentives.

Solutions to Develop HIE Capacity

The overall strategy for developing capacity in Illinois will be employed through a three-tiered model that leverages existing capacity and builds on the particular strengths of HIE stakeholders across the state as follows:

- The statewide HIE, authorized by Illinois statute and governed by the IL HIE Authority, will be available to providers throughout the state as a function for local and enterprise HIEs
- Local HIEs dedicated to engaging and serving diverse groups of local providers; and
- Enterprise HIEs throughout the state, under a variety of private ownership models, all organized to exchange protected health information within a particular privately controlled institution

These three levels of HIE will be complimentary, interconnected, and integrated to the greatest extent possible. This delivery model supports OHIT's responsibility to provide a path to participation in HIE to every provider in Illinois.

As HIE technology adoption, provider implementation, and public understanding of and confidence in HIE increase over time; Illinois' statewide HIE delivery model will evolve and adapt toward expanding the array of services offered and optimizing use of HIE technology. Also, we expect that market forces will drive the evolution of HIE in Illinois, surrounding states, and nationwide. Illinois' HIE implementation strategy is designed with these thoughts in mind.

Given the aggressive timelines for achieving Meaningful Use and implementing HIE, we believe that it is essential to build Illinois' HIE strategy around engagement of stakeholders and leverage this existing capacity. Therefore, the ILHIE will initially build on the stakeholder engagement generated by the Illinois Planning Grant Program planning processes from the past year in order to speed adoption and implementation of HIE in Illinois. Involving providers and other stakeholders directly in HIE implementation will have a multiplier effect allowing state and federal resources to act as a catalyst for change by mobilizing and engaging stakeholder staff resources, technical expertise and financial resources.

Illinois HIE Strategic & Operational Plan

Capitalizing on existing initiatives already underway in advance of the IL HIE Authority and the ILHIE becoming operational, allows greater flexibility to experiment with different HIE models.

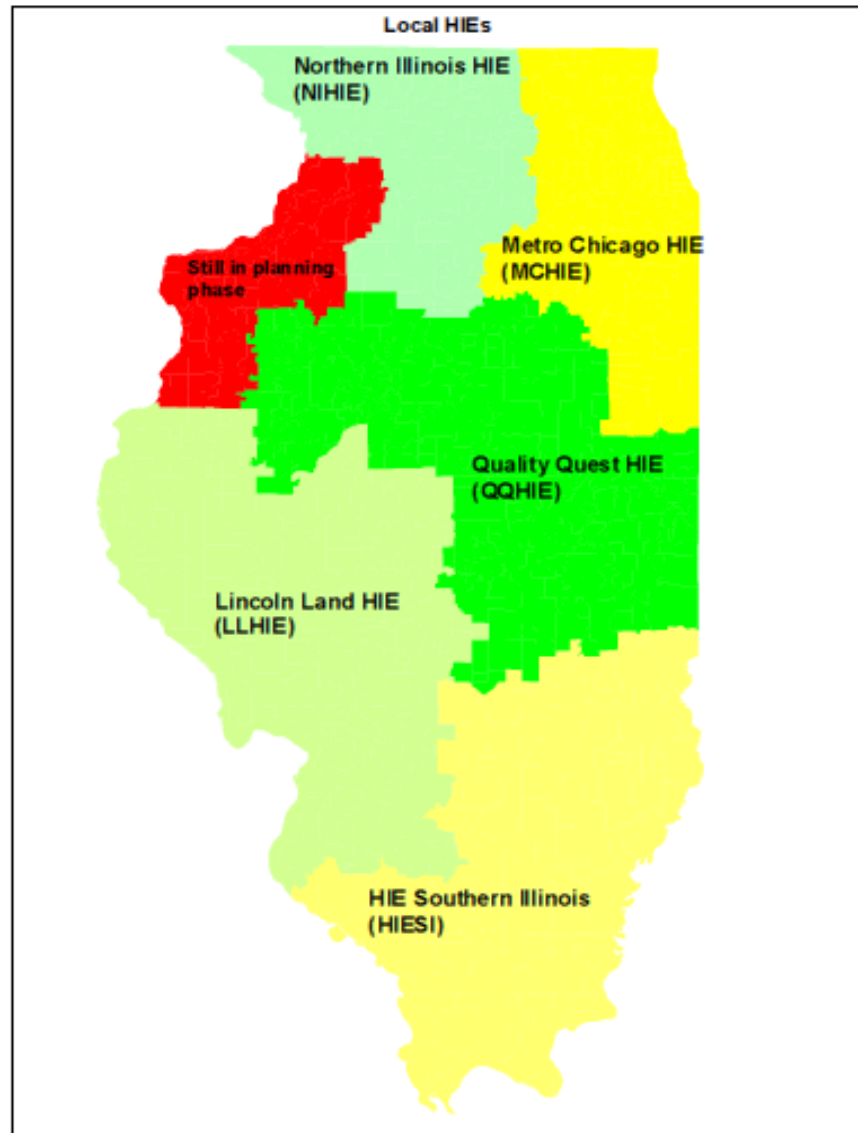
The local HIEs will operate with the expectation that all providers that request HIE service, will be allowed to connect locally – facilitated through the ILHIE. Local HIEs will be required to provide HIE services to any hospital or physician provider in Illinois, regardless of location, in order to help ensure that hospitals and providers will have at least one HIE option available. Hospitals and physicians will be encouraged to connect through the closest local HIE but will have the ability to select the option that makes the most sense for them. This will be particularly true for those areas of the state still in the planning phases.

This strategy will be effective because it will motivate hospitals participating in HIEs to actively engage their medical staffs to connect via an HIE that the hospital is committed to. This should accelerate the process of getting physicians connected and generate stakeholder commitment because they will have a sense of ownership and control in the HIE serving them.

Additionally, stakeholder concerns with sharing data will be minimized because they will have local control and data will be tightly tied to stakeholder benefit and instill public confidence in Illinois' HIE efforts. Stakeholder administration of data implies that the use of health care information being exchanged will be more visibly tied to direct patient care purposes. Lastly, this strategy will allow different regions of the state to proceed at their own pace - adapting to local readiness and conditions.

Illinois HIE Strategic & Operational Plan

The following diagram depicts the local HIEs geographically:



Illinois HIE Strategic & Operational Plan

TECHNICAL INFRASTRUCTURE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ILHIE TECHNOLOGY ARCHITECTURE STAKEHOLDER ENGAGEMENT				
1	Establish Technology and Interoperability Work Group and develop work group purpose, goals, and objectives	OHIT	June, 2010 Status: COMPLETED	100
2	Complete Technical Infrastructure domain specific section of Strategic and Operational Plan utilizing stakeholder input	OHIT; IL HIE Advisory Committee; Technology and Interoperability Work Group	July, 2010 Status: COMPLETED	100
3	Prioritize work group tasks for implementation phase	OHIT; Technology and Interoperability Work Group	July, 2010 Status: COMPLETED	100
ARCHITECTURE DESIGN				
1	Develop and prioritize Use Cases for statewide HIE in accordance with Meaningful Use and NHIN requirements	OHIT; Technology and Interoperability Work Group	July - September, 2010 Status: COMPLETED	100
2	Review statewide HIE system architecture for validation of architecture concept	OHIT; Technology and Interoperability Work Group	August – September, 2010 Status: COMPLETED	100
3	Initiate Request for Information (RFI) to formally obtain information from vendors related to the provision of products and services that can fulfill the requirements of a State level HIE	OHIT; Technology and Interoperability Subject Matter Experts <div style="background-color: yellow; padding: 2px; display: inline-block;">INTERDEPENDENCY: LEGAL & POLICY</div>	October – December, 2010 Status: IN PROGRESS	25

Illinois HIE Strategic & Operational Plan

TECHNICAL INFRASTRUCTURE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ARCHITECTURE IMPLEMENTATION				
1	Develop Business and Technical Requirements for the ILHIE Implementation Vendor RFP	OHIT; Technology and Interoperability Subject Matter Experts; IL HIE Authority; Interns INTERDEPENDENCY: LEGAL & POLICY	December 2010 – January 2011 Status: NOT STARTED	-- --
2	Initiate and complete the ILHIE Implementation Vendor RFP procurement process in accordance to the Illinois Procurement Code and Procurement Policies and Procedures	OHIT; Technology and Interoperability Subject Matter Experts; IL HIE Authority; Interns INTERDEPENDENCY: BUSINESS & TECH OPS	February – July, 2011 Status: NOT STARTED	-- --
3	Develop detailed technical architecture implementation plan in conjunction with the contracted Vendor	OHIT; Technology and Interoperability Subject Matter Experts; Vendor	August - September, 2011 Status: NOT STARTED	-- --
4	Conduct ILHIE system build and test	OHIT; Vendor	October - December, 2011 Status: NOT STARTED	-- --
5	Conduct integration planning and testing with local and enterprise HIEs	OHIT; Vendor; Local HIEs	January – March, 2012 Status: NOT STARTED	-- --
6	“Go/No- Go” – Approval to go-live with functionality based on results of testing	OHIT; Technology and Interoperability Work Group; IL HIE Authority	April, 2012 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

TECHNICAL INFRASTRUCTURE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ARCHITECTURE IMPLEMENTATION				
7	Begin Core Phase implementation (Master Patient Index; Record Locator Service; Provider Directory; Payer Directory; Public Health Entity Directory; Authentication Services)	OHIT; Vendor	April, 2012 Status: NOT STARTED	-- --
8	Conduct risk assessment and employ mitigation strategies	OHIT; Technology and Interoperability Work Group; Vendor; IL HIE Authority INTERDEPENDENCY: BUSINESS & TECH OPS	April – May, 2012 Status: NOT STARTED	-- --
9	Revise planning and implementation based on findings of assessment	OHIT; IL HIE Authority	June, 2012 Status: NOT STARTED	-- --
10	Begin Peripheral Phase implementation (Use Cases)	OHIT; Vendor	June, 2012 Status: NOT STARTED	-- --
11	Conduct risk assessment and employ mitigation strategies	OHIT; Technology and Interoperability Work Group; Vendor; IL HIE Authority INTERDEPENDENCY: BUSINESS & TECH OPS	July – August, 2012 Status: NOT STARTED	-- --
12	Revise planning and implementation based on findings of assessment	OHIT; IL HIE Authority	September, 2012 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

TECHNICAL INFRASTRUCTURE TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ONGOING EVALUATION				
1	Continue to monitor ONC and NHIN developments to ensure technical infrastructure compliance with national standards and protocols	OHIT; Technology and Interoperability Work Group; IL HIE Authority	August, 2010 – January, 2014 Status: IN PROGRESS	7
2	Continue to monitor meaningful use developments to ensure technical infrastructure compliance with national standards and protocols	OHIT; Technology and Interoperability Work Group; IL HIE Authority	August, 2010 – January, 2014 Status: IN PROGRESS	7
3	Develop services that enhance HIE as dictated by meaningful use requirements and as a result of the findings of state and national HIE performance assessments	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: LEGAL & POLICY BUSINESS & TECH OPS	August, 2010 – January, 2014 Status: IN PROGRESS	7
4	Develop interstate interoperability connectivity	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: LEGAL & POLICY BUSINESS & TECH OPS	January, 2012 – January, 2014 Status: NOT STARTED	-- --
5	Evaluate the performance of the statewide HIE to identify lessons learned and incorporate best practices	OHIT; Technology and Interoperability Work Group; IL HIE Authority	April 2012 – January, 2014 Status: IN PROGRESS	-- --
6	Conduct risk assessment and employ mitigation strategies	OHIT; Technology and Interoperability Work Group; IL HIE Authority	April 2012 – January, 2014 Status: IN PROGRESS	-- --

Illinois HIE Strategic & Operational Plan

Business & Technical Operations

Purpose: To assist in the development and implementation of business and technical policies to ensure efficient and cost-effective operations of the statewide HIE.

Goals: To manage and coordinate the interdependencies of the Operational Plan to meet key milestones, oversee the implementation and revision of key strategies, apply risk mitigation strategies and redirect resources as necessary.

The business and technical operations functions associated with Illinois' Strategic and Operational Plan and the resulting policy decisions will be driven by OHIT throughout the duration of the HIE State Cooperative Agreement Program period and eventually assumed by the IL HIE Authority. OHIT will ensure that its activities and administrative operations are well-documented and transparent to ensure an orderly and accountable transition over time. In this role, OHIT will continue to serve as the coordinating body for all activities related to the State's efforts to facilitate statewide HIE, build HIT capacity and accelerate the adoption of EHR. These coordinating efforts also include working actively with other federally and State funded HIT programs such as the Medicaid HIT Plan, the RECs, public health, and broadband and workforce development initiatives to advance mutual goals. In addition to these coordinating functions, the Business and Technical Operations outlined in the table below include budgeting and forecasting, staffing and procurement functions.

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ONGOING ENVIRONMENTAL SCAN AND ASSESSMENT				
MONITOR AND TRACK MEANINGFUL USE HIE CAPABILITIES				
1	Track health plans supporting electronic eligibility and claims transactions pursuant to the ONC-HIE-PIN-001	OHIT; Department of Insurance; Public and Private Plans	July, 2009 – January, 2014 Status: IN PROGRESS	50
2	Track pharmacies accepting electronic prescribing and refill requests pursuant to the ONC-HIE-PIN-001	OHIT; e-prescribing Vendors; Chain and Independent Pharmacies	July, 2009 – January, 2014 Status: IN PROGRESS	20
3	Convene focus groups with independent pharmacies to learn more about e-prescribing obstacles and encourage more e-prescribing	OHIT; Illinois Pharmacy Association	September, 2010 – January, 2014 Status: IN PROGRESS	5

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ONGOING ENVIRONMENTAL SCAN AND ASSESSMENT				
MONITOR AND TRACK MEANINGFUL USE HIE CAPABILITIES				
4	Track clinical laboratories sending results electronically pursuant to the ONC-HIE-PIN-001	OHIT; IDPH; National and Independent Laboratories; Clinical Laboratory Improvement Act	July, 2009 – January, 2014 Status: IN PROGRESS	30
5	Leverage the State’s technical, policy and purchasing levers to facilitate widespread electronic results delivery	OHIT; HFS; IL HIE Authority	July, 2010 – January, 2014 Status: IN PROGRESS	5
6	Track health departments electronically receiving immunizations, syndromic surveillance, and notifiable laboratory results pursuant to the ONC-HIE-PIN-001	OHIT; IDPH	July, 2009 – January, 2014 Status: IN PROGRESS	50
7	Track sharing of patient care summaries across unaffiliated organizations pursuant to the ONC-HIE-PIN-001	OHIT; Local HIE's	July, 2009 – January, 2014 Status: IN PROGRESS	5
8	OHIT will act as a liaison between un-affiliated providers to assist with establishing relationships for testing the capability to share patient care summaries across unaffiliated organizations	OHIT; Local HIEs	January, 2011 – January, 2014 Status: NOT STARTED	-- --
STRATEGY TO MEET GAPS IN HIE CAPABILITIES FOR MEANINGFUL USE				
1	Conduct annual EHR/HIE Survey in coordination with external organizations	HFS	August – October, 2009 Status: COMPLETED	100
2	Analyze survey results and assess gaps identified from EHR/HIE Survey	HFS	October, 2009 – January 2010 Status: COMPLETED	100
3	Develop and implement strategy to address identified gaps	OHIT	January – July 2010 Status: COMPLETED	100

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
ONGOING ENVIRONMENTAL SCAN AND ASSESSMENT				
STRATEGY TO MEET GAPS IN HIE CAPABILITIES FOR MEANINGFUL USE				
4	Conduct annual Provider Survey in coordination with HFS, the State Medicaid Agency, and external health care organizations	OHIT; HFS; RECs	August – September, 2010 Status: IN PROGRESS	75
5	Leverage existing agency and professional organizations survey methods and tools(e.g., IL Department of Financial and Professional Regulation Physician licensing renewal and the American Academy of Family Physicians)	OHIT; Other State Agencies, Professional Organizations	September, 2010 - January, 2014 Status: IN PROGRESS	10
6	Analyze survey results and assess gaps identified from annual Provider Survey, including feedback regarding e-prescribing, EHR adoption, and lab reporting barriers and obstacles	OHIT	October, 2010 - January, 2014 Status: NOT STARTED	-- --
7	Develop and implement strategy to address identified gaps, including outreach and mapping survey results to focus resources	OHIT	November, 2010 - January, 2014 Status: NOT STARTED	-- --
8	Employ Continuous Improvement processes	OHIT	December, 2010 - January, 2014 Status: NOT STARTED	-- --
CLINICAL INTEGRATION				
1	Establish separate Work Groups for Clinical Quality and Telemedicine; Develop individual work group purpose, goals and objectives	OHIT	July, 2010 - January, 2014 Status: IN PROGRESS	15

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
COORDINATION WITH OTHER FEDERALLY AND STATE FUNDED HIT PROGRAMS				
COORDINATION WITH MEDICAID				
1	Establish Medicaid Work Group to provide stakeholder input on Medicaid HIT Plan and Illinois Strategic & Operational Plans	OHIT; HFS; Provider Organizations	December, 2009 Status: COMPLETED	100
2	Draft and submit Planning-Advanced Planning Document on Medicaid HIT Plan to CMS for approval	HFS	November, 2009 – January, 2010 Status: COMPLETED	100
3	Engage Vendor to assist in development of Medicaid HIT Plan, align tasks and goals of Medicaid HIT Plan and State HIE Plan	HFS; OHIT	July, 2010 – February, 2011 Status: IN PROGRESS	20
4	Hold bi-weekly meetings between OHIT and HFS staff to coordinate and maximize effectiveness of activities performed pursuant to the State HIE Plan and Medicaid HIT Plan	OHIT; HFS; Vendor	August, 2010 – January, 2014 Status: IN PROGRESS	10
5	Develop target goals for provider participation in EHR incentive programs and monitor progress	OHIT; HFS; IL-HITREC; CHITREC	March, 2011 – January, 2014 Status: NOT STARTED	-- --
6	Share data on ongoing basis regarding provider participation in EHR incentive programs	HFS; OHIT; CMS; ONC; IL-HITREC; CHITREC	March, 2011 – January, 2014 Status: NOT STARTED	-- --
7	Support opportunities for exchange necessary for Stage 2 meaningful use criteria	OHIT; IL HIE Authority	2011 – 2014 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
COORDINATION WITH OTHER FEDERALLY AND STATE FUNDED HIT PROGRAMS				
COORDINATION WITH THE REGIONAL EXTENSION CENTERS				
1	Establish monthly meetings to share information and coordinate activities	OHIT; IL-HITREC; CHITREC	May, 2010 – May 2012 Status: IN PROGRESS	25
2	Exchange data regarding provider participation and progress toward EHR adoption and meaningful use	IL-HITREC; CHITREC; OHIT; HFS	September, 2010 – May 2012 Status: IN PROGRESS	10
3	Align provider outreach activities among OHIT, RECs and State Medicaid agency and coordinate message strategies regarding meeting meaningful use criteria	OHIT; HFS; IL-HITREC; CHITREC INTERDEPENDENCY: COMMUNICATIONS	September, 2010 – May 2012 Status: IN PROGRESS	-- --
COORDINATION WITH PUBLIC HEALTH				
1	Establish the Public Health Work Group and develop the work group purpose, goals, and objectives	OHIT; Public Health Work Group	February, 2010 Status: COMPLETED	100
2	Coordination with CDC funded programs to support Meaningful Use (immunization registries and electronic laboratory reporting)	OHIT; IDPH	July, 2010 – January, 2014 Status: IN PROGRESS	5
3	Align the development of the HIE technical infrastructure with public health data reporting goals and requirements	OHIT; Public Health Work Group; IL-HITREC; CHITREC INTERDEPENDENCY: TECH INFRASTRUCTURE	July, 2010 – January, 2014 Status: IN PROGRESS	20

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
COORDINATION WITH OTHER FEDERALLY AND STATE FUNDED HIT PROGRAMS				
COORDINATION WITH BROADBAND DEVELOPMENT				
1	Communicate on a quarterly basis to assess progress and gaps in statewide broadband coverage	OHIT; Illinois Broadband Deployment Council, DCEO, ILCMS	February, 2010 – January, 2014 Status: IN PROGRESS	10
2	Develop and update joint strategies to address broadband coverage gaps specifically for healthcare providers within underserved communities	OHIT; Illinois Broadband Deployment Council, DCEO, ILCMS	July, 2010 – January, 2014 Status: IN PROGRESS	5
3	Employ Continuous Improvement processes	OHIT; Illinois Broadband Deployment Council, DCEO, ILCMS	January, 2011 – January, 2014 Status: NOT STARTED	-- --
COORDINATION WITH WORKFORCE DEVELOPMENT				
1	Communicate on a regular basis to assess progress and gaps in HIT workforce development efforts	OHIT; DCEO; IL-HITREC; CHITREC	June, 2010 – January, 2014 Status: IN PROGRESS	10
2	Develop and update joint strategies to address HIT workforce development gaps	OHIT; DCEO; IL-HITREC; CHITREC	June, 2010 – January, 2014 Status: IN PROGRESS	10
3	Employ Continuous Improvement processes	OHIT; DCEO; IL-HITREC; CHITREC	January, 2011 – January, 2014 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
NATIONAL AND MULTI-STATE COORDINATION ACTIVITIES				
1	Participate in ONC Regional meetings and technical assistance opportunities developed to facilitate interstate coordination of activities and resources	OHIT	August, 2009 – January, 2014 Status: IN PROGRESS	25
2	Review federal regulations, standards or guidelines for NHIN and NHIN Direct for interaction with IL laws and regulations, and HIT policies	OHIT; IL HIE Authority INTERDEPENDENCY: LEGAL & POLICY	April, 2010 – January 2014 Status: IN PROGRESS	10
3	Develop ongoing discussions with other CMS Region 5 States regarding interstate HIE, including relevant legal and policy issues affecting interstate exchange	OHIT INTERDEPENDENCY: LEGAL & POLICY	April, 2010 – January 2014 Status: IN PROGRESS	10
4	Develop ongoing discussions with State Health Policy Consortium (SHPC) Upper Midwest HIE Collaborative project regarding legal and policy issues affecting interstate exchange	OHIT INTERDEPENDENCY: LEGAL & POLICY	May, 2010 – January, 2014 Status: IN PROGRESS	5
5	Review surrounding states' HIE Strategic and Operational Plans and identify interdependencies and priority areas for the development of strategies necessary to achieve interstate exchange	OHIT; State Health IT Coordinators in surrounding states	August, 2010 – January, 2014 Status: IN PROGRESS	10

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
LEVERAGING EXISTING STATE RESOURCES TO PROMOTE HIE				
1	Coordinate State agency HIT resources to plan phased incorporation of State systems into the statewide HIE	OHIT and State Agencies	April, 2010 – January, 2014 Status: IN PROGRESS	20
2	Continue to monitor Illinois workforce development activity that will train future employees to meet the demands of implementation of EHR and HIE in Illinois	OHIT; DCEO	April, 2010 – January, 2014 Status: IN PROGRESS	10
3	Continue to monitor Illinois broadband investment and promote the expansion of the network underserved areas.	OHIT; IL Broadband Deployment Council; DCEO; ILCMS; IL Rural Health Net	April, 2010 – January, 2014 Status: IN PROGRESS	10
4	Leverage the State’s health care purchasing power to accelerate EHR adoption and HIE through specific contract language for those elements in State procurements	OHIT and State Agencies INTERDEPENDENCY: LEGAL & POLICY	July, 2010 – January, 2014 Status: IN PROGRESS	5
STAFFING PLAN				
1	Produce a staffing plan based on the administrative, technological, clinical, legal and fiscal needs of the statewide HIE for FY 2011. Include an evaluation of staffing requirements to perform the duties of OHIT and the ILHIE	OHIT INTERDEPENDENCY: FINANCE & SUSTAINABILITY	July, 2010 Status: COMPLETED	100
2	Produce a staffing plan based on the administrative, technological, clinical, legal and fiscal needs of the statewide HIE for FY 2012. Include an evaluation of staffing requirements to perform the duties of OHIT and the ILHIE	OHIT INTERDEPENDENCY: FINANCE & SUSTAINABILITY	July, 2011 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
STAFFING PLAN				
3	Produce a staffing plan based on the administrative, technological, clinical, legal and fiscal needs of the statewide HIE for FY 2013. Include an evaluation of staffing requirements to perform the duties of OHIT and the ILHIE	OHIT INTERDEPENDENCY: FINANCE & SUSTAINABILITY	July, 2012 Status: NOT STARTED	-- --
4	Produce a staffing plan based on the administrative, technological, clinical, legal and fiscal needs of the statewide HIE for FY 2014. Include an evaluation of staffing requirements to perform the duties of OHIT and the ILHIE	OHIT INTERDEPENDENCY: FINANCE & SUSTAINABILITY	July, 2013 Status: NOT STARTED	-- --
CONTRACTUAL RESOURCES				
1	Develop justification for contracting with subject matter expertise to support the technical, legal, financial and business domains	OHIT INTERDEPENDENCY: TECH INFRASTRUCTURE LEGAL & POLICY FINANCE & SUSTAINABILITY	September, 2009 – January, 2014 Status: IN PROGRESS	25
2	Prepare procurement solicitation documents for identified resource needs according to the Illinois Procurement Code and procurement policies and procedures	OHIT INTERDEPENDENCY: LEGAL & POLICY	April, 2010 – January, 2014 Status: IN PROGRESS	25

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
CONTRACTUAL RESOURCES				
3	Submit award recommendation to the Chief Purchasing Officer and to the HIE Authority for approval	OHIT; IL HIE Authority INTERDEPENDENCY: FINANCE & SUSTAINABILITY	April, 2010 – January, 2014 Status: IN PROGRESS	25
4	Execute contract with selected vendor(s)	OHIT; IL HIE Authority INTERDEPENDENCY: LEGAL & POLICY	April, 2010 – January, 2014 Status: IN PROGRESS	25
TECHNOLOGY INFRASTRUCTURE PROCUREMENT				
1	Publish Request for Information (RFI) on the Illinois Procurement Bulletin website to formally obtain information from vendors related to the provision of products and services that can fulfill the requirements of a state level HIE	OHIT; Technology and Interoperability Subject Matter Experts INTERDEPENDENCY: TECH INFRASTRUCTURE	October – December, 2010 Status: IN PROGRESS	25
2	Route ILHIE RFP business and technical requirements procurement business case for approval	OHIT; Technology and Interoperability Subject Matter Experts; IL HIE Authority INTERDEPENDENCY: TECH INFRASTRUCTURE	January, 2011 Status: NOT STARTED	-- --
3	Publish approved RFP for vendor response on the Illinois Procurement Bulletin website	OHIT; Technology and Interoperability Work Group; IL HIE Authority	February, 2011 Status: NOT STARTED	-- --
4	Review RFPs submitted for administrative compliance and responsiveness	OHIT; Technology and Interoperability Work Group	March, 2011 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
TECHNOLOGY INFRASTRUCTURE PROCUREMENT				
5	Evaluate vendor responses in accordance to established procurement policies and procedures	OHIT; Technology and Interoperability Work Group	March – May, 2011 Status: NOT STARTED	-- --
6	Select vendor(s) based on scoring related to meeting business and technical requirements and competitive pricing	OHIT; Technology and Interoperability Work Group INTERDEPENDENCY: FINANCE & SUSTAINABILITY	May – June , 2011 Status: NOT STARTED	-- --
7	Submit vendor(s) award recommendation to IL HIE Authority and State Chief Procurement Officer	OHIT; IL HIE Authority	June, 2011 Status: NOT STARTED	-- --
8	Execute contract with selected vendor(s)	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: LEGAL & POLICY	July, 2011 Status: NOT STARTED	-- --
STANDARD OPERATING PROCEDURES FOR ILHIE				
1	Apply standards for participation in the statewide HIE in accordance with State and federal laws and guidelines to facilitate widespread, interoperable HIE, participation in interstate exchange and NHIN developments to ensure consistency with national standards and protocols	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: TECH INFRASTRUCTURE LEGAL & POLICY FINANCE & SUSTAINABILITY	August, 2011 – March, 2012 Status: NOT STARTED	-- --

Illinois HIE Strategic & Operational Plan

BUSINESS & TECHNICAL OPERATIONS TASKS AND TIMELINE				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
CONTROL AND REPORTING				
1	Prepare monthly Stimulus 360 Reports, a state-based report that collects spending and job creation data resulting from ARRA funding for the State of Illinois	OHIT; Healthcare and Family Services INTERDEPENDENCY: FINANCE & SUSTAINABILITY	April, 2010 – January, 2014 Status: In Progress	20
2	Prepare quarterly ARRA reports for the Recovery Accountability and Transparency Board	OHIT; Healthcare and Family Services INTERDEPENDENCY: FINANCE & SUSTAINABILITY	April, 2010 – January, 2014 Status: In Progress	20
3	Prepare annual report for the ONC	OHIT INTERDEPENDENCY: FINANCE & SUSTAINABILITY	April, 2010 – January, 2014 Status: In Progress	20

Illinois HIE Strategic & Operational Plan

Legal & Policy

Purpose: Guide design, development and implementation of the legal and policy aspects of the statewide HIE.

Goals:

- Inaugurate IL HIE Authority: Facilitate the formation of the Authority's Board of Directors and its Advisory Committee;
- Identify Barriers & Remedies: Identify regulatory and policy barriers to the successful implementation of a statewide HIE, and explore the routes potentially available in Illinois to formally address such regulatory and policy barriers; and
- Create HIE Privacy & Security Infrastructure: Propose and implement initiatives addressing the privacy and security of health information which mitigate risk and foster public trust.

The Illinois General Assembly has provided for the creation of the Illinois Health Information Exchange Authority, which will develop and implement a statewide HIE, and promulgate standards for the exchange of health information in Illinois. In the near term, until such time as the Authority becomes fully operational with its own staff resources, it is anticipated that OHIT will provide the Authority subject matter expertise, including strategic and operational plan proposals. In the near term, OHIT's Operational Plan with respect to the Legal and Policy domain includes the following actions.

Risk Mitigation

As discussed above in the Governance domain, we recognize that the State of Illinois is facing unprecedented financial and resource challenges and a statewide election, with resulting potential constraints on the future legislative and regulatory activities of the State's next General Assembly and next Administration. In the Legal and Policy domain, a risk exists that future delays may be encountered in the development and enactment of legislative and regulatory proposals aimed at addressing Illinois legal and policy barriers to the implementation of the Plan. Illinois has attempted to mitigate such risks by securing broad stakeholder engagement in the development of HIE in Illinois, and bi-partisan support for the Illinois legislation which has been enacted to date which provides the HIE legal and policy foundations, and resulting tools for implementation of the Plan.

In addition, the long-term success of the activities funded by this State HIE Cooperative Agreement are largely predicated upon the success of and widespread provider participation in the Medicare and Medicaid EHR incentive payment programs. OHIT has received feedback from some stakeholder organizations and individual providers that they are not convinced of the value of the payment incentives, lack confidence that federal CMS and the State will be able to administer the program as projected, and may elect to incur Medicare reimbursement reduction rather than achieve Meaningful Use of EHR. OHIT will mitigate the risk of the potential for early lack of provider participation by promoting the work of the RECs and initially focusing on those providers and stakeholder organizations that are enthusiastic about the payment incentive programs and Meaningful Use and building early wins with those organizations to demonstrate the ability for success of the programs. For providers that

Illinois HIE Strategic & Operational Plan

remain reluctant to participate, OHIT will work with the Medicaid Program, private payers, patient organizations and other health care stakeholders active on the State HIE Advisory Committee to encourage adoption of EHR and achievement of Meaningful Use. OHIT recognizes that the long-term success and sustainability of Illinois' statewide HIE depends upon widespread participation among providers and data trading partners and will remain flexible in its policies and mandates to encourage incremental participation and build trust and support over time.

LEGAL AND POLICY DOMAIN				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
FACILITATION OF FORMATION AND OPERATION OF IL HIE AUTHORITY				
1	Monitor federal laws, regulations and policies relevant to the governance and operation of the Authority, and utilization and protection of health data, aligning with the State's strategy for HIE with federal care delivery organizations	OHIT	April, 2010 – January, 2014 Status: IN PROGRESS	N/A
2	Propose & update operating bylaws and policies for adoption by Authority to establish procedures for carrying out its statutory responsibilities including: safeguarding privacy and security of HIE; ensuring accountability and maintaining fiscal integrity of the HIE	OHIT; IL HIE Authority Board of Directors INTERDEPENDENCY: GOVERNANCE	October, 2010 – January 2014 Status: IN PROGRESS	10
3	Propose & update standards for adoption by Authority for participation in the statewide HIE in accordance with State and federal laws and guidelines to facilitate widespread, interoperable HIE, participation in interstate exchange and NHIN developments to ensure consistency with national standards and protocols	OHIT; IL HIE Authority Board of Directors INTERDEPENDENCY: GOVERNANCE TECH INFRASTRUCTURE BUSINESS & TECH OPS	October, 2010 – January 2014 Status: IN PROGRESS	-- --

Illinois HIE Strategic & Operational Plan

LEGAL AND POLICY DOMAIN				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
FACILITATION OF FORMATION AND OPERATION OF IL HIE AUTHORITY				
4	Support infrastructure procurement and implementation, including development of requirements and contracts for ILHIE Implementation Vendor RFP and other vendor procurements, preparation of procurement solicitation documents, and execution of contracts with vendors	OHIT INTERDEPENDENCY: TECH INFRASTRUCTURE BUSINESS & TECH OPS	December, 2010 – January, 2014 Status: NOT STARTED	-- --
5	Develop ongoing discussions with other CMS Region 5 States regarding interstate HIE, including relevant legal and policy issues affecting interstate exchange	OHIT INTERDEPENDENCY: BUSINESS & TECH OPS	April, 2010 – January 2014 Status: IN PROGRESS	5
6	Develop services that enhance HIE as dictated by meaningful use requirements and as a result of the findings of state and national HIE performance assessments	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: TECH INFRASTRUCTURE BUSINESS & TECH OPS	April, 2010 – January 2014 Status: IN PROGRESS	0
7	Develop interstate interoperability connectivity	OHIT; Technology and Interoperability Work Group; IL HIE Authority INTERDEPENDENCY: TECH INFRASTRUCTURE BUSINESS & TECH OPS	January, 2012 – January, 2014 Status: NOT STARTED	-- --
IDENTIFICATION & REMEDIATION OF LEGAL BARRIERS TO IMPLEMENTATION OF ILHIE				
1	Establish the Privacy and Security Work Group and develop workgroup purposes, goals and objectives, as a multi-stakeholder advisory body on privacy and security issues	OHIT	February, 2010 Status: COMPLETED	100

Illinois HIE Strategic & Operational Plan

LEGAL AND POLICY DOMAIN				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
IDENTIFICATION & REMEDIATION OF LEGAL BARRIERS TO IMPLEMENTATION OF ILHIE				
2	Conduct and update analysis of IL privacy and security law	OHIT	April, 2010 – January, 2014 Status: IN PROGRESS	30
3	Identification of inter-state issues, through participation in State Health Policy Consortium (SHPC) Upper Midwest HIE Collaborative project	OHIT INTERDEPENDENCY: BUSINESS & TECH OPS	May, 2010 – January 2014 Status: IN PROGRESS	10
4	Conduct and update analysis of IL privacy and security law enforcement	OHIT; IL Attorney General	July, 2010 – January, 2014 Status: IN PROGRESS	5
5	Leverage the State’s health care purchasing power to accelerate EHR adoption and HIE through specific contract language for those elements in State procurements	OHIT; State Agencies INTERDEPENDENCY: BUSINESS & TECH OPS	July, 2010 – January 2014 Status: IN PROGRESS	5
6	Consider methods available for addressing legal and policy barriers (e.g. statutory & regulatory action)	OHIT; IL HIE Authority; IL Attorney General	March, 2011 – January, 2014 Status: NOT STARTED	-- --
CREATION OF TRUST & RISK MITIGATION HIE INFRASTRUCTURE				
1	Formulate and update State inter-agency Privacy & Security Law Enforcement Policy	OHIT; IL HIE Authority	September, 2010 – January, 2014 Status: IN PROGRESS	0
2	Propose and revise common patient consent form for use in Illinois	OHIT; IL HIE Authority	September, 2010 – January, 2014 Status: IN PROGRESS	5

Illinois HIE Strategic & Operational Plan

LEGAL AND POLICY DOMAIN				
TASK #	TASK	RESOURCES	TIME FRAME FOR COMPLETION	% COMPLETE
CREATION OF TRUST & RISK MITIGATION HIE INFRASTRUCTURE				
3	Propose and revise “data use & sharing agreement” (DURSA) for IL HIE	OHIT; IL HIE Authority	September, 2010 – January, 2014 Status: IN PROGRESS	5
4	Adopt and revise Privacy & Security Policy of IL HIE Authority to provide oversight and accountability of the HIE and foster public trust	OHIT; IL HIE Authority	September, 2010 – January, 2014 Status: IN PROGRESS	0

Illinois HIE Strategic & Operational Plan

Operational Plan Acronym Legend

CEPAWG - Consumer Education and Public Awareness Work Group
CHITREC - Chicago Health Information Technology Regional Extension Center
CMS – Illinois Department of Central Management Services
DCEO – Illinois Department of Commerce and Economic Opportunity
DoI – Illinois Department of Insurance
FSWG - Financial and Sustainability Work Group
GWG - Governance Work Group
HFS – Illinois Department of Healthcare and Family Services
IDPH - Illinois Department of Public Health
IL-HITREC - Illinois Health Information Technology Regional Extension Center
OHIT – Illinois Office of Health Information Technology
ONC - Office of the National Coordinator for Health Information Technology
PHWG - Public Health Work Group
REC - Regional Extension Center
TIWG - Technology and Interoperability Work Group

Appendices

Appendix A: Glossary

Appendix B: Figures

Appendix C: ILHIE 2009 HIE/EHR Adoption Survey Results Summary

Appendix D: Illinois 2010 Statewide EHR Provider Survey

Appendix E: ILHIE ONC PIN Guidance Laboratory Survey

Appendix F: Illinois Health Information Technology and Exchange Act

Appendix G: Executive Order 1-2010

Appendix H: ILHIE Advisory Committee and Work Groups

Appendix I: ILHIE Request for Information

Appendix J: ILHIE Business Plan Resource Request for Proposals

Appendix K: Budget (and attachments)

Appendix L: Letters of Support