



E-HEALTH INFORMATION EXCHANGE

Curriculum Implications

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February 28-29, 2008
AIS SIG OSRA**



Objective

- To begin a dialog about the implications of HIT & HIE for computer and information systems curricula at both undergraduate and graduate levels.



Health Information Technology & Health Information Exchange

- The National Picture
- University Role
- A Regional Initiative
- Curriculum Opportunities
- Curriculum Implications



Why the Interest in HIT & HIE?

- Run away medical costs
- Increasing incidents of medical errors
- Growing complexity of a multiple provider / multiple payer system
- Privacy and security issues (HIPPA)
- Clinical needs versus administrative needs
- Only major industry not using IT
- A systemic problem



The National Picture

- U.S. healthcare delivery system is in major transformation
- Widespread application of health information technology (HIT) will be required
 - to provide physicians with immediate and effective access to both information about individual patients and current medical knowledge at the point of care.
- Lack of access to comprehensive patient information is limiting the ability of providers to deliver the highest levels of care and efficiency.
 - Experience has shown that better access to patient data creates greater patient safety, reduces medical errors, and reduces healthcare costs.
- Technology will provide patients with greater control of their information, empowering individuals as healthcare consumers.



National e-Health Leadership

- April 2004 President Bush issued directive for widespread adoption of interoperable electronic health records (EHRs) by 2014.
- Office of the National Coordinator for Health Information Technology (ONC) in the Department of Health and Human Services (HHC).
 - www.hhs.gov
- Goal: a nationwide health information network (NHIN).
- A Network of Networks implemented by linking regional and statewide HIEs across the nation.
- National standards for interoperability of HIT & HIE.
- Requires collaboration on an unprecedented level.



University Role

- A case in regional engagement (stewardship)
- Kentucky has elected to involve universities as major players in developing a state e-Health Network
- Enabling state legislation passed in 2005 and 2007



College of Business Role

- Consulting
 - Reengineering expertise
 - Technical expertise
- Building partnerships
- Seeking grant funding
- Resources, Graduate internships
- Economic development leadership



Regional Health Information Exchange

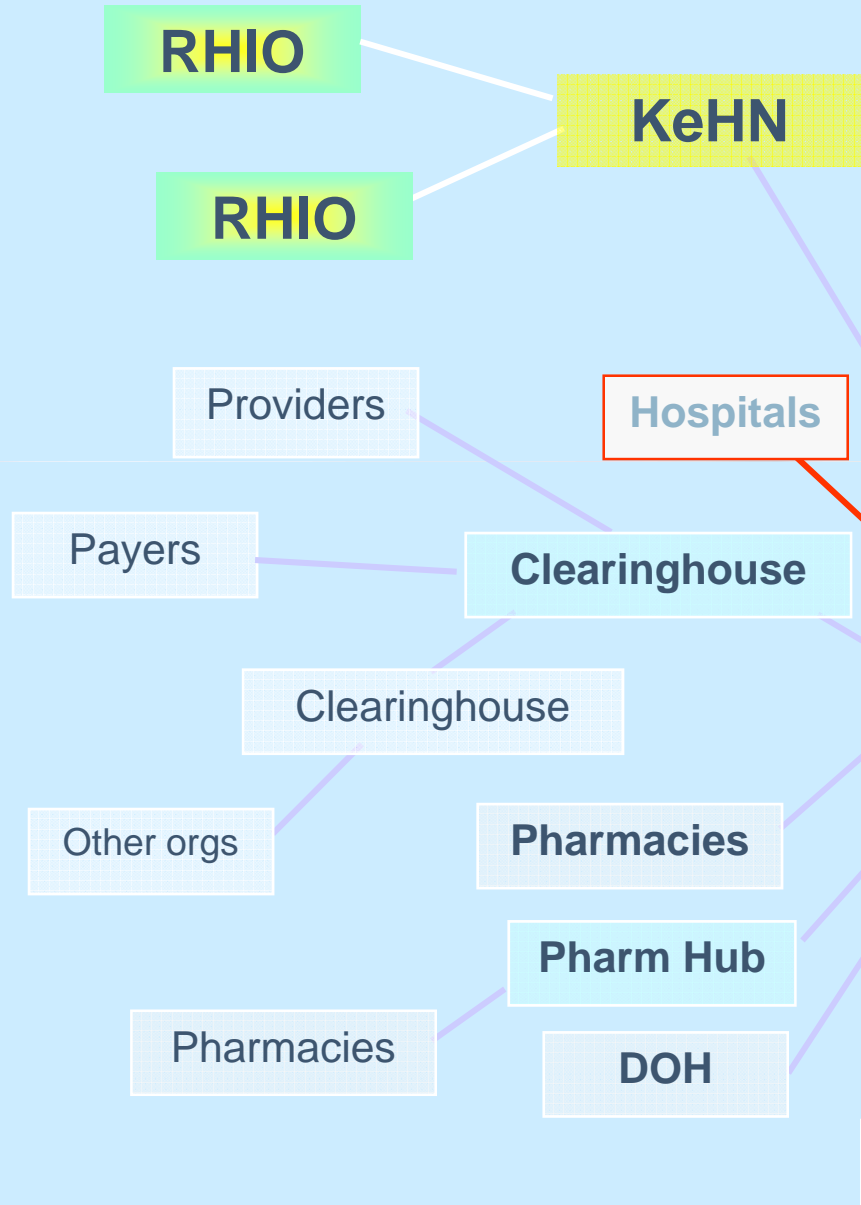
- Started with e-health conversations between IS Department and St. Claire Regional Medical Center (SCR)
- Proposal to Dean in Spring 2005
- E-Health Federal Relations Proposal in November 2005
- Meetings with legislators
- Meetings with Northern Kentucky University Infrastructure Management Institute (IMI)
- St. Claire HIT Strategic Plan
- Need for business continuance solution identified as major barrier to progress
- Mission expanded from electronic medical records (EMR's) at SCR to the Northeast Kentucky RHIO



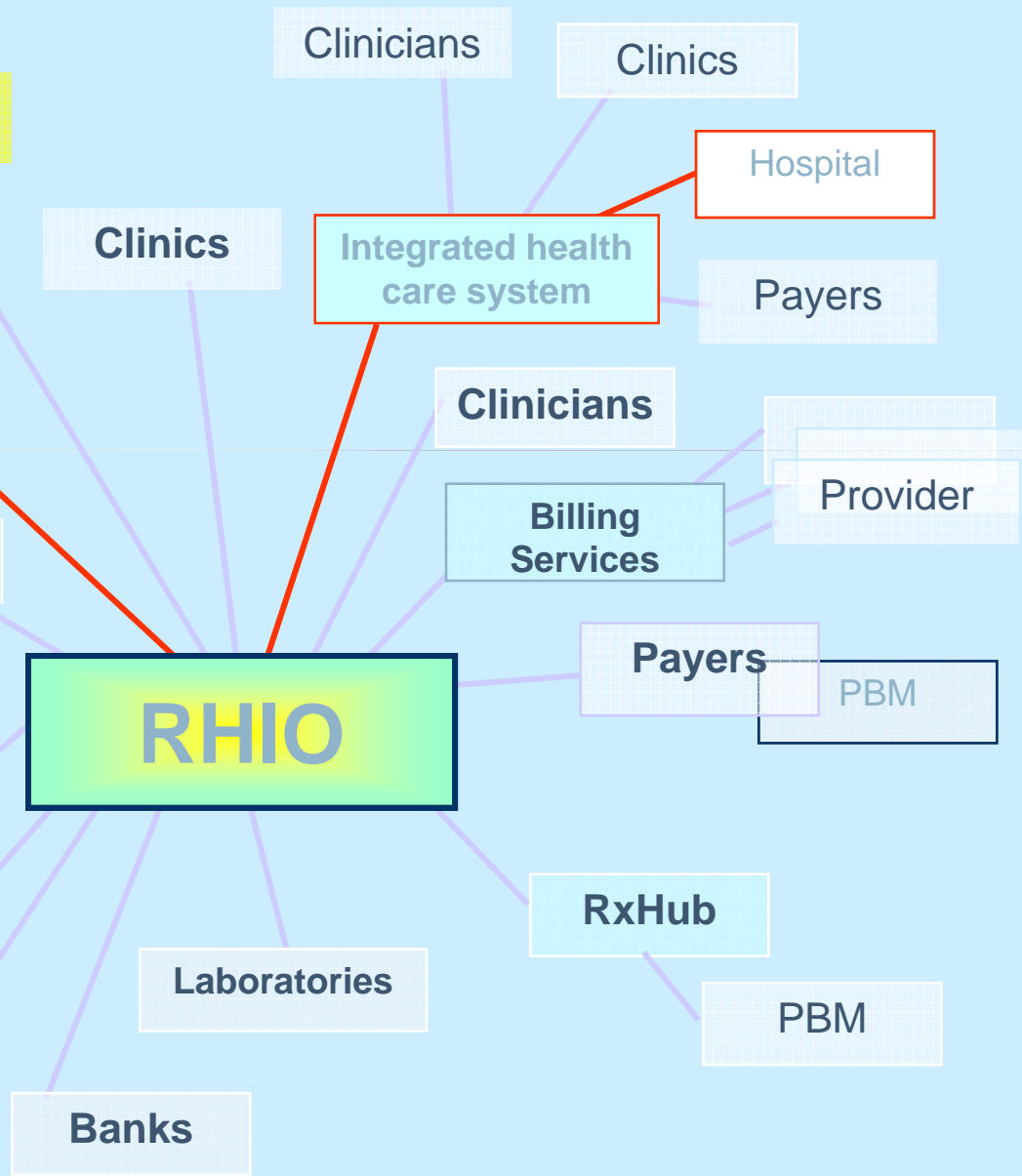
NeKY RHIO Goals

- Ensure availability of critical healthcare information at point of care.
- Allow health information to follow the consumer.
- Create infrastructure for secure health information exchange.
- Connect regional healthcare providers to state and national health information exchange.
- Empower healthcare consumers.
- Enhance public health capacity to protect citizens.
- Promote regional economic development.

What is a RHIO?



An Example





Mission

Support adoption of electronic medical records and develop a secure interoperable regional e-health network with the goal of improving quality and cost-effectiveness and empowering consumers to more effectively meet their healthcare needs.



Approach

- Rural healthcare needs vs urban needs
- Focus on organizational issues not just technology
- Focus on the big picture, but build incrementally
- Involve all stakeholders
- Patient centric
- Driven by the medical community
- Build on common platform & standards
- Systemic problem



RHIO Progress

- Steering Committee
- Studied Other RHIO Models
 - CareSpark
 - LouHIE
 - HealthBridge
 - Veterans Administration e-Health Network
 - Jim Oaks – Delaware State RHIO
 - High tech hospitals in India
- Researched national, state & regional initiatives



Progress (2)

- Researched and mapped regional medical trading areas and referral patterns
- Aligned with KY e-Health Network Initiative
- Member of HIMSS National Federation of RHIOs
- Representation on State Initiatives
 - Williams – KY e-Health Network Board
 - Regan – KY e-Health Network Advisory Group and KY e-Health Corporation



Progress (3)

- Press Release / Official Announcement
- Bring in additional community partners
 - ARH
 - Fleming County Hospital
 - UK Medical Center
 - MeadowView Medical Center
 - Primary Plus
 - Gateway District Public Health
 - Nursing Homes
 - Humana
- Participation in KY e-Health Summits



Current Initiatives

- Home Health Network Project
 - RWJF grant application
- St. Claire Primary Care EMR and E-
Prescribing Initiative
 - ePIK Grant Award \$81,000
- Participated in other grant applications
- SCR building new data center
- Evaluating Business Continuance solution



Business Continuance Center

- Started with SCR's inquiry about MSU's interest in partnering to meet BC/DR needs
- Economic development potential: Critical need for all medical providers to support HIE
- Research –
 - Confirmed interest with sampling of medical facilities
 - Visited industry business continuance centers
 - Worked with NKU Infrastructure Management Institute
- Disaster Recovery Plan for SCR
- Business Plan for Proposed BCC
- Funding Sources



Next Steps

- Incorporate RHIO as a 501(c)3
- Establishing priorities for RHIO functionality and services
- Determine Business Model
- Develop Business Plan
- Web site



Next Steps

- Funding / Resources
- Hire part-time executive director
- Partner with UK in a pilot health information exchange project
- Participate with KeHC on KHIP project as a service provider
- Building community awareness and support



Curriculum Opportunities

- Curriculum: Healthcare + College of Business – multiple opportunities
 - Information Systems
 - Management
 - Finance
- Opportunities for students
 - Service learning
 - Internships
- Faculty research, consulting, & professional development
- Both undergraduate and graduate levels
- Regional Engagement mission
 - Showcase projects
 - MSU Enterprise Center
 - Innovation Center
 - Economic development



Curriculum Opportunities

- Health information systems
- Health information networks
- Security and privacy
- Business continuance
- Training
- Workflow redesign
- Innovation and change management



Implications

- Do we need specializations?
- If so, would they be at undergraduate level, graduate, or both?
- Should HIT specializations be collaborative degrees since HIT bridges both healthcare and information technology?
- Where will the leadership come from, and what is the university's role in fostering innovation and new technology applications for clinical practice and health information exchange?



More Information

- **ONC** <http://www.hhs.gov>
- **HIMSS Health Information Management Systems Society**
http://www.himss.org/ASP/topics_rhio.asp
- **Kentucky e-Health Network**
<http://ehealth.ky.gov/>
- **E-Health Initiative**
<http://www.ehealthinitiative.org/default.mspx>
- **i-HealthBeat** <http://www.ihealthbeat.org/>
- **Mass Health Data Consortium**
<http://www.mahealthdata.org/ma-share/>



Questions?