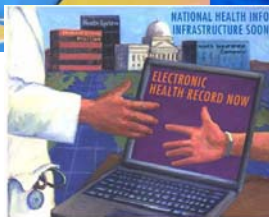


Health Information Sharing: Case Studies for Interoperability

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Computer Sciences Corporation



**The Second Health Information Technology Summit
Washington, DC
September 9, 2005**



EXPERIENCE. RESULTS.

Agenda

- Massachusetts Community and Interoperability History
- NEHEN
- MA-SHARE and the Massachusetts eHealth Collaborative

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Our Community and History¹

- Massachusetts Health Data Consortium



- The convener and educational organization, the business incubator
 - Founded 1978
 - Created the Affiliated Health Information Networks of New England in CIO Forum in 1995

- New England Healthcare EDI Network (NEHEN LLC)



- The transactor of community administrative (HIPAA transaction) data
 - Formed 1997 (incorporated 1998)
 - Proved to the community that collaboration was implementable and sustainable
 - 25 member organizations, 45+ hospitals, 5000+ independent physicians, 3M covered lives

- MA-SHARE (Simplifying Healthcare Among Regional Entities)



- The grid of community clinical utilities
 - Founded and incorporated as a 501c3 in 2003 (clinical counterpart to NEHEN)
 - First project in 2004 – MedsInfo-ED – provided medication history for emergency visits

- Massachusetts eHealth Collaborative (MAeHC)



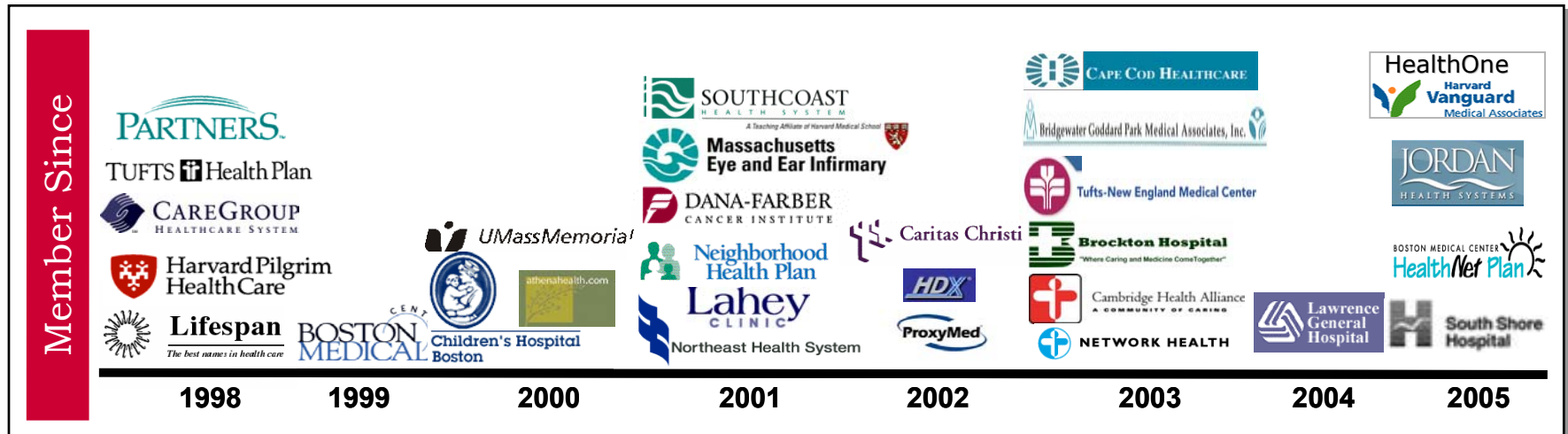
- The last mile to the clinician offices for three selected communities
 - Formed and incorporated in 2004
 - \$50M funding from Blue Cross Blue Shield of Massachusetts to prove the viability of interoperable electronic health records (EHRs) in Brockton, Newburyport, and North Adams

¹Halamka, J et al, "Healthcare IT Collaboration in Massachusetts: The Experience of Creating Regional Connectivity", (pre-publication)

NEHEN Case Study – Lessons Learned

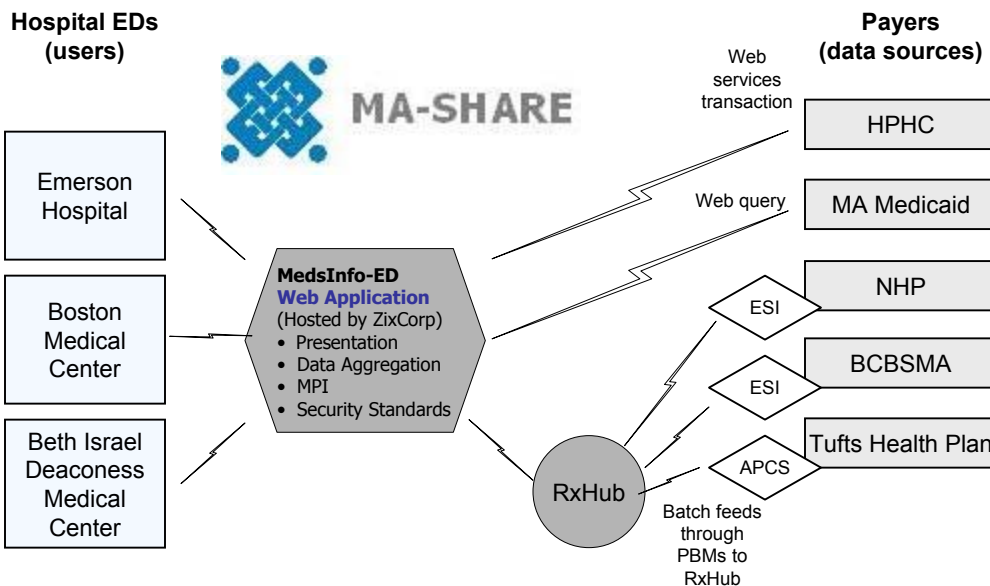


- Focus on standards
 - X12N, with common implementation guides for all partners
- Allow flexibility in other places
 - For business expediency (to let others play)
- Adopt a federated model
 - To allay security concerns, reduce costs and allow organizations to retain control of data, implementation details, and business workflow



MA-SHARE Case Study

- Work started with MedsInfo-ED in 2004
 - Pilot to learn about and study clinical data exchange
 - Developed with ZixCorp and RxHub



Disclosure

Patient Informed & Agreed Yes
 No - patient declined
 Patient condition and emergency preclude agreement
 - determined by physician First Last name

Patient Identification

Required Fields

Name
 First Middle (optional) Last

Gender Male
 Female

DOB / / ZIP Code [ZIP Locator](#)
 mm / dd / yyyy

Optional Fields

Use these fields to refine the search

Health Plan ID
 Medicaid ID
 Prescription Benefit Plan
 Social Security #

ID 1 Other ZIP
 ID 2 Other ZIP

Select ID Type...

Welcome David Jones, Beth Israel Deaconess Medical Center
 Not David Jones? Click [here](#) Help Log off

MedsInfo

Nancy Doris Whyte DOB: 01/09/1978 (F)

4871 Harkiss Court, Andover, MA 01810-2597 | HPHC: 78416314, BCBS Mass - 370404391
 Patient Informed & Agreed: Precluded | Determined by physician Phillip Browning
 Data Sources: Harvard Pilgrim (01/01/04-03/05/04), BCBS (2/22/03-12/31/03)

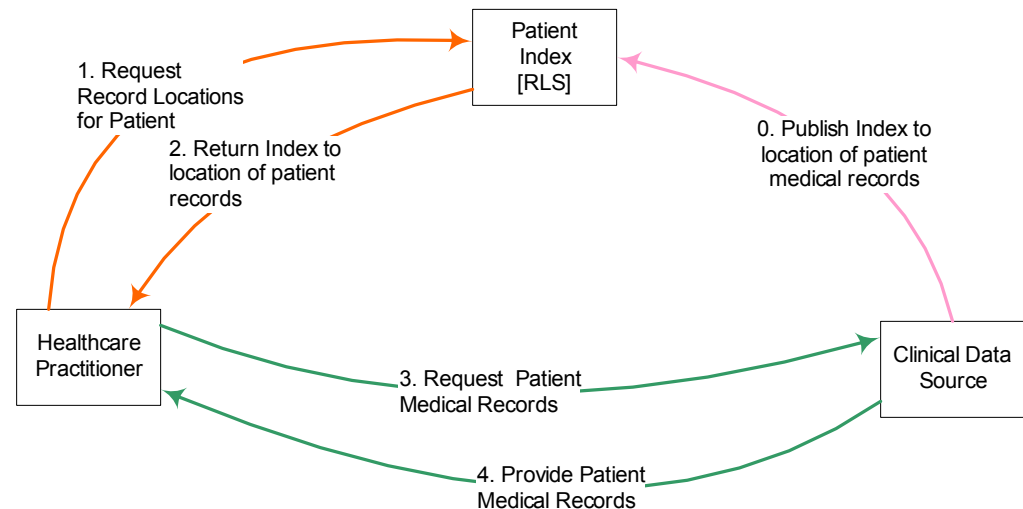
Medication History Show each drug only once regardless of multiple dispense dates.

Dispensed	Fills	Name	Dosage/Form	Qty	Class	Prescriber
03/05/04	1	Zyrtec Cetirizine	5 mg tablets	30	Antihistamines	Atkins, John, MD
03/05/04	1	Toprol XL Metoprolol	50 mg tablets	30	Beta Blocker	Michealmass, Janice, MD
03/05/04	1	Viiox Rofecoxib	25 mg tablets	15	NSAID	Smith, Louise, MD
11/01/03	2	Carafate sucralfate	1 g tablets	30	Anti-ulcer	Atkins, John, MD
10/18/03	6	Lipitor Atorvastatin	40 mg tablets	30	Statin	Cohen, Jacob, MD
05/11/03	1	Keflex Cephalexin hydrochloride	500 mg tablets	14	Antibiotic	Atkins, John, MD

Data limitations: The medication history displayed is partial. It reports only health plan payment data. It may be incomplete or inaccurate, and excludes medication history related to treatment of HIV/AIDS, mental health conditions and substance abuse. View [Filtered Drug List](#) to see which drugs are excluded from patients' medication history.

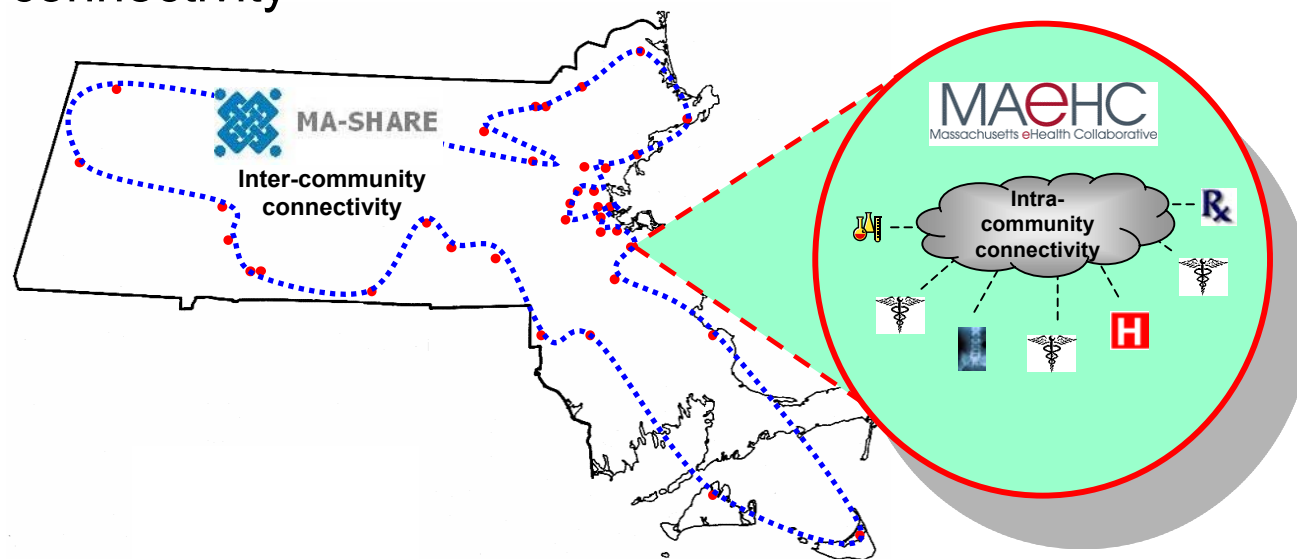
MA-SHARE Case Study – Current Work

- Record Locator Service prototype funded by the Markle Foundation’s Connecting for Health project
 - Objective is to create a “Reference Implementation” to stimulate and support national efforts
 - Functionality
 - Publish patient index (record location) from local data source to central registry (simulating registration / ADT events)
 - Acquire address (record location) of source EHR system and/or local patient index from central registry
 - Retrieve medical data directly from data source in a federated architecture

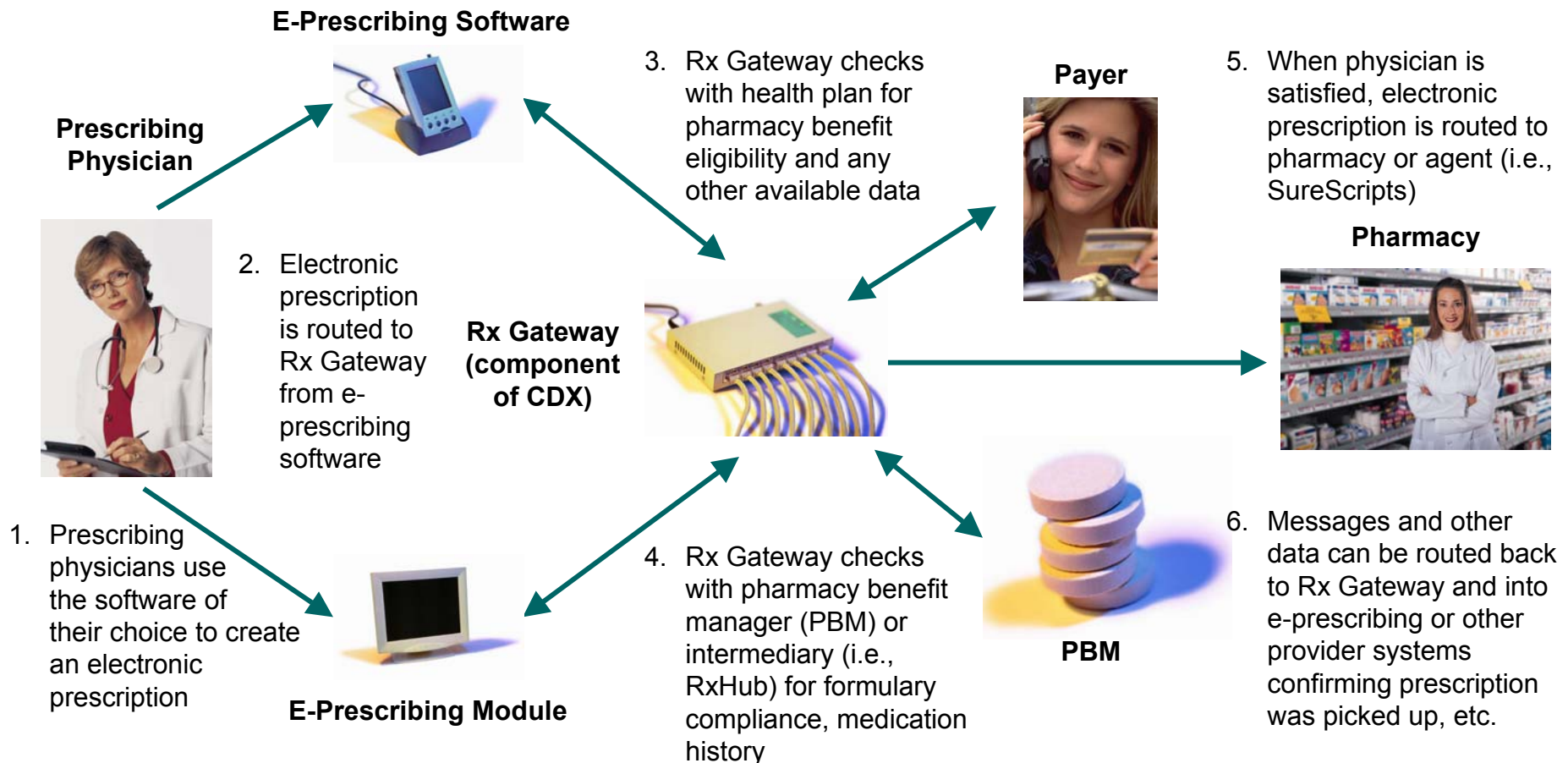


MA-SHARE – Next Steps

- Develop the Markle RLS prototype into a public-private clinical data exchange utility for Massachusetts
 - Release 1.0 of the MA-SHARE Clinical Data Exchange (CDX)
 - Hosted Record Locator Service
 - Distributed and federated CDX Gateways
- Support both intercommunity (MA-SHARE) and intracommunity (MAeHC) connectivity



MA-SHARE – Moving from Infrastructure to Projects with the RxGateway



Massachusetts Case Study Conclusions

- As with many large projects, work begins with infrastructure – and infrastructure begins with standards
 - Based on existing and external work (national and international)
 - Validated through the Markle RLS Reference Implementation
 - As determined by MAeHC for EHRs in their communities
- NEHEN set a strong foundation
 - Standards, openness
 - Collaborative relationships and trust – simple governance model
 - Cost-sharing and discernible ROI for all parties
- We are moving from the simple to the complex in an orderly and step-wise fashion
 - Structured and mature data sets of X12 and EDI before testing or “breaking trail” with HL7, XML and web services
 - Starting with what we have experience in the clinical domain (medications) before tackling additional use cases
- Healthcare information sharing can occur in manageable and deliverable timeframes, but Massachusetts’ experience is that it takes many years of sustained effort to achieve proven results