



eHEALTH INITIATIVE

Real Solutions. Better Health.

Connecting Communities – Advanced HIE Services

Tuesday, January 22, 2013

2:00 – 3:00 pm ET

Reminder

*Please mute your line
when not speaking*

(6 to mute, *7 to unmute)*



Reminder

This call is being recorded



Agenda

- Welcome and introduction
- Roll call
- Overview of objectives
- Presentations: Advanced/value-add HIE services
- Discussion/Questions
- Next Steps



Overview

- Workgroup will:
 - identify gaps in knowledge & highlight best practices of how HIE can improve/support population health
 - discuss how emerging trends & issues will redefine face of HIE in 2013 & beyond
 - explore the **context, capabilities, & components of HIE for population health** in relation to relevant events looming on horizon (e.g. MU 2/3, NwHIN governance, HIPAA, and the administration next year)





HIT: Connecting Communities Whatcom County, WA

eHealthInitiative
January 22nd, 2013



A little history

- In 1996 - Hinet, a private health information intranet, was created through collaboration between a hospital and payor
- E-mail and Hospital EMR on 105 pcs at each physician office in the county.
- In 2000 - Providers started paying their fair share for network operations

Today - WHO

- All Physician Offices and their staff
- All SNFs
- The Health Department
- The Jail
- Payor and Ancillary Providers
- The Hospital Medical Center System

- **PATIENTS *aka* PEOPLE**

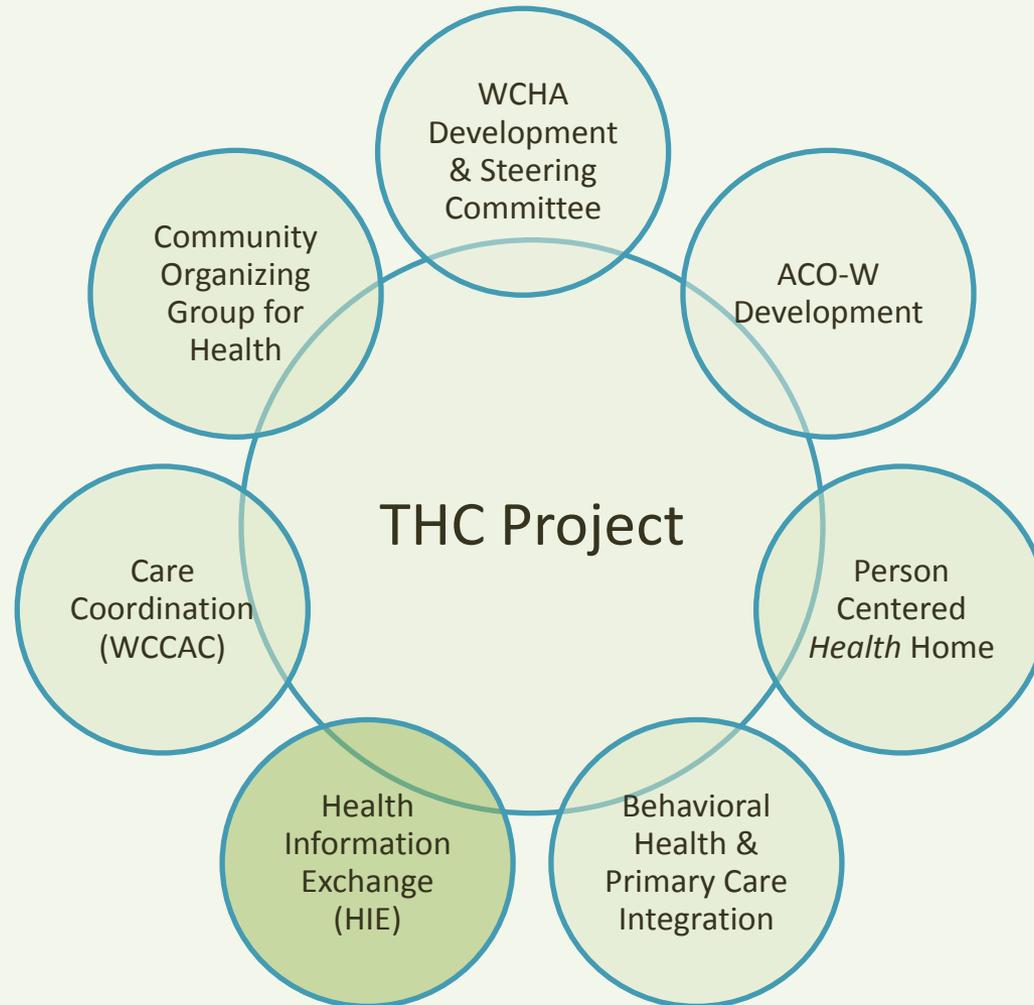
Today - WHAT

- These 2700 users on nearly 3000 pcs have:
 - Internet Access
 - Anti-virus and spam protection
 - Subscription Medical References
 - Images available online
 - Labs available
 - HelpDesk and Consulting svcs
- >80% of docs have EMRs (>95% of PCPs)
- A robust HealthVault connected PHR available www.sharedcareplan.org

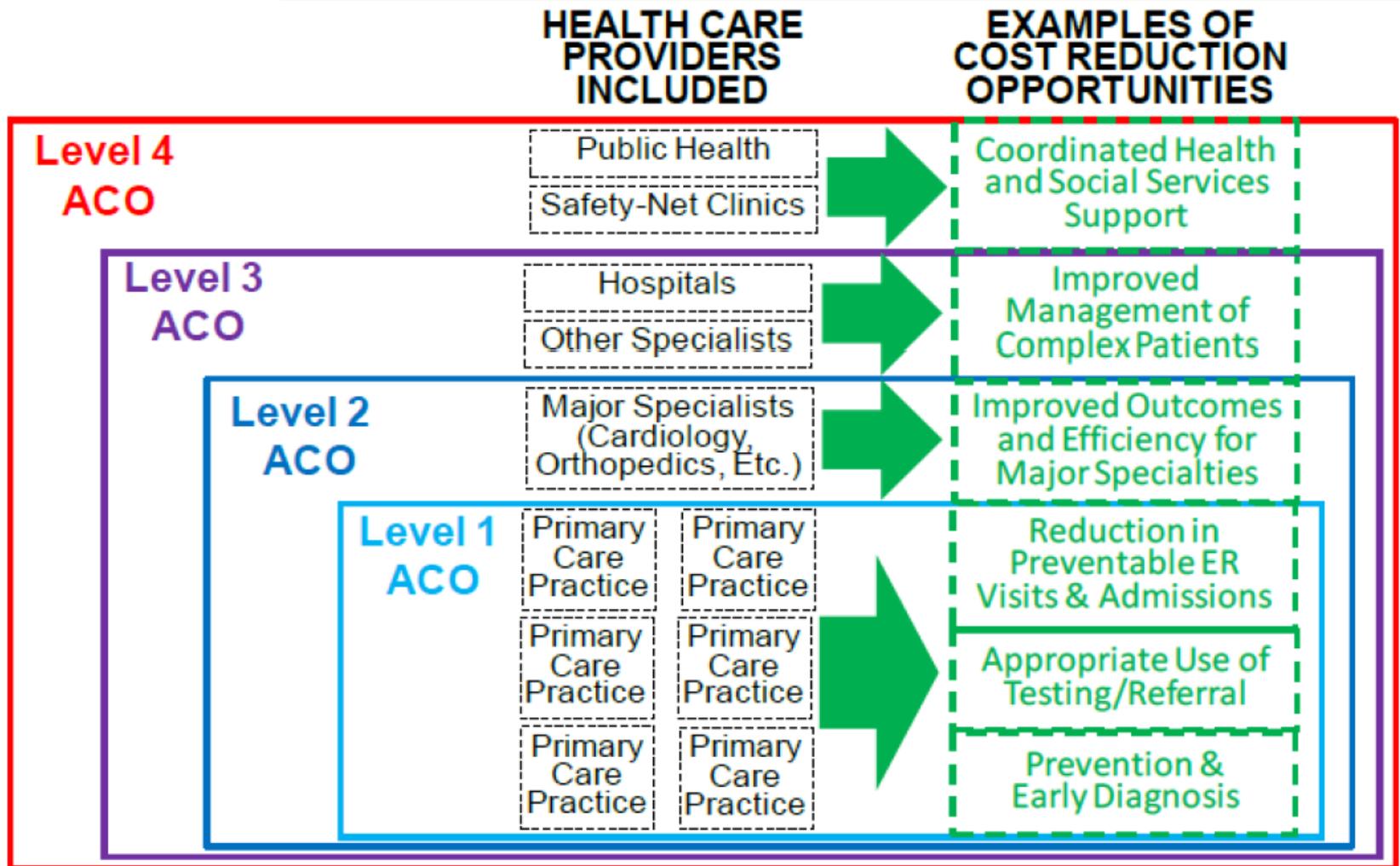
Hello Houston?

- Dozens of EMRS and Practice Management systems in use
 - No view across systems
 - No ability to provide population health
- Need to support the workflow of providers and patients - in the practice setting and at home
- A set of community solutions is needed to transform how health and healthcare are delivered and supported
 - Enter Whatcom Alliance for Health Advancement

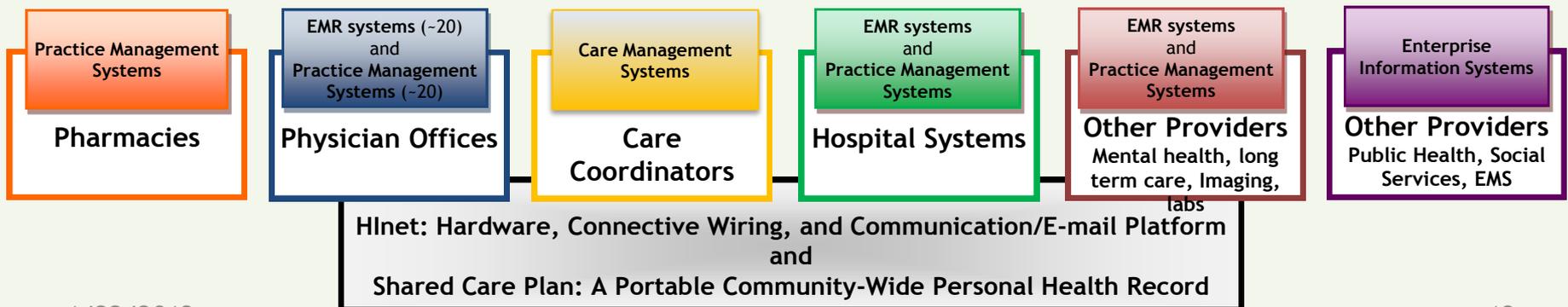
Transforming Healthcare Task Forces



A community-wide, level 4 ACO



Whatcom Today



Whatcom Community

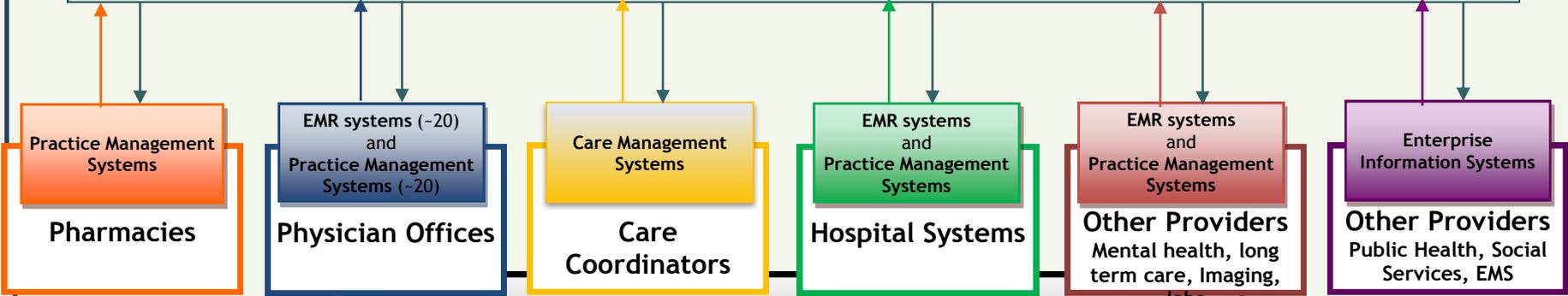
ACO—Achieving the Triple Aim

Quality Improvement	Satisfaction Improvement	Cost Performance Improvement
---------------------	--------------------------	------------------------------

Analytic Systems: Software and personnel

Data Repository: Clinical and Claims Data
Receipt and storage of data for look up and analysis

Health Information Exchange



Hlnet: Hardware, Connective Wiring, and Communication/E-mail Platform and
Shared Care Plan: A Portable, Community-Wide Personal Health Record



Currently underway

- HIE software finalization
- Governance discussions
- Engaging care coordination providers & Consumers
- Designing integrated care delivery model
- Business plan finalization



Thank you!
Your questions welcome ...

Lori Nichols

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360.671.6800 x 203



Emergency & Image Exchange Services
Improving Patient Care and Reducing Costs



Regional Health Information Organization

Background On Regional Footprint

ROCHESTER RHIO

RHIO

HIE service area covers 13 counties, with a total population of 1.4 million

Over 850,000 patients have provided consent to allow HIE access to their care providers

Today over 70 organizations provide data to the HIE, among them 19 regional hospitals, regional reference labs, radiology practices, EMS and elder care agencies.

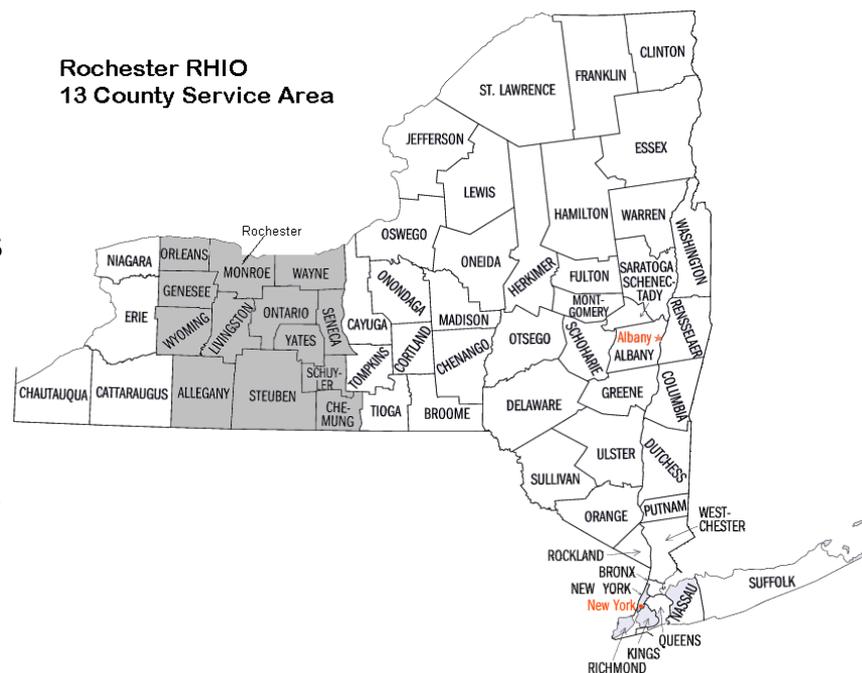
Currently connecting 1300 of the areas 3000 Physicians.

Services include both query and push based results delivery

Averaging around 30k queries each month

Averaging ½ million reports sent each month to 208 Physician practices

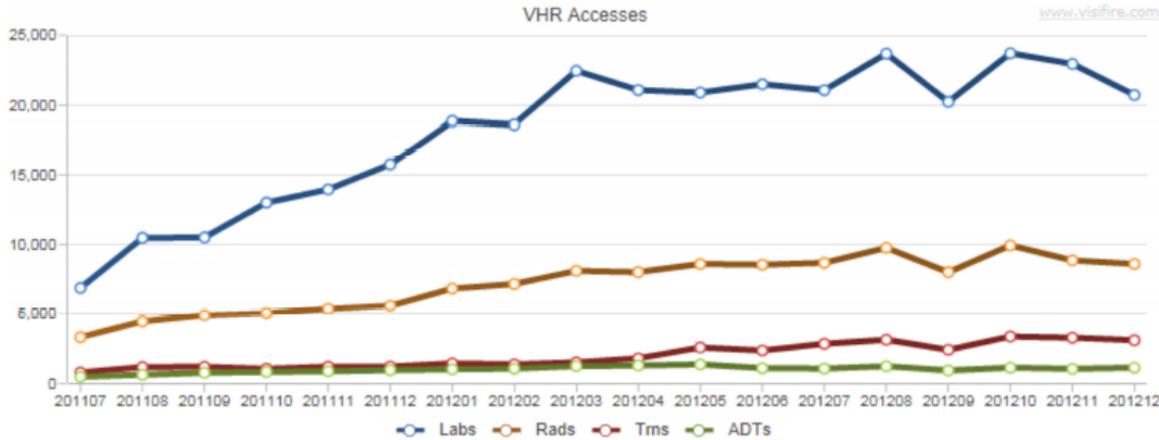
Interfaced to 20 different EHR Vendor Systems



Trends For Query & Results Delivery Services

VHR Accesses

Reported 01/02/2013



Query Access

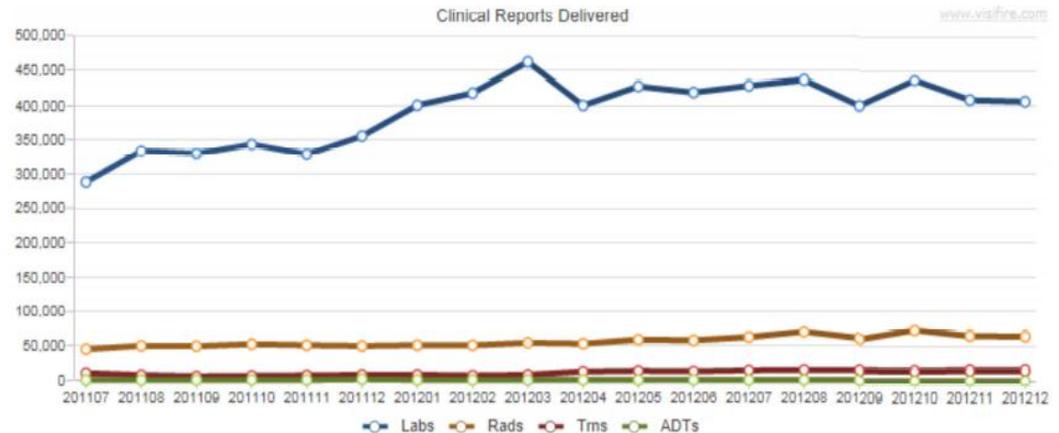
- Labs : 20705
- Radiology : 8626
- Transcribed : 3099
- Admit/Discharge : 1120

Reports Delivery

- Labs : 405484
- Radiology : 64624
- Transcribed : 14689
- Admit/Discharge : 4

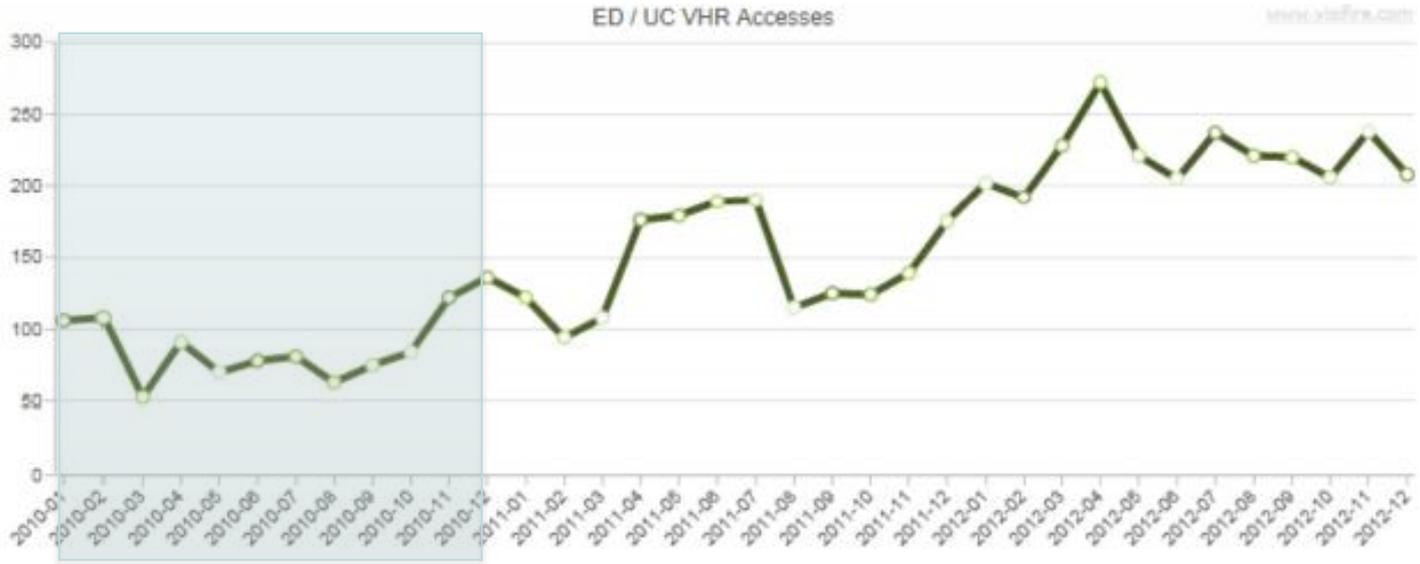
Clinical Reports Delivered

Reported 01/02/2013



Today's focus: a particular care setting and a particular type of information...

Use Of HIE In The Emergency Department Resulted In Fewer Hospital Admissions



The HIE was accessed on average 75 times each month in 5 Emergency Departments during the study period of 2009-2010

 Study Period

HIE is currently accessed more than 200 times each month in the 5 Emergency Departments studied

In addition to core HIE services, emergency services include ED landing page, NEMESIS pre-hospital care data, and Emergent Image Exchange

Monthly Emergency Department / Urgent Care VHR Patient Utilization
Report Date: 01-10-2013

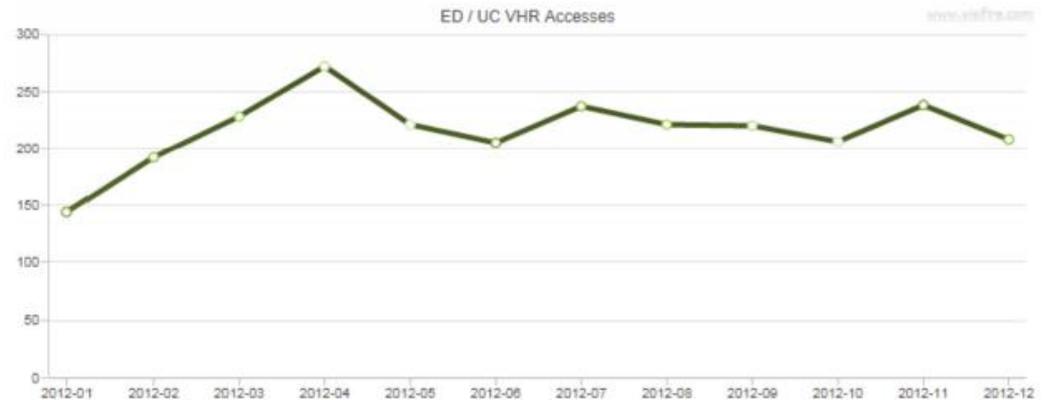


Image Exchange Through HIE Reduced Probability Of Repeat Imaging Services & Realized Significant Administrative Savings



On average 22 image views per month during the study period of 2009-2010

Study Period

Today we we see an average of over 600 images viewed per month

Report Date: 01-02-2013

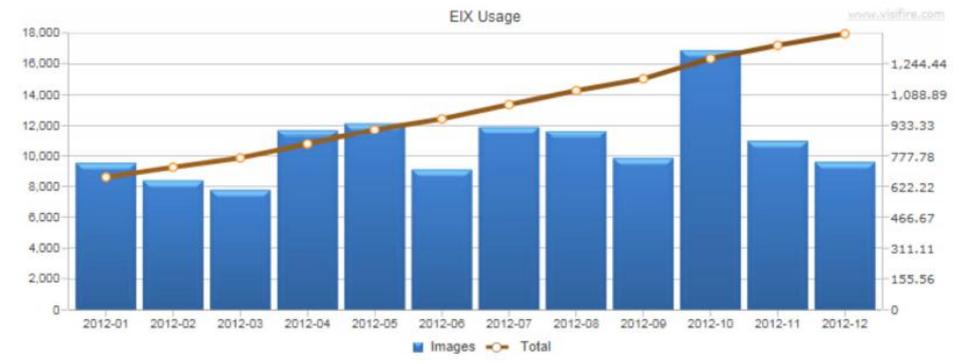
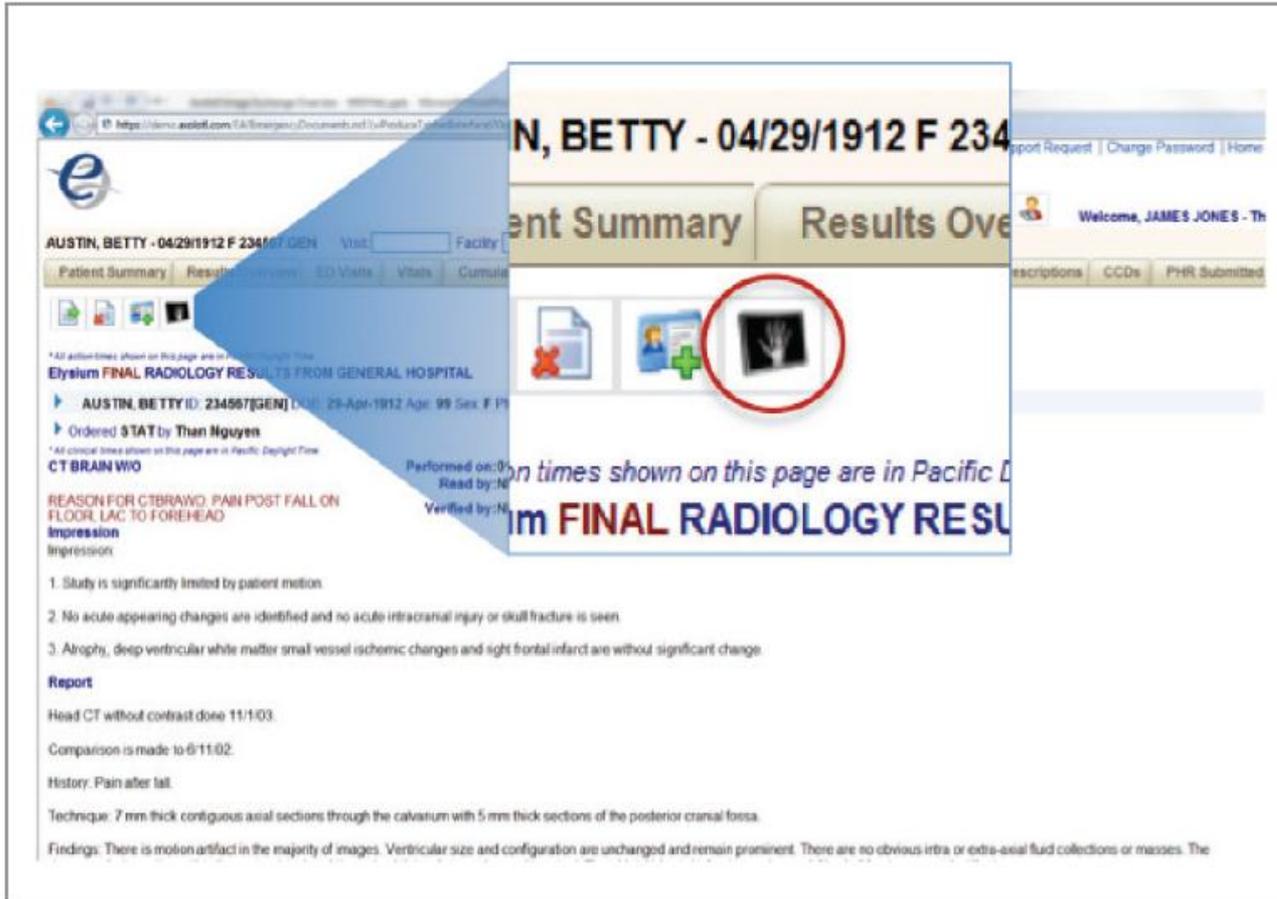


Image Exchange Through The HIE

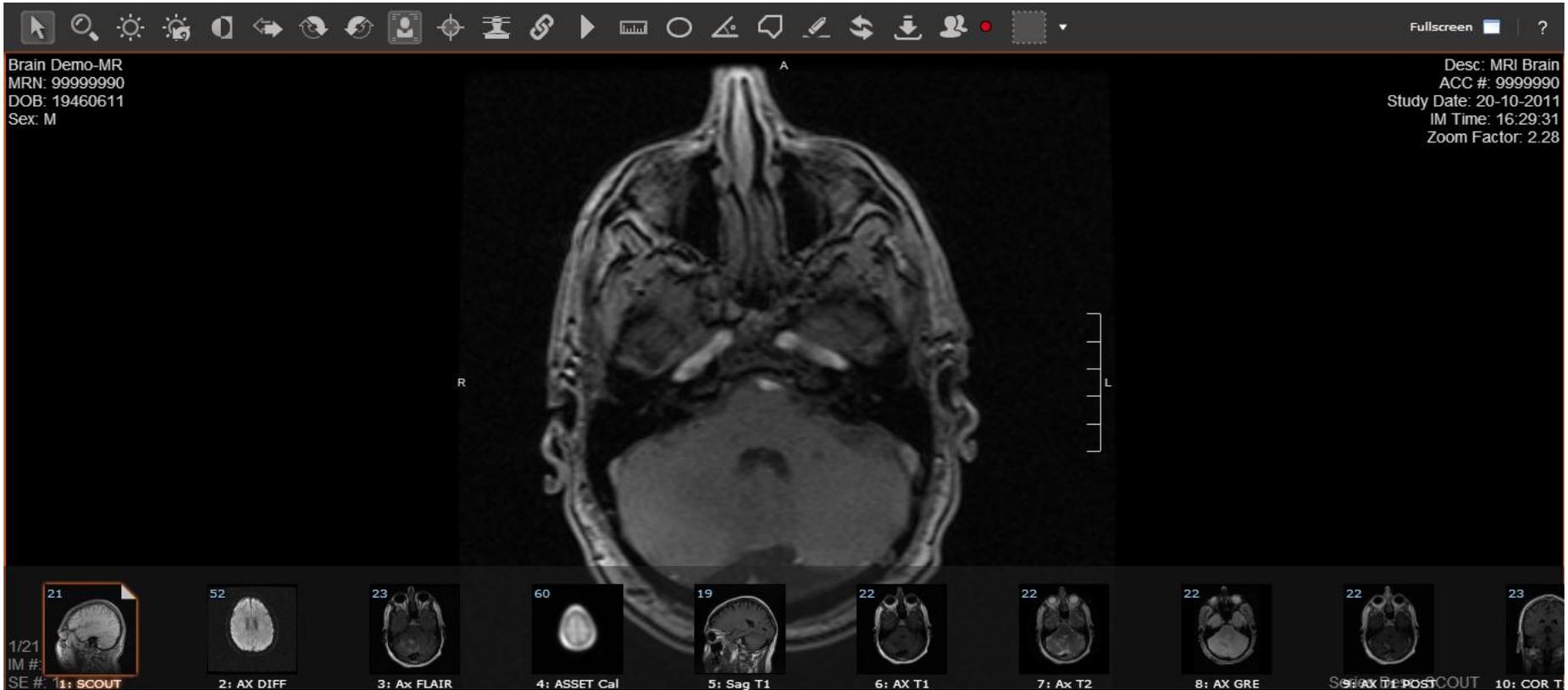


Authorized HIE users can access images from multiple imaging providers

With a single click from the patient record, the image is displayed with a diagnostic quality “Zero Footprint” viewer

Zero Footprint viewer makes deployment and upgrades across region much easier

Regional Image Viewer



Viewer lets physicians analyze images, including X-rays, MRIs, CT scans, and ultrasounds and make side-by-side comparisons, similar to the PACS software used by radiology professionals

“This offers a tremendous advantage over traditional methods to obtain and view medical images. This new method of distributing patient images throughout the community allows us to access diagnostic quality images, right from the patient’s record,” – area Radiologist

- Image Exchange contains radiology and cardiology images from 12 hospital systems and diagnostic imaging providers
- DICOM quality images
- Zero footprint viewer requires no software to be downloaded or installed for easier deployment
- Recent 30 days of images are cached for fast access, over 30 days perform ad hoc query
- Emergent Image service established to send images immediately for consultation
 - Service does not require waiting for signed reports
 - Assists diagnosis and treatment of patients in ED
- Real-time image collaboration feature allows control of image viewing simultaneously by multiple users
- Q2 Services
 - Forward images to PACS
 - Send image to EHR

Emergency Care & Image Exchange Focus 2013

- Increase education and deployment of emergency department and imaging services
- Increase education outreach to promote emergent image service
- Outreach and marketing of imaging collaboration feature
- Increase number of imaging providers
- Work with HIE and image vendor on forwarding images to PACS
- Work with HIE vendor and image vendor to pilot image interoperability with EHR vendor
- Re-pour study data at current utilization rates



Indiana Health Information Exchange

Better Outcomes. Delivered.

Indiana Health Information Exchange Profile of Value-added Services January 2013



Indiana Health Information Exchange

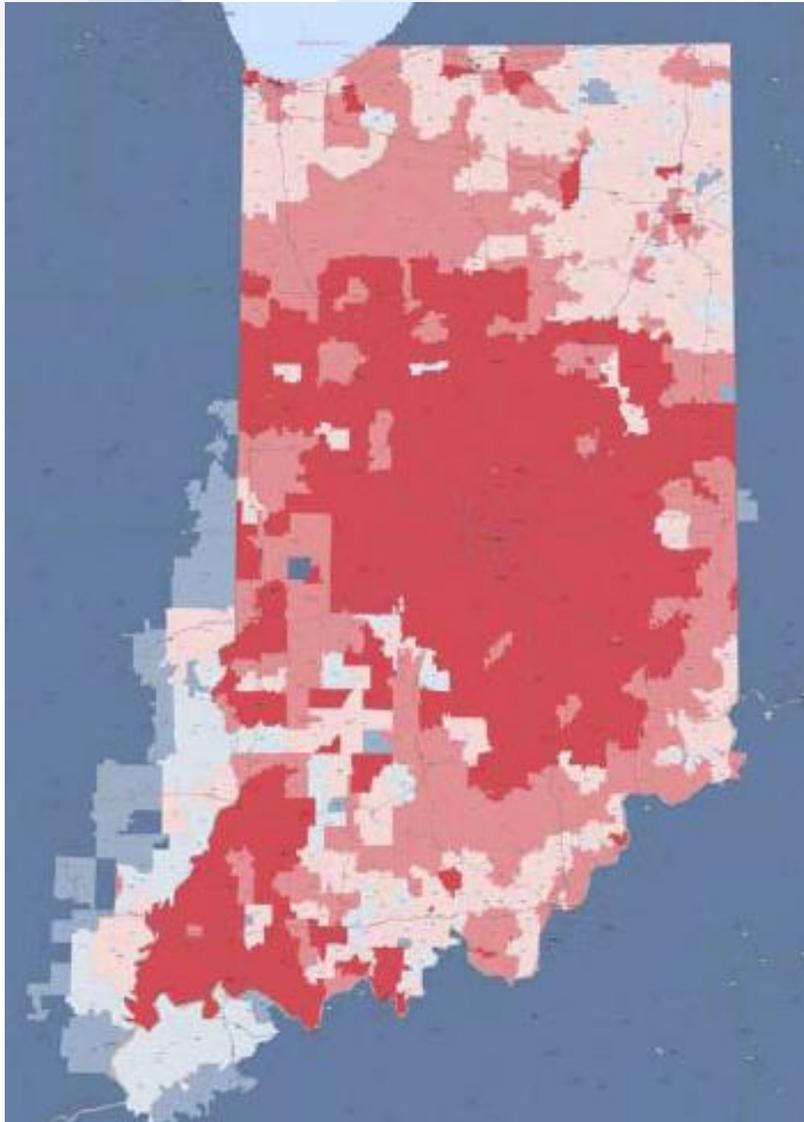
The nation's largest health information exchange:
93 Indiana hospitals and 25,000 physician participants

Enriched by  *Regenstrief Medical Informatics*

 BioCrossroads



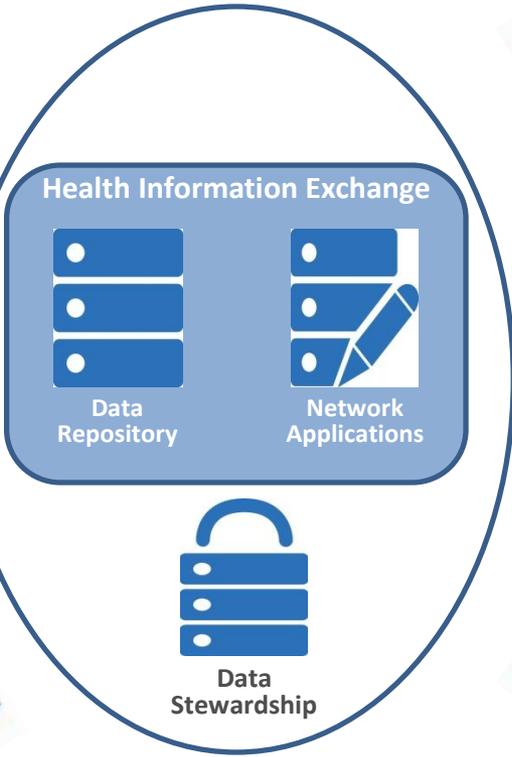
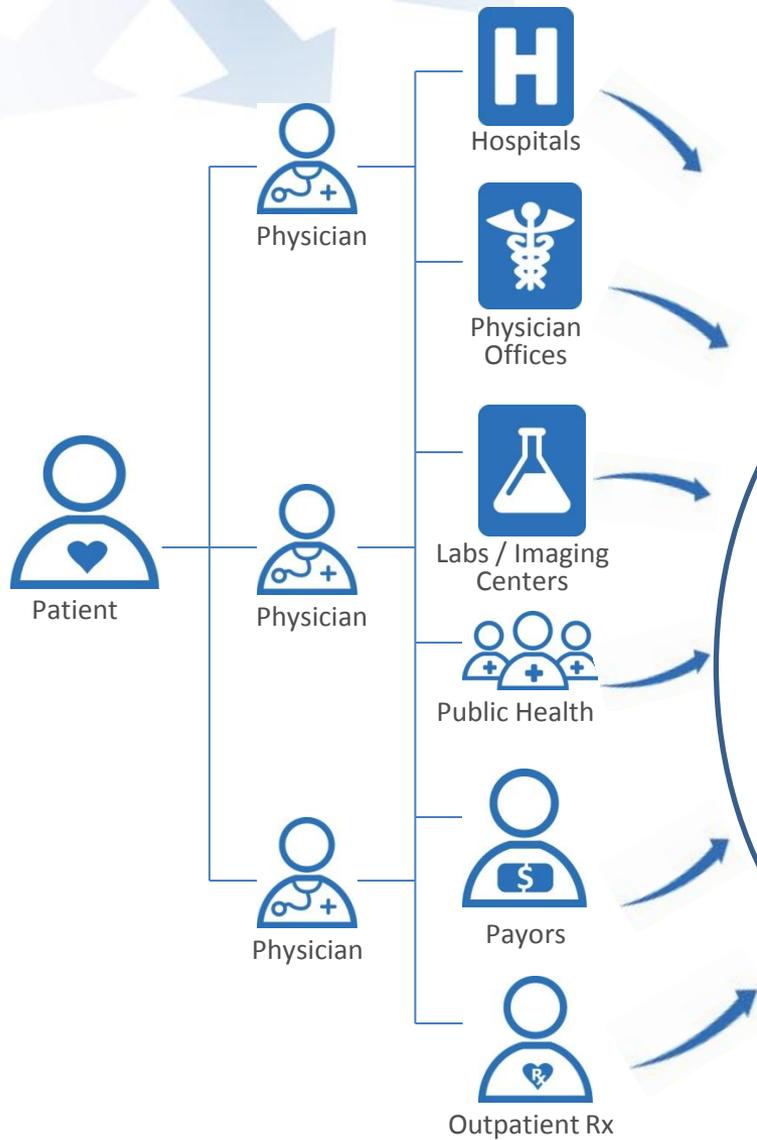
IHIE Statistics



- Nation's largest HIE
- Founded in February 2004
- Based on the technology, knowledge, and experience of the Regenstrief Institute
- 75 employees
- Providing services to 93 hospitals (23 health systems), 25,000 clinicians, and 5 payors
- Serving an area with a population of about 6 million people



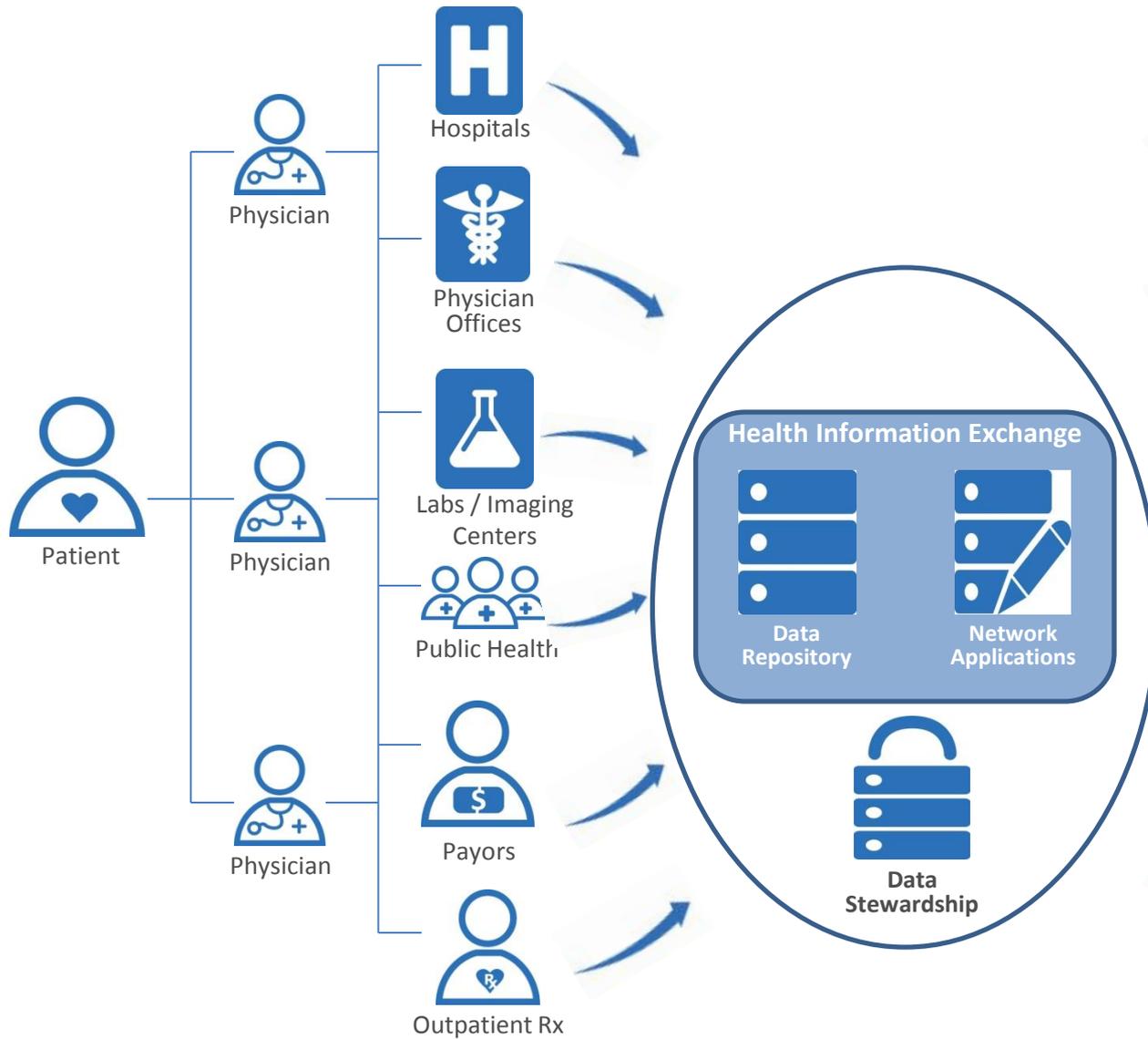
Health Data Sources



Value-Added Services



Health Data Services



Value-Added Services

This section lists several value-added services provided by the organization:

- Docs 4 Docs[®] Service**: Represented by a circular arrow icon.
- INPC[™]**: Represented by a large blue arrow icon.
- Quality Health First[®] Program**: Represented by a blue arrow icon.
- ImageZoneSM**: Represented by a circular arrow icon, with a note 'powered by see my radiology.com'.
- Indiana Health Information Exchange Professional Services** and **ACO & Analytic Services**: Represented by a multi-directional arrow icon.
- PHESS** (Public Health Emergency Surveillance System): Represented by a large blue 'PHESS' text with 'Public Health Emergency Surveillance System' below it.

IHIE's Services



Service Profile of the Indiana Health Information Exchange:

- Public Health Services
- DOCS4DOCS® Clinical Messaging Service (D4D)
- Indiana Network for Patient Care™ (INPC™)
- Quality Health First® Program (QHF®)
- ImageZoneSM
- ACO & Analytic Services
- Professional Services

In 2010, IHIE began employing a more formal Product Management view of its profile of services.



Public Health Services

With the Regenstrief Institute, IHIE offers a variety of services which support the Public Health system in Indiana and support the achievement of meaningful use by health care provider organizations

IHIE / Regenstrief Institute Services supporting Public Health

- **Public Health Emergency Surveillance System (PHESS)**
 - Statewide infrastructure for the early detection of public health emergencies for the Indiana State Department of Health
 - Example of HIO-to-HIO interoperability
- **Automated reporting of Notifiable Conditions**
- **Electronic routing of Immunization data**

The DOCS4DOCS[®] Service is:

- An **electronic results delivery** service

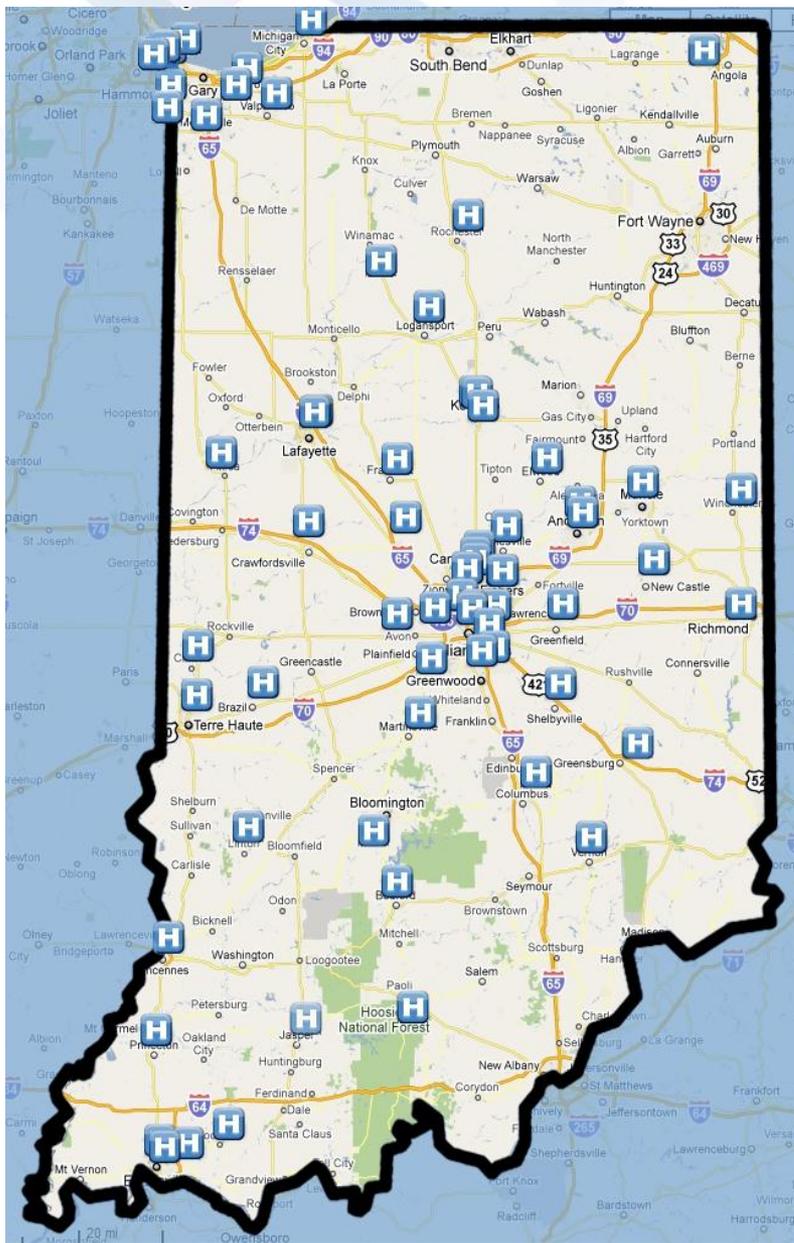
More than 25,000 physicians in 17 states are set up to receive patient results via DOCS4DOCS at no cost to the physicians

- **A single source for information** such as lab results, radiology reports, transcriptions, pathology and hospital admissions reports, discharge and transfer reports from all participating Indiana hospitals, physician practices, labs and radiology centers.

Results can be viewed through a web-based portal or delivered directly into an electronic medical record system.

“While many major metropolitan areas have similar systems, (IHIE’s) was one of the first and is viewed by many as one of the best...”
– *Indianapolis Star, June 2007*





The Indiana Network for Patient Care[®] is:

- A patient-centric community health record for a growing number of Indiana citizens (the “jig-saw puzzle assembler”)
- Includes provider, payor, and public health data
- Growing to serve over half the population of Indiana
- Used primarily in EDs but also accessible to approximately 1/3 of ambulatory care physicians in the Indianapolis market



The Quality Health First[®] Program is:

- A **multi-payor, value-based pay-for-performance chronic disease management** and preventive care program

More than 2,200 physicians in 70 communities participate, covering over 1 million patients in Indiana

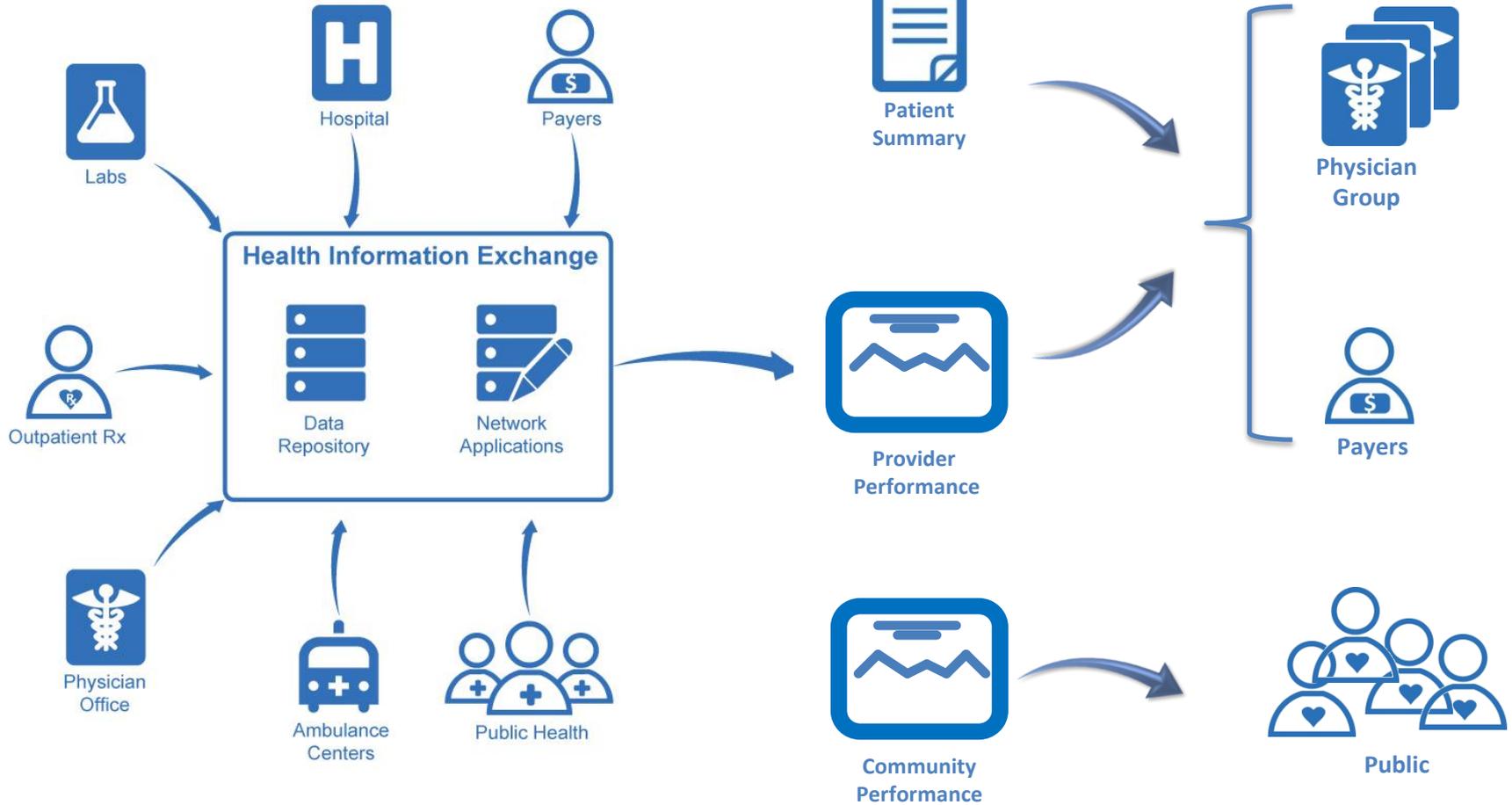
Anthem BCBS, UnitedHealthcare, Unified Group Services, Medicare, Medicaid participate

- **Helping physicians identify and prioritize** health screenings and other testing; provide early interventions and consistent support
- Providing an avenue for **enhanced reimbursement** for physicians
- Focused on **cancer screenings, diabetes care, heart disease care**



Data Management

Quality Health First® Program



ImageZone is:

- **A cloud- based medical image sharing** service that enables instant image access and enhances quality of care for:
 - Trauma Transfers
 - Referrals and consultations
 - Referring physician communications
 - Enhances communication with referring physicians and builds loyalty



Sharing Images. Saving Lives.





Indiana Health Information Exchange *ACO & Analytic Services*

IHIE's ACO & Analytic Services Include:

- ADT Alerts for Hospital Admits or ED Visits (ACOs, Medicaid Payer)
- INPC Careweb Access for ACO Care Managers
- Attribution Services – who are PCPs and/or Specialists for a Patient Population
- Data and/or Calculations for Quality Measures (ACO, QHF, others)
- CCDs for attributed Patient Populations
- Predictive Analytics for Various Use Cases
- Population Management Analytics
- Impact Analysis for Chronic Disease Management





Indiana Health Information Exchange
Professional Services

IHIE's Professional Services Overview

Planning, advisory and HIE management services to public HIEs, private HIEs, CMS ACOs, and Commercial ACOs, including:

- Strategic, Tactical, and Operational Planning
- Sustainability, Business Models, Value Proposition
- Governance, Contracts, Policies, and Procedures
- Stakeholder Engagement, Trust, Commitment
- HIE role in supporting ACOs
- Executive and Operational HIE Management





Indiana Health Information Exchange

Thank You

317.644.1750

www.ihie.org





ClinicalConnect Health Information Exchange

A collaboration of regional providers

eHI Connecting Communities Meeting

“Innovation in HIE”

Laura Mosesso, Client Services Manager

Tuesday, January 22nd, 2013

ClinicalConnect HIE Members and Participants



ClinicalConnect HIE – *Background*

- Pennsylvania **non-profit** Corporation - 501(c)(3)
- Governed by Board of Directors
- First member live Summer of 2012
 - Team currently onboarding remaining members and new participants
- First HIE in Western Pennsylvania
 - Largest in the state
- **Currently 7.6 million patient records in database**
- **Volume of participating patients has exceeded the 1.3 million mark**

ClinicalConnect HIE – *Background*

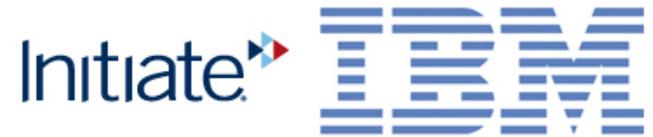
- **Opt-out model** (i.e. the data is exchanged unless the patient requests to not participate)
 - Opt-out model is consistent with Pennsylvania state law (*ACT 121*)
- Patient's participation decision (consent) is captured through each participant's registration system
- Technically ClinicalConnect HIE tracks all patient consent decisions and honors the last consent received

ClinicalConnect HIE – *Technology Vendors*



DbMotion technology is used to leverage capabilities of members; it offers semantic interoperability and a centralized repository of aggregated normalized data.

IBM Initiate integrates with existing systems and data sources to accurately match and link different representations of provider data to create a master view.



Security

ClinicalConnect HIE – *Security Model*

- **ClinicalConnect HIE Model** = *leverages the best security practices of members*
- ClinicalConnect HIE provides local control over who accesses patients' information while allowing secure data exchange capabilities to be built into each organization's workflows
- All security and access is directed by the member so that ClinicalConnect HIE does not validate the users

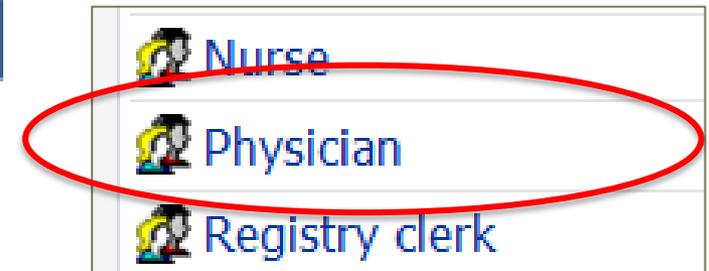
ClinicalConnect HIE – Roles

- Clinical roles are be mapped within the dbMotion application based on the clinician’s role within the member EHR
- Set of roles are defined within ClinicalConnect HIE

System A: Physician, ER Physician, Resident

System B: Pediatrician, Anesthesiologist

System C: Physician

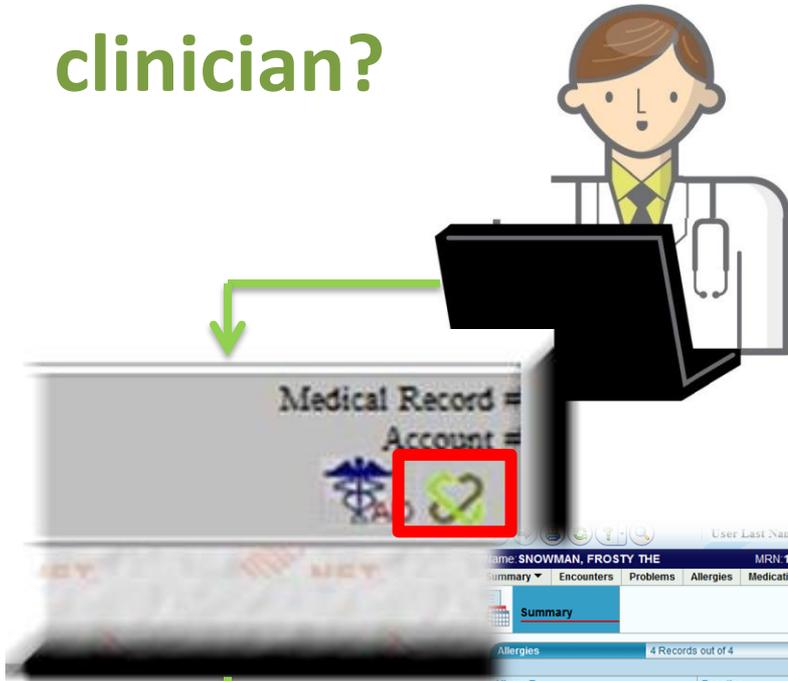


**ClinicalConnect HIE
Roles**

ClinicalConnect HIE – *Security Model*

- ClinicalConnect HIE users are authenticated and access patient information through their own member's **EHR** systems and related security technologies
- Once they gain authorized access, they can access ClinicalConnect through a hyperlink to launch a search of other data available about the patient from participating organizations

What does ClinicalConnect HIE look like to a clinician?



- Clinician **logs into member EHR** and selects patient record
- Clinician **clicks a link to ClinicalConnect HIE**
- **Patient is displayed in context** in **dbMotion ClinicalConnect HIE** with data from members and UPMC integrated into one view

Summary | Encounters | Problems | Allergies | Medications | Labs | Immunizations | Documents

Summary

Allergies		4 Records out of 4	
Allergy To	Reaction		
Keflex CAPS	Swelling		
Nonsteroidal Anti-inflammatory Compound...	Swelling, NOS		
Lactose	Lactose		
Peanuts	Anaphylaxis		

Medications		2 Records out of 4	
Medication	SIG		
Furosemide (Furosemide 40 MG...)	40 mg By Mouth Daily		
Warfarin (Warfarin Sodium 3 MG...)	3 mg By Mouth Daily		

Encounters				4 Records out of 5
Admission Date	Type	Facility	Attending	
5/3/2012 13:35	emergency	Heritage Valley S...	EMERGENCY...	
5/1/2012 14:00	General	Heritage Valley S...	EMERGENCY...	
4/6/2012	ambulatory	UPMC - UNIV OF ...		
4/5/2012 14:06	ambulatory	NorthWest	FORSYTHE, R...	

Problems	3 Records out of 3
Problem	
Urinary tract infectious disease (UTI (urinary tract infection))	
Seizure disorder	
Atrial fibrillation (Atrial Fibrillation and Flutter)	

Labs			4 Records out of 6
Collected	Test	Specimen	
4/30/2012 21:48	Electrolytes		
4/30/2012 01:52	Dioxin		
4/5/2012 14:37	AFB Culture - Decontamin...	Abscess	
4/5/2012 14:34	PTT Mix		

Dr. Name: Emma Watson

- Diagnosis: heart failure
- Diagnosis: heart failure
- Diagnosis: chronic heart failure
- Diagnosis of Chronic Heart Failure
- Diagnosis query - not enough information is available
- Diagnosis query - not enough information is available
- Diagnosis query - not enough information is available
- Diagnosis query - not enough information is available
- Diagnosis query - not enough information is available

Semantic Interoperability

ClinicalConnect HIE and Semantic Interoperability

- Clinical data is **aggregated** from our members clinical source systems and this data is then **organized** and **semantically harmonized** (*e.g. medications are grouped by drug classification*) so as to provide a more complete picture of the patient's longitudinal care record.

Semantic Interoperability – Vocabulary Standards

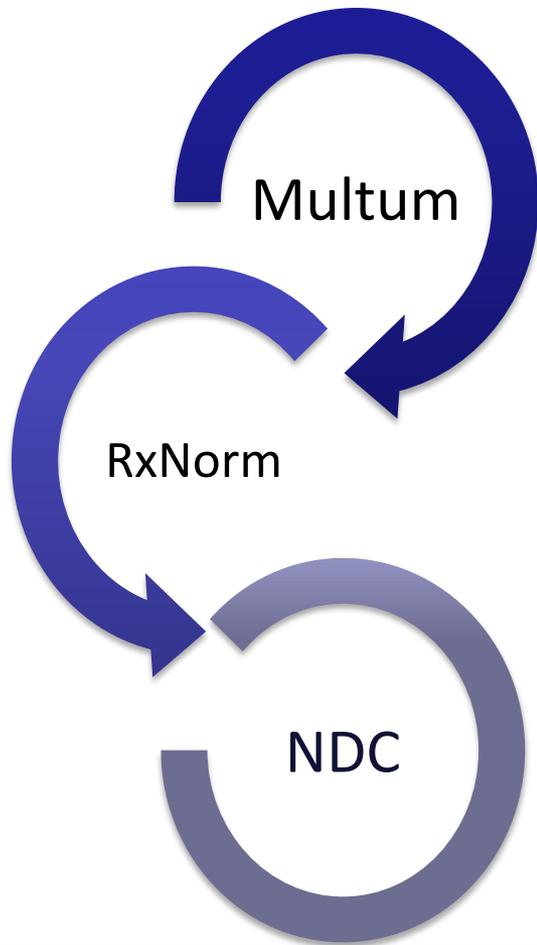
- The objective is to link multiple disparate code vocabularies into a single, organized baseline
- Using a baseline vocabulary will organize data into a cohesive clinical view for all ClinicalConnect HIE member systems

Lab Result	
<i>Code</i>	HBA1C
<i>Interpretation</i>	H = High

Lab Result	
<i>Code</i>	123 = HBA1C
<i>Interpretation</i>	High = High

Lab Result	
<i>Code</i>	HbgA1C
<i>Interpretation</i>	1 = High

Semantic Interoperability – Example



EHR #1 Utilizes Multum for Medications and can “publish” to ClinicalConnect HIE in their format

dbMotion then aggregates and relates to both a “baseline” (RxNorm) and downstream “local”

EHR #2 Utilizes NDC for Medications and dbMotion can “publish” to them in their code

ClinicalConnect HIE – *Vocabulary Standards*

Medications	<ul style="list-style-type: none">• RxNorm, NDF-RT, NDC, Medispan, Multum
Allergies	<ul style="list-style-type: none">• UNII, NDF-RT
Problems	<ul style="list-style-type: none">• SNOMED-CT, Medcin, ICD-9
Immunizations	<ul style="list-style-type: none">• CVX
Labs	<ul style="list-style-type: none">• LOINC
Unmapped codes	<ul style="list-style-type: none">• Will display in “OTHER” category

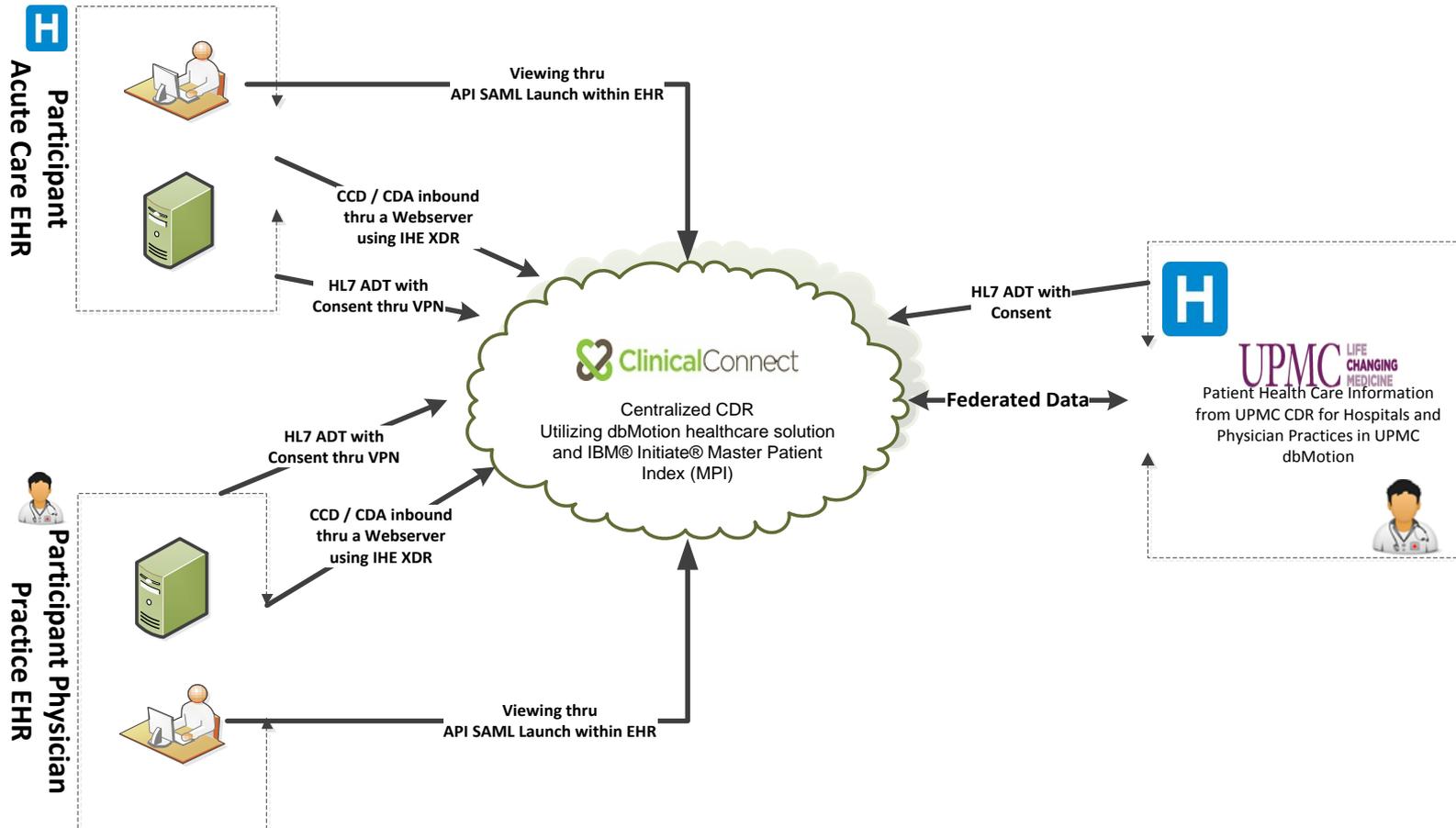
ClinicalConnect HIE – Semantic Interoperability Example

Data is then organized and semantically harmonized

Medications				4 Records	Dispense	Refill	Prescriber	Status	Facility	Type
Date	Medication	SIG								
ANTISPASMODICS, URINARY (1)										
10/26/2008	VESicare 10 MG Oral Tablet (Solifen...	#30Tablet, [Reported], NO REFILLS	30				Active	Heritage Vall...	Pres	
DIURETICS (1)										
4/5/2012 14:19	Furosemide (Furosemide 40 MG Oral ...	40 mg By Mouth Daily	30 tab(s)	0			active	UPMCNOR	Pres	
GASTRIC MEDICATIONS, OTHER (1)										
NON-OPIOID ANALGESICS (1)										
OPIOID ANALGESICS (1)										
1/14/2013	Hydrocodone-Acetaminophen 5-500 ...	#60Tablet, TAKE 1 TABLET EVERY 6 TO ...	60				Active	Heritage Vall...	Pres	
PROTECTANTS, ULCER (1)										
11/9/2012	Sucralfate 1 GM Oral Tablet (Sucralf...	#120, [Reported], NO REFILLS	120				Active	Heritage Vall...	Pres	
STOOL SOFTENER (1)										
THYROID SUPPLEMENTS (2)										
12/27/2012	Levothyroxine Sodium 50 MCG Oral ...	#90, take 1 tablet by mouth every mornin...	90				Active	Heritage Vall...	Pres	
12/20/2012 10:03:24	Levothyroxine Sodium (Levothyroxin...	75 mcg By Mouth ACBrkfst	30 tab(s)	0			active	UPMCNOR	Pres	
Others (2)										
4/2/2012	Omega 3 1000 MG Oral Capsule (Om...	1 Swallow, oral BID	60				Active	Heritage Vall...	Pres	
5/24/2007	Acetaminophen 400 MG Oral Capsule ...	#180Capsule, TAKE 1 CAPSULE TWICE A...	180				Active	Heritage Vall...	Pres	

Clinical data is aggregated from members clinical source systems

ClinicalConnect Health Information Exchange Technical Model



**Note – Each Participant’s technical architecture to network with CCHIE will vary based on their internal EHR architecture although the technology will remain the same.*

ClinicalConnect HIE – CCD Data Exchange

- Encounters
- Medications
- Allergies
- Problems
- Immunizations
- Lab Results
- Documents such as *Discharge Summary and Radiology Reports*

***Current Scope:
Phase I***

Semantics – *why they matter for ClinicalConnect HIE*

Advantages

1. **Point of Care Workflow** – Organized data set that makes sense; makes the “work-flow”
2. **EHR Interoperability** – Flexible code import/export to get more out of existing systems
3. **Population Health** – Point of care disease management, alerts across EHRs
4. **Health Analytics** – Post-care Quality, Reporting, Accountable Care, et al

ClinicalConnect HIE – *Thank you!*

www.clinicalconnecthie.com

ClinicalConnect

FOR PATIENTS FOR PROVIDERS ABOUT US CONTACT US

ClinicalConnect: A secure health information exchange

ClinicalConnect is western Pennsylvania's first Health Information Exchange (HIE). A partnership of leading regional health care providers, ClinicalConnect will help to improve the safety, quality, and efficiency of care for patients throughout the region by securely connecting clinicians with patients' vital electronic medical records.

BUTLER HEALTH SYSTEM

View All Providers

LEARN THE BENEFITS FOR PATIENTS LEARN THE BENEFITS FOR PROVIDERS

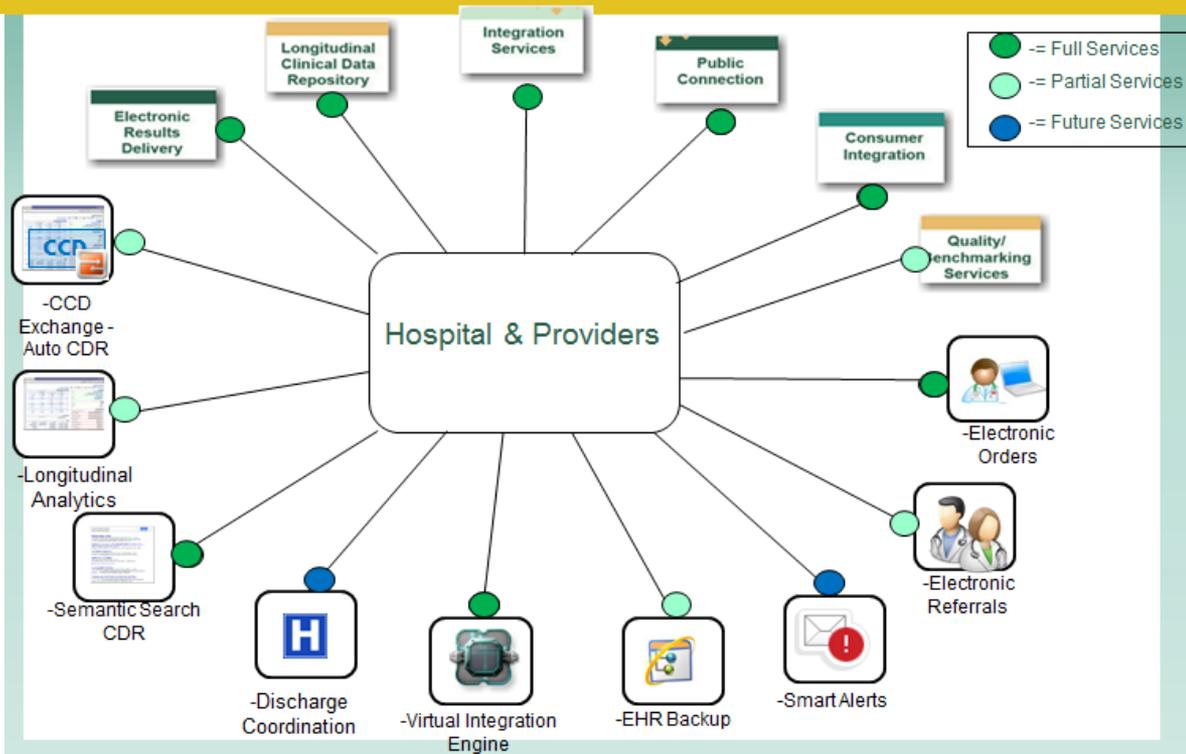
Laura A. Mosesso
Client Services Manager, Outreach
mosessol@clinicalconnecthie.com

Health Information Exchange Evolution *“Today and Tomorrow”*

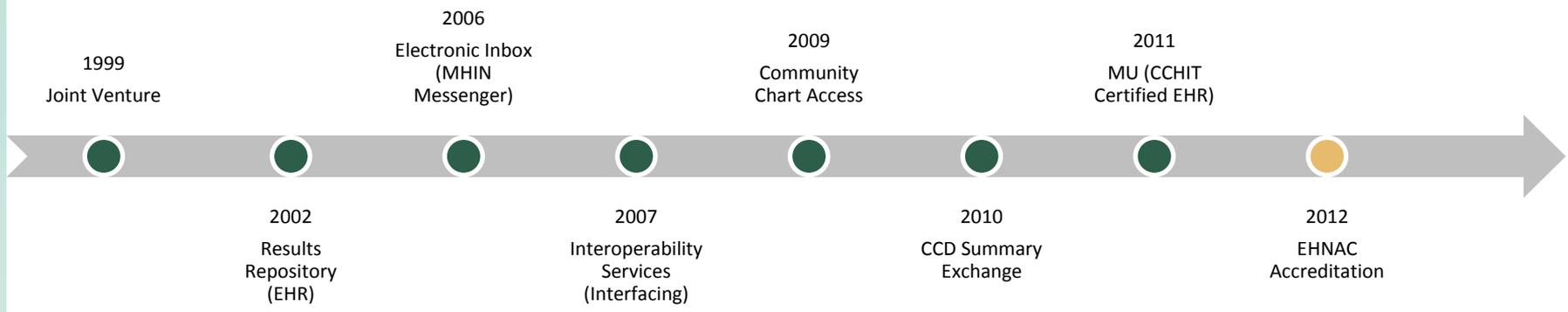
eHealth Initiative Connecting Communities
January 22, 2013

Tom Liddell, Executive Director, MHIN

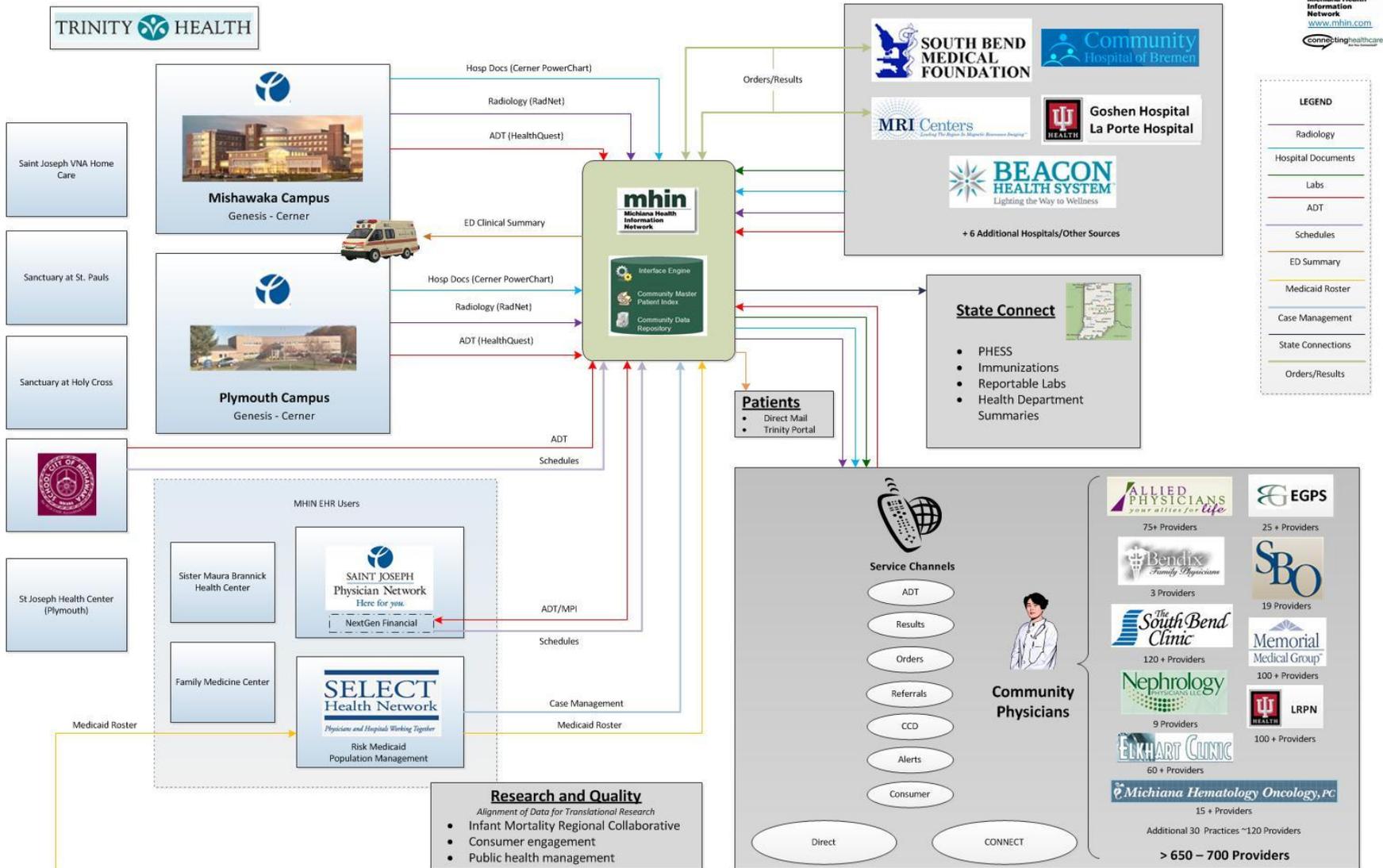
mhin HIE Success: Sustainable. Measurable.

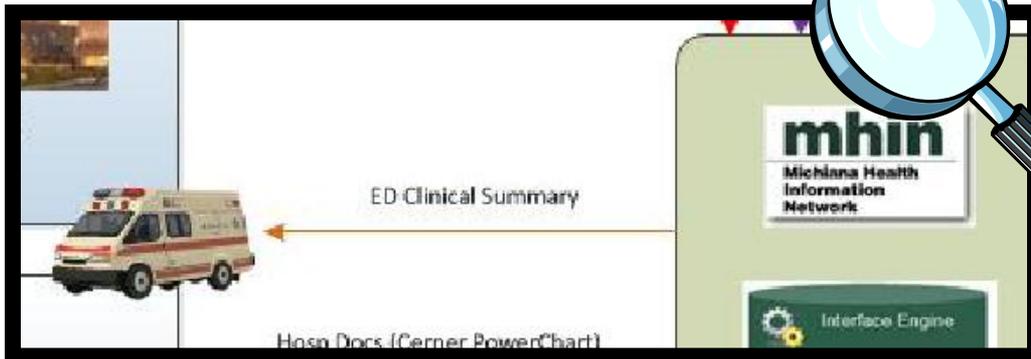


- ### Key HIE Measures
- 12 Years of Exchange
 - EHNAC Accredited
 - Over 300 Data Sources
 - 10 million Transactions/Month
 - Over 1 million online charts
 - Over 4,000 users connected
 - XDS, Direct, and CDR enabled



Saint Joseph Regional Medical Center - Health Information Exchange





Quick Facts

- Generated within less than one minute upon admittance to ED.
- ED Summary includes comprehensive medical information from data sources across the region.
- Relevant information in the hands of the ED physician during an emergency.

Sample Summary

1 Wake Up

MHIN
Automated processes recognize registrations, query the database, and prepare clinical summaries for viewing via the web or print out.

2 Prepare Summary

3 Send Back

SAMPLE_ED2
 Michiana Health Information Network Patient Summary Report Date: 04/29/2011 14:19
 Page: 1
 Name: XXXXXXXXXXXXXXXXXXXX -- SSN: XXXXXXXXXXXX
 Address: XXXXXXXXXXXXXXXXXXXX -- D.O.B.: 01/01/1900
 -- Sex: F
 -- Race:
 -- Marital Status:
 SOUTH BEND, IN 466141536 -- Language:
 Home Phone: 574-XXX-XXXX -- MRN: 00000000
 Mobile Phone: -- MHIN ID: 00000000
 Problems
 POSITIVE PPD; Hyponatremia; Tendonitis R TRICEPS; L-Spine Herniated Disc;
 Mixed hyperlipidemia; Anxiety state, unspecified; DEPRESSION;
 ATYPICAL HYPERPLASIA - BREAST; Benign hypertension
 Allergies
 NKA+
 Medications
 Xanax 0.5 mg oral tablet (alprazolam)
 Start: 11/29/2010 -- End: N/A
 0.5 mg, 1 tab(s), PO, qday, x 90 day(s), # 90 tab(s), 3 Refill(s)
 paroxetine (paroxetine)
 Start: 07/08/2010 -- End: N/A -- PO, qday, 0
 # 90 tab(s), 3 Refill(s)
 Paxil 20 mg oral tablet (paroxetine)
 Start: 05/24/2010 -- End: 05/13/2012 -- 20 mg, 1 tab(s), PO, qday,
 # 90 tab(s), 3 Refill(s), faxed to pharmacy
 Pravachol 20 mg oral tablet (pravastatin)
 Start: 05/24/2010 -- End: 05/13/2012 -- 10 mg, 1 tab(s), PO, qHS, #
 90 tab(s), 3 Refill(s), faxed to pharmacy
 dyazide oral capsule (hydrochlorothiazide-triaertere)
 Start: 05/24/2010 -- End: 05/13/2012
 1 cap(s), PO, qday, # 90 cap(s), 3 Refill(s), faxed to pharmacy
 benazepril 10 mg oral tablet (benazepril)
 Start: 05/24/2010 -- End: 05/13/2012 -- 10 mg, 1 tab(s), PO, qday,
 # 90 tab(s), 3 Refill(s), faxed to pharmacy
 Norvasc 3 mg oral tablet (amlodipine)
 Start: 05/24/2010 -- End: 05/13/2012 -- 5 mg, 1 tab(s), PO, qday, #
 90 tab(s), 3 Refill(s), faxed to pharmacy
 Chantix (varenicline)
 Start: 05/27/2009 -- End: N/A -- See Instructions.
 Instructions: one starter pak, and 3 continuing paks, # 4 Box, 0
 Zoster Vaccine (Misc Drug)
 Start: 03/30/2009 -- End: N/A -- Zoster Vaccine, See
 Instructions, 1, 0, 03/30/09 10:43:37, 0, Refills: please
 administer zoster vaccine., thanks, Dr Mokfi, Substitution Allowed
 hormone cream (Misc Drug)
 Start: 09/17/2007 -- End: N/A -- hormone cream, See
 Instructions, 09/17/07 10:09:23, 0, marmain, for vaginal use,
 Substitution Allowed
 multivitamin (multivitamin)
 Start: 05/20/2004 -- End: N/A --
 Fibercon (polycarbophil)
 Start: 05/20/2004 -- End: N/A --

SAMPLE_ED2
 Michiana Health Information Network Patient Summary Report Date: 04/29/2011 14:19
 Page: 2
 Name: XXXXXXXXXXXXXXXXXXXX D.O.B.: 01/01/1900 SSN: XXXXXXXXXXXX
 Discrete Lab Results (Most Recent 3)
 LEGEND: \Hgb / Na | C1 | BUN |
 MBC >---< PLT | K | CO2 | Cr |< Gluc PT: PTT: INR:
 \Mct \
 11/19/2010 10:49
 8.55 | 14.6 / 291 | 130 | 90 | 12 |
 | 42.1 \ | 3.9 | 22 | 0.88 | PT: PTT: INR:
 05/17/2010 09:35
 | 132 | 94 | 16 |
 | 4.5 | 25 | 0.79 | PT: PTT: INR:
 Other Results (Most Recent 5)
 H&P Operative Note 07/08/2010 ELKHART GENERAL HOSPITAL
 07/08/2010 ELKHART GENERAL HOSPITAL
 ED Encounters since (Most Recent 5)
 05/24/2010 -- Emergency -- MEMORIAL HOSPITAL
 06/02/2010 -- Emergency -- SBRNC SOUTH BEND CAMPUS
 Healthcare Providers
 Ansari, Rafat H
 BARBOUR, NINA
 DEVIRALIA, JAMES M
 Federspiel, Richard
 Garcia, Juan C
 Lackman-Chuppe, Jennifer
 Shayo Hofli, MD
 Christopher Norborg, MD
 Peterson, Charles E
 Tutthill, Linda
 Kathleen M. Delnay, MD
 Vitals
 Vitals on record
 Page 2

Auto Triggered Care Summary: automated, efficient, secure

Goal: Enable the Health Exchange inside your applications and organization

-Registration



-Healthcare Organization



-Providers



-Providers view the prepared summary via a web link



-ADTs

-Notification with web link (and/or CCD) back to sending system

1 -Wake Up

-MHIN
-Automated processes recognize registrations, query the database, and prepare clinical summaries for viewing via the web.

2 -Prepare Summary

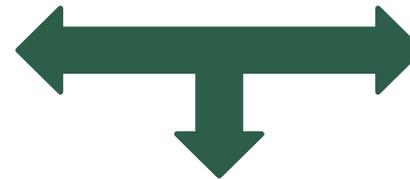
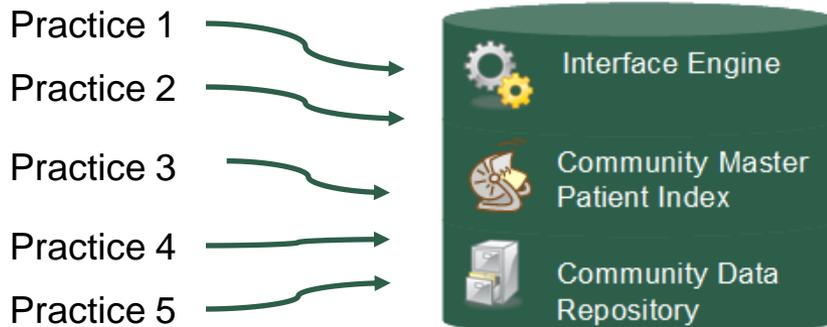
3 -Send Back

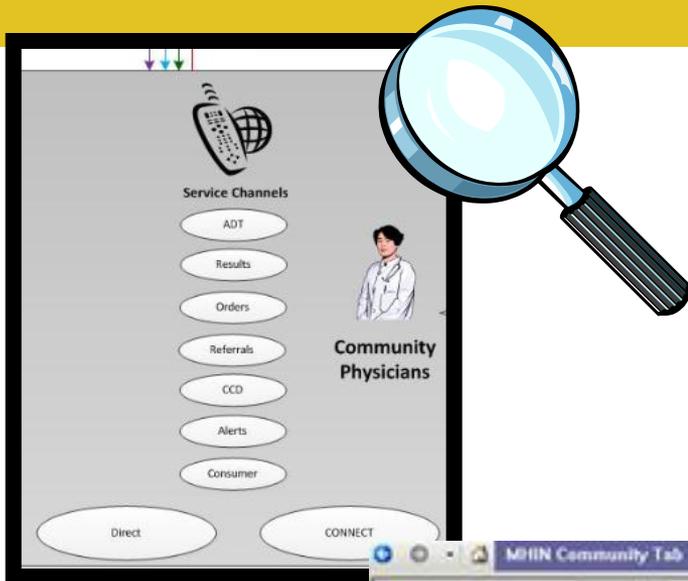


Quick Facts

2010- 2013

- Bi-directional interface with the ISDH CHIRP.
 - 500 + providers
- Kicked off interstate connectivity with Michigan for cross state immunization exchange.
 - 2013
- Focus on prenatal and postnatal care through collaborative community research.





Quick Facts

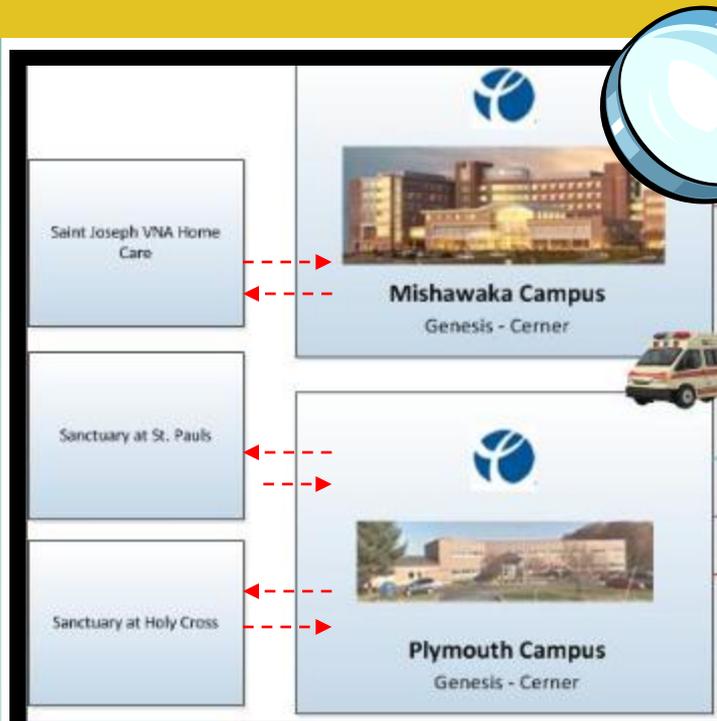
- Cross state exchange and query of Continuity of Care Documents enabled through the CONNECT gateway.
- View of CCDs received and posted to the Community Data Repository.
- Identifies source of data.
- Consolidates into one view and attempts to de-duplicate codified items such as ICD-9 diagnoses/conditions.

CCD

The screenshot shows the 'MHIN Community Tab' web application. At the top, there is a disclaimer: "This record is an aggregate summary of medical information obtained from multiple participating healthcare providers. This clinical summary is intended to support optimal patient care. It is not intended to replace the patient's medical record nor is it guaranteed to encompass all historical information on this patient. It is provided to you in conformation with patient privacy requirements." Below the disclaimer, patient information is displayed: "TESTONE MHINCCD Male 35 Years DOB: 09/01/1976 HIE ID: 0000000000 PCP: Home Phone: 574-968-0001". A search bar is present with "Search" and "Reset" buttons. The main content area is divided into two columns. The left column contains a vertical navigation menu with the word "NAVIGATION" and various categories: "Conditions(Problems) - [Default: All Historical] - [No Results]", "DIAGNOSIS - [Default: All Historical] - [No Results]", "PROCEDURES - [Default: All Historical] - [No Results]", "MEDICATIONS (RX And Documented Historical/Home Medications) - [Default: All Historical] - [No Results]", "Allergies - [Default: All Historical] - [No Results]", "IMMUNIZATION / VACCINE HISTORY - [Default: All Historical] - [No Results]", "LAB ORDERS - [Default: All Historical] - [No Results]", "LAB RESULTS - [Default: All Historical] - [No Results]", and "MICROBIOLOGY - [Default: All Historical] - [No Results]". The right column displays "VITAL SIGNS / CLINICAL RESULTS (Last 4 Results) - [Default: All Historical]" with a table of data:

Name/Measurement	Most Recent	Previous	Previous	Previous
Weight	130.0 lb			
Temperature	98.6 DegF			
Respiratory Rate	40			
Pulse Site	Radial			
Height	67.0 in			
Heart Rate	55			
Body Mass Index	20.4			
Blood Pressure - Systolic	110.0 mmHg			
Blood Pressure - Diastolic	60.0 mmHg			

Below the table is a search bar and a tooltip showing "Type: - SYSTOLIC", "Ref Range: Undefined", "Date/Time: 03/06/2002 03:40:00 PM", and "Source: MH-01-D-R". At the bottom of the right column, there are more categories: "Radiology - [Default: All Historical] - [No Results]", "History & Physical - [Default: All Historical] - [No Results]", and "Discharge Summary - [Default: All Historical] - [No Results]".

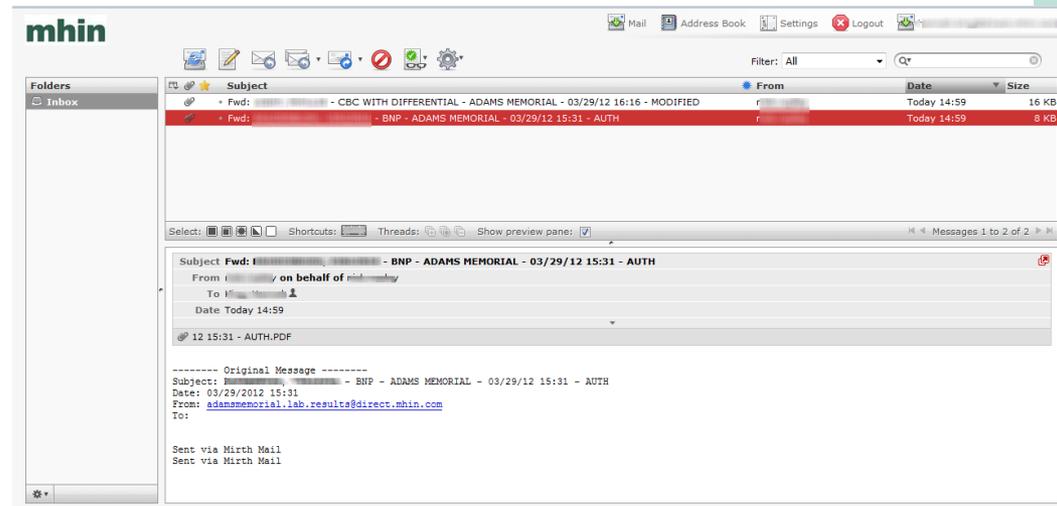


Quick Facts

- Among first program in the state and nation to implement the Direct Project to improve care coordination.
- Transitions in care coordination through Direct Mail for extended care facilities and acute care facilities.
- Incident reports and discharge summaries exchanged immediately and electronically with the transition of the patient from and back to the extended care facility.

MHIN Direct Mailbox

Direct Project specifies a simple, secure, scalable, standards-based way for participants to send encrypted health information directly to known, trusted recipients over the Internet.



Thank You.
Questions?

Tom Liddell
toliddell@mhin.com

Next Steps

- Please join us for a webinar discussing the newly released HIPAA rule, sponsored by PwC – January 29, 2:00 – 3:30 pm ET.
- Slides from today’s call will soon be available at <http://www.ehealthinitiative.org/issues/health-information-exchange-hie/connecting-communities-work-group-materials.html>
- The next meeting will be on **Tuesday, February 26th between 2:00-3:00pm EST**
- In the meantime, please contact Alex Kontur at alex.kontur@ehealthinitiative.org with any comments and/or questions

