

Commonwealth of Massachusetts
Executive Office of Health and Human Services



Technical and Business Barriers and Opportunities

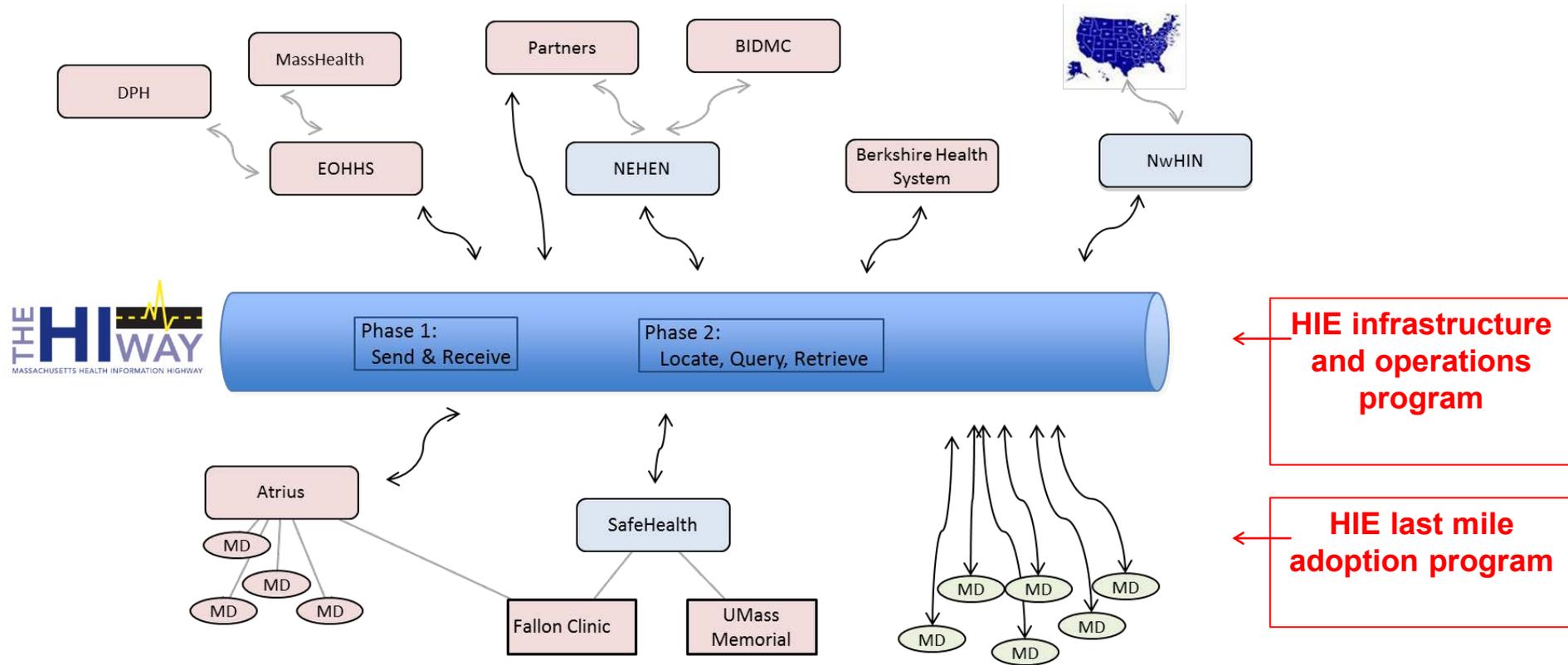
January 29, 2013



A statewide HIE service that is flexible to wide variety of current and future market needs



Illustrative example

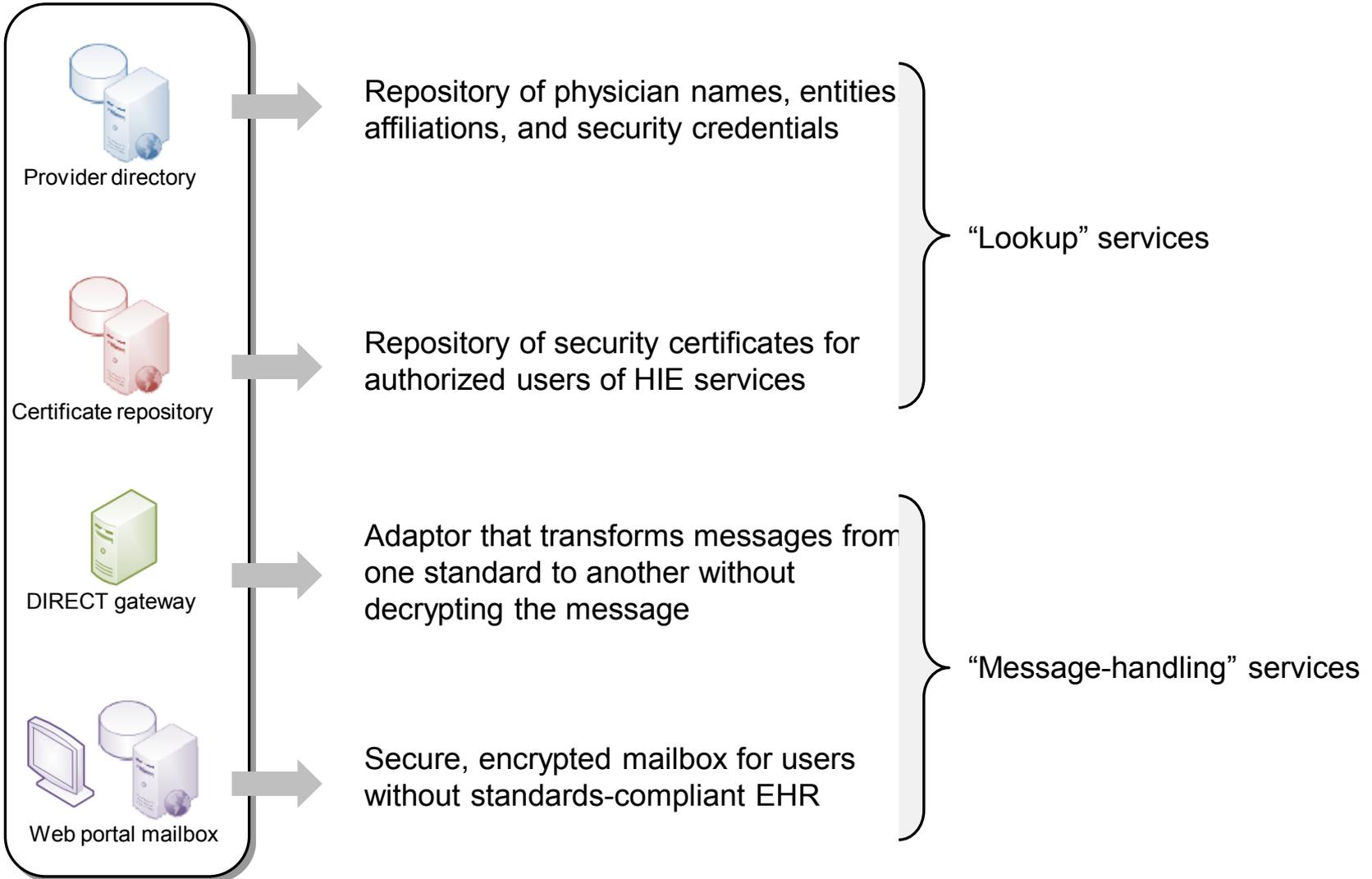




Basic Commonwealth HIE Services Description



HIE Services





3 ways to connect to Mass Hlway



User types



Physician practice



Hospital



Long-term care
Other providers
Public health
Health plans

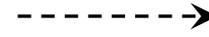


Labs and imaging centers

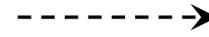
3 methods of accessing HIE services



EHR connects directly



EHR connects through LAN



Browser access to webmail inbox



HIE Services



Provider directory



Certificate repository



DIRECT gateway



Web portal mailbox



Phase 1 infrastructure



- **Release 1 (October 16, 2012)**
 - **Direct Gateway with 4 integration options: SMTP/SMIME, XDR/SOAP, LAND appliance**
 - **Provider directory v1**
 - **AIMS/Public key infrastructure v1**
- **Release 2 (December 17, 2012)**
 - **Participant enrollment portal (November, 2012)**
 - **Webmail (November, 2012)**
 - **HL7 Gateway (syndromic surveillance, ELR, CBHI)**
 - **IMPACT (SEE, web-based CDA-editor for long-term care facilities)**
 - **Provider directory v2**
 - **AIMS/Public key infrastructure v2**
- **Vendor-hosted cloud supports both HIE and HIX/IES**



Mass Hlway – Transactions sent Oct 16



Transactions sent over Mass Hlway during Golden Spike demonstration

Use Case	From	To	Content
Eastern Hospital to Western Hospital	Massachusetts General Hospital	Baystate Medical Center	Governor Patrick medical record (CCD)
ACO to ACO	Beth Israel Deaconess Medical Center	Massachusetts General Hospital	Patient summary record (CCD)
Hospital to Practice	Childrens' Hospital	Atrius Health	Patient summary record (CCD)
Suburban Hospital to Academic Medical Center (bi-directional)	MetroWest (Vanguard)	Tufts Medical Center	Patient summary record (CCD)
ACO to Quality Data Warehouse	Beth Israel Deaconess Physician Organization	Massachusetts eHealth Collaborative	Encounter summary (CCD)
Hospital to Referring PCP	Beth Israel Deaconess Medical Center	Dr. Ayobami Ojutalayo (Lawrence)	Patient summary record (CCD)
ACO to Health Plan	Beth Israel Deaconess Medical Center	Network Health Plan	Patient summary record (CCD)

Participating vendors: Orion Health, Meditech, Cerner, eClinicalWorks, LMR (Partners), webOMR (BID), Epic, Siemens



Consolidated phasing plan



Consolidated HIE phasing proposed to CMS and ONC on October 23, 2012

	Phase 1	Phase 2
HIE components	<ul style="list-style-type: none">• Provider directory• PKI infrastructure• Direct/HL7 gateway• Web portal mailbox	<ul style="list-style-type: none">• Master Person Index• Record locator service• Consent database• Patient-directed messaging• Query/retrieve infrastructure
HIE end-points	<ul style="list-style-type: none">• Any TPO participant• Public health• SS, CBHI, MIIS	<ul style="list-style-type: none">• MassHealth clinical data repository• Medicaid/HIX participants• Public health• ELR, PMP, Opioid, Lead

A richer set of services available to a broader set of participants



Phase 2 supports high-value use cases



MassHlway service

Use case examples

Medical record location

- An emergency room provider uses MassHlway to determine the organization(s) that holds a patient’s medical records
- A case manager uses Hlway to identify the care team that may be serving a patient

Medical record retrieval

- An emergency room provider uses MassHlway to retrieve a summary record for a patient
- A provider uses Hlway to retrieve prior diagnostic test results and specialist visit records to aid in patient diagnosis

Public health reporting

- A provider uses MassHlway to report to the public health cancer registry, immunization registry, lab reporting program, opioid treatment program, syndromic surveillance program, or childhood lead poisoning prevention program

Patient-directed Messaging

- A hospital provider uses MassHlway to send discharge instructions to a patient-specified PHR/portal
- A patient uses MassHlway to send “clipboard” information to a specialist prior to an initial visit

Consent management

- A provider uses MassHlway to record a patient’s consent preferences for information sharing via the MassHlway
- A patient uses MassHlway to set his/her own consent preferences

Value drivers:

- Continuity of care
- Patient safety & reduction in adverse events
- Reduction in controlled substance overuse
- Reduction in utilization of medical services
- Enhanced public health reporting adherence
- Supports MU achievement
- Administrative simplification



Phase 2 overall timeline



Mass Hlway Phase 2 high level project schedule

Activity	Completion date
Submit IAPD to CMS	Complete
CMS approval of Phase 2 IAPD	Jan/Feb 2013
Procurement for Phase 2 services (RFP, Change Orders, Internal Development)	Jan/Feb 2013
Phase 2 infrastructure vendor selected	March 29, 2013
Phase 2 contract (or change order) executed	Apr 15, 2013
Go-live for Phase 2, Release 1 (Public Health interfaces)	Apr-Oct, 2013
Go-live for Phase 2, Release 2 (CDR, EMPI, RLS, Consent)	Oct 2013 – Mar 2014



Hlway Private Fee Principles



- **All participants pay some fee for ongoing HIE services**
 - **Minimizes market distortions caused by “free” services**
 - **Establishes payment framework for future later phase HIE services**
- **Participants pay for service-level that they consume**
 - **Service menu options**
 - **No requirement to purchase later Phase services**
 - **Annual subscription fees – no transaction or click charges**
- **Fees should cover private sector allocation requirement for HIE services (~\$700K per year)**
 - **Private fees should not be used for other purposes**
 - **Fee revenues should be segregated from general state revenues**
 - **Need to align timing of fee generation with CMS matching rules**
- **Fees will need to be adjusted periodically as circumstances change**
 - **Will be difficult to precisely target allocation requirement in any given year**
 - **Need to create process for allocating and distributing surpluses to later phases and/or future year services**
 - **First year, in particular, will be a market-testing year – want to start with a reasonable framework, and apply lessons learned for future steady-state pricing**



Current Hlway Price List



Massachusetts Health Information Highway Rate Card

10/8/2012

Tier	Category	Total # in state (esti- mated)	One- time set- up fee	Annual Services Fee		
				LAND plus HIE services (per node)	Direct HIE services (per node)	Secure Web HIE services (per user)
Tier 1	Large hospitals	14	\$2,500	\$27,500	\$15,000	\$240
	Health plans	9	\$2,500	\$27,500	\$15,000	\$240
	Multi-entity HIE	5	\$2,500	\$27,500	\$15,000	\$240
Tier 2	Small hospitals	35	\$1,000	\$15,000	\$10,000	\$240
	Large ambulatory practices (50+)	11	\$1,000	\$15,000	\$10,000	\$240
	Large LTCs	8	\$1,000	\$15,000	\$10,000	\$240
	ASCs	63	\$1,000	\$15,000	\$10,000	\$240
	Non-profit affiliates	5	\$1,000	\$15,000	\$10,000	\$240
Tier 3	Small LTC	310	\$500	\$4,500	\$2,500	\$120
	Large behavioral health	10	\$500	\$4,500	\$2,500	\$120
	Large home health	15	\$500	\$4,500	\$2,500	\$120
	Large FQHCs (10-49)	10	\$500	\$4,500	\$2,500	\$120
	Medium ambulatory practices (10-49)	365	\$500	\$4,500	\$2,500	\$120
Tier 4	Small behavioral health	90	\$25	\$250	\$175	\$60
	Small home health	134	\$25	\$250	\$175	\$60
	Small FQHCs (3-9)	29	\$25	\$250	\$175	\$60
	Small ambulatory practices (3-9)	1,595	\$25	\$250	\$175	\$60
Tier 5	Small ambulatory practices (1-2)	4,010	\$25	\$60	\$60	\$60



- **General Highlights**
 - Sets statewide health care cost goals pegged to GSP growth
 - Requires public payers to transition to alternative payment methodologies
 - Establishes voluntary certification process for ACOs and PCMHs
- **HIE/HIT Highlights**
 - Requires all providers to “implement fully interoperable electronic health records that connect to the statewide health information exchange”
 - HIE governance (HIT Council) and HIE program ownership consolidated in EOHHS:
 - “The executive office shall take all actions necessary to directly manage the Office of the National Coordinator-HIE Cooperative Agreement and ONC Challenge Grant programs, including the termination of the current State Designated Entity delegation and the transfer of management responsibility of said ONC-HIE Cooperative Agreement from the Massachusetts e-Health Institute to the executive office.”
- EOHHS and MeHI working together through inter-agency agreements to assure momentum and continuity of CMS-funded HIE and ONC-funded Last Mile programs

Category 1 - Quality and Safety

- Standards which support flexible platforms for measuring and reporting quality (QueryHealth, QRDA/HQMF)
- Standards which support measurement of EHR usability
- Standards which address current content gaps - HL7 version 2 lab orders, formulary downloads, cancel transaction needed for hospital discharge medication e-prescribing, representing genomic data in the EHR
- Standards which support defect reporting to PSOs
- Standards which support redundant data identification/reduction

Category 2 - Health Information Exchange

- Standards which support query/response of provider and patient identity in directories
- Standards which support Record Locator Services
- Standards which support consent in a query/response architecture such as granular patient privacy preferences hosted in a managed service ("pull") and sent as part of the request for records ("push")
- Improvements to the CCDA standard to facilitate unambiguous parsing, longitudinal record sharing, and bulk record sharing
- Standards to support image exchange

Category 3 - Consumer

- **Standards to support representation of patient generated data including consumer device data**
- **Standards to support consumer friendly terminology**
- **Standards to support transport of data to and from patients**
- **Standards to record advanced directives/care preferences**
- **Standards to record care plans/care team**

Category 4 - ACO/Population Health/Care Management

- **Standards for clinical documentation supporting new payment models (includes ICD10, smart problem lists, computer assisted coding)**
- **Standards needed for registry support including structured data capture and transmission to third party repositories**
- **Standards to support closed loop referral workflow**
- **Standards to support data comparability across entities including detailed clinical models**
- **Standards for clinical decision support, both knowledge representation and application programming interfaces (APIs) for query/response to knowledge resources**

Category 5- Privacy/Security

- **Standards for securing data at rest, especially genomic data and consumer downloads**
- **Standards for application programming interfaces supporting modular application integration**
- **Standards supporting data segmentation for privacy**
- **Standards and certification criteria that anticipate broad NSTIC adoption**
- **Standards supporting Digital signature**