



KHIE

**KENTUCKY HEALTH
INFORMATION EXCHANGE**

2015 Annual Report

The Kentucky Health Information Exchange (KHIE) is a secure, interoperable electronic network that supports statewide exchange of patient health information among healthcare providers across the Commonwealth.



Commonwealth of Kentucky

Cabinet for Health and Family Services

Division of Kentucky Electronic Health Information



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Background

The use of health information technology (IT) has the potential to improve the quality, safety, and efficiency of health care in the United States and around the world. Health IT can support patient care delivery activities such as communications, results reporting, order entry, care planning, and documentation. Examples of health IT applications include electronic health records (EHR), clinical decision support including alerts and reminders, computerized provider order entry, electronic access to clinical practice guidelines and evidence databases, consumer health informatics applications, telemedicine, and electronic exchange of health information.

In recent years, the Health Information Technology for Economic and Clinical Health (HITECH) Act has accelerated EHR adoption in ambulatory and hospital settings across the United States. The HITECH Act, part of the American Recovery and Reinvestment Act of 2009 (ARRA), is providing up to \$29 billion in incentive funding for the adoption and “meaningful use” of EHRs by hospitals and physicians. As a result of HITECH funding, 94 percent of non-Federal hospitals, 78 percent of hospital-based physicians, 84 percent of emergency departments, and 73 percent of hospital outpatient departments in the United States have adopted EHRs. The motivation to increase the use of EHRs is grounded in evidence that health IT may improve the quality, safety, efficiency, and satisfaction with care, as has been reported in recent systematic reviews. **We have seen the adoption of electronic health records in Kentucky jump from below 21% to over 80% in the past six years, no doubt a direct result of HITECH.**

A key challenge to effective use of health IT, however, is that most U.S. residents, especially those with multiple conditions, receive care across a number of settings. Of the 3.7 million patients hospitalized in Massachusetts during a five year period, 31 percent were admitted to two or more hospitals (57% of all visits) and one percent were admitted to five or more hospitals (10% of all visits). Similarly, an analysis of 2.8 million patients seen by an emergency department in Indiana found that 40 percent had data at multiple institutions. These data silos present a challenge if we are to meet the goal stated by former Agency for Healthcare Research and Quality (AHRQ) Director Dr. Carolyn Clancy that, “**data should follow the patient**” wherever they get their care.

To enable data to follow patients wherever they receive care, attention is now focused on health information exchange (HIE), defined as the reliable and interoperable electronic sharing of clinical information among physicians, nurses, pharmacists, other health care providers, and patients across the boundaries of health care institutions, health data repositories, states, and other entities who are not within a single organization or among affiliated providers. The HITECH Act recognized that EHR adoption alone is insufficient to realize the full promise of health IT. HITECH allocated \$563 million for states or state designated entities to establish HIE capability among health care providers and hospitals in their jurisdictions. Kentucky received close to \$10 million in 2010 to support the development of KHIE. Ideally, HIE across health care organizations should facilitate care coordination and transitions between settings, improve patient safety, and reduce duplicate testing.

Although the rationale for HIE has been viewed as critical, the path to achieve it has, in some respects, been more difficult than EHR adoption, in no small part due to the lack of sustainable business models. Nonetheless, HIE adoption has grown as a result of the HITECH Act.

The History of Health Information Exchange in Kentucky

The Kentucky Health Information Exchange (KHIE) is a statewide secure, interoperable network where participating providers with certified electronic health record technology (CEHRT) can access, locate, and share needed patient health information with other providers, at the point of care.

The oversight and governance of KHIE was originally housed in the Governor's Office (2005 to 2009) with the Lt. Governor under "**eHealth.**" In 2009, in response to ARRA/HITECH funding opportunities Governor Beshear established the Governor's Office of Electronic Health Information (GOEHI) in the Cabinet for Health & Family Services (in the Office of the Secretary). In 2014 KHIE was moved to the Kentucky Office of Health Benefit & Information Exchange (KOHBE) for budgetary purposes (KHIE receives some portion of the KY Access funds). KHIE is now administered by the **Division of Kentucky Electronic Health Information** in the KOHBE.

Key Work in 2015

KHIE resides in a very strategic location within the Cabinet for Health & Family Services, in that it is fortunate to have key sister agencies such as the KY Office of Health Policy, KY Department for Public Health, KY Department for Medicaid Services, and the KY Department for Behavioral Health, Developmental and Intellectual Disabilities. This location affords KHIE many opportunities to work closely with these agencies on significant initiatives and grant/funding opportunities.

Throughout 2015 KHIE continued to collaborate with key partners within the Cabinet and across the Commonwealth, especially in the area of Electronic Health Record (EHR) Adoption and Meaningful Use (MU), or the CMS EHR Incentive Program. KHIE convenes a MU Collaborative Workgroup with representatives from the KY Medicaid EHR Incentive Team, KY Department for Public Health, KY Regional Extension Center (housed in the University of KY College of Medicine), NorthEast KY Regional Health Information Organization (NeKy RHIO), KY Quality Improvement Organization (Qsource) and of course KHIE. The purpose of this collaborative workgroup is to review and interpret new and modified CMS requirements and all things 'Meaningful Use.' The primary objective of the workgroup is to have consistent guidance and 'one clear voice' for the providers across Kentucky, so they receive the best and most efficient assistance as they maneuver the often murky waters of the EHR incentive program (MU). To date, the CMS EHR Incentive Program (Medicaid & Medicare) has paid out over \$500 million in incentive dollars to Kentucky providers (hospitals, physicians, clinics, etc.). KHIE plays a pivotal role in this program. All electronic public health reporting for MU has been deferred from Public Health to

KHIE. Subsequently, if a provider in Kentucky is pursuing MU and incentive payments they MUST participate in KHIE for public health reporting. This arrangement with Public Health has provided tremendous leverage for KHIE to work with healthcare providers all across the state.

In 2015 KHIE played a key role in working with the Office of Health Policy (OHP) on the State Innovation Model (SIM) program. OHP applied for a planning grant for SIM and was awarded \$2 million early in 2015. KHIE was very involved in all aspects of the SIM initiative, including membership on the Core Team. KHIE staff assisted especially with the Health IT activities and had tremendous input into the SIM HIT Plan, which was submitted in November 2015.

Another key piece of work in 2015 was the All Payer Claims Database (APCD) and KY Health Data Trust initiative. KHIE had the opportunity to be involved in this core/steering committee as well and to be a significant part of the planning and development work of this initiative. As this work progresses through 2016, KHIE will play a major role as a data source of clinical information for the APCD and KY Health Data Trust.

KHIE also continued to focus on the key aspects of being a health information exchange/network: outreach & education, onboarding, technology upgrades, HIPAA compliance, and long term sustainability. The following provides a brief update for those areas.

Outreach & Education

On a daily basis, KHIE Outreach Coordinators are instrumental in engaging providers and assisting them with the first phase or the administrative side of onboarding to KHIE. The Outreach Coordinator (OC) gathers critical information about the provider regarding goals for connecting to KHIE. Since KHIE is the designated Public Health Authority for the state of KY for Meaningful Use, the role of the OC has evolved to include focusing on needs and objectives to support providers in pursuit of CMS' MU activities, as related to Public Health Reporting and Transitions of Care.

The overarching role of a KHIE Outreach Coordinator is to act as an extension of KHIE to represent its vision for promoting and facilitating health information technology across the Commonwealth of Kentucky.

To promote health information technology in 2015, KHIE hosted its successful annual eHealth Summit. While all of the Outreach Coordinators are involved to some extent, one played a major role in the planning and hosting of the event.

Furthermore, throughout 2015, the Outreach Coordinators collaborated on various levels with key stakeholders, such as the Regional Extension Centers, to promote health information technology across the state. They also represented KHIE at 27 conferences held across the Commonwealth.

Listed below are a few of them.

- Kentuckiana Health Collaborative
- Kentucky Medical Group Management Association (KMGMA)
- Medicaid Forum (5)
- KY Optometric Association
- Bluegrass Healthcare Information and Management Systems (HIMSS) Informatics Conference
- Bluegrass Human Services Council
- UK Skilled Nursing Facilities
- KY REC Survival Seminars (5)
- KY Immunization Registry Conference
- Data Fostering Conference
- Area Health Education Center (AHEC) Summer Conference
- Kentucky Rural Health Association (KRHA) Annual Conference
- Northern Kentucky University (NKU) Health Innovation
- Foundation for a Healthy Kentucky
- Kentucky Health Information Management Association (KHIMA)

With the support of KHIE's Deputy Executive Director, the Outreach Coordinators participated in a number of KHIE projects throughout 2015 that were crucial to the ongoing success of KHIE. Many of these projects increased awareness of KHIE and/or added to KHIE's value proposition.

- State Innovation Model (SIM) Planning Meetings
- Super Utilizer Emergency Department (ED) Program
- Learning Action Network Program
- Western Appalachian KY Health Care Associates Network
- MHealth: Mobilizing the Louisville Community Program

Further collaboration with sister agencies and other community resources demonstrated how KHIE could be beneficial to them in their daily work. Some of these include: KY Department of Corrections and KY Board of Emergency Medical Services (EMS).

Additionally, the Outreach Coordinators worked diligently to promote KHIE's Community Record/VHR. They collaborated with KHIE's Community Record/VHR trainer to coordinate eight trainings across the state. These included:

- Lexington-Fayette Department of Corrections
- Rice's Pharmacy
- Pineville Community Hospital
- Rockcastle Regional Hospital & Respiratory Care Center
- Mercy Medical Associates
- New Lexington Clinic
- St Claire Regional Medical Center
- Pathways, Inc.

KHIE & Behavioral Health

KHIE continued its focus on behavioral health. In 2015, the Outreach Coordinators facilitated training with Pathways, Inc. on KHIE's consent form for sharing health information through a health information exchange.

KHIE continues to concentrate on behavioral health connectivity. Six Community Mental Health Centers (CMHC) are included in the vendor hub nearing completion by NetSmart, a nationally recognized behavioral health vendor. Once this connectivity is completed, these six CMHCs will be able to share behavioral health, substance and alcohol abuse information with the larger KHIE community using a 42 CFR Part 2 compliant consent form.

KHIE, the KY Department for Behavioral Health and Developmental and Intellectual Disabilities (DBHDID) and the Office of Administrative and Technology Services (OATS) are collaborating on KHIE connectivity for the first state-owned behavioral health hospital. Central State is tentatively scheduled to go-live with KHIE in the 3rd quarter of 2016. Central State Hospital will also share substance and alcohol abuse information after receiving the patient's consent. The KHIE team is collaborating with DBHDID, OATS and Central State Hospital to ensure all Central State patient data will be exchanged, with KHIE, with appropriate patient consent.

KHIE is supporting the work of DBHDID in assisting with the development of the care coordination requirement of the Certified Community Behavioral Health Center (CCBHC) demonstration project grant. KHIE is concentrating on expanding available connectivity options with criminal justice and Kentucky owned and operated behavioral health hospitals and behavioral health care locations. These expanded connectivity options, for CMHCs that are connected to KHIE, will be included in the Kentucky demonstration project grant as electronic methods for coordinating a patient's care between transitioning providers.

KHIE & Public Health

The partnership between KHIE and the KY Department for Public Health is one of the most critical collaborations for KHIE and impacts providers all across the state. The KY Department for Public Health has deferred all electronic public health reporting to KHIE to act as the data intermediary between the provider and Public Health. This has been an enormous opportunity for KHIE in that it has opened many doors with providers to discuss health information exchange.

In 2015, KHIE worked closely with the Kentucky Department for Public Health Immunization Program (KIP) to establish connectivity with a new immunization registry vendor (Envision) and to begin work of onboarding Kentucky providers to Envision. KHIE and KIP are currently working behind the scenes to migrate the historical data feeds from the old immunization registry to Envision.

The electronic laboratory reporting regulation that goes into effect in October 2016 was also a priority for KHIE in 2015. This new regulation requires hospitals to report disease surveillance data electronically to the Kentucky Department of Health via KHIE. By December 31, 2015, seven hospitals were reporting disease surveillance data electronically. Another 13 hospitals are currently in the process of onboarding.

Also during 2015, KHIE effectively doubled the number of provider locations that report syndromic surveillance data to the CDC BioSense system. By year end, KHIE was receiving and routing syndromic surveillance data from 475 provider locations to CDC BioSense. Another 114 provider locations were in the process of syndromic surveillance testing.

Also by year end, KHIE had a total of four providers submitting cancer case data to the Kentucky Cancer Registry (KCR). The ability to onboard more eligible providers for cancer case reporting continues to be hampered by a lack of EHR vendors that possess a certified interface with which to submit cancer information.

The partnership between KHIE and the KY Department for Public Health, and the technical infrastructure/network that has been implemented with providers across the state establishes great groundwork for the development of future disease registries for public health in Kentucky.

Technology Update

In March 2015, KHIE achieved a significant technical milestone, releasing the next generation of KHIE which supports cross-enterprise document sharing across healthcare providers. This next generation platform is based on Integrating the Health Enterprise (IHE) framework, the standard required by The Sequoia Project (formerly Healthway) and recognized by the ONC 2015 Interoperability Standards Advisory for clinical document exchange in and outside a specific health information exchange domain. Because this framework has been adopted widely by EHR vendors, many providers already have the functionality within their own EHR systems to exchange clinical documents. At present, KHIE is actively onboarding several large healthcare organizations and critical access hospitals for this service, including KentuckyOne Health, Norton Healthcare, University of Kentucky, and Harrison Memorial Hospital.

Health Information Service Provider & Direct Secure Messaging

In addition to connecting to KHIE's health information exchange, providers can also utilize KHIE's Direct Secure Messaging services for care transitions. Direct secure clinical messaging is an interoperable, scalable and standards-based way to communicate among providers using the Internet. Providers can utilize KHIE's Health Information Service Provider (HISP) and Direct secure messaging web portal to improve care coordination efforts across the care continuum.

KHIE also hosts a Direct Email Catalog and Direct Community Contact List to assist with building the community of care. Akin to a phone book, the Direct Email Catalog enables providers to share their Direct secure email addresses with the community at large. The Direct Community Contact List is used by providers wanting to test their Direct capabilities with other healthcare organizations. Members who join the community share the name of a person within their organization who can answer questions and facilitate Direct testing efforts.

By the end of 2015, KHIE had 336 individuals from 17 different healthcare facilities utilizing KHIE's Direct secure messaging web portal. There were also 1,658 unique Direct email addresses in the KHIE Direct Email Catalog and 453 facility locations participating in the Direct Community Contact List.

HIPAA Privacy & Security

KHIE's vendor is required by contract to be NIST 800 rev. 4 compliant. Current KHIE funding provides for the development of a scope of work and assessment of privacy and security controls during the third quarter of 2016.

Annual privacy and security training is required for all KHIE employees beginning January 1, 2016. Areas of emphasis for KHIE for 2016 include improvement in the NIST family of Access Control, specifically

addressing improvement in the process of provisioning authorized users and ending authorized user's access.

Privacy is addressing one-third of the NIST 800 rev. 4 Appendix J privacy controls and conducting a gap analysis of the current KHIE operations and policies.

Data Integrity & Governance

The Data Integrity and Governance team is part of the Data Management Division within the Division of Strategic Services. This team works with all the different departments within the Cabinet for Health and Family Services to continuously improve the value and trustworthiness of the information by assuring that data and content are valid, accurate, reliable, current and comprehensive. The goal is to ensure that the clinical and non-clinical data and information are available, trusted, and useable by those who rely on this information to make decisions to improve health and provide appropriate services to our clients. This is accomplished by assuring correct association of patients and matching of medical reports. The Data Integrity team works in multiple databases within the Cabinet to accomplish this work. They not only work in KHIE, but also work with all of the primary systems that run in the Cabinet for Health & Family Services including: Kynect (health benefit exchange); KAMES (the Kentucky eligibility system); KASES/KICCS (Child Support systems), KY-CHILD (Birth Registry), KY-EDRS (Death Registry), MMIS (Medicaid), and TWIST (Community Based Services).

In an ongoing effort to assure data integrity and quality information, the Data Integrity and Governance team, working with individual healthcare providers, resolved and merged 101,609 patient records in 2015. This is significant in that this maintains the 'Master Patient/Person Index' within our health information exchange. This extremely important work ensures accurate patient identification which in turn facilitates improved quality and safety of care for our population.

KHIE & Sustainability

KHIE is supported by a sustainability plan established by the Cabinet for Health and Family Services (CHFS) utilizing funds received from an approved Implementation Advance Planning Document Update (IAPDU) through the Centers for Medicare and Medicaid Services (CMS) along with assessment fees collected from Kentucky insurers (KY Access funds) to cover the "state share" and "fair share" portions.

Qualified expenditures are cost allocated with CMS to support KHIE. This cost allocated funding supports Meaningful Use (MU) of electronic health records to make accessible health information exchange (HIE) and onboarding services to hospitals and providers participating in the Kentucky Medicaid Electronic Health Record (EHR) Incentive Program.

HIE sustainability requires value to be delivered to the end-user that exceeds all costs of service. At its core, KHIE provides baseline services supporting evolving MU requirements and additional value-added services across the state on a universal access basis. As healthcare reform progresses, it is anticipated that there will be increased value to stakeholders for both direct services and trusted 3rd party interconnection.

The sustainability plans of the Kentucky Health Information Exchange are also subject to the oversight of the Kentucky Health Information Exchange Coordinating Council and the more specific oversight of the Business Development and Finance Committee for that council.

Accomplishments in 2015

- Completed major technical upgrade to support a more robust electronic exchange
- Increased number of live provider locations from 1031 to 1125
- Increased number of data feeds from 1790 to 2354
- Supported providers with meaningful use requirements for public health reporting and transitions of care
- Provided HISP (health information service provider) connections with 20+ hospitals
- Provided over 400 Direct Secure Messaging mailboxes to providers with no EHR
- Assisted the KY REC with six Meaningful Use Roadshows, from Morehead to Paducah
- Held a successful 2015 **eHealth Summit** with over 300 attendees

Goals for 2016

- Acquisition of new technology platform for 'Next Generation' KHIE
- Complete Certification with the national 'eHealth Exchange'
- Engage with the Veterans Administration
- Complete connectivity with border states (Indiana, West Virginia, Ohio)
- Increased utilization of KHIE (more queries!)
- Connectivity with state behavioral health facilities
- Connectivity with local health departments
- Connectivity with state correctional health care facilities

Conclusion

Although many challenges prevail, the Kentucky Health Information Exchange continues to forge ahead and make progress. KHIE has made tremendous progress in the most important, yet most challenging, element to health information exchange – forging relationships. The significance of trust and accountability cannot be overstated when an entity is considering the sharing of information. The technology is only the tool and vehicle by which to get the work done – at the core of the work is the relationship and the collaboration it took to get there.

The KHIE footprint across the state continues to grow. As we foster new and different collaborations in the future and as health care works to transform from fee-for-service, to value and quality outcomes focused, the value proposition can be demonstrated even more. **KHIE, as a statewide “public utility” can, and will, make a difference for Kentucky in meeting the triple aim: better care, better health and smarter spending.**

Respectfully Submitted,

Polly M Bentley

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