



CRISP

*Connecting Physicians With Technology
to Improve Patient Care in Maryland*

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Chesapeake Regional Information System for Our Patients

NIST Health IT Symposium Series

Status, Challenges, and Progress to Date

September 27th, 2012





CRISP Mission and Vision

Chesapeake Regional Information System for Our Patients

Mission

To advance the health and wellness of Marylanders by deploying health information technology solutions adopted through cooperation and collaboration.

Vision

We will enable and support the Maryland healthcare community to appropriately and securely share data in order to facilitate care, reduce costs, and improve health outcomes.



History of National HIE Strategy

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- Early national HIE strategy shaped by David Brailer (first US HIT Coordinator appointed in 2004 by President Bush) and Santa Barbara HIE experience
- Early strategy was supportive of state and regional efforts setting up federated HIE networks, however, ONC remained a poorly funded office within HHS
- Over subsequent Coordinators (including Robert Kolodner) national strategy shifted to focus on development of a network of networks linked together relying on National Health Information Network standards and policies (NHIN itself is not actual infrastructure)
- Under David Blumenthal's ONC, this strategy led to the development of an open source instantiation of the NHIN standards called CONNECT. These models largely focused on the concept of query-based HIE - collecting encounter records into repositories clinicians could later access.
- Then HITECH happened.....



Government Mandates

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Meaningful Use and Where HIE Fits Today

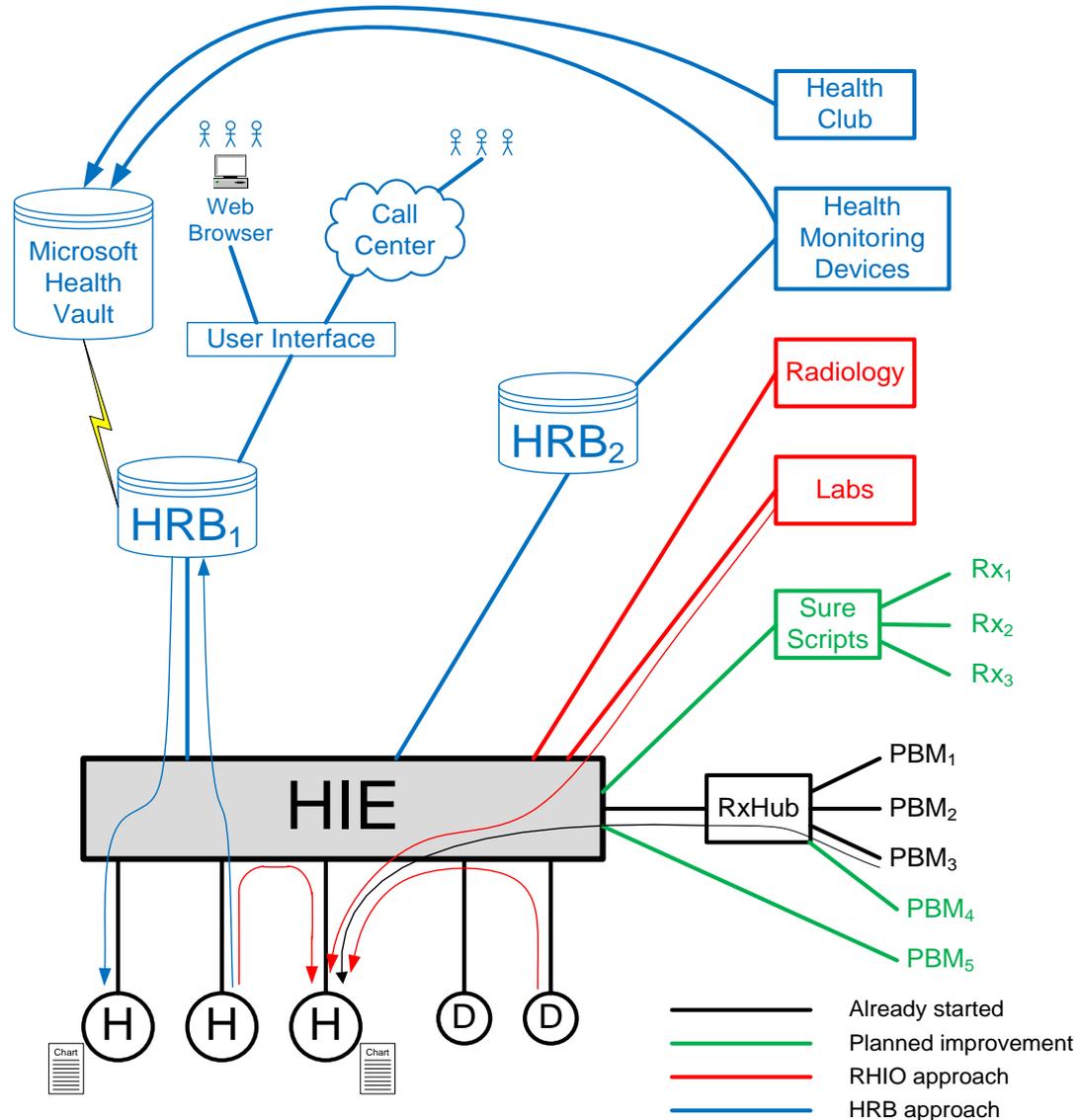
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- Some HIE effort suffered from the “dog caught-up to the mailman” syndrome
- Across the country, progress of HIE as a reliable infrastructure was uneven. Some north-eastern states made good progress, but many states were getting nowhere
- As ONC and CMS evaluated where HIE should fit within larger MU strategy, they decided to focus on **Directed exchange** of clinical information, analogous to existing workflows ... HIE wouldn't be required
- The central theme of this decision was avoidance of the technical, legal, and relationship complexities of query-based HIE and focus on a simple standard (basically secure email) which could be ubiquitously adopted. When paired with MU CDA documents, much could happen...
- Supporting transitions in care (relying on CDA templates) through **Directed exchange** is currently the heart of an evolving national strategy



Original CRISP HIE diagram

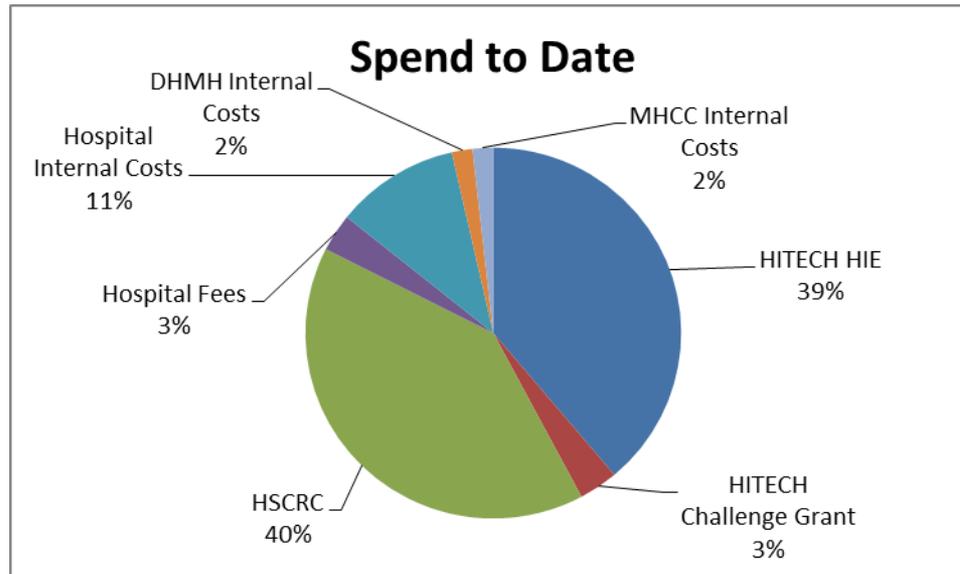
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Maryland HIE Sustainability

- CRISP funding to date has largely been grant based
- CRISP is currently collecting hospital participation fees
- The CRISP sustainability plan calls for operating expenses to be distributed across 3 customer-bases; hospitals, payers, and public sources





High Level Interoperability Challenge

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Without mandate, CRISP has found most levels of inbound and outbound integration with ambulatory EMRs a difficult target to achieve.

1.Transport Interoperability (e.g. VPN, SFTP)

1.Message Interoperability (e.g. CDA, HL7)

1.Semantic (Vocabulary) Interoperability (e.g.LOINC, SNOMED, ICD)

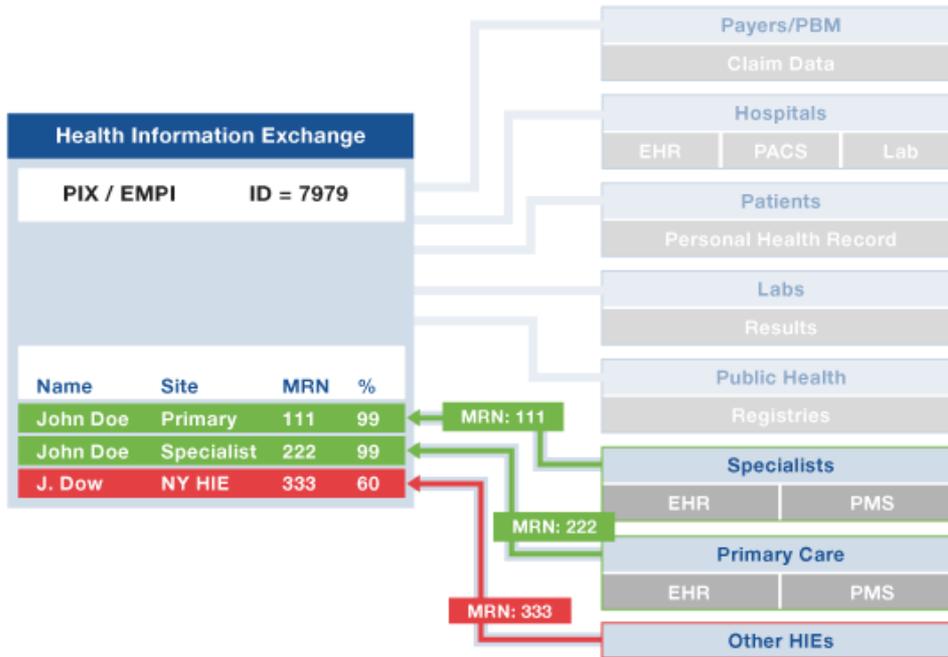
2.Process Interoperability (workflow)

The enemy of interoperability is optionality and lack of specificity....what we are doing today is largely widespread connectivity, not interoperability....



Master Patient Indexing – IBM Initiate

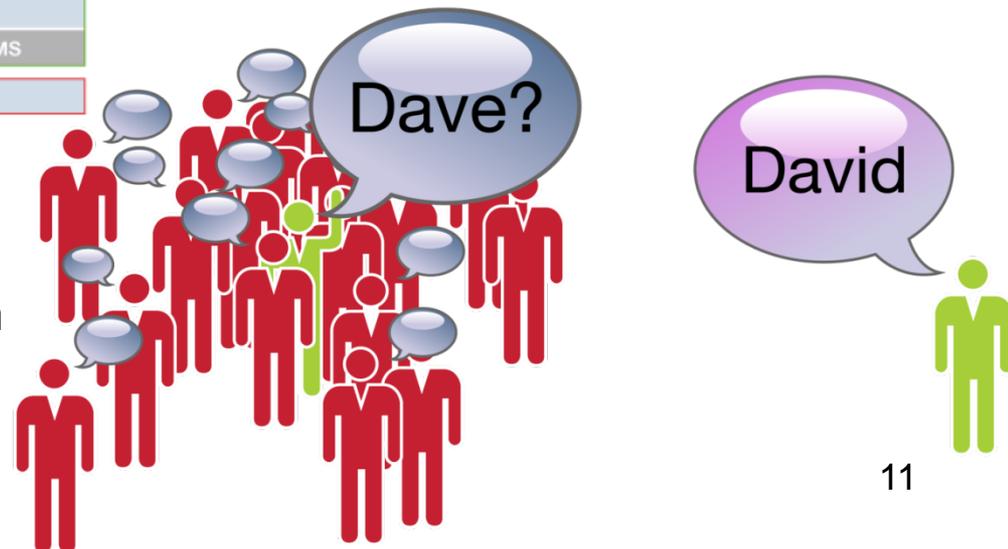
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The Challenge: accurately and consistently linking identities across multiple facilities to create a single view of a patient.

A zero or near-zero tolerance of a “false positive” match with a low tolerance of a “false negative” match.

Accurate cross-entity patient identity management is a critical function for an HIE to serve multi-organizational reform initiatives





Connectivity Progress to Date

Updated Sept 18th, 2012

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Progress Metric	Result
Organizations Live	
Hospitals (Total 48)	48
Hospital Clinical Data Feeds (Total 143 - Lab, Radiology, Clinical Docs)	86
National Labs	2
Radiology Centers (Non-Hospital)	5
Identities and Queries	
Master Patient Index (MPI) Identities	~4M
Opt-Outs	~1500
Queries (Past 30 Days)	~3500
Data Feeds Available	
Lab Results	~16M
Radiology Reports	~5M
Clinical Documents	~2M ¹²



Current Focus Areas

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- 1. Query Portal Growth**
- 2. Direct Secure Messaging**
- 3. Encounter Notification System (ENS)**
- 4. Encounter Reporting System (ERS)**
- 5. Health Benefits Exchange integration**



CRISP Query Portal

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The CRISP Query Portal can make clinical information available

- Access must be part of a treatment encounter or approved use case
- Web-based application with credentials issued by CRISP
- The current workflows are difficult

Types of Data Available

- Patient demographics
- Lab results
- Radiology reports
- Medication fill history
- Discharge summaries
- History and physicals
- Operative notes
- Consults

Key Challenge / Lesson Learned: The depth of data, the breadth of data, and the geographic diversity of data must be significant to reach the “tipping point” in query



Query Portal

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Browser address bar: [https://crisptest.axolotl.com/EA/EmergencyDocuments.nsf/\(wProduceTabbedInterface\)?OpenAg...](https://crisptest.axolotl.com/EA/EmergencyDocuments.nsf/(wProduceTabbedInterface)?OpenAg...) SMITH, John J [16-Jan-1942]

VHR Home | Inbox | Support Request | Change Password | Home | Links | Help | Log Out

Welcome, Doctor Jones - Monday, May 9

SMITH, John J - 01/16/1942 M Visit: [] Facility: [] From: 1/1/2006 To: 5/9/2011

- All
- Summary
- Cumulative Lab
- Lab
- Radiology
- Reports
- ADT
- Consent
- Office Memos
- Encounters
- Orders
- Patient Info
- Open Report

Lab

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 4:18:00 PM	CBC	T Nguyen
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 4:18:00 PM	OP PROTIME	R Jones
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 4:18:00 PM	TROPONIN I	J Contreras
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 4:18:00 PM	CPK +MB IF INDI	J Wallaby
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 4:18:00 PM	BASIC PANEL-OP	R Jones

Radiology

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2/13/2007 10:10:00 AM	HANDS	T Kennedy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 3:00:00 AM	US CAROTID ART	M Keeler
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9/30/2006 3:00:00 AM	CT BRAIN W/O	T Morningstar
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6/10/2006 3:00:00 AM	CHEST 2 VIEWS	J Contreras
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6/5/2006 3:00:00 AM	CHEST 2 VIEWS	J Wallaby

Reports

<input type="checkbox"/>	6/15/2010	Cancellation Policy	D Pcp
<input type="checkbox"/>	6/15/2010	Cancellation Policy	D Pcp
<input type="checkbox"/>	12/19/2006 3:00:00 AM	Chart Notes	M Keeler
<input type="checkbox"/>	10/11/2006 3:00:00 AM	Chart Notes	T Morningstar
<input type="checkbox"/>	8/22/2006 3:00:00 AM	Chart Notes	T Nguyen

ADT
No results matched your search.

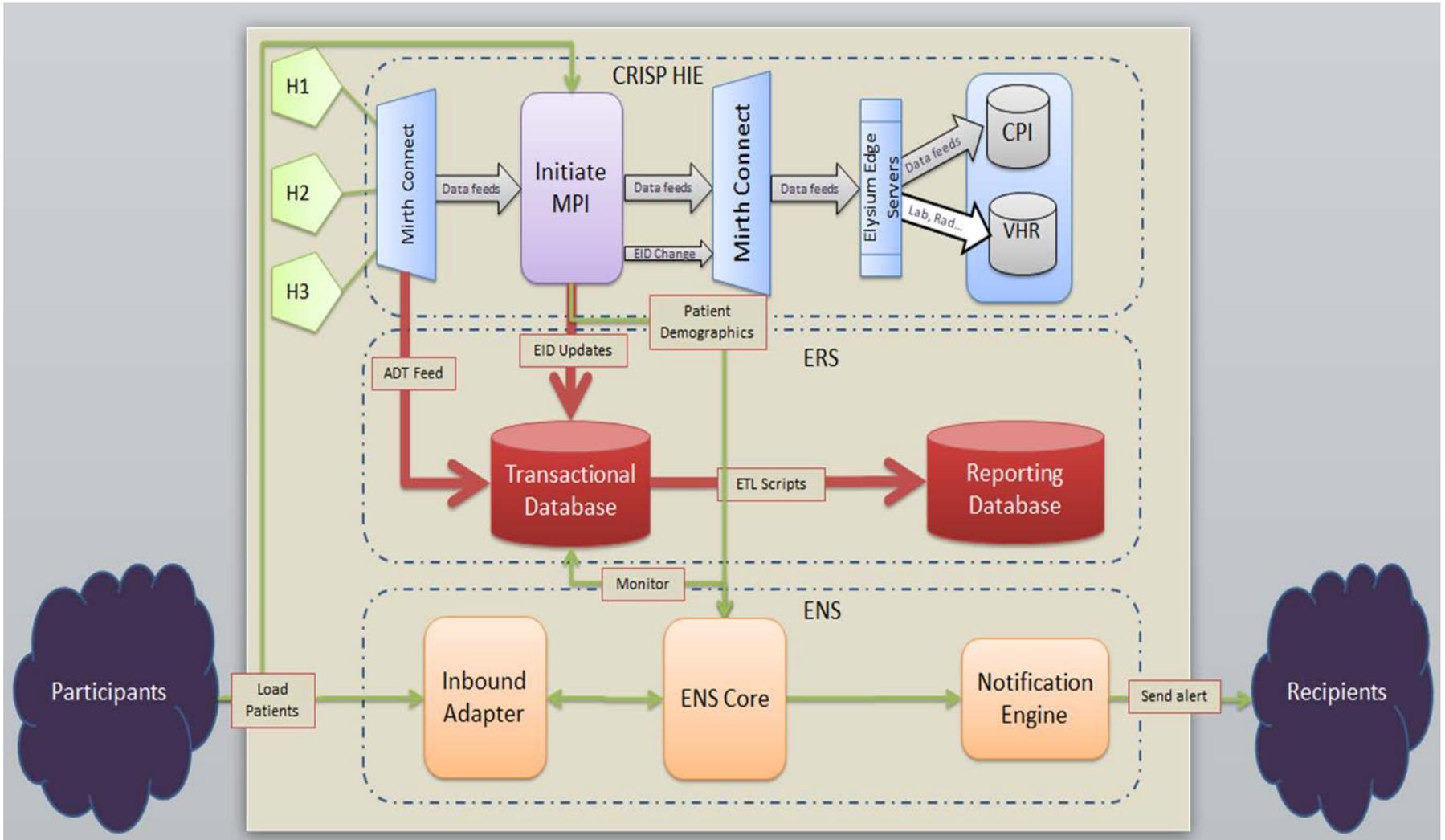
Cumulative Lab Not all lab test results and observations can be displayed in a cumulative view. For specific observations not present in this view, search within the lab or other tabs.

Elements	09/30/06 04:18 PM	09/19/06 01:45 PM	08/14/06 11:35 AM	08/10/06 12:45 PM	08/07/06 11:25 AM	08/06/06 09:13 AM	08/05/06 02:02 PM	08/04/06 09:37 AM	Next
HCT	34.1	35.9		31.1		25.5	24.0	29.1	
BANDS	3			12			8		
RDW	13.1			12.2		12.8	14.0	12.9	
PROTEIN-TOTAL	6.3								
LDL			85		82				
ESR				90					



CRISP Infrastructure Overview

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PDMP as Part of Query

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- DHMH and the PDMP team have been actively interested in partnering with CRISP on Maryland's PDMP technology solution
- CRISP can play an important role in ensuring controlled dangerous substance (CDS) data is incorporated into a single source of external clinical data for providers (rather than a stand alone PDMP portal)
 - If Maryland does push ahead with PDMP, we are eager to use the CRISP query portal to provide access to physicians, believing a two-portal solution would be bad for everyone.
- We will be working closely over the coming weeks with our partners, including Optum, to evaluate capabilities to support the program





CRISP Direct Secure Messaging

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Direct Secure Messaging Usages:

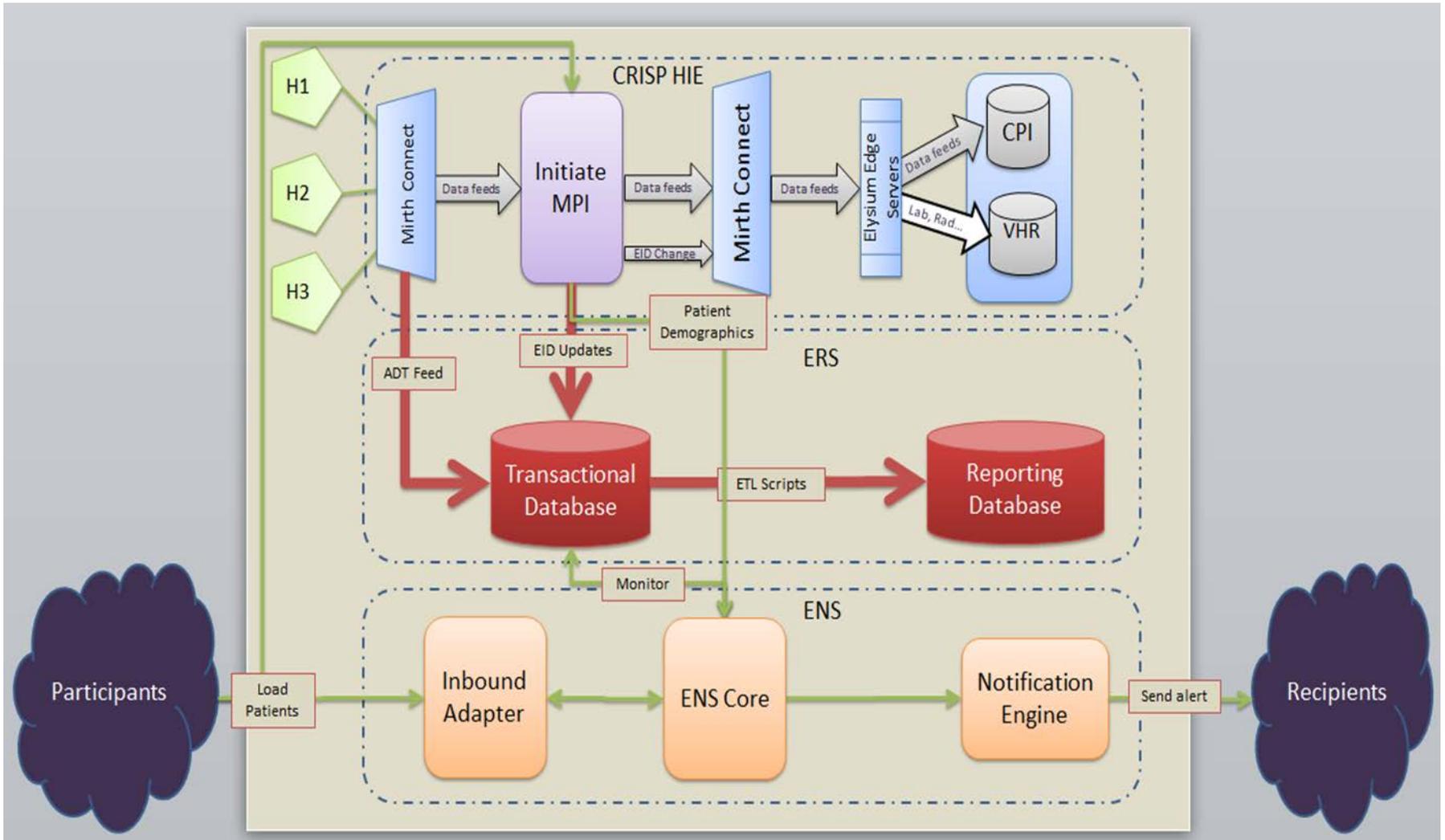
- To **communicate referrals** and **visit summaries** between Ambulatory practices
- To send **relevant patient clinical information** between ambulatory practices and hospitals
- To make formal **medical records requests** from Ambulatory practices to the hospital
- To receive **encounter alerts** from CRISP's Encounter Notification System when a patient is hospitalized





CRISP Infrastructure Components

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Encounter Notification Service



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- ENS went live on August 3rd with practices at three hospital partners
 - Harbor Hospitals, St. Josephs, GBMC and JHCP
- Roughly 6000 messages per month are current triggered
- Subscribers submit a patient panel to CRISP and identify which types of alerts they would like to receive
- Phase 1 notifications only include demographic information and the event types; including chief complaint and discharge diagnosis could increase the value of the service significantly

Forward Print Save

Jane Smith Admit UMHC
ycerregistry@crispdirect.org to caremgr1@crispdirect.org (Jul 13, 01:09 PM)

bramble@crispdirect.org

- OriginalMessage ----
From: caremgr1@crispdirect.org
To: sjcancerregistry@crispdirect.org
Date: Tue, Jul 10, 2012, 09:01 AM
Subject: Jane Smith Admit UMHC

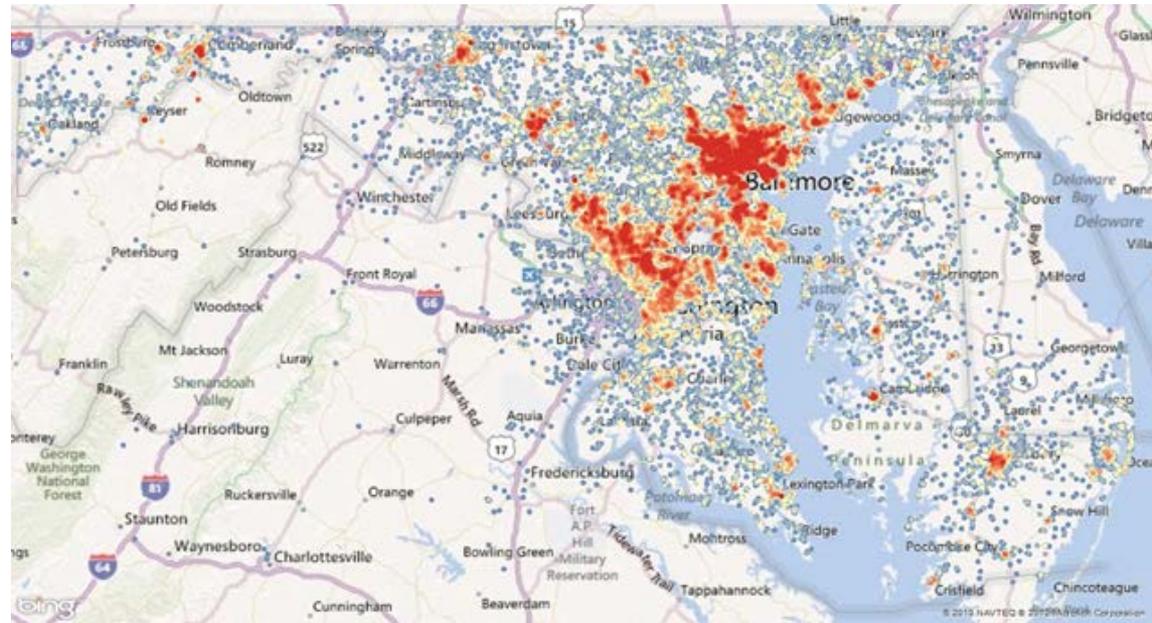
Date:	03-22-2012	23:48
Event:	Patient Admit	
Name:	Jane Smith	
Patient ID:	0000001111	
Facility:	Hopkins	
DOB:	03-01-05	
Address:	1112 Main Street, Gaithersburg, MD 33310	
Gender:	F	
Phone:	301-443-9999	



Encounter Reporting Service

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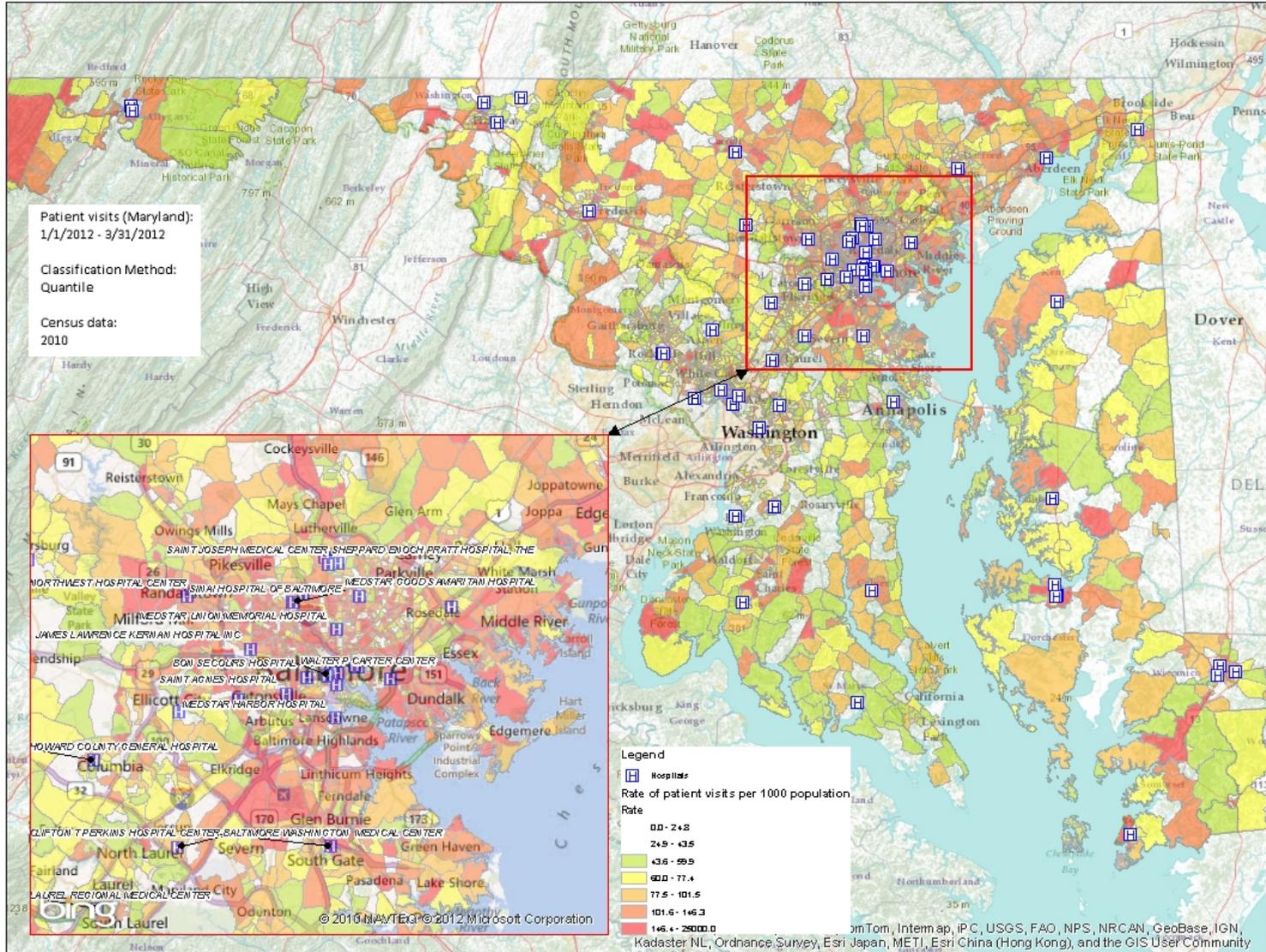
- Inter-hospital readmission reports have been distributed to half of Maryland hospitals
- CRISP is working with hospital to address variation admission data produced by financial data versus that which we receive from registration systems – THIS IS A MAJOR CHALLENGE
- CRISP has generated a series of proof-of-concept GIS maps to visualize utilization as hot-spots
- This capability could be valuable to public health officials as well as to hospitals





ERS Mapping

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Health Benefits Exchange Services

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CRISP was include in the HBE Level 2 funding request to support 3 specific services:

1.Provider Information Management

- Partnering with Optum, CRISP will offer a verified provider demographics source (fed by the HBE Qualified Health Plans) to enable HBE customers to search for plans by providers in the network

2.Master Patient Indexing Services for the All Payer Claims Database

- Relying the Initiate MPI, CRISP can enable insights into member churn between QHPs and Medicaid plans as member eligibility status changes over time

3.Clinical Summary Care Coordination Service

- Based on a triggering event, CRISP will compile a time-banded summary of data (starting with just encounter data) to forward to care coordinators



Questions

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