

The State (and Statewideness) of Health Information Exchange: Taking Stock

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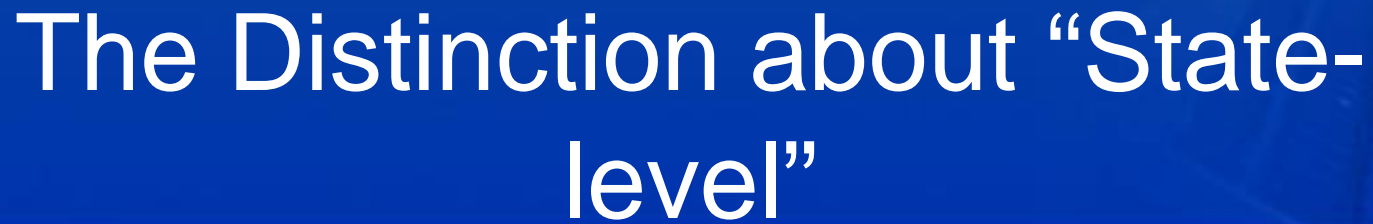
State-level HIE Consensus Project
Western States Health-e Connection Summit

Background

Taking a State-level Focus

- The State-level HIE Consensus Project
 - Sponsored by ONC
 - 3 years of field research, synthesis, implementation guidance, input (www.slhie.org)
 - Steering Committee (13 diverse state-level HIE leaders)
 - Leadership Forum (all state-level HIEs invited) launched in 2008
- Three major contributions
 1. Mechanism for input and coordination between nationwide, state, local HIE
 2. Generating body of knowledge re HIE development, state-level considerations
 - Organizational roles and accountabilities
 - Value proposition, financing and sustainability
 - Emerging models, operationalizing for statewide HIE
 3. Forum, voice for state-level HIE leaders
 - Solutions, shared learning, consensus

The Distinction about “State-level”



- ***State-level*** HIE roles, functions, issues, and strategies involve but are distinct from those specific to ***state government***.
- ***State-level*** refers to collective, collaborative efforts involving public and private sectors to advance HIE:
 - Statewide planning and implementation
 - Governance, technology, policy, HIE services, business model/financing
 - Addressing unique needs and characteristics of the inclusive statewide landscape
 - Coordinating negotiated, consensus based solutions for HIE implementation
 - Supporting HIE serving statewide health and health care improvement for all.

State-level HIE Leadership Emerging Consensus



- November 2008 Leadership Forum retreat
 - Address factors required for success in building and sustaining effective statewide interoperability
 - Attended by 22 of the state-level HIE efforts from across all 50 states
- Consensus findings
 - Iterative observations and analysis of statewide HIE development
 - Strategic yet pragmatic considerations for implementing HIE to support goals for transforming health care
- Significance for today's discussion
 - Reflect diverse state-level realities – stages of maturity, capacity
 - Also reflect common state-level perspectives and “readiness” to address the challenges to implement HIE to significantly impact health and health care

Presentation Objectives



- Highlight lessons learned from experiences, progress, and challenges in the field
 - The landscape of statewide HIE development
 - The distinct nature and contributions of state-level HIE efforts
- ARRA as a backdrop
 - Highlight the leadership and leverage to be gained from states (and designated state-level entities) in advancing HIE priorities and requirements
- Point to strategies and priorities for taking the next steps
 - As state-level stakeholders deploy in response to the ARRA
 - Collectively as state level perspectives contribute to federal policy and nationwide activities.

Organizing HIE Development

Why States and State Level HIE

- States vary but represent distinct populations, geographic boundaries, forms of government, policies (codified in laws and regulations), economies and marketplace dynamics, and cultures (norms for “how things get done”).
- *All* state policy makers and governments have interests related to health, health care, health care reform that relate to HIE.
 - ***Policy priorities***: consumer protections, vulnerable populations, stewardship of public resources to preserve and protect (and for physical and economic well being)
 - ***Government leverage***: Executive branch leadership, statutes, regulation and enforcement, payer/contract - marketplace incentives
 - ***Budget drivers***: Medicaid, Public Health, State Employees

State Governments and Health IT

- States viewing health IT as a vital tool to increase quality and decrease costs
- States addressing barriers to health IT adoption using various policy levers to promote its adoption and use
 - Planning (e.g. establishing goals, commissions, studies)
 - Targeted financing initiatives
 - Protecting privacy in the digital age
 - Promoting health information exchange (e.g. designating state-level HIE organizations)
 - Advancing adoption and use (e.g. eRx initiatives)

Distinct State-level HIE Activity

- Across the variable landscape of RHIOs, HIEs
- Need for Distinct Organizational Capacity
 - Align HIE policies and practices with the state's legislative and regulatory policy environments
 - Serve statewide goals for health care quality and cost-effectiveness
 - Address statewide barriers to HIE
 - Balance the rights and needs of all state residents
 - Bridge between nationwide, state and local HIE
- Emergence of State-level HIE Entities – the state-level HIO
 - Linked to the **state's** health functions/accountabilities (serving and protecting citizens of the state)
 - Defined by the **pragmatic landscape** of opportunity, stakeholder defined interests and options, local and statewide cultures
 - Driven by a **distinct value proposition**: HIE inherently collaborative, systemic, this shared health infrastructure essential

State-level HIE

Organizational Distinctions

- Distinct state-level HIE organizational purpose
 - Govern HIE (information movement) **among** organizations and/or regions and **within** a state's geographic borders, according to **nationally recognized standards**, for a purpose of **improving health and health care** (from ONC definitions project, led by NAHIT)
- Two primary functions
 - q **Governance**
 - Convene stakeholders
 - Coordinate development and implementation of statewide roadmap to interoperability
 - q **Technical HIE Services** (state-level operations optional)
 - Supporting statewide HIE services (either a statewide exchange or offer common services to RHIOs)

State-level HIE Development, Organization Prevailing Models

- SLHIE in 49 states
- Governance
 - Various forms, stages of development
 - State government commissioned and/or hosted
 - Independent not-for-profit organizations
 - Less formal coalitions of stakeholders to collaborate
 - Common attributes
 - Structured public-private partnership
 - Non-profit
 - Transparency in decision-making, balanced stakeholder representation
 - Goals for broad social benefit (e.g. improving health and health care quality and efficiency)
- Governance and operations: Various configurations
 - Statewide data exchange provided by SLHIE Organization
 - SLHIE organization outsources statewide data exchange
 - SLHIE supports local RHIOs by providing common services (e.g. MPI, RLS)
 - SLHIE strictly a governance organization, RHIOs provide the data

ARRA Links to State-level Efforts

- States and designated state-level entities
- Mechanism to carry out aspects of federal law and policy
 - Disperse federal funds
 - Contribute to ongoing financing
 - Maintain accountability and transparency
 - Address priorities for quality improvement, public health, privacy enforcement
- Sources of leverage
 - State grants = components of statewide plan for HIE physical and organizational infrastructure
 - Provider adoption = meaningful use of EHR
 - Medicaid = incentives, financing
 - Privacy enforcement

Implications State Grant Program

<p><u>Funding Mechanism</u> Appropriations, subject to annual review & authorization</p>	<p><u>Payment Agent</u> States or state-designated entities</p>
<p><u>Payment Recipients</u></p> <ul style="list-style-type: none"> • State Department of Health or a <i>qualified</i> state-designated HIE governing entity. • Recipients must consult with wide range of stakeholders throughout health care. 	<p><u>Level of Funding</u></p> <ul style="list-style-type: none"> • To be determined. At least \$300 million. • Matching funds <i>may</i> be required in FY 09 & FY 10 (and <i>will</i> be required in FY 11).
<p><u>Requirements for Funding</u></p> <ul style="list-style-type: none"> • Submission of a plan, approved by HHS, that describes the activities to facilitate and expand the electronic movement and use of HIE according to nationally recognized standards and implementation specifications. 	
<p><u>Use of Funds</u></p> <ul style="list-style-type: none"> • Enhancing broad and varied participation in nationwide HIE • Identifying State or local resources available towards a nationwide effort to promote health IT • Complementing other federal programs and efforts towards the promotion of health IT • Providing technical assistance to develop & disseminate solutions to advance HIE • Promoting effective strategies to adopt and utilize health IT in medically underserved communities • Assisting patients in utilizing health IT • Encouraging clinicians to work with Health IT Regional Extension Centers • Supporting public health agencies' access to electronic health information • Promoting the use of EHRs for quality improvement 	

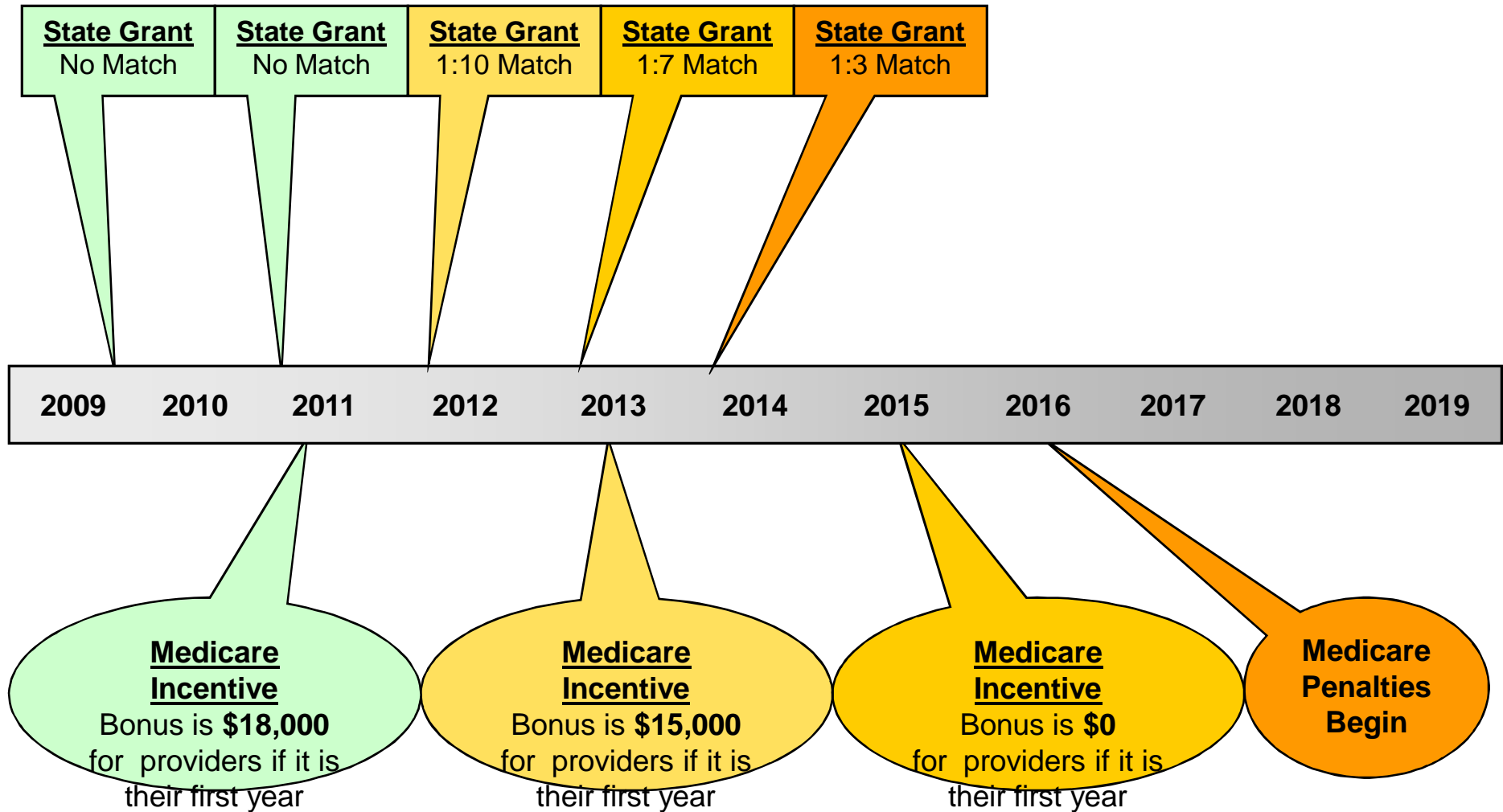
Implications

Definitions “Meaningful Use” and “HIE”

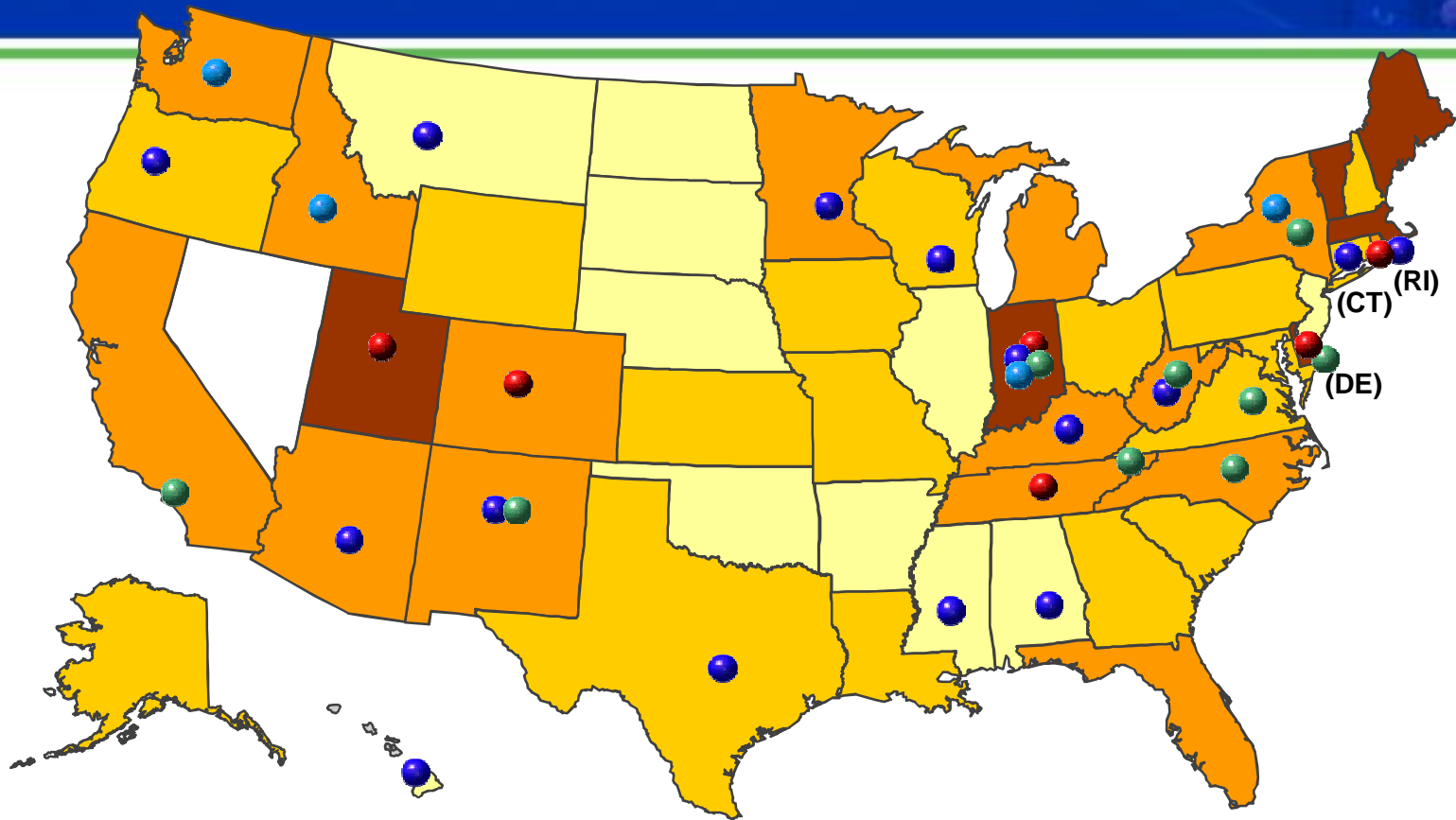
- **To receive incentives, qualified professionals must use certified EHR technology in a “meaningful manner”**
 - Use ***electronic prescribing*** as determined to be appropriate by the HHS Secretary
 - ***Connect to an HIE*** in a manner that provides for the electronic exchange of health information to improve the quality of health care, such as promoting care coordination (in accordance with law and standards applicable to the exchange of information)
 - ***Submit information on clinical quality measures*** and other measures as selected and in a form and manner specified by the Secretary.
- **Additional consideration**
 - The Secretary ***shall*** seek to improve the use of EHRs and health care quality over time by requiring more stringent measures of meaningful use.

Implications for States

The next two years provide a window for intensive development at the state and provider level; such efforts, however, need to be in production by 2011 for provider incentive payments to commence.



Implementation Readiness: Landscape as of December 2008



State/Regional Contracts (6)	1. Formative
Medicaid Transformation Grants – HIE/EHR focus (15)	2. Foundational
NHIN Trial Implementation (9)	3. Implementation
CDC HIE Biosurveillance (4)	4. Operational

Source:



Online at <http://www.slhie.org/>

Statewide HIE... Stages to Bring Interoperability to Scale

1. FORMATIVE STAGE			
2. FOUNDATIONAL STAGE			
3. IMPLEMENTATION STAGE			
4. OPERATIONAL STAGE			
Summary	Governance Activities/Milestones	Financial Activities/Milestones	Technical Activities/Milestones
<p>Overview: A fully functioning state-level HIE is fulfilling either governance and/or technical operation roles, and exchange of clinical data is occurring in accordance with published plan.</p>	<p><u>Operational Activities</u></p> <ul style="list-style-type: none"> - Governance entities overseeing development & implementation of state-level HIE effort <p><u>Operational Milestones</u></p> <ul style="list-style-type: none"> - Lead entity (e.g., state agency, state instrumentality, indep public/private partnership) actively conducting statewide convening and coordinating functions. - Key features of privacy, policy and accountability framework in place and operational 	<p><u>Operational Activities</u></p> <ul style="list-style-type: none"> - Financing options to sustain statewide HIE operations identified and agreed upon <p><u>Operational Milestones</u></p> <ul style="list-style-type: none"> - Funding for statewide HIE sustainability <i>secured</i>. 	<p><u>Operational Activities</u></p> <ul style="list-style-type: none"> - Exchange of live data in accordance with technical plan. <p><u>Operational Milestones</u></p>
			<ul style="list-style-type: none"> - Pilots projects launched and operational. - Components of statewide HIE technical infrastructure in development.

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SLHIE Roadmaps to Interoperability

Common Threshold Issues

- q **Identifying Objectives/Social Capital.** Defining and ranking the goals and then build the necessary consensus to support implementation. This requires governance structures, stakeholder participation, and dedicated resources.
- q **Defining Shared Services.** Then necessary to identify core services and functions that are valued across a wide range of stakeholders, navigate disruptive or competitive challenges to existing and planned systems.
- q **Prioritizing Services to Implement.** Involves difficult choices between supporting near-term HIE solutions and investing in services that would advance the longer term goals of full interoperability.
- q **Vendors, Technical Requirements, Purchasing Services.** Brokering solutions at the state-level requires strategy, technical knowledge, business savvy (vendor's bundled technical and pricing package, applications vary dramatically in their capabilities, performance, reliability, and costs)
- q **Economy of Scale, Approach to Getting Participation:** State-level policy challenges: mandate entities adopt, use statewide HIE services or allow for the option of using alternatives to statewide HIE?

SLHIE Roadmaps

Prevailing Paths in Smaller States

	Delaware <i>DHIN</i>	Maine <i>HealthInfoNet</i>	Rhode Island <i>RIQI Currentcare</i>
Total hospitals	6	37	11
Total physicians	2,325	4,052	4,141
<i>Total Population</i>	864,746	1.3 million	1.0 million
Technical Architecture	<u>Federated, "Push/Pull"</u> Utilizes a federated approach whereby clinical results are delivered or "pushed" to providers; a query function to enable "pull" capabilities is anticipated to be available in early 2009.	<u>Centralized, "Pull"</u> Using a centralized approach to share clinical data at the point of care. Clinical database where participants send data to one repository and participants query the repository.	<u>Hybrid Model</u> Using decentralized servers/vaults for each provider location with a central repository of exchange.
Services	<ul style="list-style-type: none"> -Clinical messaging -Med Hx (planned) -Public health reporting 	<ul style="list-style-type: none"> -Clinical data at point of care -Med Hx (planned) 	<ul style="list-style-type: none"> - Med Hx via portal

SLHIE Roadmaps

Prevailing Paths in Larger States

	California CalRHIO	Tennessee eHealth Exchange Zone	New York SHIN-NY
<i>Total Population</i>	<i>36 million</i>	<i>6 million</i>	<i>19 million</i>
<i>Architecture Implementation approach</i>	<u>Single, Statewide Utility</u> <i>Providing full range of services</i>	<u>Single, Statewide Utility</u> <i>Providing “selected” services</i>	<u>No Single Utility</u> <i>Services sponsored by multiple RHIOs</i>
<i>Proposed Statewide Services</i>	<ul style="list-style-type: none"> - Patient ID management - Access control - Data Integration 	<ul style="list-style-type: none"> - Centralized portal - Provider authentication 	<ul style="list-style-type: none"> - Enterprise Bus - UDDI - SureScripts/RxHub feed
<i>Use cases</i>	<ul style="list-style-type: none"> - Med Hx to ED 	<ul style="list-style-type: none"> - Medicaid data - eRx - Licensing services - Immunization registries - Longitudinal records 	<ul style="list-style-type: none"> - Medicaid data to EHR - Med Hx, eRx - Public health reporting - Quality reporting - Immunization reporting

Bringing HIE to Scale

Sources of Capital for Infrastructure Capacity

Cumulative Investments in State-level HIE Capacity Building (2000-2008)

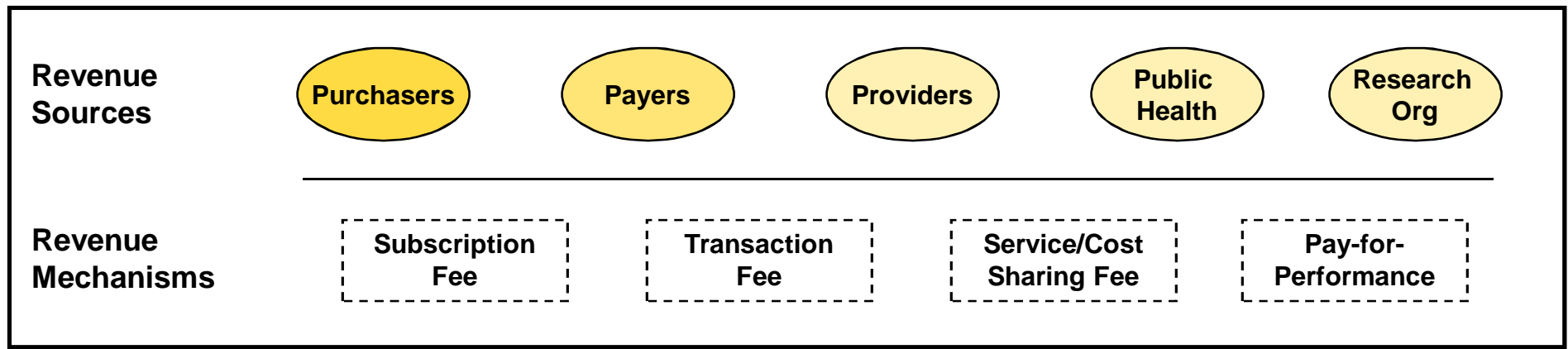
	Fed Gov't	State Gov't	Philanthropy	Providers	Payers	Financial Institutions	Total Funds
Rhode Island	76%	<1%	24%	<1%	<1%	0%	\$11 M
Vermont	12%	79%	<1%	9%	<1%	0%	\$5 M
Maine	11%	8%	40%	40%	<1%	0%	\$3 M
California	2%	<1%	10%	6%	5%	76%	\$20 M
Tennessee	34%	61%	<1%	<1%	<1%	0%	\$15 M
Florida	5%	93%	<1%	<1%	<1%	0%	\$6 M
Michigan	<1%	97%	<1%	9%	4%	0%	\$6 M

Key Findings

- **Public financing:** Reliance on state's operating budgets is risky, capital financing preferable.
- **Non-profit financing:** Philanthropies are important resource for formative activities.
- **Private sector financing:** Hospitals and physician practices challenged by lack of capital; getting payers to agree on equitable apportionment mechanisms has been

Bringing HIE to Scale

Financing Mechanisms for Sustainability



Key Findings

- **Creating mechanisms to sustain operations is a challenge** due to dynamic marketplace characterized by structural disincentives for HIE, emerging alternatives and competitive challenges, rapidly evolving technologies, and wide cost variation.
- **Early focus on transactional efficiency models:** A handful of local HIE efforts have developed successful models based on transactional efficiencies for participating providers; others continue to assess the viability of shared infrastructure for generating revenues to sustain operations and/or repay interest on debt instruments.

State-level HIE Challenges

Financing and Sustainability

- 1. In a functioning SLHIE, benefits are dispersed making it challenging to justify SLHIE financing options based on individual stakeholders.**
- 2. The presence of multiple and varied stakeholders creates a free rider problem that requires collective action to address.**
- 3. HIE scale and sustainability require adequate and aligned public and private investments.**
 - No one sector has the size, resources, or clout to advance HIE on its own.
 - State (and federal) government must support statewide HIE efforts.
- 4. Health care financing must be configured to support HIE which will enable quality improvements and cost savings.**
 - This is the most significant value proposition for state-level interoperability

Success under the ARRA

Observations from State-level HIE leaders

- We find ourselves at a crossroads in our work to advance HIT and HIE.
 - HIE now tied to national economic and social goals for improved health and health care, expectations and accountability sharpened
- Given the ARRA components, realizing success will depend upon the nature of our *collective* and *collaborative* response.
 - HIE must be part of aligned and coordinated strategies to achieve a high performing health system.
- State-level HIE efforts have crucial significance for the path ahead
 - ARRA defines state-level roles/accountabilities
 - ARRA channels resources for diverse HIT and HIE investments (provider adoption, HIE)
 - But, effectiveness relies on critical state-level governance functions for HIE to develop to achieve broad social benefit

Considering a New Information-Based Health Infrastructure



- Good health information will redefine the health care landscape and marketplace.
 - A new “market” for good health information must be created (via appropriate balance of roles and responsibilities, rules, incentives, oversight, and rewards).
 - Building and sustaining the capacity to generate good health information is not competitive but collaborative.
 - *Using* the information will re-set where and how competition occurs.

HIE for Broad Social Benefit

Principles at Stake



- Building HIE to scale and effectiveness is a matter of equity and economics
 - HIE impacts the health and healthcare quality and cost-effectiveness for *all* individuals and populations.
 - The benefits of HIE accrue differently for individual stakeholders, but realizing optimal benefits that achieve health care reform goals requires widespread data sharing capacity across all stakeholders.
 - Building and maintaining the capacity for widespread HIE is a collective effort. No one community, provider, or corporate-based HIE effort commits to or invests in building capacity to

HIE Governance is Key



- A mechanism is needed to forge new, productive and sustainable levels of collaboration, consensus and coordinated approaches (HIE Governance).
 - Data sharing policies and practices have to accommodate various settings and capacities, yet be consistent and sound to ensure confidentiality protections and HIE credibility.
 - Health care interests have to figure out strategies to fund, maintain and use a shared network that delivers business value for individual interests but also serves social goals.
 - There are many practical issues and challenges to navigate among stakeholders to build consensus for incorporating HIE within the technology, policy, business and organizational health infrastructure.

What State Level HIE Offers “Disruptive Technology”



- State-level HIE entities are models of effective working collaboratives.
 - They offer the necessary governance mechanism to convene, negotiate, coordinate across HIE stakeholder interests.
- SLHIE organizations are new and disruptive and play distinct roles for achieving innovation.
 - SLHIE functions to effectively and efficiently broker resources, interface with the marketplace to foster HIE services that are cost-effective in serving stakeholder interests and goals for health care quality, cost-effectiveness, preserving and protecting public health
- SLHIEs distinctly relate to state and federal health policy goals
 - They serve the interests of state government: all statewide residents, consumer protections, fiscal stewardship

Critical Next Steps

- **Create a Coordinated Approach**
 - A governance framework with accountability and defined roles
 - Policy guidance for privacy and security
 - Defined, well structured use cases
 - A technical plan that considers shared services for stakeholders
- **Build Working Collaboration with Key Stakeholders**
 - State Departments of Health and Medicaid
 - State-level HIE entities
 - State quality and safety initiatives
 - State Medical Societies and Hospital Associations
 - FCC broadband grantees

Coordinated Strategies Leveraging Incentives, Financing

- Leverage federal strategies
 - Support **comprehensive statewide plans**: link and accelerate provider adoption and HIE implementation with use cases/value cases
 - Prioritize and accelerate quality improvement initiatives linked with HIE (e.g. reimbursement policies) to drive HIE to scale and sustainability.
- Coordinate federal and state level investment strategies (e.g. Medicaid)
 - Support for statewide governance
 - HIE technical capacity to support quality improvement
 - State-level roadmaps linked to core services
 - Coordinated framework of interoperability policies
- Leverage federal and state level marketplace relationships and incentives, engaging support from public and private payers, purchasers

Focus on Results



- Set expectations and identify milestones relative to long range HIE implementation
 - Plan for financing that recognizes start up and long term capital financing strategies
 - Set milestones to support coordinated building to scale and sustainability
 - Link strategies e.g. NHIN, value cases
- Launch robust long term monitoring and evaluation to measure HIE impact
 - Link to achieving health care reform goals

Tackling Key Priorities



- State-level HIE Leadership Forum
 - Support to state-level planning and implementation efforts
- Priorities for ARRA success
 - Continued learning and supports for e state-level HIE organizational best practices
 - Effective governance
 - Accountability
 - Roadmap strategies
 - Implementation
 - Achieving levels of HIE capacity to impact health care reform priorities
 - Demonstrating impact
 - Informing ongoing development of federal policy

Resources

- **State-level HIE Consensus Project (www.slhie.org)**
 - Analysis of governance, financing and implementation strategies
 - Links to Statewide HIE Roadmaps and Plans
 - Online forum
- **State Alliance for eHealth (www.nga.org/center/ehealth)**
 - Key recommendations for State government
 - Analysis of accountability and financing approaches
- **Health IT Champions or HITCh (www.hitchampions.org)**
 - Database of State health IT legislation
 - List of State health IT Executive Orders
 - Reports and studies on best practices

Thank you!



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