CRISP

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

Chesapeake Regional Information System for Our Patients

Maryland's Health Information Exchange

SOA in Healthcare Conference

The Role of Health Information Exchange in Driving Toward Interoperability

July 15th, 2011

What is CRISP?

➢ CRISP (Chesapeake Regional Information System for our Patients) is Maryland's statewide health information exchange (HIE) and Regional Extension Center (REC)

– **Health Information Exchange**, or HIE, allows clinical information to move electronically among disparate health information systems. The goal of HIE is to deliver the right health information to the right place at the right time—providing safer, more timely, efficient, effective, equitable, patient-centered care.

– **Regional Extension Center** (REC) is a program created by the ONC that is funded through the stimulus bill. RECs will offer technical, implementation, and educational assistance to facilitate providers' adoption and meaningful use of electronic medical records (EMRs).

Mission Statement

Our mission is to advance the health and wellness of Marylanders by deploying health information technology solutions adopted through cooperation and collaboration. We will enable the Maryland healthcare community to appropriately and securely share data, facilitate and integrate care, create efficiencies, and improve outcomes.

Key Points Above

1) We are about health IT
2) We exist to facilitate cooperation around a narrow set of activities
3) We are an enabler, but "technology is necessary but insufficient"
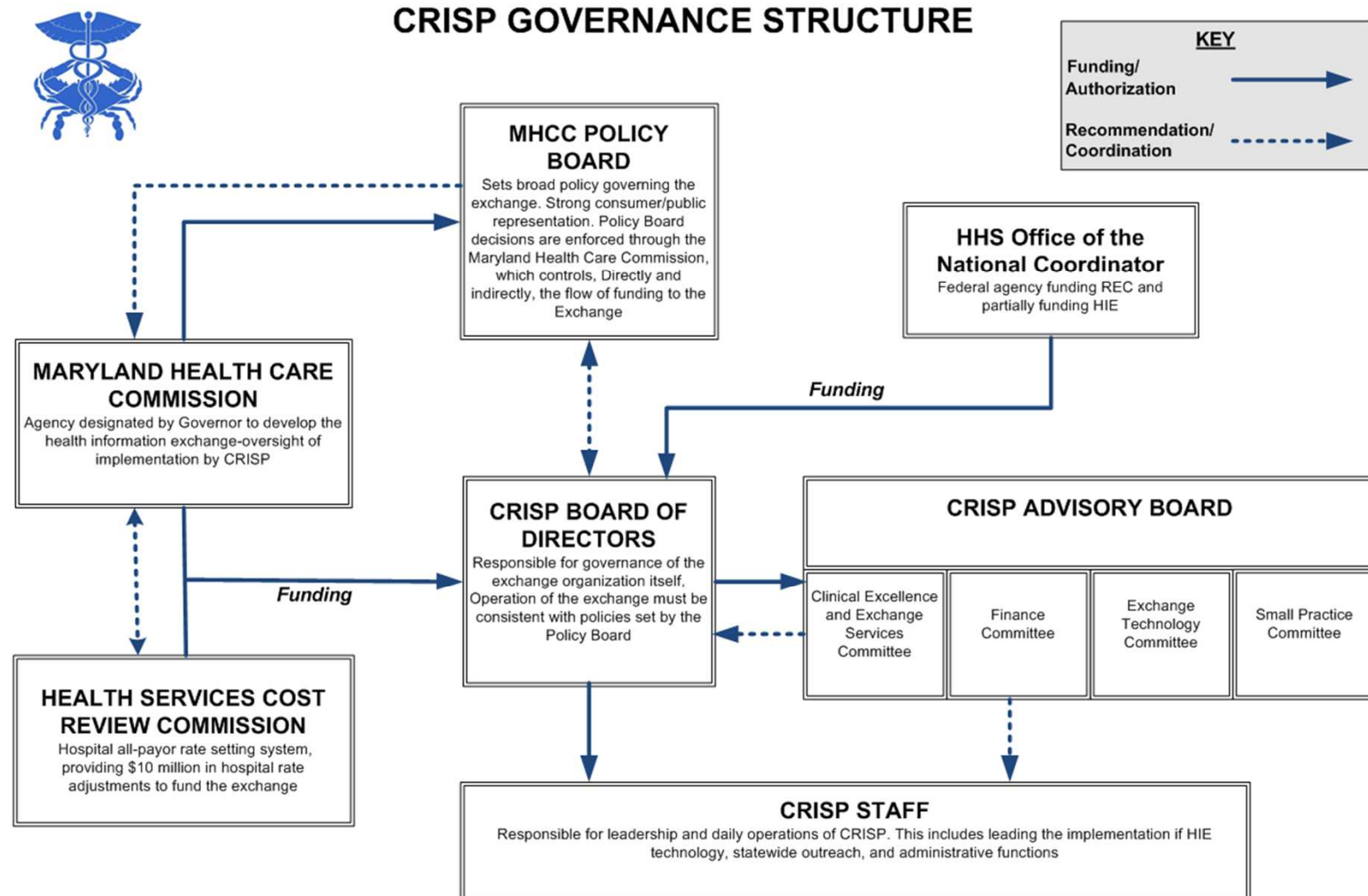
HIE Principles

Guiding Principles

➢ Begin with a manageable scope and <u>remain incremental</u>

➢ Create opportunities to cooperate even while <u>participants still compete in other ways</u>

➢ Affirm that competition and <u>market-mechanisms spur innovation</u> and improvement

➢ Promote and <u>enable consumers' control</u> over their own health information

➢ <u>Be flexible</u> to support both distributed and data bank models

➢ Use <u>best practices and standards</u>

➢ Serve the <u>entire Maryland healthcare community</u>

CRISP GOVERNANCE STRUCTURE

KEY
Funding/Authorization
Recommendation/Coordination

MHCC POLICY BOARD
Sets broad policy governing the exchange. Strong consumer/public representation. Policy Board decisions are enforced through the Maryland Health Care Commission, which controls, Directly and indirectly, the flow of funding to the Exchange

HHS Office of the National Coordinator
Federal agency funding REC and partially funding HIE

MARYLAND HEALTH CARE COMMISSION
Agency designated by Governor to develop the health information exchange-oversight of implementation by CRISP

Funding

CRISP BOARD OF DIRECTORS
Responsible for governance of the exchange organization itself, Operation of the exchange must be consistent with policies set by the Policy Board

CRISP ADVISORY BOARD

Clinical Excellence and Exchange Services Committee

Finance Committee

Exchange Technology Committee

Small Practice Committee

Funding

HEALTH SERVICES COST REVIEW COMMISSION
Hospital all-payor rate setting system, providing $10 million in hospital rate adjustments to fund the exchange

CRISP STAFF
Responsible for leadership and daily operations of CRISP. This includes leading the implementation if HIE technology, statewide outreach, and administrative functions

5

Health Information Exchange

$10 million in state funding trough HSCRC

$9.3 million in HITECH HIE funding

-MHCC prime recipient with CRISP as execution partner

$1.7 million in HITECH Challenge Grant funding

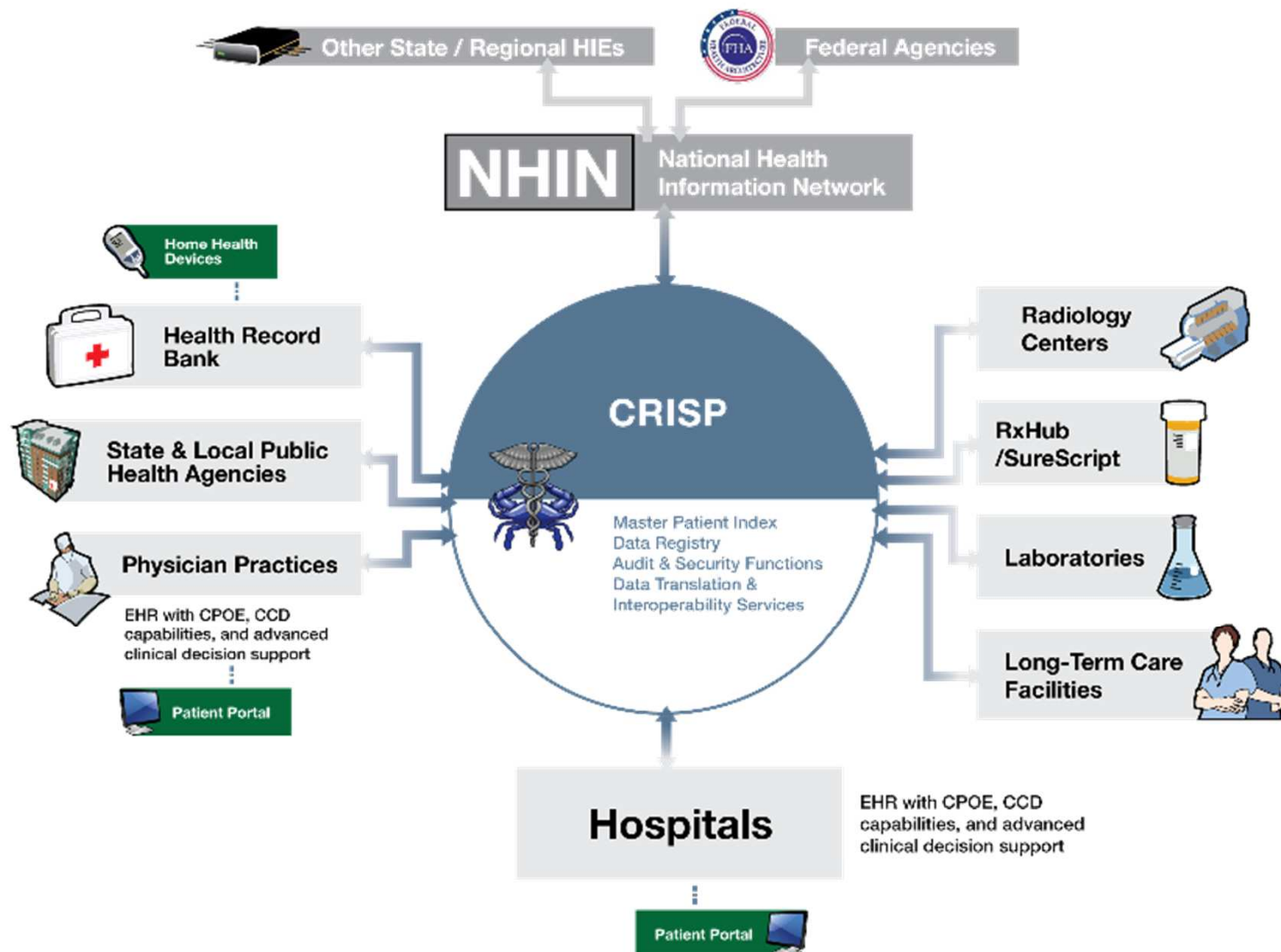-MHCC prime recipient with CRISP as execution partner

Regional Extension Center

$5.5 million in HITECH funding

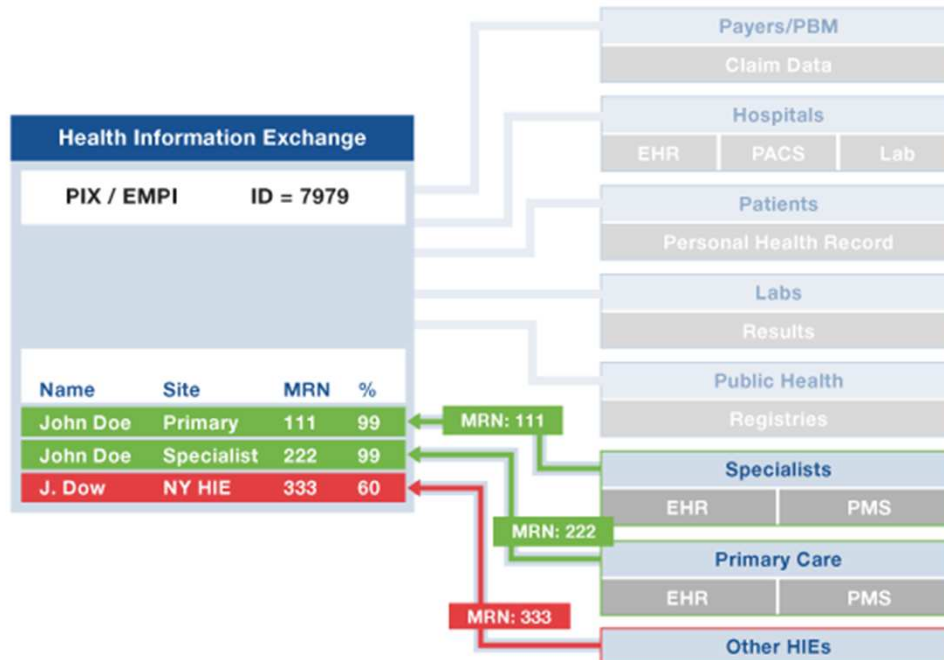-CRISP prime recipient with MSOs as sub-recipients

Master Patient Indexing

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.
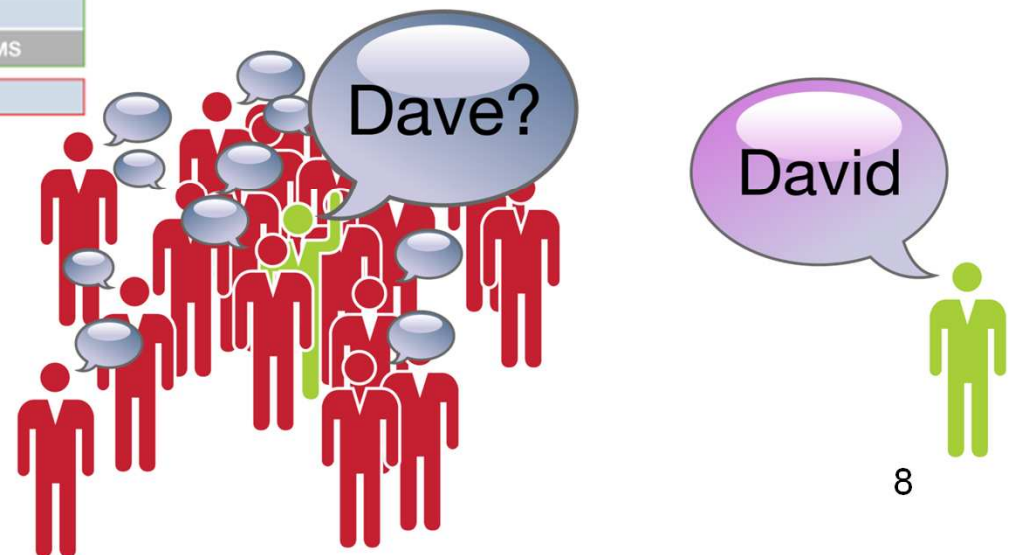
Initial Data Types Submitted / Available

➢ Patient demographics

➢ Lab results

➢ Radiology reports

➢ Electronic documents (discharge summaries, history & physicals, operative notes, and consult notes)

➢ Transport approaches include "pushing results," "querying or searching for data," and "subscribing" to specific patients.

➢ CRISP will likely rely on "Direct" protocols for provider to provider messaging functionality. In support of this function CRISP will act as a HISP.

Connectivity Efforts

➤ CRISP has established relationships with nearly every hospital in the state at some level (we are currently live with 12 hospital as "data providers")

➤ We are actively working on technical connectivity with 35 hospitals (out of 46)

➤ We expect 15-20 additional hospitals to go live over the next 6 months
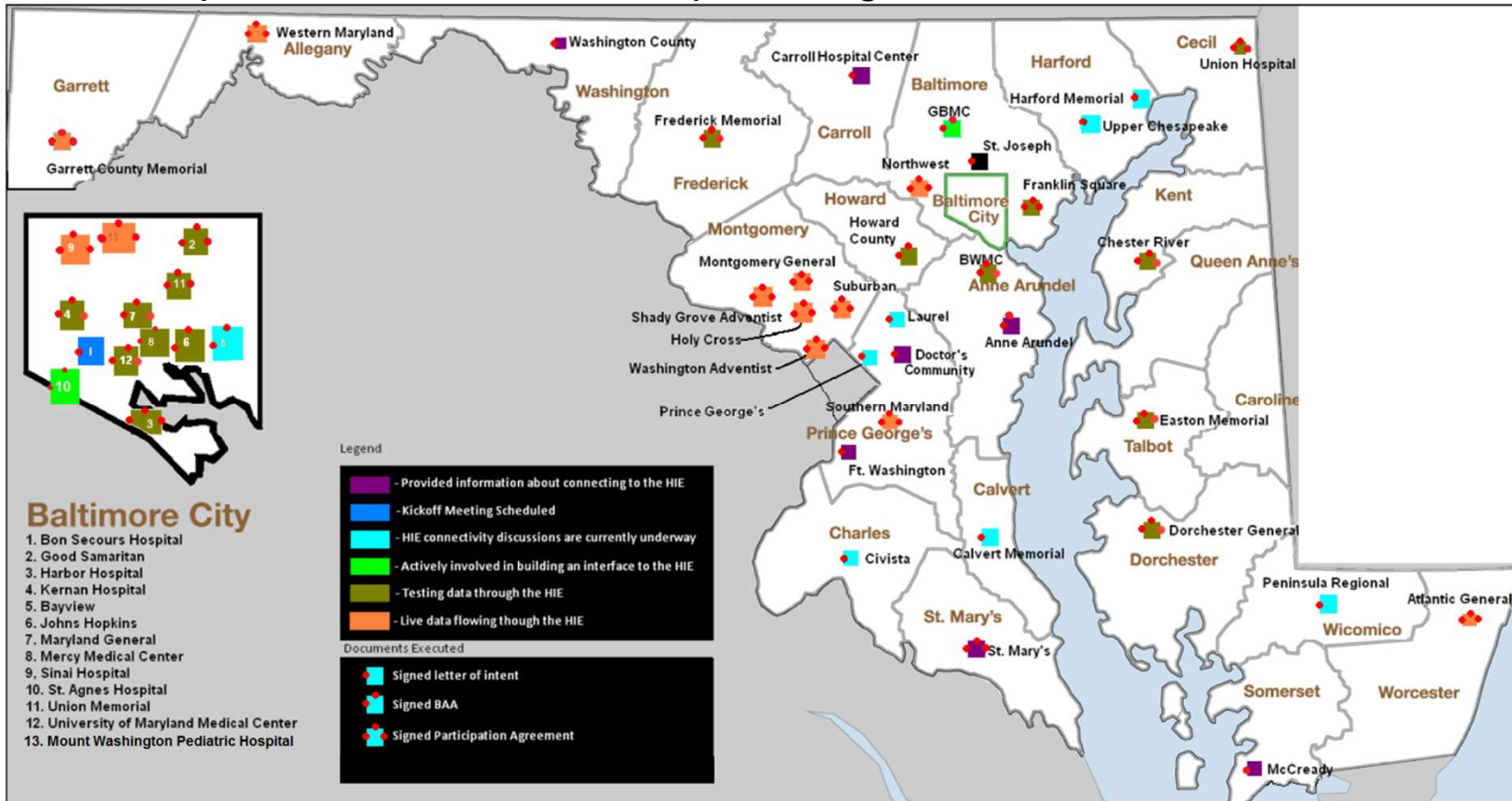
10

Health Information Exchange Organizations act as a "hub", or central agent, for many things…

➢ Technology Hub
➢ Contracting Hub (e.g. participation agreements, funding agreements, vendor agreements, etc.)
➢ Relationship Hub

As a relationship hub we are a body that can bring together organizations to cooperate on a specific set of data sharing activities while still continuing to compete in other ways, including on health IT (just not on the availability of data itself).

We can perhaps have a greater influence on achieving interoperability in our role as a relationship hub than we can as a technology hub by requiring our vendors and influencing our partners to pursue and implement standards within their products and processes.

11

Connectivity Efforts Today

➢ Much of what HIEs do today is establishing connectivity (connectivity is defined here beyond the strict technical definition)

  ➢ Typically over VPNs or web services and mapping various types of HL7 messages (i.e. labs, radiology results, clinical reports) to meet a centrally defined specification (as defined by the HIE's technology vendors) so that they can be processed, routed, or made available for searching in the future.

➢ These efforts are achieving critical connections, making data available to providers, and establishing essential and foundational infrastructure

➢ It also proves to our stakeholders that they can work together without sacrificing business objectives or competitiveness in the marketplace

Connectivity vs. Interoperability

➢ However, that connectivity is far from interoperability….

➢ Interoperability Challenge
  - ➢ Transport
  - ➢ Message
  - ➢ Semantic / Vocabulary

➢ HL7 is a valuable message standard but with very loose implementation guidelines causing lots of variation

➢ Inconsistent and patchy use of various vocabularies and clinical terms creates even deeper interoperability challenges

Lab Results Delivery Example

Connectivity:

1. Technical connectivity must be established from lab to HIE and HIE to practice
2. HL7 ORU message must be transformed to inbound specification of HIE then outbound specification of destination EMR
3. Lab to EMR result compendiums must be developed to map result values into destination spec (lab calls potassium "K" but the EMR calls it "P")
4. Patient matching issues must be addressed

Interoperability:

1) Consistent connectivity pathway is utilized
2) Lab and EMR vendor adhere to the same HL7 specification and LOINC code their lab results
3) HIE routes results to the ordering provider
4) Enough patient data is included in the result message to map the result into the patient chart

Danger for HIEs in Interoperability Services as Value Proposition

➢ As an HIE we should advocate and support interoperability, but providing the comprehensive solution for achieving interoperability across a given service area should not be the defining force in our value proposition for participants, nor should it be where we spend our limited resources in the near-term.

➢ Interoperability specification are new and evolving….they take a lot of time to implement at their current maturity level. If we don't make some measurable progress in the near term, we risk not being around for the long term.

➢ In seeking to become a valuable, and hopefully critical, infrastructure for our states and communities, HIEs will be better served focusing on broad connectivity, even if that connectivity isn't achieving true interoperability today.

Moving Interoperability Upstream and Downstream

➢ Interoperability standards need to be pushed "upstream" to data creators and the data consumers "downstream" must deploy those same standards to accept the data or understand the messages or requests.

➢ Relying on an HIE infrastructure to provide the interoperability solution is continuing to add ever increasing layers of patchwork that are unsustainable in the long-term, even if they help an HIE be valuable to their participants in the short term.

➢ The vast majority of HIE's are not sufficiently funded to centrally cure interoperability challenges across their entire service area.

Near Term Transformation Services and Interoperability for Scale

➢ Of course, some basic translational services like HL7 mapping or limited LOINC maps (kinds of "transitional interoperability services") make sense for HIEs as they seek to increase the number of participants they are connected with.

➢ However, acting as the mechanism to achieve more advanced interoperability may take HIE organizations down the wrong path for the long-term.

➢ Scaling to accomplish broader bi-directional connectivity at an ambulatory level will require truly interoperable systems.

Becoming Critical Infrastructure

➢ We should have strategic goals around interoperability but there are current tactical realities and sacrifices (i.e. not letting the perfect be the enemy of the good – a mantra all HIEs should embrace) required to get the infrastructure deployed, operational, and creating value.

➢ Future success in supporting interoperability will likely be predicated on an HIE becoming a relevant infrastructure and positioned to take advantage of progress on widespread adoption of transport, message, and vocabulary standards.

➢ Achieving that relevance means that HIEs should focus on inserting themselves, even if in the limited role of providing connectivity, as critical infrastructure where ever possible.

Looking Forward

Near- to Mid-Term

➢ Continue to drive hospital connectivity while working on XDS.b and XCA-based (NHIN-based standards) exchange with sub-networks and other ambulatory hubs

➢ Establish public health connectivity (we are starting with electronic lab reporting)

➢ Become critical infrastructure for key constituents (we are starting with a preventable readmissions reporting program)

➢ Expand access to providers for the ability to query

Mid- to Long-Term

➢ Ensure we stay true to our consumer-centric goals and create PHR / HRB connectivity

➢ Work towards platform-style 3rd party development

➢ Maintain flexibility to provide payment reform-supporting infrastructure (i.e. PCMH and ACO offering)

Questions?

Scott Afzal

Program Director, CRISP

Principal, Audacious Inquiry

Scott@ainq.com

443-812-4636