10 Years
eHEALTH INITIATIVE
Real Solutions. Better Health.

Private Health Information Exchange:
Enterprise and Proprietary Data Exchange

Dial-in information:
1.800.667.1053

December 1, 2011

About eHealth Initiative (eHI)

- Since 2001, only national, non-partisan group that represents all the stakeholders in health care.
- Mission to promote use of information and technology in healthcare to improve quality, safety and efficiency.
- Focused on education and advocacy.
- Coalition of over 200 organizations is one of most influential groups in data issues, HIT and HIE.
- eHI is the only group tracking the progress of over 260 regional, state and local initiatives working on health information exchange for 8 years.

What Does eHI Do?

- Work with our members to influence policy
- Convene multi-stakeholders to build consensus
- Members contribute through virtual forums:
  - Meaningful Use and Health Reform Policy
  - Connecting Communities through Health Information Exchange
  - HIT Infrastructure for Accountable Care
  - Using Health IT to Coordinate Care
  - Data Analytics and Research
- Inform and mobilize reports, weekly newsletters, educational events and policy alerts.

Housekeeping Issues

- All lines are muted
  - To ask a question or make a comment, please submit via the chat feature and we will address them in the order received at the appropriate time
- The webinar is being recorded.
  - Members can access slides and replays of any webinar for free from eHI's store
  - Non-members can purchase access to any webinar replay for $25.00
  - eHI Store
    - http://www.ehealthinitiative.org/store.html

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Overview of Our Agenda

- **Introduction and Welcome (3:00 – 3:10 PM)**
  - Jason Goldwater, Vice President, Research and Programs, eHealth Initiative
- **Enterprise HIE: Results from the 2011 Survey of Health Information Exchange (3:10 – 3:25 PM)**
  - Jennifer Covich Bordenick, Chief Executive Officer, eHealth Initiative
- **Maine's Non-Profit Health Information Exchange Growth and Sustainability (3:25 – 3:40 PM)**
  - Shaun Alfreds, MBA, CPHIT, Chief Operating Officer, HealthInfoNet
- **Private Health Information Exchange (3:40 – 3:55 PM)**
  - Peter Greaves, Senior Product Manager and Architect, Covisint
- **Questions and Final Thoughts (3:55 – 4:25 PM)**
- **Closing (4:25 – 4:30 PM)**
  - Jason Goldwater, Vice President, Research and Programs, eHealth Initiative

Jennifer Covich Bordenick

Chief Executive Officer, eHealth Initiative

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Enterprise HIE:
Results from the 2011 Survey of Health Information Exchange

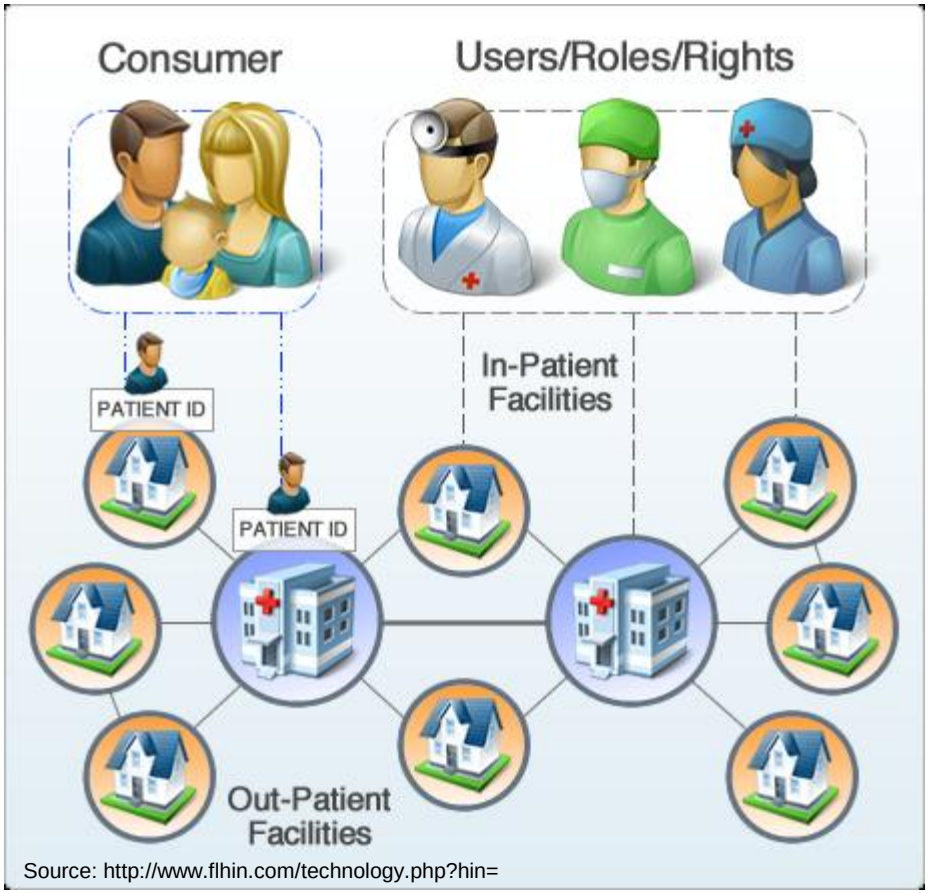
Jennifer Covich Bordenick,
Chief Executive Officer, eHealth Initiative
December 1, 2011

Community-based HIEs

Source: http://www.statschedules.com/HealthInformationExchange.html

- Regional
- Funding/governance often involves government entities
- Open to any provider willing to pay to access
- High degree of interoperability

Enterprise HIEs (eHIEs)



Source: http://www.flhin.com/technology.php?hin=

- Based around an IDN/hospital system and affiliated providers
- Often governed/funded by private entities
- Often open to affiliated providers only
- Less focus on maintaining broad interoperability

2011 Survey on Health Information Exchange

The 2011 survey primarily focused on community-based HIEs

- Included a filter question to identify enterprise HIEs → "Which of the following best describes your HIE?"
  - Respondents who selected "hospital based or integrated delivery network" were given a small set of questions designed for enterprise HIEs
  - Approximately 15 organizations self-identified as enterprise HIEs and completed these questions

Results of the 2011 Survey on Health Information Exchange

- A number of organizations identified as community-based, despite being hospitals/IDNs…including these organizations, there were 29 total enterprise HIEs identified in the 2011 survey

Findings - ACOs

- Enterprise HIEs are more likely to seek to participate in an ACO. 11 enterprise HIEs (38%) reported plans to participate versus only 25% of all respondents.

Enterprise HIE Findings – Self Identified as Enterprise

- Enterprise HIEs varied greatly
  - Only 7 of the 15 connect with hospitals or providers outside of their network.
  - The majority of these do not make hospitals and providers outside of the network pay to participate
  - At the time of the survey only 3 reported that they connect with a community HIE, an SDE, or statewide HIE

Findings - Challenges

- Enterprise HIEs and other HIEs face similar challenges:
  - The top governance challenges for eHIEs include : lack of board knowledge in HIE, poor management-board communication, conflicts of interest
  - The top challenges reported by eHIEs include: Addressing technical aspects including architecture, applications and connectivity (18), Developing a sustainable business model (17), Addressing government policy and mandates (16)
    - Developing a sustainable business model and defining value are not as often identified as challenges for enterprise HIEs

Findings - Stakeholders

- Stakeholders involved in governance, providing data, and viewing/receiving data are similar for eHIEs and all survey respondents → Hospitals, primary care physicians and specialty care physicians
- Pharmacies and independent labs are reported as providing data more often by eHIEs

Findings – Revenue and Funding

- As expected, enterprise HIEs overwhelmingly receive funding from hospitals and health systems
  - 70% of eHIEs reported receiving revenue from hospitals and health systems
  - Of those receiving revenue from a hospital or health system, 40% of total revenue was the smallest amount reported by an eHIE and two reported that hospitals/health systems accounted for 100% of their revenue

Findings – Revenue and Funding (contd.)

- Revenue from federal funds (not more than 20% of total revenue for any eHIE) and provider practices were also common

	Percentage of Total Revenue						
	0%	1-20%	21-40%	41-60%	61-80%	81-99%	100%
Hospitals/Health systems	2	-	1	1	3	-	2
Provider practices	5	2	-	1	-	1	-
Federal Funds	5	4	-	-	-	-	-
Payers	6	1	-	1	-	1	-
Private grant funds	8	1	-	-	-	-	-

Findings - Privacy

- eHIEs reported that patients are most often notified that their data can be exchanged through the Notice of Privacy Practices (NPP) of participating health care providers (8)
- Opt-out consent remains the dominant consent model, though enterprise respondents were slightly more likely to offer opt-in policies at all levels except for sensitive data

Findings - Functionalities

- Enterprise HIEs offer similar functionalities as all HIE respondents: Master patient index (9), connectivity to electronic health records (6) and results delivery (6)

Current Functionalities for Advanced Initiatives	
Stage 1 Meaningful Use Items	
Connectivity to electronic health records	6
Electronic Prescribing	4
Stage 2 Proposed Meaningful Use Items	
Results delivery (e.g. laboratory or diagnostic study results)	6
Provider Directory	4
Non-Meaningful Use Items	
Master Patient Index	9
Record Locator Service	5
Health summaries for continuity of care	4
Clinical documentation	4

Findings – Data Exchanged

- Enterprise HIEs exchange similar types of data as all HIE respondents: lab results (7), outpatient lab results (6), medication data (6) and allergy info (6)

Data Exchanged by Advanced Initiatives	
Stage 1 Meaningful Use Items	
Laboratory Results	7
Care Summaries (demographics, encounter history, medications, etc.)	5
Stage 2 Proposed Meaningful Use Items	
Outpatient laboratory results	6
Radiology results	5
Non-Meaningful Use Items	
Medication data (including outpatient prescriptions)	6
Allergy info	6
Inpatient diagnoses & procedures	5

Findings – Direct Project

- 8 enterprise HIEs reported that they are planning to incorporate Direct into their HIE offerings

Conclusions

- Enterprise HIEs function much the same as community-based HIEs → they offer similar functionalities and exchange similar types of data, which suggests that HIE services are universal
- Enterprise HIEs are more likely to seek to participate in an accountable care organization

Conclusions (contd.)

- From our survey, the largest difference between enterprise HIEs and community-based HIEs is funding
  - Though still a major hurdle, developing a sustainable business model is less often reported as a challenge by eHIEs. Likewise, eHIEs are less likely to report defining value as a challenge
  - Enterprise HIEs almost exclusively appear to receive funds from hospitals and health systems and have much less diversity in their sources of funding/revenue

Shaun Alfreds, MBA, CPHIT

Chief Operating Officer, HealthInfoNet

HealthInfoNet

Maine's Non-Profit Health Information Exchange Growth and Sustainability

Connecting Providers to Better Outcomes




HealthInfoNet

- HealthInfoNet operates **Maine's designated statewide health information exchange (HIE)**, a secure, standardized electronic system where providers can share patient health information for treatment purposes

- The **Statewide Regional Extension Center**
  - Supporting 1,000 and primary care providers and 22 Rural and Critical Access Hospitals statewide in:
    - Accelerating electronic health record adoption
    - Education
    - Participation in HIE and other Statewide health IT activities
- Key partner in the **Bangor Beacon Community**
  - HIE support for care transitions, coordination, and population health

HealthInfoNet

What is HealthInfoNet?

- **Maine-based:** The Board of Directors are active and prominent in the Maine medical community and represent a variety of organizations and interests
- **Independent:** HealthInfoNet is independent and is not owned by insurance companies, health care organizations, associations, employers or government
- **Nonprofit:** HealthInfoNet is a private nonprofit organization. It is funded by many sources including charitable foundations, Maine health care providers, and state and federal government
- **Multi-stakeholder:** Involves Consumers, Providers, Payers, Business and Government

HealthInfoNet

Brief History of HealthInfoNet

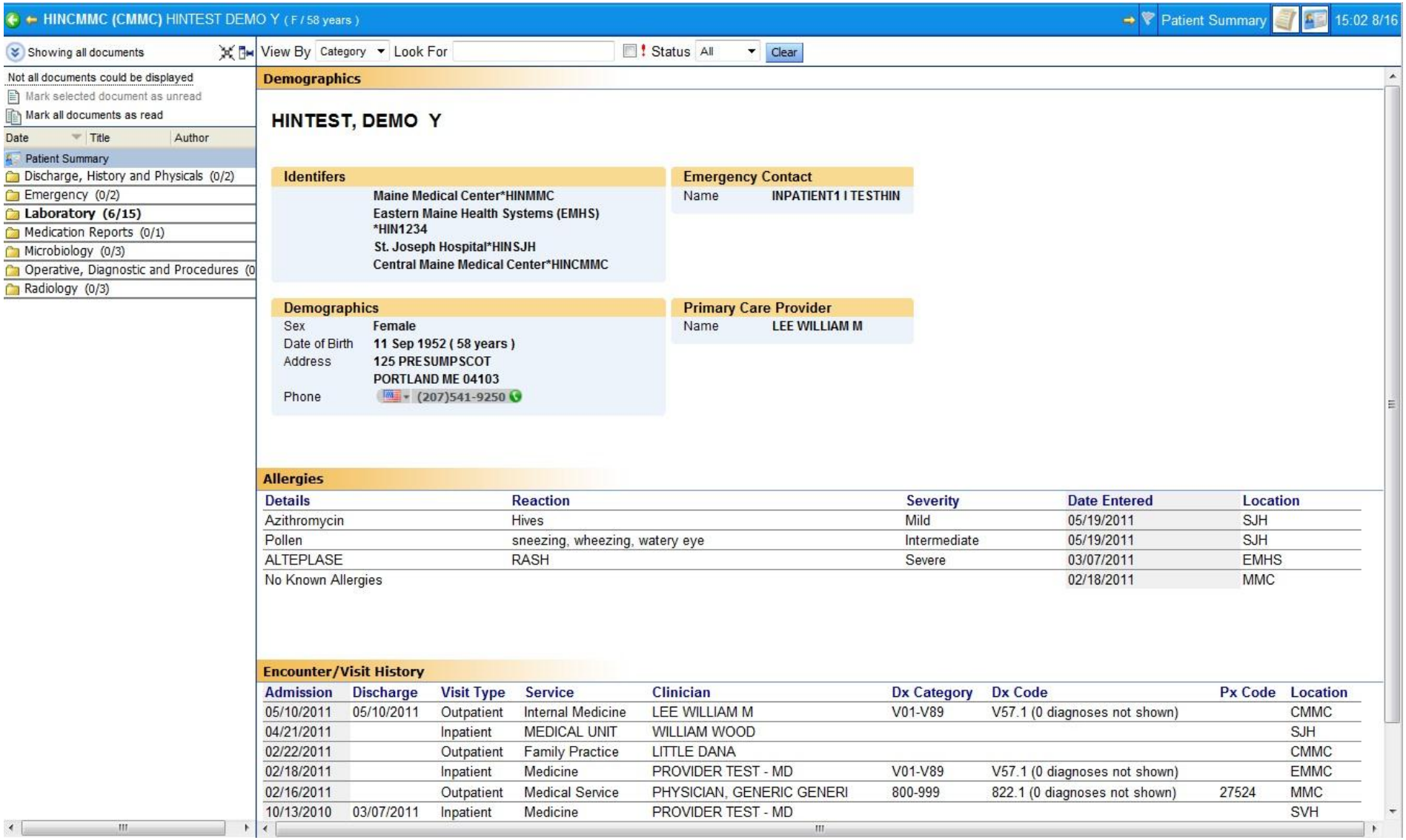
- **2005** - Health stakeholders convened “We will no longer compete on data!”
  - Initial funding from MeHAF, Providers, and other stakeholders
- **2006** - HealthInfoNet’s Beginning
  - Designed the core infrastructure requirements
  - Established HIN as a 501(c)3
  - RFP released, prime vendor chosen
- **2008** - “Go Live” on Demonstration Project
- **2010** - Demonstration Ends Statewide Roll-out Begins
  - Re procured vendors – HealthInfoNet = Prime Vendor
  - Regional Extension Center activities begin
  - Initiate Beacon Community activities
- **2011** - Begin statewide data warehouse and PHR activities

HealthInfoNet

What is in the system?

- Patient Identifier and Demographics
- Encounter History
- Laboratory and Microbiology Results
- Radiology Reports
- Adverse Reactions/Allergies
- Medication History (Commercial and MaineCare)
- Diagnosis/Conditions/Problems (primary and secondary)
- Immunizations
- Dictated/Transcribed Documents

What does HealthInfoNet look like?



Security Processes

- Uses a Virtual Private Network (VPN), not connected to the Internet and protected by a dedicated Firewall and intrusion monitoring
- All users are given unique passwords and can only access the system from their organization's EHR
- Data is encrypted at all times (in motion and at rest) and demographics are stored separately from clinical data
- Provider activity logs are audited daily by HealthInfoNet staff and access reports can be generated at any time
- Users must confirm they have a relationship with the patient and a need to see their information. This is recorded in the system
- Provide consumers with access to audit (upon request) of all providers and data accessed

HealthInfoNet

HealthInfoNet Consent Policy

- Maine law requires HealthInfoNet follow an opt-out consent policy
- This policy was originally written in 2007 with input from stakeholders representing patients, providers, employers, payers, and government
- Consumers opt-out online, on paper, or over the phone
- Consumers opt-out once for all care locations at which time their clinical data is deleted, not just hidden
- State law requires participating providers give the patient a state-approved form the first time they visit that provider location
- For mental health and HIV data state law requires HIN to shield the data until the patient actively opts that data in
  - This is currently being implemented targeted at early 2012

HealthInfoNet

HealthInfoNet's HIE Current Status

- Over 1,006,330 individuals have a HealthInfoNet record
  - 70,973 individuals have primary addresses outside of Maine
  - 36% of individuals have visited two or more participating providers – Up to 75% crossover of patients between hospitals within individual communities
  - 6,900 individuals, less than 1% have opted out
- 2,487 Maine clinicians can access the system
- Impact of provider organizations participating
  - 21 of Maine's 39 hospitals connected – 33 under contract (All by 2013)
  - Over 58 Ambulatory practices connected (1,000 providers under contract through REC)
  - 70% of annual statewide inpatient discharges and ED Visits
  - 45% of annual statewide ambulatory visits
- Support provider reporting requirements to Maine CDC (labs and immunizations)

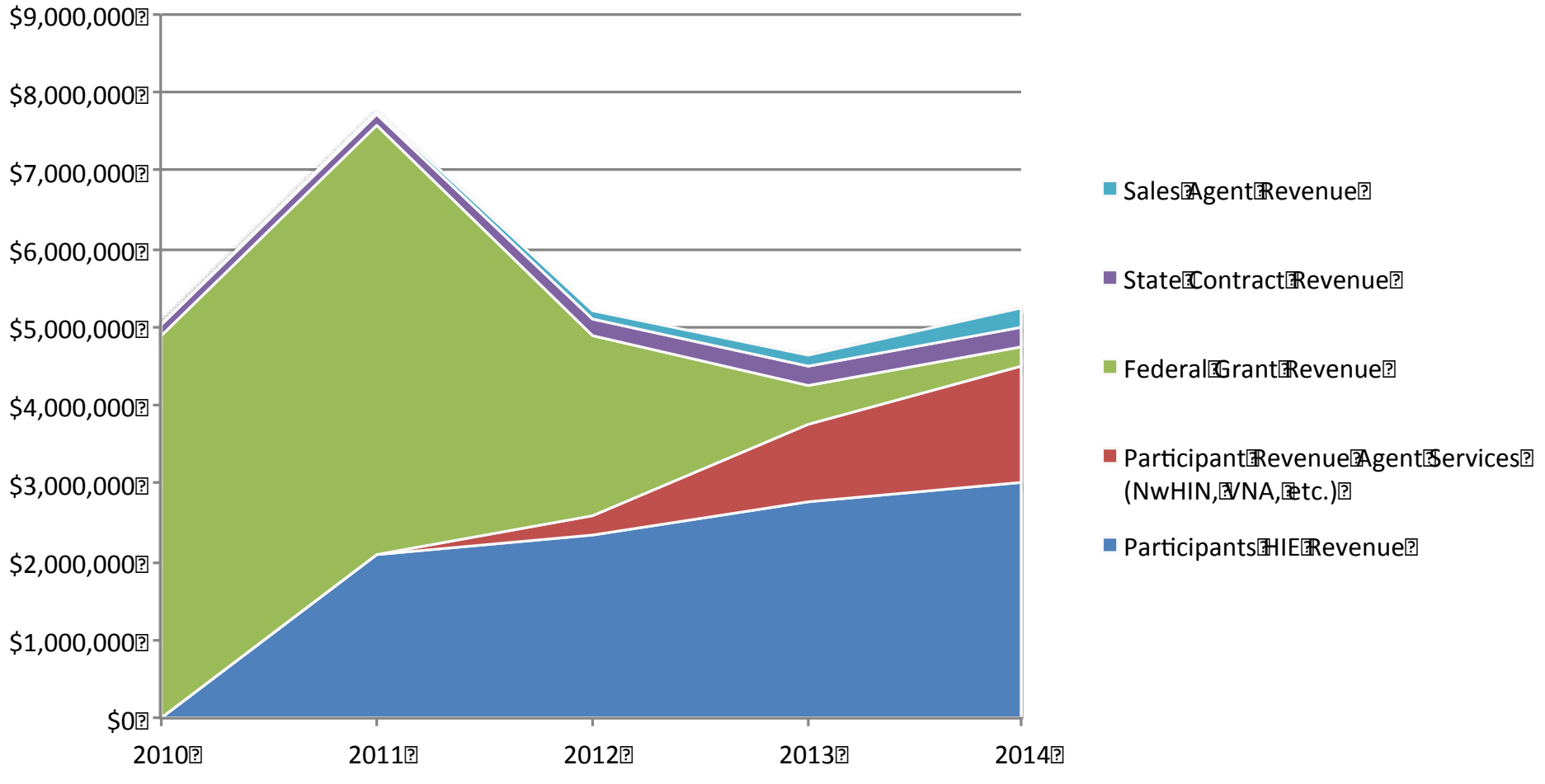
HealthInfoNet

Revenue Model

- Originally Developed on a distributed model for 3 stakeholder groups
  - Provider
  - Payer
  - Government
- Payers have been difficult to attract – although recently showing interest
- State government has had little $ to invest
- Providers have seen value throughout and have agreed to pay appropriate “share”
  - 1/3 of total operations today
  - 1/2 of total operations in 2012
- Grants and contracts support much of the remainder (HIE, REC, Beacon, CHIPRA, State contracts)
- Reseller of NwHIN Direct GE Centricity Module
- Soon to provide NwHIN EMR Agnostic tool

HealthInfoNet

HIN Revenue Breakdown (Current and Projected)



HealthInfoNet

Hospital Subscription Fees

Hospital Bed Size**	Annual Fee*
25 or less (and CAH)	$25,000
26-49	$40,000
50-75	$50,000
76-99	$75,000
100-150	$90,000
151-250	$125,000
251-500	$175,000
501+	$200,000

* These prices represent 2011 HIN pricing estimates. HIN does not guarantee these rates as they are dependent on HIN operating costs to maintain interfaces.

** Note: For specialty hospitals and other facilities, HIN manages subscription pricing on a per/provider basis at approximately $1,000/provider per year. These prices are negotiable and are also dependent on the complexity of the EMR interface.

HealthInfoNet

Ambulatory Provider Subscription Fees

- HIN Pricing varies by practice size
  - Practice responsible for internal interface activities and VPN connection to HIN
  - HIN interface development (one time fee)
    - $5K for REC and PCA/FQHC participants and practices of 10 or less providers
    - $10K for non REC
  - Annual Subscription
    - $600 per provider (prescribing privileges)

Additional HIN Revenue Sources 2011/2012

- Data Analytics for Participants (under development)
  - Tiered subscription to access analytic functions
    - Tier 1 – Treatment
    - Tier 2 – System level analytics
    - Tier 3 – Participant identified analytics and comparative effectiveness tools
- Employers – Using data to drive down self-insured costs
  - Medication therapy management (MTM) partnership with pharmacies
    - Data to support reduced pharmacy spend
  - Subscription fee
- Sales agent
  - Broadband access (Reseller)
  - NwHIN Direct (VAR and Contractor)
- Other Grants
  - Partnering with PCA, PCMH, QIO, and other statewide organizations on transformation grants
- Statewide Image Repository Pilot (Beginning Q1 2012)

HealthInfoNet

Current Challenges and Risks

- Continued provision of “Value”
  - Network issue and concrete quantitative impact analysis
  - Consistently providing “new” products
  - Increasing the “Market” while maintaining integrity of the data, privacy and confidentiality
- Secondary use of data
- The last mile
  - Integration into health care delivery workflow
  - Interfacing with small EMR products
  - Discrete CCD is not ubiquitous
  - 2-factor authentication
- Rollout of ACO/Risk Contracts
  - If it becomes a channeling strategy HIE is at risk
- Competing Priorities
  - Is Meaningful Use a benefit or a risk?

Questions/Comments?

- HealthInfoNet Website: http://www.hinfonet.org
- For more information contact Shaun Alfreds: salfreds@hinfonet.org

41

Peter Greaves

Senior Product Manager and Architect, Covisint

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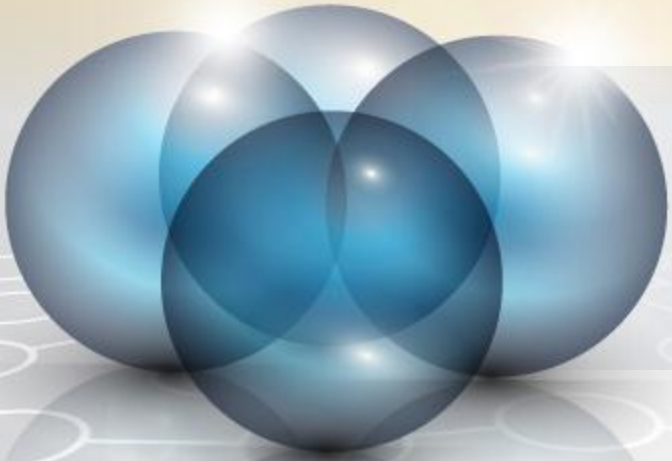


Private Health Information Exchange

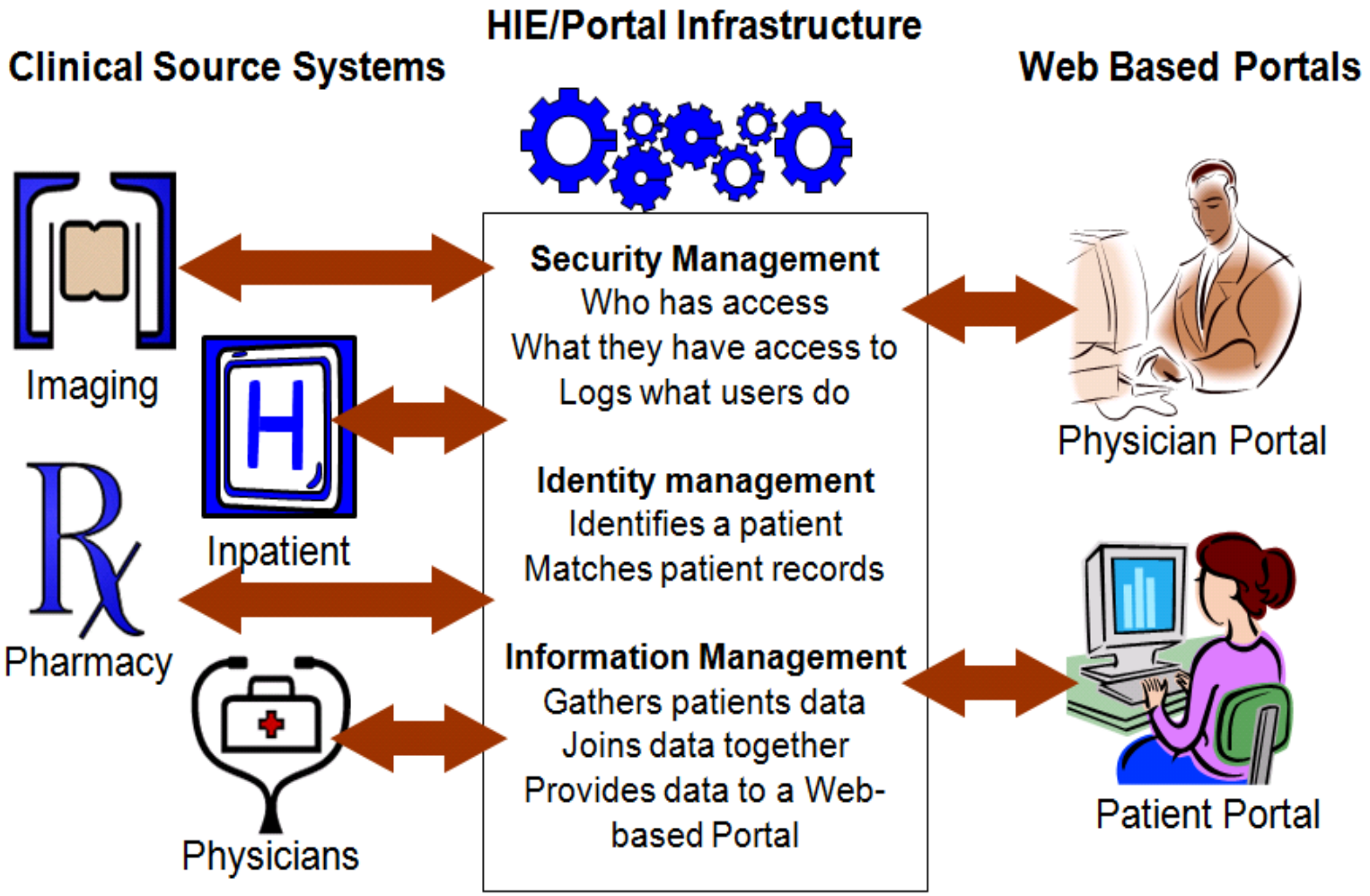
November 17th 2011

"Health Information Exchanges (HIEs) are defined as non-owned hospitals, health systems, ambulatory entities, and/or other third parties that share/exchange patient data and other information.

A private designation means that the majority of the HIE governance and funding is handled by a single IDN or hospital."

KLAS, 2011

Traditional View of a HIE



Historical Perspective on HIE

- 2004 to 2010 the focus was on the mechanics of health information exchange
- Very high profile HIEs closed down, with two of the repeated themes being challenges of trust, and value
- ROI and value have at best been fuzzy
- The model of “build it and they will come” has not worked

How do you provide real and demonstrable value built on top of health information exchange?

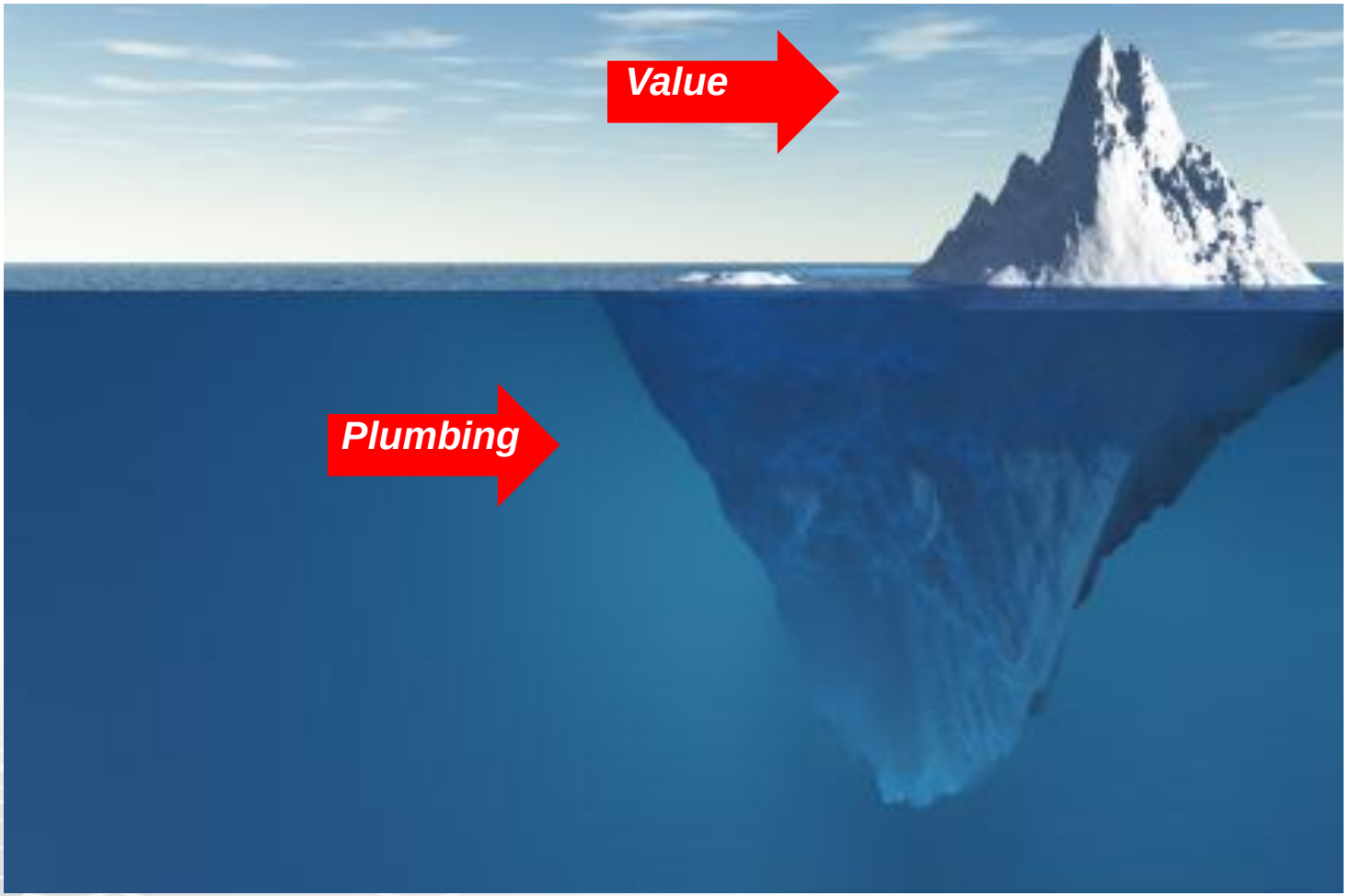
Challenges for the Private HIE

- Lack of access to traditional HIE funding sources (ONC, AHRQ, …)
- Revenue models based on incentive programs most often receive retrospective payment (PQRI, Meaningful use)
- Competing with a myriad of other demands from the anchor tenant
- Meeting the wider community where they are – anchor tenants have notably more sophisticated systems then smaller practices
- Objectives and value need to closely align with objective and vision of anchor tenant
- Traditional health information exchange is not seen as conducive to existing workflow

Key Success Factors for Private HIEs

- Identifiable value proposition with measurable success criteria
- Easier decision-making due to fewer competitive issues
- Providing value to the whole community through access to key tenant data
- Access to claims and inpatient data provides immediate analytic value
- Meeting the community where they are
- Being able to leverage messaging and web services if viable to leave clinicians in familiar workflows
- Able to more easily identify and target value propositions due to homogenous nature of organization

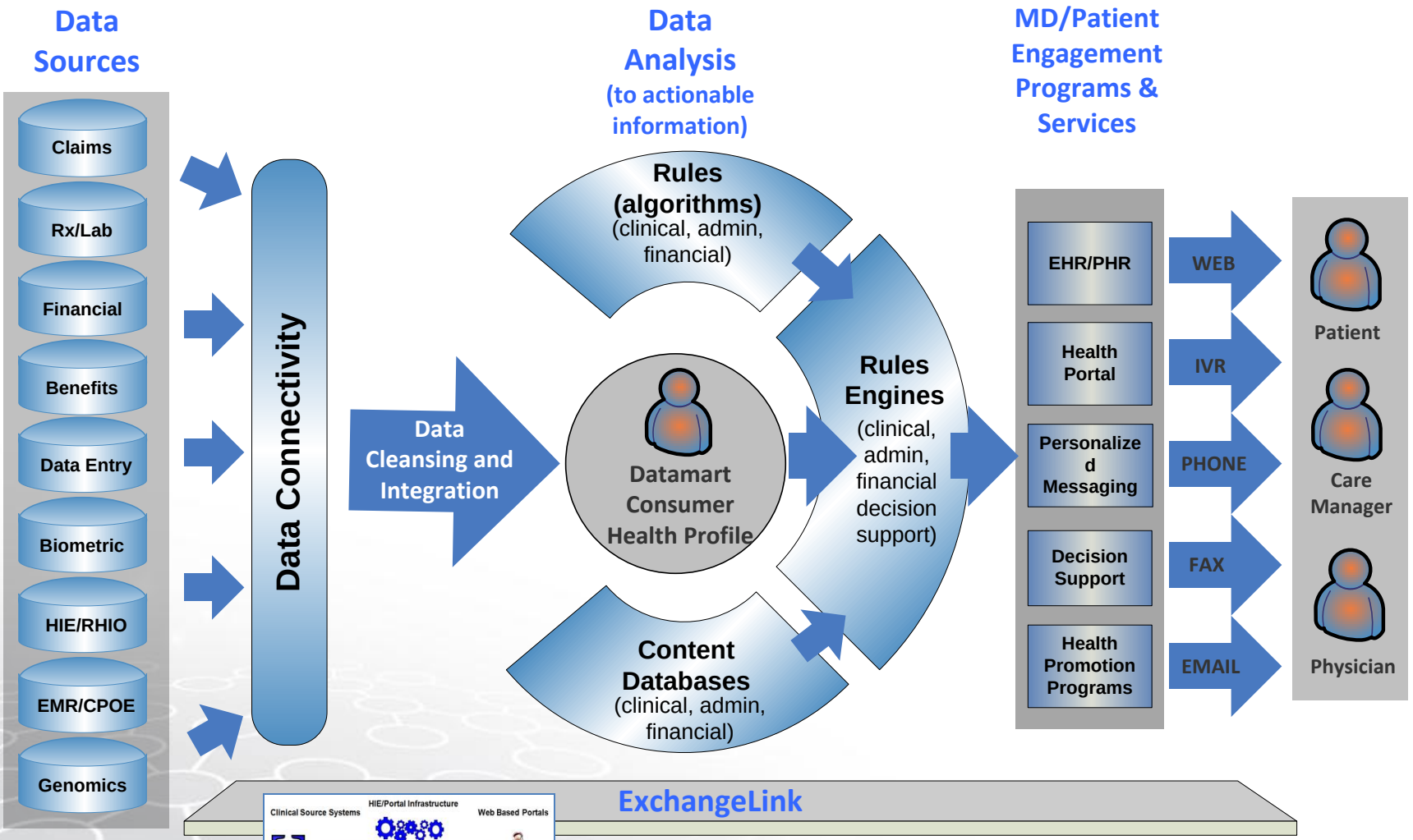
HIE as a foundation

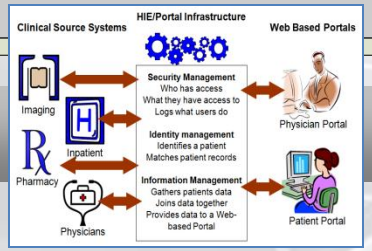


Core Covisint Principles

- Hosted solutions – Platform as a Service, Software as a Service
- Attention to the “ility’s” – scalability, extensibility, auditability
- Building a framework of trust
- Identify the value proposition up front
- Converting data to information, and information to actionable information
- Supporting a move from episodic to managed care
- Being able to “move the needle” and track the movement empirically

The Role of the Patient Registry





In Closing….

- While private HIEs have far more control over decision making and policy, they have a challenge in not having access to private funding or the advantages of a not-for-profit structure
- The realization of return on value needs to typically be far more rapid than has been the case for publicly funded HIEs
- It is critical in creating a value model, to be able to empirically identify value, whether that be cost reduction, simplification or supporting payment and care delivery reform
- Unlocking the value of the data they have for many HIE's is a key success factor
- Having a multi-modal delivery model for information provides flexibility and helps protect investment

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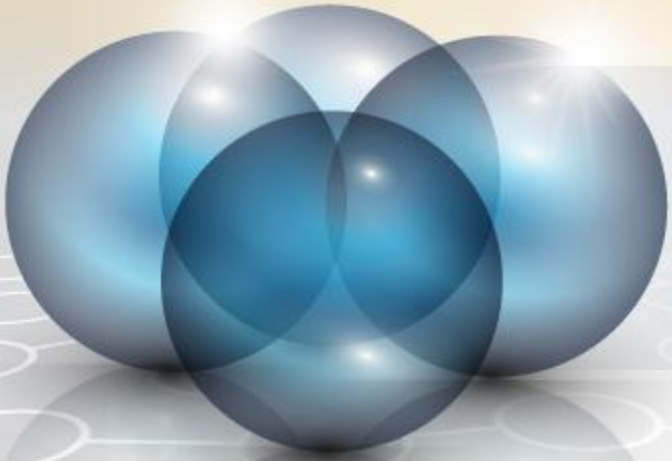

Questions?

Questions
Final Thoughts

Thank You to Our Speakers

- Jennifer Covich Bordenick, Chief Executive Officer, eHealth Initiative
- Shaun Alfreds, MBA, CPHIT, Chief Operating Officer, HealthInfoNet
- Peter Greaves, Senior Product Manager and Architect, Covisint

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- **Upcoming Conferences**
  - 2012 eHI Annual Conference – *Cancer, Diabetes and Heart Disease: Improving Care Through eHealth*
    - January 11 and 12, 2012 - Washington, D.C.
- **Upcoming Webinars**
  - *Top Health Industry Issues in 2012: Connecting in Uncertainty*
    - Tuesday, December 13, 2011
- **Reports and Directories**
  - Vendor Report
  - List of HIEs and Selected Vendors
  - Sustainability Report

Contact Information

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  - Amy Eckenroth, 202.624.3265, amy.eckenroth@ehealthinitiative.org
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