



HEALTH INFORMATION EXCHANGE • KEYSTONE HEALTH INFORMATION EXCHANGE • KEYSTONE HEALTH INFORMATION EXCHANGE

IHE Connectathon

January 29, 2008

Jim Younkin
KeyHIE Project Director



KeyHIE Development

- 2004 AHRQ Planning Grant
- 2005 Regional Survey / Symposium
- 2005 AHRQ Implementation Grant
- 2005 MOU to establish Central Penn Health Information Collaborative (CPHIC)
- 2007 PA DOH Grants
- 2007 Renamed to be more inclusive
- Seven healthcare organizations and growing

Initial Project

- Address information needs of ED physicians
- Access information from “external” organizations at the point of care

2005 Stakeholder Requirements

- Clinicians

Clinicians...

- Medications
- Allergies
- Problems
- Immunizations
- EKG's

2005 Stakeholder Requirements

- Clinicians
- Vendors

Vendors...

- Agree with project importance
- Prefer not to build one-off interfaces
- Follow EHRVA Roadmap
- Suggest “Continuity of Care” or “Medical Summary”
- None could promise delivery in project time frame (Start '06 ... Complete '08)

2005 Stakeholder Requirements

- Clinicians
- Vendors
- Strategy

Strategy...

- Leverage systems and data sources already in place to avoid high start-up costs
- Build incrementally
- Adopt national models and standards
 - Connecting for Health
 - IHE
 - HITSP

Patient Details:

HOME > SEARCH RESULTS > PATIENT DETAILS

Name	Age	Gender	Date of Birth
RHIO, EXCHANGE	21 yrs	MALE	8/25/1986

Demographics (3)

Geisinger Shamokin Bloomsburg

MRN: **9999001** Authorization: **GIVEN** Home Phone: **(570)271-5555**
 Age: **21 yrs** Address: **205 LEE ST** Work Phone:
 Gender: **MALE** Address 2: Cell Phone:
 Date of Birth: **8/25/1986** City: **BLOOMSBURG** Marital Status: **SINGLE**
 Ethnicity: State: **PA** Maiden Name:
 SSN: **XXX-XX-9999** Zip: **17815** Religion: **None**

MRN | Name

Search Clear

"Sounds-Like"

*First Name: MI: EXCHANGE

*Last Name: RHIO

*Gender: Male

*Age: 20 (OR)

*Date of Birth:

Encounters (20)

Displaying [1-20] of (20) encounters ...

Date	Facility	MRN	Service
9/17/2007	Geisinger	9999001	NEUROL
9/14/2007	Shamokin	8888001	NOT AUTHO

Encounters (22)

Past Current Future Canceled Apply Changes

Displaying [11-20] of (22) encounters ...

Previous Page Next Page

Date	Facility	MRN	Service	Attending	Reason
6/30/2007	Bloomsburg	7777001	Emergency Room	DOCTOR, BLOOMSBURG	SEIZURES (pending)
6/29/2007	Geisinger	9999001	PED/NEUROLOGY	DOCTOR, GEISINGER	SEIZURES PEDS NEURO (pending)
6/28/2007	Geisinger	9999001	LABORATORY BP1	DANVILLE, LAB PROCESSING	OTHER MALAISE AND FATIGUE
6/09/2007	Shamokin	8888001	NOT AUTHORIZED		
6/07/2007	Bloomsburg	7777001	Emergency Room	DOCTOR, BLOOMSBURG	POS SPINAL INFECTION/HX SEIZURES (pending)
6/01/2007	Bloomsburg	7777001	Emergency Room	DOCTOR, BLOOMSBURG	FOREIGN BODY IN NOSE (pending)
5/31/2007	Bloomsburg	7777001	Emergency Room	DOCTOR, BLOOMSBURG	FOREIGN BODY IN EAR (pending)
5/31/2007	Shamokin	8888001	NOT AUTHORIZED		
5/27/2007	Shamokin	8888001	NOT AUTHORIZED		
5/01/2007	Geisinger	9999001	LABORATORY BP1	DOCTOR, GEISINGER	LAB (pending)

KeyHIE Portal

- Live today in two Emergency Departments
- 5 pilot users in 2007
- 40+ users by February '08
- 75+ users by June '08

Limitations

1. Navigate unfamiliar user interfaces
2. EHR Access agreements
3. Patient authorizations

Solution...

“IHE Document Store”

Patient Details:

[HOME](#) > [ED BOARD](#) > PATIENT DETAILS

Name	Age	Gender	Date of Birth
RHIO, EXCHANGE	21 yrs	MALE	8/25/1986

MRN Name

*Select Facility:

*Facility MRN:

- Demographics (3)

Gelsinger

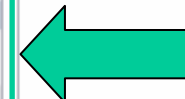
MRN:	9999001	Authorization:	GIVEN	Home Phone:	(570)271-5555
Age:	21 yrs	Address:	205 LEE ST	Work Phone:	
Gender:	MALE	Address 2:		Cell Phone:	
Date of Birth:	8/25/1986	City:	BLOOMSBURG	Marital Status:	SINGLE
Ethnicity:	WHITE/CAUCASIAN	State:	PA	Maiden Name:	
SSN:	XXX-XX-9999	Zip:	17815	Religion:	None

- Encounters (3)

Past
 Current
 Future
 Canceled

Displaying [1-3] of 3 encounters ...

Date	Facility	MRN	Service	Attending	Reason	Documents
9/17/2007	Geisinger	9999001	NEUROLOGY	DOCTOR, GEISINGER	TRANSIENT ALTERATION OF AWARENESS	
9/14/2007	Shamokin	8888001	NOT AUTHORIZED			
8/28/2007	Geisinger	9999001	NEUROLOGY	DOCTOR, GEISINGER	OTHER CONVULSIONS --- ANORMALIES OF CEREBROVASCULAR SYSTEM --- NEUROPATHY IN OTHER DIS	



- Documents (5)

Displaying [1-5] of 5 documents ...

Date	Facility	MRN	Document Type	Document Name
9/17/2007	Geisinger	9999001	Patient Authorization	GHSUAuth-99990001-20070917
9/14/2007	Shamokin	8888001	NOT AUTHORIZED	
8/28/2007	Geisinger	9999001	Scanned Document	GHSbloodConservation-99990001-20072807
8/20/2007	Shamokin	8888001	NOT AUTHORIZED	
8/17/2007	Bloomsburg	7777001	Patient Authorization	TBHAAuth-8888001-20070817

Patient Details:

[HOME](#) > [EO BOARD](#) > PATIENT DETAILS

Name	Age	Gender	Date of Birth
RHIO, EXCHANGE	21 yrs	MALE	8/25/1986

MRN Name

*Select Facility:

*Facility MRN:

- Demographics (3)

Geisinger | Shamokin | Bloomsburg

MRN: 9999001
 Age: 21 yrs
 Gender: MALE
 Date of Birth: 8/25/1986
 Ethnicity: WHITE/CAUCASIA
 SSN: XXX-XX-9999

Name	Age	Gender	Date of Birth
RHIO, EXCHANGE	21 yrs	MALE	8/25/1986

- Encounters (3)

Displaying [1-3] of (3) encounters

Date	Facility	MRN
9/17/2007	Geisinger	9999001
9/14/2007	Shamokin	8888001
8/28/2007	Geisinger	9999001

- Documents (5)

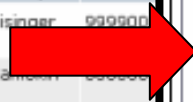
Displaying [1-5] of (5) documents attached to **Geisinger** visit # **12345678 (MRN 9999001)** on **9/27/2007**.

Document Type	Document Name
Visit Summary	Neurology Visit Summary
Lab	Comprehensive Metabolic Panel
Lab	Routine Urinalysis
Radiology Image	CT Scan Cranium
Lab	Vitamin B12

- Documents (5)

Displaying [1-5] of (5) documents

Date	Facility	MRN	D
9/17/2007	Geisinger	9999001	P
9/14/2007	Shamokin	8888001	NOT AUTHORIZED
8/28/2007	Geisinger	9999001	Scanned Document
8/20/2007	Shamokin	8888001	NOT AUTHORIZED
8/17/2007	Bloomsburg	7777001	Patient Authorization



John Halamka

MRN: 598-0478001

Gender: Male

Date of Birth: May 23, 1962

Personal Health Record Powered by 

▼ Patient Info

Personal Physicians HealthCare Continuity of Care Document

▼ Summary Purpose

▲ Payers

Payer name	Policy type	Covered party ID
Harvard Pilgrim Health Plan	Care Group Preferred	HPCG02815-00

▼ Advance Directives

▲ Functional Status

Functional Condition	Effective Dates	Condition Status
No functional status limitations		

▲ Problems

Condition	Condition Status
AV Nodal Reentry Tachycardia	Resolved
Lyme Disease	Resolved
Low HDL Cholesterol	Resolved
Corneal Abrasion	Resolved
Vegan	Active

▼ Family history

▲ Social History

Social History Element	Description
Tobacco use	never
Passive smoke exposure	no
Alcohol use	no
Caffeine use (drinks/day)	<1
Exercise (hours/week)	10-20
Sun exposure	rarely
Dietary restrictions	vegan

▲ Allergies, Adverse Reactions, Alerts

Substance	Reaction	Status
Amoxicillin	Rash	Active

▲ Medications

Medication	Instructions	Start Date	Status
Centrum silver tab (multiple vitamins-minerals)	1 PO qDay		Active
Vitamin D3 (cholecalciferol)	1600 units PO qDay	Oct 2007	Active

 **KeyHiE** *The right information, right now.*

Keystone Health Information Exchange

[Home](#) [ED Board](#) [Hospital Phone List](#) [My Account](#) [Help](#) [Logout](#)

Patient Details:

[HOME](#) > [ED BOARD](#) > PATIENT DETAILS

Name	Age	Gender	Date of Birth
RHIO, EXCHANGE	21 yrs	MALE	8/25/1986

Demographics (3)

Geisinger	Shamokin	Bloomsburg
MRN: 9999001	Authorization:	
Age: 21 yrs	Address:	
Gender: MALE	Address 2:	
Date of birth: 8/25/1986	City:	
Ethnicity: WHITE/CAUCASIAN	State:	
SSN: XXX-XX-9999	Zip:	

Name

RHIO, EXCHANGE

Documents (5)

Displaying [1-5] of (5) documents

Document Type

Visit Summary

Lab

Lab

Radiology Image

Lab

Encounters (3)

Displaying [1-3] of (3) encounters ...

Date	Facility	MRN	Service	Atte
9/17/2007	Geisinger	9999001	NEUROLOGY	DOC
9/14/2007	Shamokin	8888001	NOT AUTHORIZED	
8/28/2007	Geisinger	9999001	NEUROLOGY	DOC

Documents (5)

Displaying [1-5] of (5) documents ...

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8/28/2007	Geisinger	9999001	Scanned Document
8/20/2007	Shamokin	8888001	NOT AUTHORIZED
8/17/2007	Bloomsburg	7777001	Patient Authorization

Our Process

- Start with HIMSS
- Contract with IHE-vetted professional to navigate RFP process
- Develop requirements (source, timing, etc)
- Request for Proposal sent to vendors...
 - IHE “certified” for PIX and XDS Registry/Repository
 - Hosting capabilities
 - Grant-related time constraints

Integration Requirements

- Provide and Register Documents
- Query and Retrieve
- Interface set up with Registry / Repository
- Document Consumers
- Document Sources
- Patient Identity Source
- KeyHIE RLS

HITSP Constructs / IHE Profiles

- ISTP_HITSP_13_v2.0_2007 Manage Sharing of Docs
- IST_HITSP_22_v2.0_2007 Patient ID Cross-Referencing Transaction
- IST_HITSP_23_v2.0_2007 Patient Demographics Query Transaction
- IST_HITSP_29_v2.0_2007_Notification of Document Availability Transaction
- ISC_HITSP_35_v2.0_2007 Lab Result Terminology
- ISC_HITSP_37_v2.0_2007 Lab Report Document
- ISC_HITSP_48_v2.0_2007_Encounter Document
- ISC_HITSP_48_v2.0_2007_Encounter Document
- HITSP/T16 Consistent Time
- HITSP T/17 Secured Communication Channel
- HITSP C26/Non-Repudiation
- HITSP/C19 Entity Identity Assertion
- HITSP /T15 Collect and Communicate Audit Trail
- HITSP TP30/Manage Consent Directives
- ISTP_HITSP_50_v1.2_2006_Retrieve Form for Data Capture
- ISTP_HITSP_49_v1.2_2006_Radiology Report Document

XDS Transactions

- Maintain Time
- PIX Query
- Patient Identity Feed
- Patient Demographics Query
- Register Document Metadata
- Provide and Register Document Set
- Provide and Register Document Set
- Query Registry
- Retrieve Document Request
- Authenticate Node
- Record Audit Event

Status

- No official award announcement
- Grant deadlines loom
- Multiple document types likely
 - Transcription documents (PDF)
 - HL7 messages (CCD?)
 - Custom batch reports (CCD?)
- Participants enthusiastic about new possibilities
- Still no EKG's!

Take Away...

- We need YOU!



Contact Information

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