



Welcome to the AHRQ Medicaid and CHIP TA Webinar

Tuesday, May 15, 2012, 3:00–4:30 p.m. Eastern

Medicaid and Health Information Exchange: The potential role of Direct Exchange

Presented by:

John Hall, Krysora, Direct Project Coordinator

Erica Galvez, ONC, Community of Practice
Director, State HIE Program

Amy Zimmerman, Rhode Island Executive Office of
Health and Human Services, State HIT Coordinator

Mark Jacobs, DHIN, Chief Information Officer

Moderated by:

Robert Bailey, RTI International

Funded by the Agency for Healthcare
Research and Quality

*** Please note all participants were placed on mute
as they joined the session.**

Overview

- Welcome, Robert Bailey, RTI International
- Before we begin
- Introduction
- Medicaid and Health Information Exchange: The potential role of Direct Exchange

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- **John Hall**, KrySORA, Direct Project Coordinator
- **Erica Galvez**, ONC, Community of Practice Director, State HIE Program
- **Amy Zimmerman**, Rhode Island Executive Office of Health and Human Services, State HIT Coordinator
- **Mark Jacobs**, DHIN, Chief Information Officer
- Questions and Answers – Robert Bailey
- Closing Remarks – Robert Bailey

Before We Begin

- Please note all participants were placed on mute as they joined the Webinar.
- If you wish to talk, choose the “raise hand” option to notify the host.
- If you have a question during the presentation, please send your question to ***all panelists*** through the chat. At the end of the presentations, there will be a question and answer period.
- We are currently in the process of posting all of the TA Webinar presentation slides to the project Web site:
<http://healthit.ahrq.gov/Medicaid-SCHIP>

Evaluation

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- We would very much like to get your feedback; your input is extremely important to us and will help to improve future sessions to ensure we provide the best possible assistance to your agency.
- If you do not have time to complete the evaluation immediately following the Webinar or would rather receive the form via e-mail, please contact Diana Smith at dianasmith@rti.org
- As always, thank you!

An Overview of Direct

Presented by:

John Hall
Coordinator, Direct Project

What Is the Direct Project?

A project to create the set of **standards** and **services** that, with a **policy** framework, enable simple, directed, routed, scalable transport over the Internet to be used for secure and meaningful exchange between known participants in support of **meaningful use**.

Direct: Secure Directed Exchange Via the Internet



The Direct Project specifies a simple, secure, scalable, standards-based *transportation mechanism* that enables participants to send encrypted health information directly to known, trusted recipients over the Internet.



b.wells@direct.aclinic.org

h.elthie@direct.ahospital.org

- **Simple.** Connects healthcare stakeholders through universal addressing using simple *push* of information.
- **Secure.** Users can easily verify messages are complete and not tampered with en route.
- **Scalable.** Enables Internet scale with no need for central network authority that must provide sophisticated services such as EMPI, distributed query/retrieve, or data storage.
- **Standards-based.** Built on well-established Internet standards, commonly used for secure e-mail communication (i.e., SMTP for transport, S/MIME and X.509 certificates for encryption and integrity protection)

Direct: An Alternative to Legacy Mechanisms

Direct addresses health information challenges today

- Communication of health information among providers and patients still mainly relies on mail or fax
 - Slow, inconvenient, expensive
 - Health information and history is lost or hard to find in paper charts
- Current forms of electronic communication may not be secure
 - Encryption features of off-the-shelf e-mail clients not often used in healthcare communications today
- Physicians need to transport and share clinical content electronically in order to satisfy Meaningful Use requirements

Direct: Key Concepts

- Direct enables *push*-based transport – a sender pushes information to one or more recipients
- Direct Messages act as containers of health information
- Direct Addresses are used to route Direct Messages
- Digital certificates are used to protect Direct Messages and express trust relationships
- SMTP is used to transport Direct Messages
- Security/Trust Agents (STAs) and Health Information Service Providers (HISPs) are responsible for providing the services necessary for exchange using Direct

Direct Messages

- Direct Messages are like secure email messages
 - Comply with RFC 5322
 - Headers
 - Contents – text plus attachments
 - Security information – signatures, certificate information as applicable
- Contents can be structured or unstructured
 - Text and other human-readable representations
 - Consolidated CDA, CCD, CCR
 - PDF, TIFF
 - Office documents
 - HL7 lab results
 - IHE XDM specifications

Direct Addresses

- Direct Addresses are used to route information
 - Look like email addresses
 - Used only for health information exchange

b.wells@direct.aclinic.org



The diagram shows the email address 'b.wells@direct.aclinic.org' with brackets underneath. A bracket under 'b.wells' is labeled 'Endpoint'. A bracket under '@direct.aclinic.org' is labeled 'Domain'. A larger bracket under the entire address is labeled 'Direct Address'.

- An individual may have multiple Direct Addresses

Direct and Digital Certificates

- Each Direct Address must have at least one X.509v3 digital certificate associated with it
 - Address-bound certificate – certificate tied to a specific Direct Address
 - Domain-bound certificate – certificate tied to the Domain that is part of a Direct Address (also known as an organizationally bound certificate)
- Digital certificates are used within Direct to express trust relationships and to secure Direct Messages by encrypting and signing information.

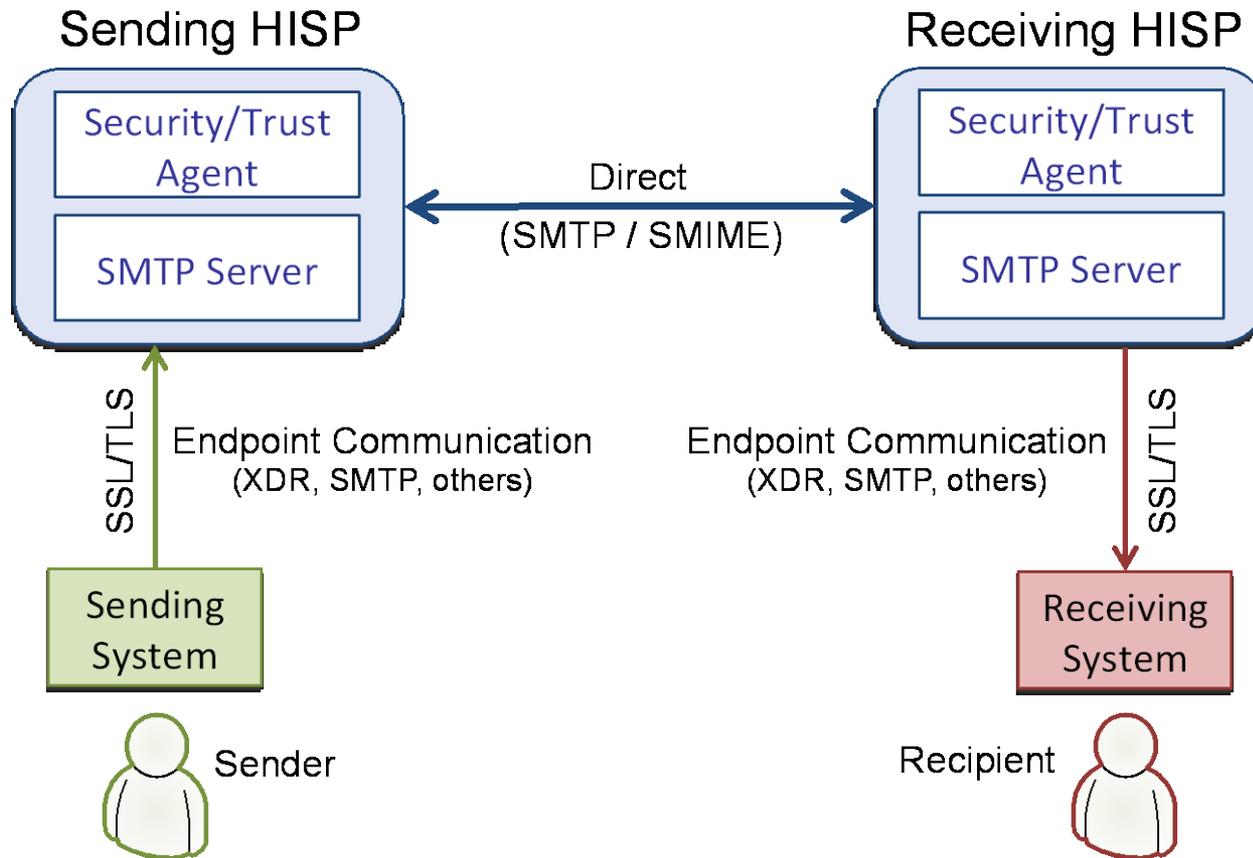
Core Trust Concepts in the Direct Project

- Communication can occur only between trusted parties.
 - Sender and recipient may each individually manage trust relationships.
 - STAs / HISPs may manage trust relationships on behalf of their participants.
 - Both of the above may be true in a given environment.
- Trust relationships are expressed using digital certificates. A party may choose to trust a specific certificate, as well as any certificate that cryptographically chains to a trust anchor.
- Certificates are issued only to parties that agree to abide by specified trust policies. These policies often cover:
 - Certificate applicability (i.e., purposes for which certificates are issued)
 - Identity proofing and registration of parties
 - Security requirements of parties
- Setting trust policy is outside the domain of the Direct Project.
 - Policy originates with Health Information Technology Policy Committee (HITPC)
 - States and other communities may build upon policy set by the HITPC

What Are STAs and HISPs?

- Security/Trust Agents (STAs) are responsible for securing, routing, and processing Direct Messages
 - STA may be a system under the direct control of an exchange participant
 - STA may be a service offered by an intermediary, known as a Health Information Service Provider (HISP), acting on behalf of an exchange participant
- STAs and HISPs are responsible for performing a number of services required for the exchange of health information as defined by the Direct Project
 - Provide Direct Addresses
 - Publish and find digital certificates
 - Secure health information in transit using S/MIME and certificates
 - Route and transport Direct Messages using Direct Addresses and SMTP
 - Depending on implementation model (e.g., Web portal), possibly store Direct Messages

An Example Direct Scenario



Direct: Who Is Using It?

- States, territories, and communities across the nation
- Federal and state agencies
- Electronic health record (HER) vendors
Including: Amazing Charts, ApeniMED, Allscripts, Quest Diagnostics Care 360, Cerner Corporation, eClinicalWorks, e-MDs, Epic, GE Healthcare, Greenway, NextGen, Polaris, Siemens, SOAPware
- Health information exchange (HIE) vendors
Including: Ability, Axolotl, Harris, Health-ISP, Inpriva, Kryptiq Corporation, Max.MD, MedAllies, Medicity, Mirth, Secure Exchange Solutions, Surescripts
- Personal health record (PHR) vendors
Including: Microsoft, NoMoreClipboard

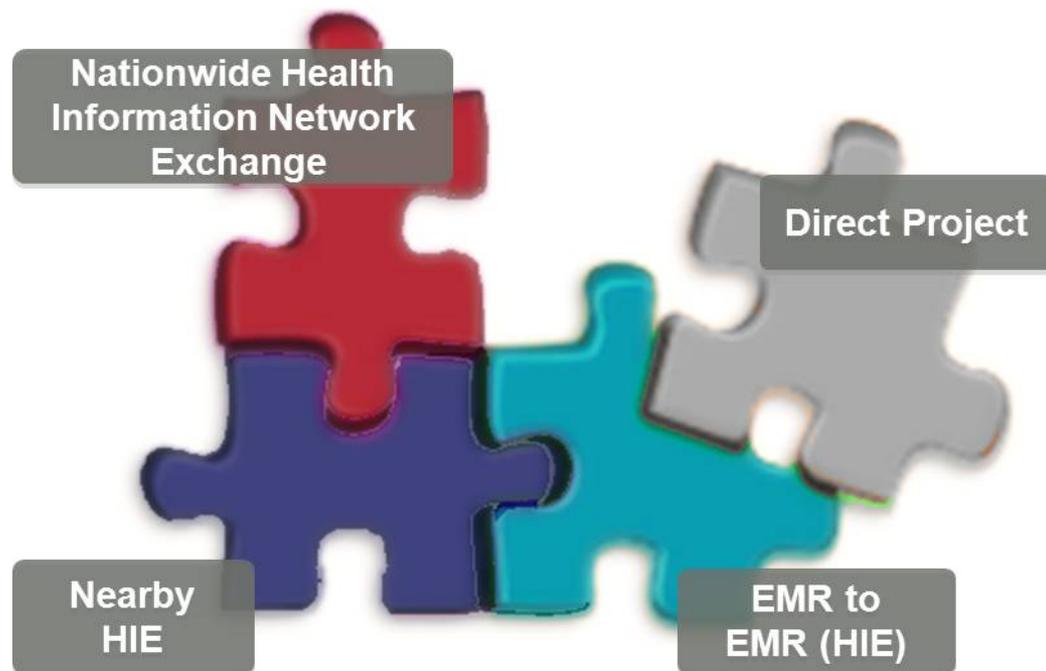
Direct and Other Types of Exchange

Direct was designed to **coexist** gracefully with existing mechanisms for data exchange.

Direct doesn't necessarily need to replace other ways you exchange information electronically today, but it might **augment** them.

Direct is another tool in your information exchange toolbox, providing a low-cost way to enable **push-based HIE** that can enable you to eliminate slow, inconvenient, and expensive paper-based methods of exchange.

The Direct specifications are being incorporated into the **Nationwide Health Information Network**.



Health information exchange:
a puzzle with many pieces

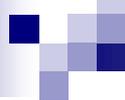
Direct Implementation and Adoption: Perspectives from ONC's State HIE Program

Presented by:

Erica Galvez, Community of Practice Director, State HIE
Program, ONC

Opportunities

Opportunity	Description
White Space	Large areas of state don't have viable exchange options for providers
Duplication	Every exchange creates own eMPI, identity solution, and directories
Information Silos	Unconnected exchange networks don't support information following patient across entire delivery system
Disparities	Low-capacity data suppliers do not have resources or technical capacity to participate in exchange
Emerging Networks	Emerging networks need resources and technical support
Public Health Capacity	States' numerous reporting needs are resolved in one-off ways or aren't electronic
No Shared Trust/Interop Requirements	Lack of common technical and trust requirements makes negotiations and agreements difficult and slows public support and exchange progress



State HIE grantees are driving Direct adoption...

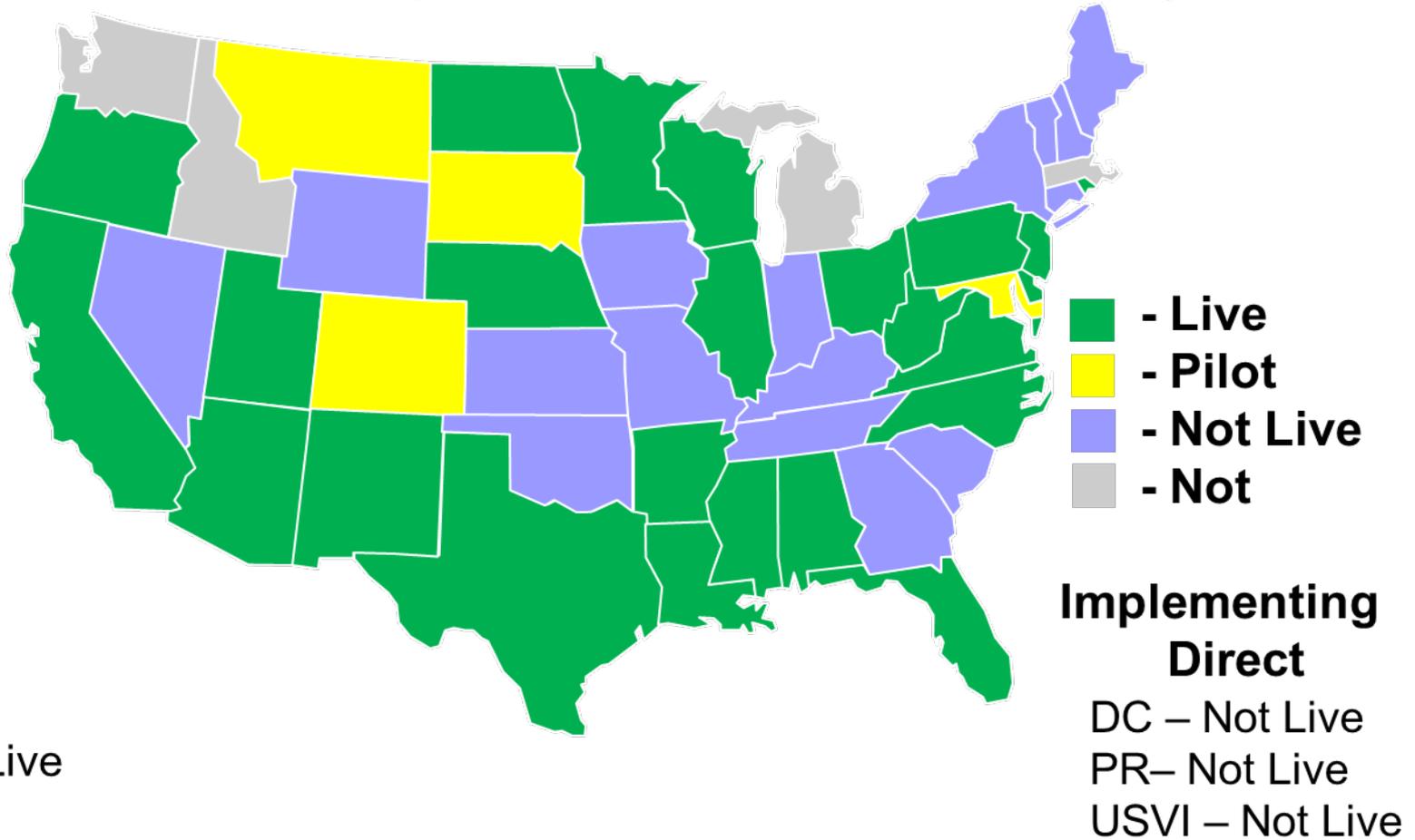
- More than 50 states and territories are leveraging Direct to rapidly enable information exchange to support Meaningful Use exchange requirements
 - 49 will use Direct to support safe, informed transitions (referrals, discharges)
 - 33 will use Direct for structured lab result delivery to ambulatory providers
 - 24 will use Direct for public health reporting



...and are taking different approaches to implementation

- Contractual approach – grantee offers HISP services
- Marketplace approach – many HISPs, qualification process for getting into marketplace
- Hybrid – both offering HISP services and establishing marketplace for other HISP options

State HIE Implementation Progress

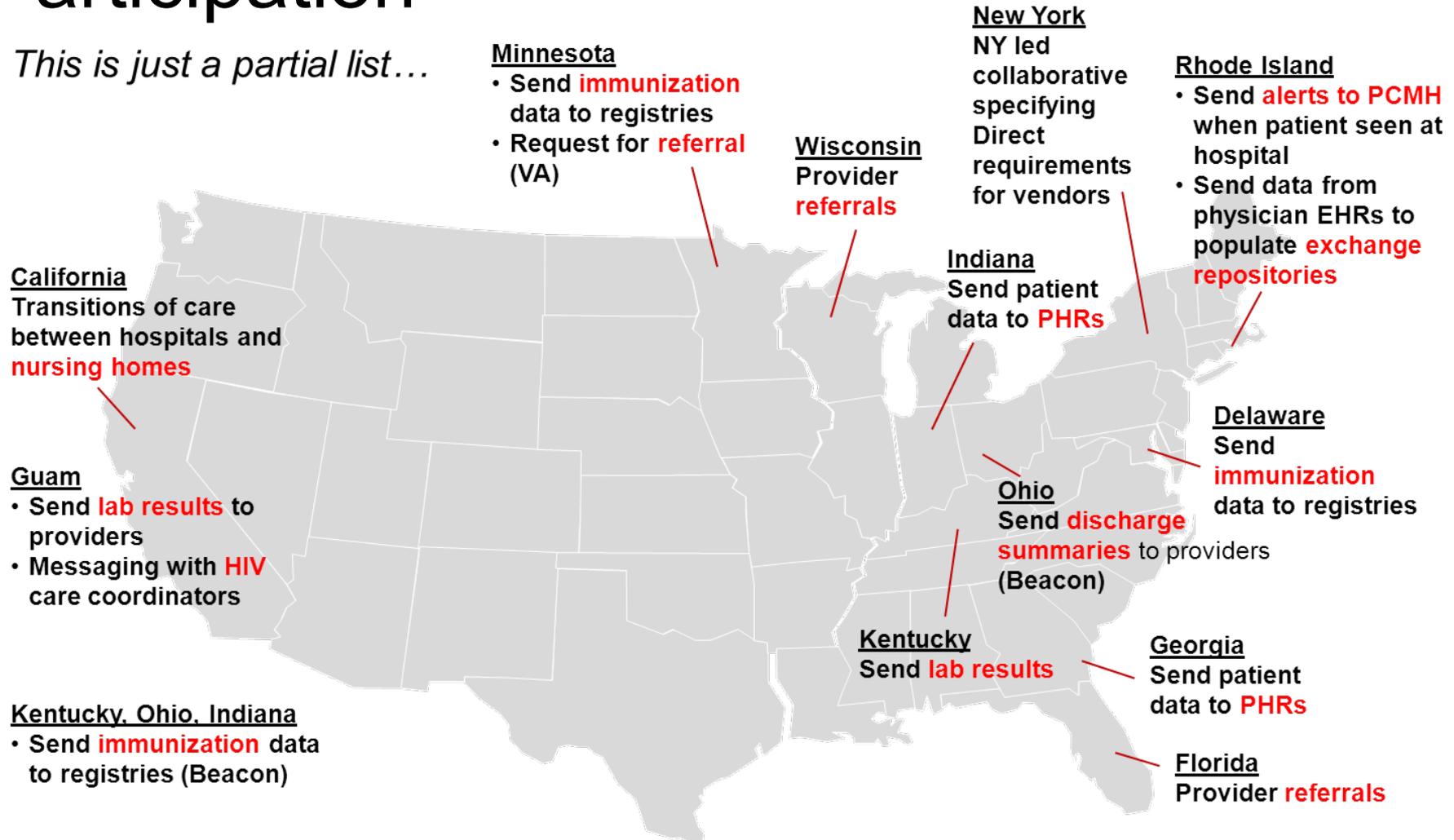


Live Direct is broadly available to providers

Pilot Direct is available to a limited number of providers participating in a pilot

Direct Creates an “Architecture of Participation”

This is just a partial list...



Voices from the Field

Safety



"As physicians, we are committed to providing high-quality, efficient care for our patients. But when a patient comes to our office and we don't have the information we need to care for the patient, it's not only frustrating—it can be life-threatening...Direct will protect patients."

Holly Miller, Chief Medical Officer Med Allies

Provider Communication



"Direct has revolutionized communication about patient care transitions in the same way that Facebook permanently altered social communication."

Barbara Morris, Community Care Physicians, Latham, NY

Care Coordination



"I like the idea of being able to send secure messages with confidential client information to colleagues since we are unable to do this with regular email. [We can] use this with our medical case managers and physicians."

Jessica Cate, HIV Surveillance Coordinator Guam Public Health

EHR Workflow



"This is an efficient way for me to have the information I need to care for patients who are referred to me. It's different from other methods of communicating, such as email or fax, because it is coming right into my EHR, the focal point of all of my clinical workflow and communication."

Ferdinand J. Venditti, Jr., Vice Dean for Clinical Affairs Albany Medical College

Using Direct: Rhode Island Examples

Presented by:

Amy Zimmerman, MPH
Rhode Island State HIT Coordinator
Executive Office of Health and Human Services



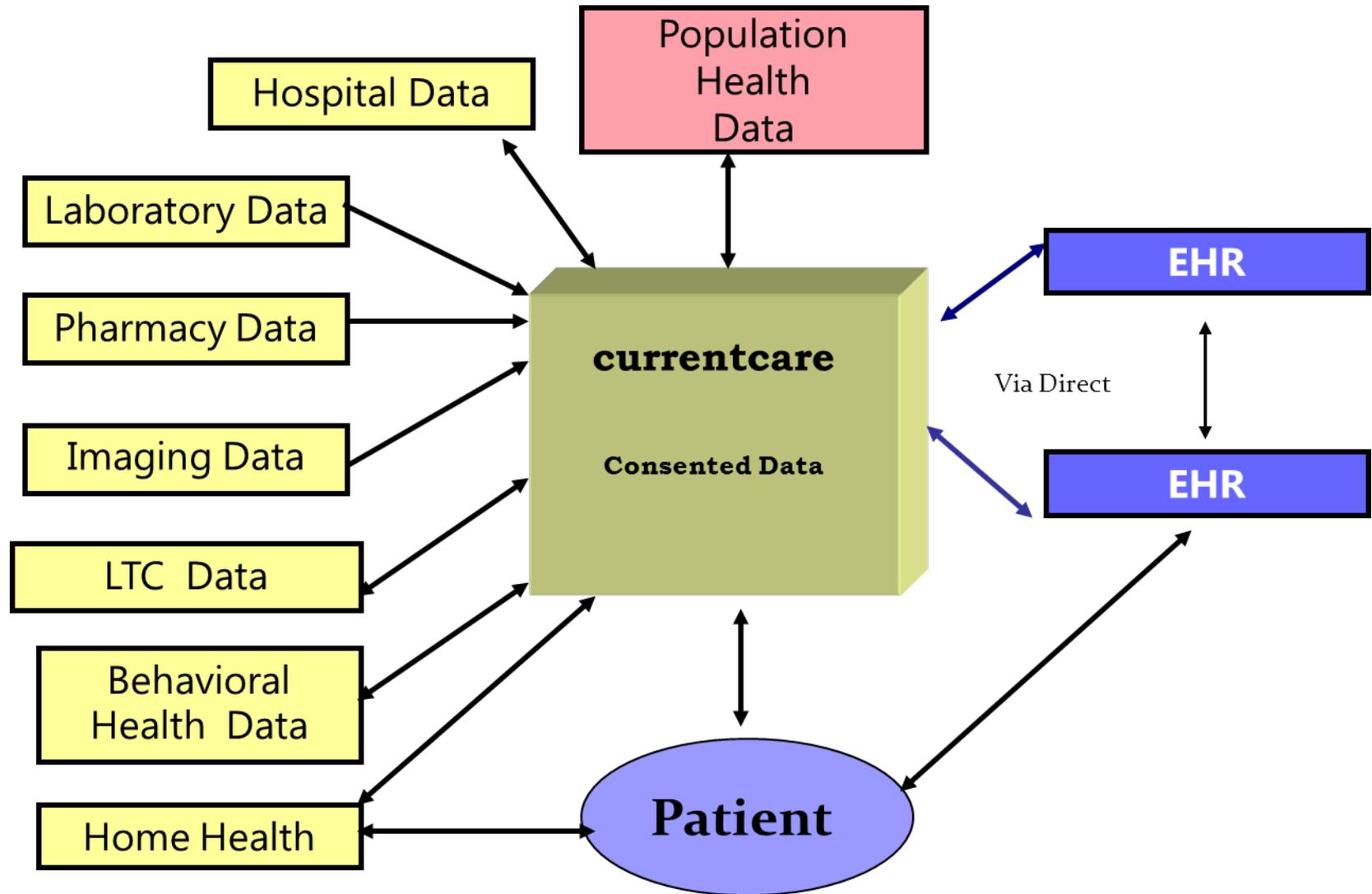
Outline

- HIE in Rhode Island:
 - Currentcare (noun)
 - Direct (verb)
 - Uses cases for Direct

Currentcare

- Longitudinal patient record
- Hybrid technical model:
 - Centralized repository
 - Accommodates federated data systems
- Opt in: consent is required to have your data become part of the HIE; you also decide who can access your data

Clinical Data Exchange in RI



Rhode Island's HIE: Currentcare

- Status:
 - 220,000 Rhode Islanders enrolled (opt in)
 - 3 or 4 ADT feeds
 - Approximately 7 labs sending lab results
 - A number of EHRs sending data to currentcare via “Direct”
 - Access to medication history data
 - Pilot testing accessing patient data (record inquiry service)
- Services:
 - Adoption of Direct (secure email messaging for healthcare)
 - Provider notification
 - Patient record inquiry service (HIE)
 - EHR integration (with currentcare)

Rhode Islands's Uses of Direct:

- 3 Current Use cases:
 - From provider's EHR to currentcare (HIE)
 - From currentcare to provider
 - Provider to provider
 - Specialists and PCPs
 - Behavioral health provider to PCP

These use cases support meaningful use core measure 14: demonstrating your capability to exchange key clinical information electronically.

Provider Notification

- Hospitals transmit real-time information to currentcare on admissions and discharges.
- Currentcare adds the information to the consented patient's record and **sends a Direct Message to the patient's PCP with clinical information about the hospitalization.**



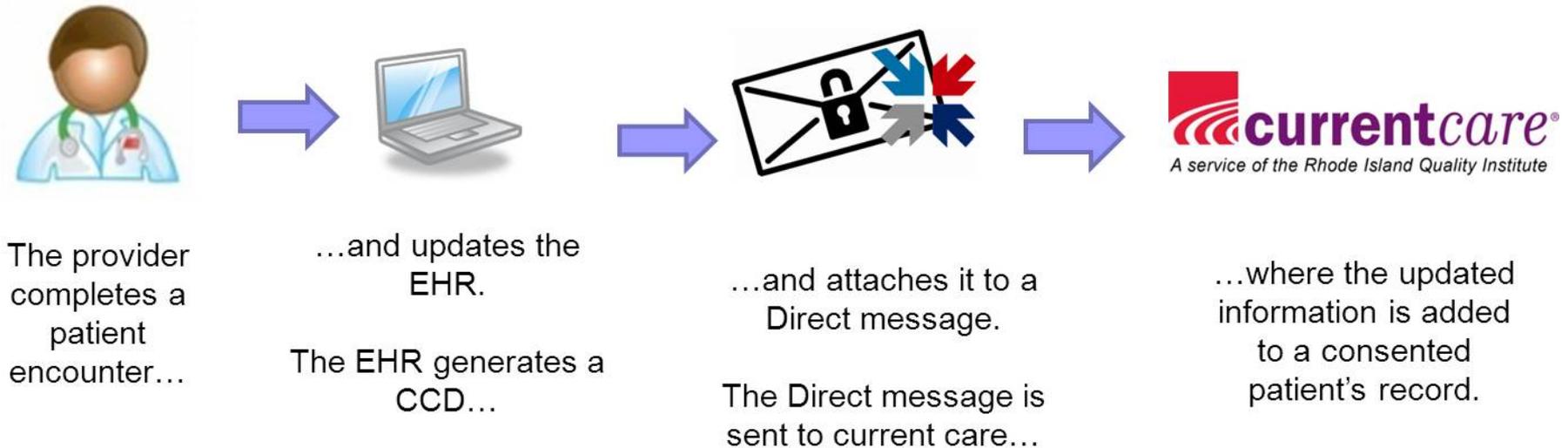
*Better Continuity of
Care for Patients*

From Provider's EHRs to Currentcare

- Direct to securely transmit the clinical information of consented patients from the EHR to currentcare:
 - Provider completes a patient encounter
 - Physician or other staff member updates the practice EHR
 - EHR automatically creates a continuity of care document (CCD)
 - EHR attaches that CCD to a Direct Message
 - Direct message is sent to currentcare's Direct inbox, and checks patient consent
 - Adds the information to the patient's longitudinal record
 - Information now available to patients' care team via currentcare

From Currentcare to Provider:

- Direct is the transport mechanism being used to automatically transmit clinical information for consented patients from a practice's EHR to currentcare.



The provider completes a patient encounter...

...and updates the EHR.
The EHR generates a CCD...

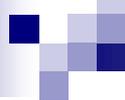
...and attaches it to a Direct message.
The Direct message is sent to current care...

...where the updated information is added to a consented patient's record.



Rhode Island Trust Community

- Is a community of verified Rhode Island providers who have a legitimate need to use Direct Messaging.
- Helps providers adopt Direct by creating a pre-authenticated and authorized list of providers they are willing to accept direct messages from
- Without the Trust community, providers have to identify each provider they will accept messages from
- Administered by the State's Regional Health Information Organization (state-designated entity), the Rhode Island Quality Institute



For more information, please contact:

Amy Zimmerman: amy_zimmerman@health.ri.gov
401-222-1439

DirectProgram@riqi.org
888-924-4156

<http://www.docEHRtalk.org>

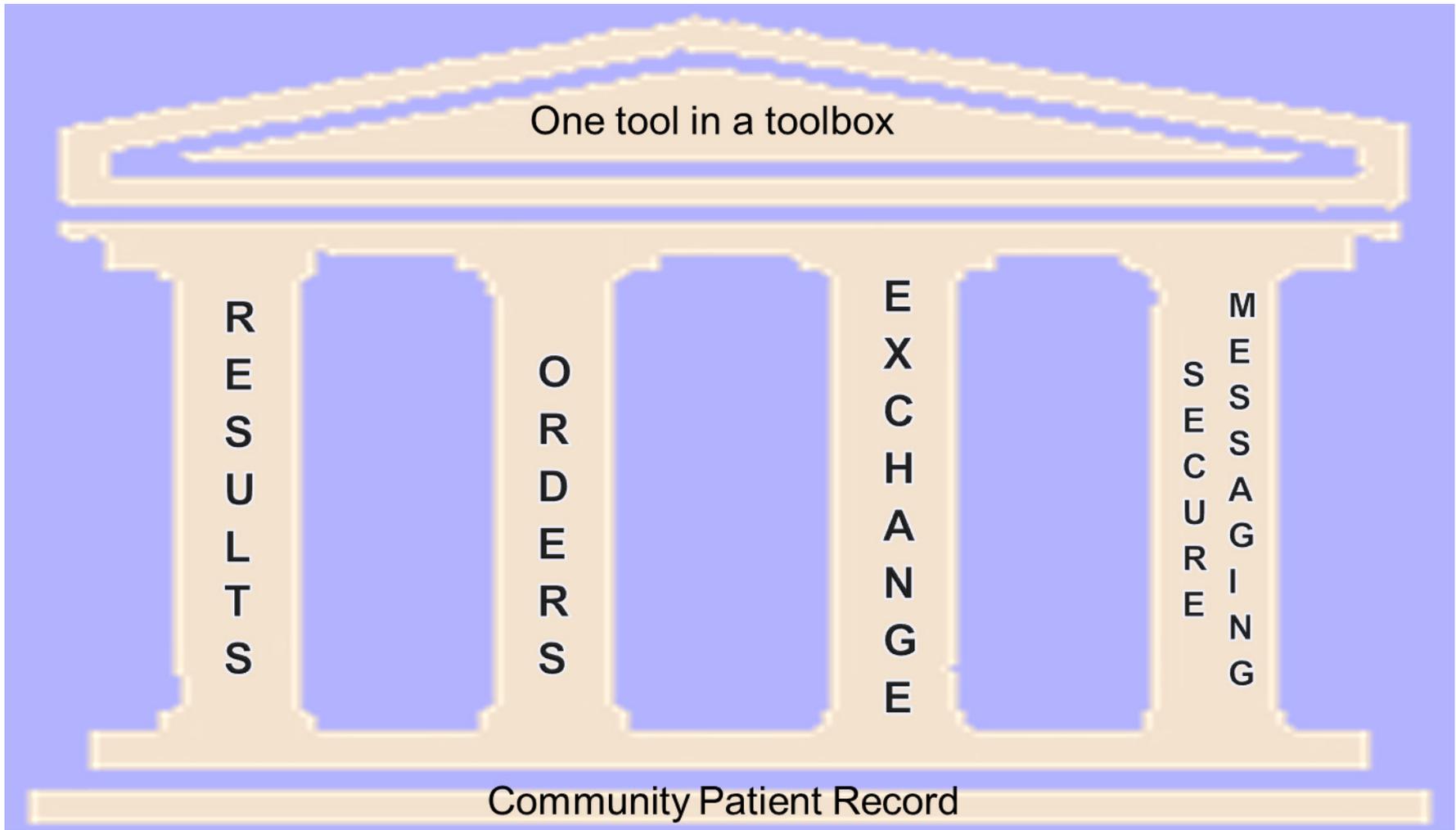
Direct Implementation and Adoption: The Delaware Perspective

Presented by:

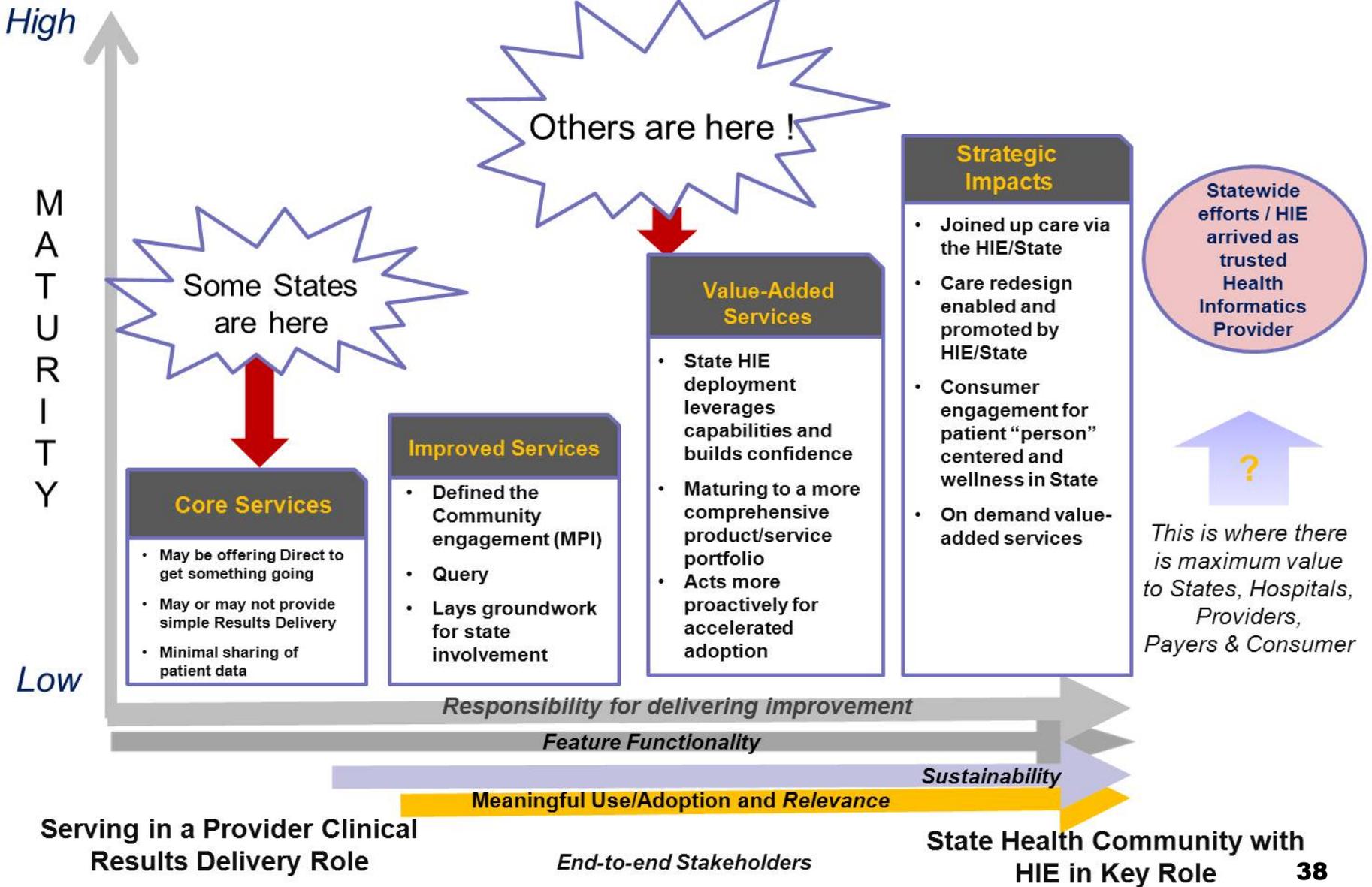
Mark J. Jacobs, MHA, CPHIMSS, FHIMSS

Chief Information Officer, Delaware Health Information
Exchange

My Pillars of Interoperability

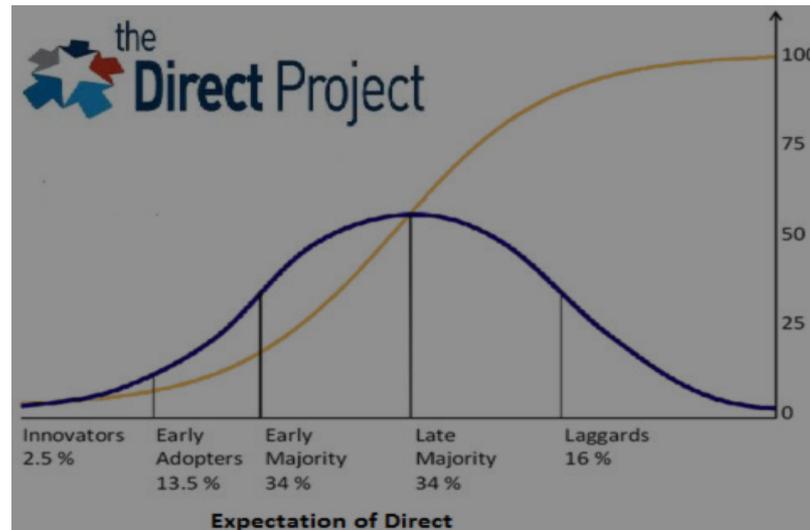


The Direct Dilemma



Some Struggle Toward Adoption and Use

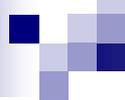
- Direct has a stigma of email, not transport
- Adoption is being subsidized in many states
- Direct dilemma for states at higher maturity levels
- States are learning together and promoting *Use Cases*
- Technology Adoption Rules “may” apply with Direct



Looking at the Landscape of Direct

- Colorado - CoRHIO
- Oregon - HITOC
- Arizona - AZHIE
- Maryland – CHRISP
- Delaware – DHIN
- Ohio - OHIP
- Pennsylvania - PA eHealth Collab
- Vermont - Vitl
- Hawaii - HHIE
- Massachusetts - MeHI
- Virginia - VHEN
- South Dakota - HealthLink
- Illinois - ILHIE





Let's Look at Some Problems

- Coordination of care is often a challenge between provider to provider, referrals, etc.
- Health care team satisfaction with the current methods for communication can be enhanced
- Telephone consults are sometimes an inefficient and cost-ineffective method when communicating with patients
- Secure patient-provider communication is a required component of Meaningful Use and patient-centered medical home
- ED and urgent care use is elevated due to problems with access to care and poor communication methods

Laying Down the Direct(ive) Challenge

- Challenge and stigma of email
- Lacks the discrete capture “metadata” sizzle
- Use cases still emerging
- ONC – opportunity to get health information moving and guarantee the trustworthiness of exchange



Different Approaches—Use Cases

- ***Referrals*** – When referring a patient to specialists, Direct Secure Messaging can send the necessary patient information to the specialist
- ***Transitions of Care*** – When admitting a patient to a long-term care facility, a provider can use Direct Secure Messaging to send a treatment summary to the facility
- ***Hospital Discharge*** – When discharging a patient, a hospital can use Direct Secure Messaging to send the discharge instructions to the primary provider

Use Cases Seeing Success

- Direct Secure Messaging can quickly and securely exchange information such as:
 - Patient encounter notes
 - Care summaries (CCD)
 - Referral documents
 - Hospital discharge summaries
 - Transporting HL7 VXU “gift packages”

Thinking Out of the Box

- Delivery of clinical quality measures
- Most state HIEs collect ADTs from hospitals (e.g., Delaware and Maryland from 100% of hospitals)
 - Direct messaging gives HIEs the opportunity to provide notifications of admission to MCOs
 - Direct messaging provides EDs the opportunity to send data about re-admission events, never events, provider preventable conditions, etc.
- Ambulatory providers can use Direct as a “test of attestation” and validate that providers are doing exchange through a secure transport mechanism

Closing Thoughts

- Some states are further along than others in adoption of Direct
- For states with more HIE maturity, Direct is either one tool in the toolbox or a distraction
- Medication assumptions what Direct can do for them
- Until recently, Medicaid was claims based:
 - Medicaid agencies got what they needed through claims
 - Medicaid agencies may view Direct as another layer
- Other technologies may make more sense (FTPS/SFTP, VPN, etc.)
- Most states are marketing Direct as a method of exchanging care summaries (CCDs)
- Checking the box: most states report they are approximately 50% along
- Use cases emerging: no universal use case has emerged
- Additional use cases may emerge with notifications and forms for provider care management with Medicaid MCOs using Direct