



# Engaging Community Leaders: Developing a Plan and Strategy for the MedsInfo-ED Project

**A patient safety initiative to automate communication of medication history**

**Elliot M. Stone, Executive Director & CEO  
MA Health Data Consortium, Inc.**

**The Health Information Technology Summit  
October 22, 2004**



## **Sponsors:**

### **Alliance for Health Care Improvement:** Medical Directors of 6 local Health Plans

- Blue Cross Blue Shield of MA.....2.6 million members
- Harvard Pilgrim Health Care.....790,000 members
- Tufts Health Plan.....747,000 members
- Fallon Community Health Plan.....185,000 members
- Neighborhood Health Plan.....120,000 members
- Health New England.....90,000 members

## **Pilot Hospitals:**

- Beth Israel Deaconess Medical Center...534 beds, teaching, level 1 trauma
  - Boston Medical Center.....547 beds, teaching, level 1 trauma
  - Emerson Hospital.....170 beds, community
- } 14,000  
ED visits  
monthly

## **Project Management:**

- MA Health Data Consortium, Inc.
- MA-SHARE, LLC

## **Technical Consultants:**

- ZixCorp
- Computer Sciences Corporation (CSC)

# WHY?



## The GOALS

- Real-time clinical information for ALL patients to their treating providers: *what they need, when & where they need it to assure patient safety*
- A clinical application to comply with The Leapfrog Group/National Quality Forum Safety Practices... *information transfer, communication, safe medication use*
- Address JCAHO Patient Safety Goals: *"Improve the Effectiveness of Communication Among Caregivers"*
- Collaborate with MA Coalition for the Prevention of Medical Errors- *Reconciling Medications project*

# Why?



## ED Med History Incomplete, Inaccurate

### Current Processes: Suboptimal

- Often only drug names (not dose or regimen) are recorded at intake
- Even in hospitals with Computerized Provider Order Entry medications at discharge are not entered
- Multiple places in the chart where drug information is recorded by multiple individuals
- Sources of information include: patient, family, transfer lists from NH, EMT notes, pill bottles, family sent home to get pill bottles, etc.
- Time consuming: for RNs, ED MDs, Admitting MDs

Sources: ED Physicians Pilot Hospitals

## Why? High Risk, Challenging Data Gathering



- High Acuity – too much anxiety or pain to recall or recite list
- Altered Mental Status – stroke
- Complex Pathology – on large # of medications
- Poor Historians – Elderly, dementia, psychiatric patients, you and me
- Complex History – Frequent medication changes and multiple providers
- Unintentional Data Withholding – Not mentioning oral contraceptives & receiving antibiotic for sore throat
- Intentional Data Withholding – Embarrassed about Viagra; see;  
*Jack Nicholson in "Something's Gotta Give"*
- Seeking controlled substances

Sources: ED Physicians Pilot Hospitals

# Why?



## Hopes and Expectations

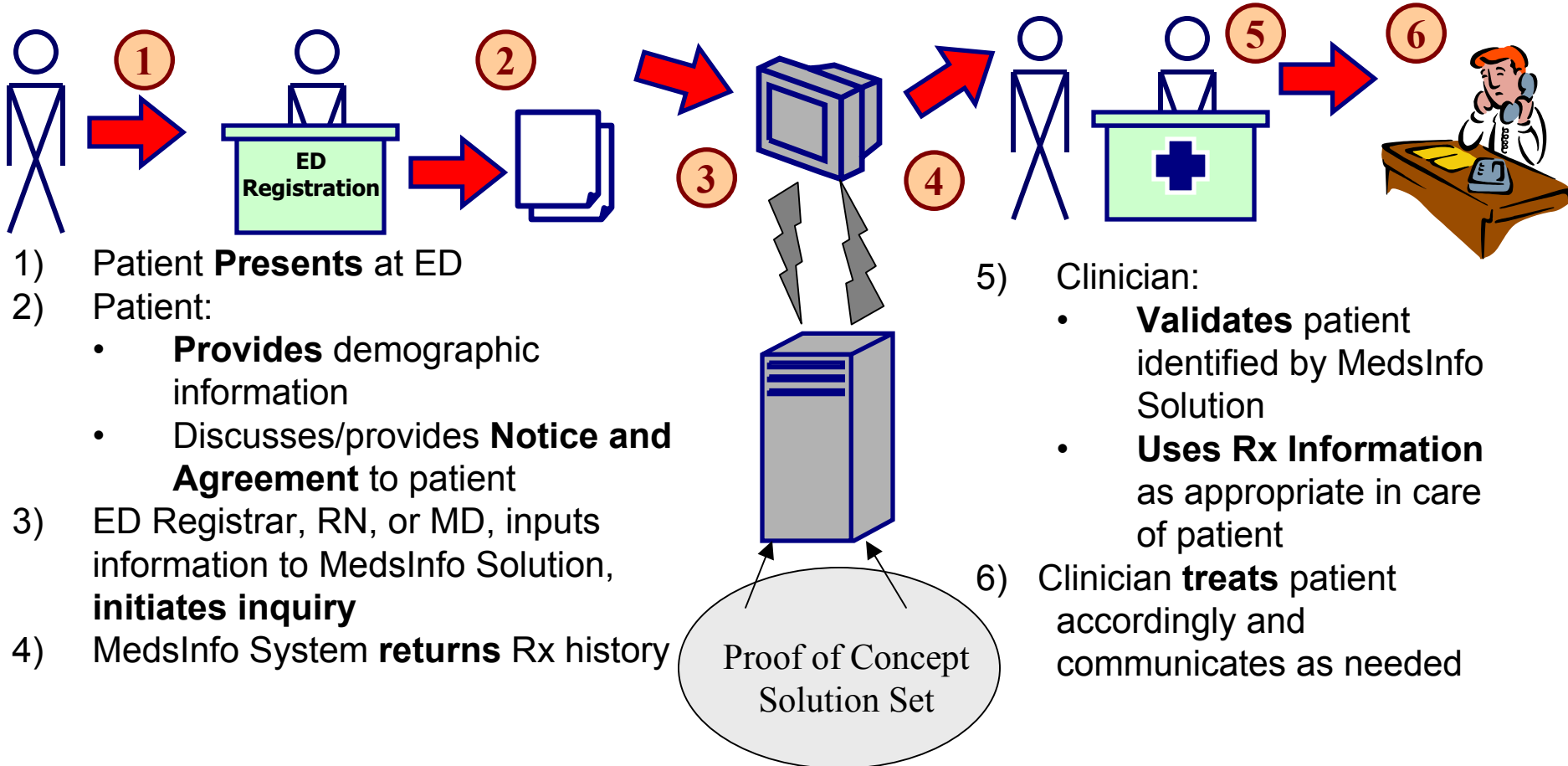
- More streamlined and efficient process to obtain medication history
- More complete and accurate medication history
- More complete and accurate medication orders for patients admitted
- Decreased “errors” in diagnosis and treatment
- Improved outcomes and lowered costs of care

Sources: ED Physicians Pilot Hospitals

# WHAT?

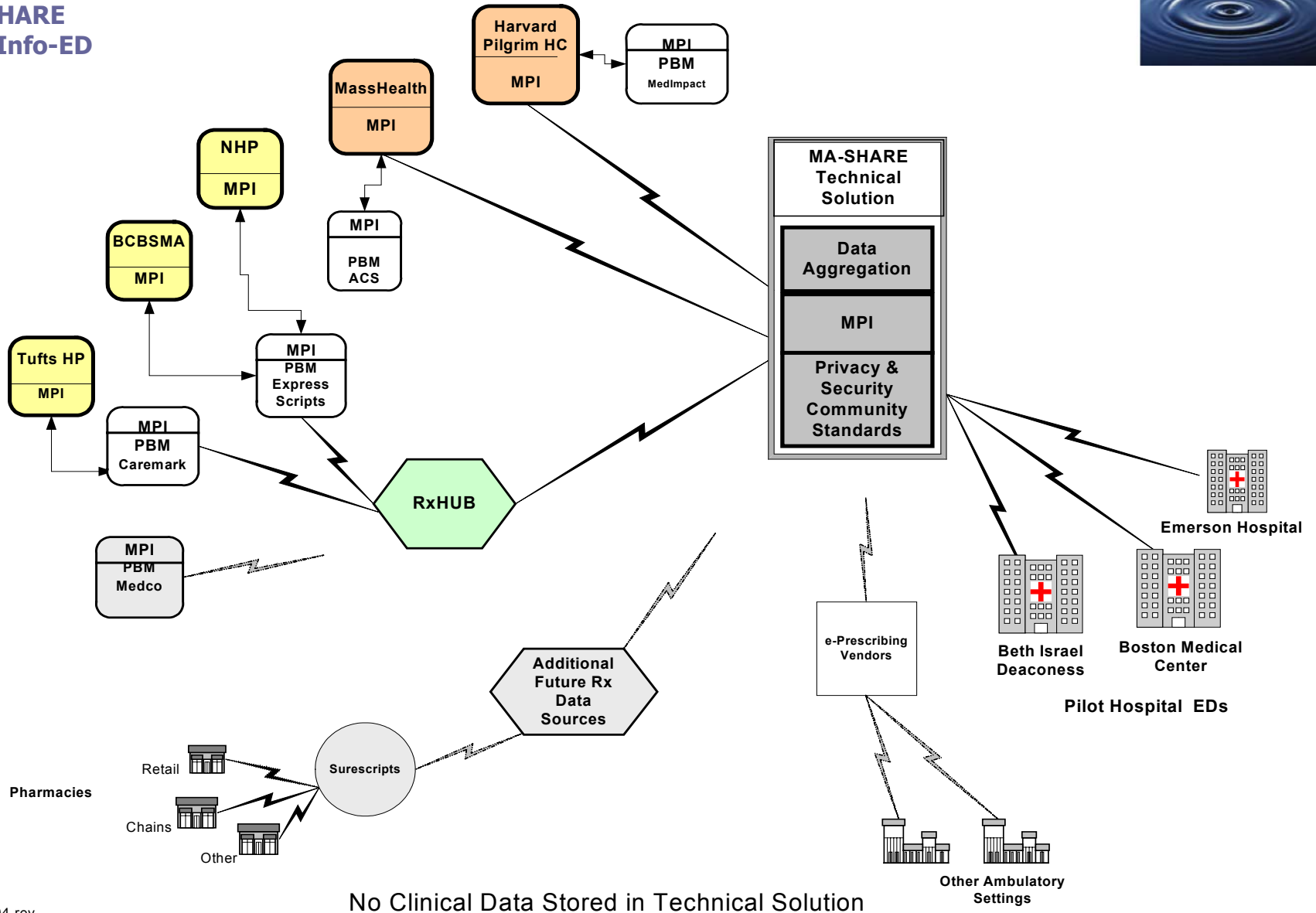


## Integrating MedsInfo into ED Workflow



**A patient safety initiative to automate communication of medication history**

# MedsInfo-ED System Process Environment



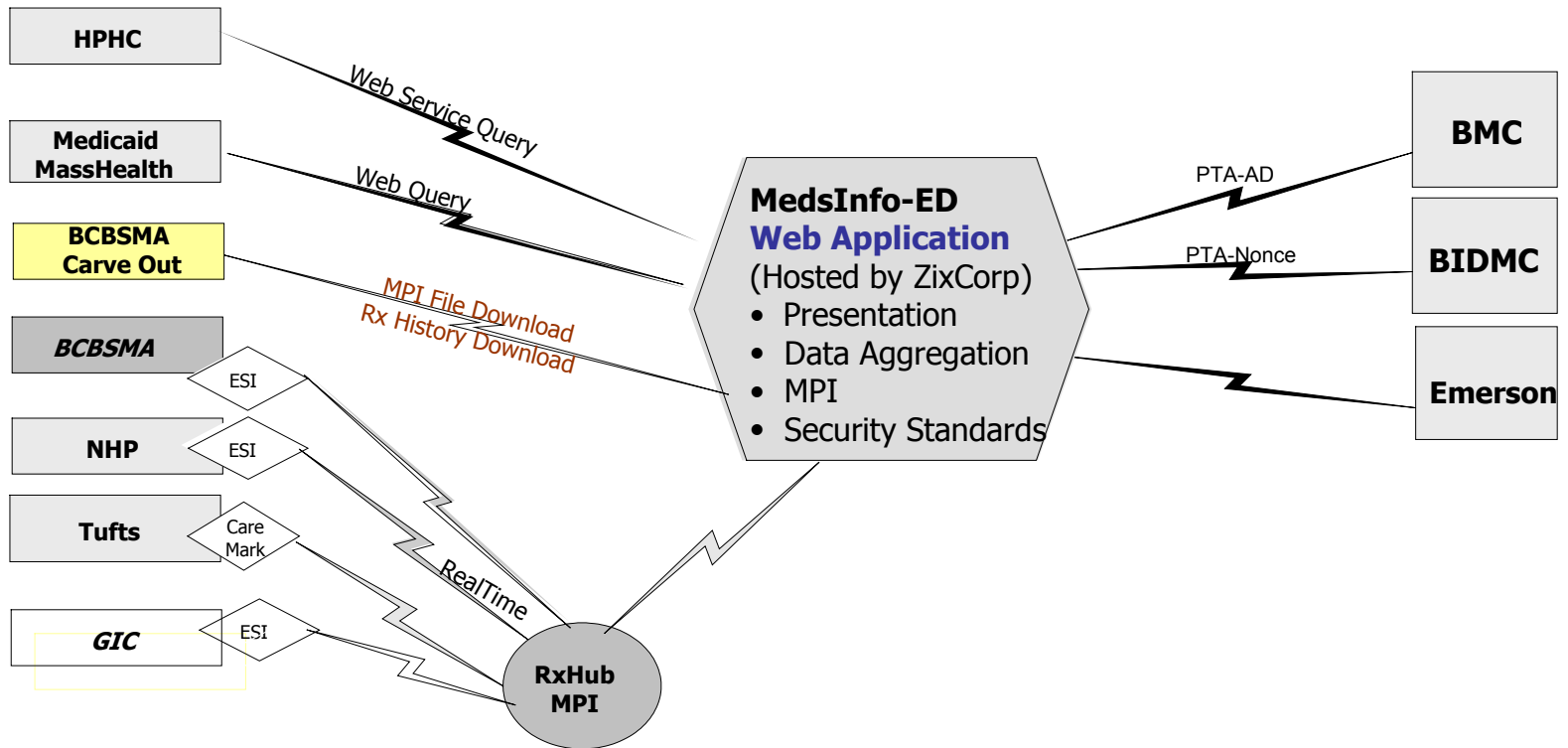
No Clinical Data Stored in Technical Solution





**Payers**  
-data sources

**Hospitals**  
- users





## MedsInfo

### Log In

Username

Password

Security Disclaimer

Access to this website is for authorized users only. All access (including time and IP address) is tracked, logged and monitored. If you do not have permission to be here, you should leave immediately. This information is made available to the Hospital by other healthcare entities. Any unauthorized use may result in hospital discipline and/or legal repercussions.

Log In:

Forgot login? Contact your administrator.

Use and disclosure of this information must comply with all applicable State and Federal laws and regulations including privacy and security.

## Web Flow – Search Form – Mockup



### 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  /  /   
mm / dd / yyyy

ZIP Code  [ZIP Locator](#)

#### Optional Fields

Use these fields to refine the search

ID 1

ID 2

Select ID Type...

Other ZIP

Other ZIP

## Web Flow - Results Case - Mockup



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

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### MedsInfo

Note: Patient name & data are fictitious

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### Nancy Doris Whyte

DOB: 01/09/1978 (F)  
4871 Harkiss Court, Andover, MA 01810-2587 | HPHC: 78416314, BCBS Mass - 370404391  
Patient Informed & Agreed: **Precluded** | Determined by physician Phillip Brownling  
Data Source: Harvard Pilgrim (01/01/04-03/05/04), BCBS (2/22/03-12/31/03)

Medication History Last 4 months  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	Vioxx 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 Atorvastin	40 mg tablets	30	Statin	Cohen, Jacob, MD
05/11/03	1	Keflex Cephalexin hydrochloride	500 mg tablets	14	Antibiotic	Atkins, John, MD

Print All
New Search

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.



## Privacy Officers agreed:

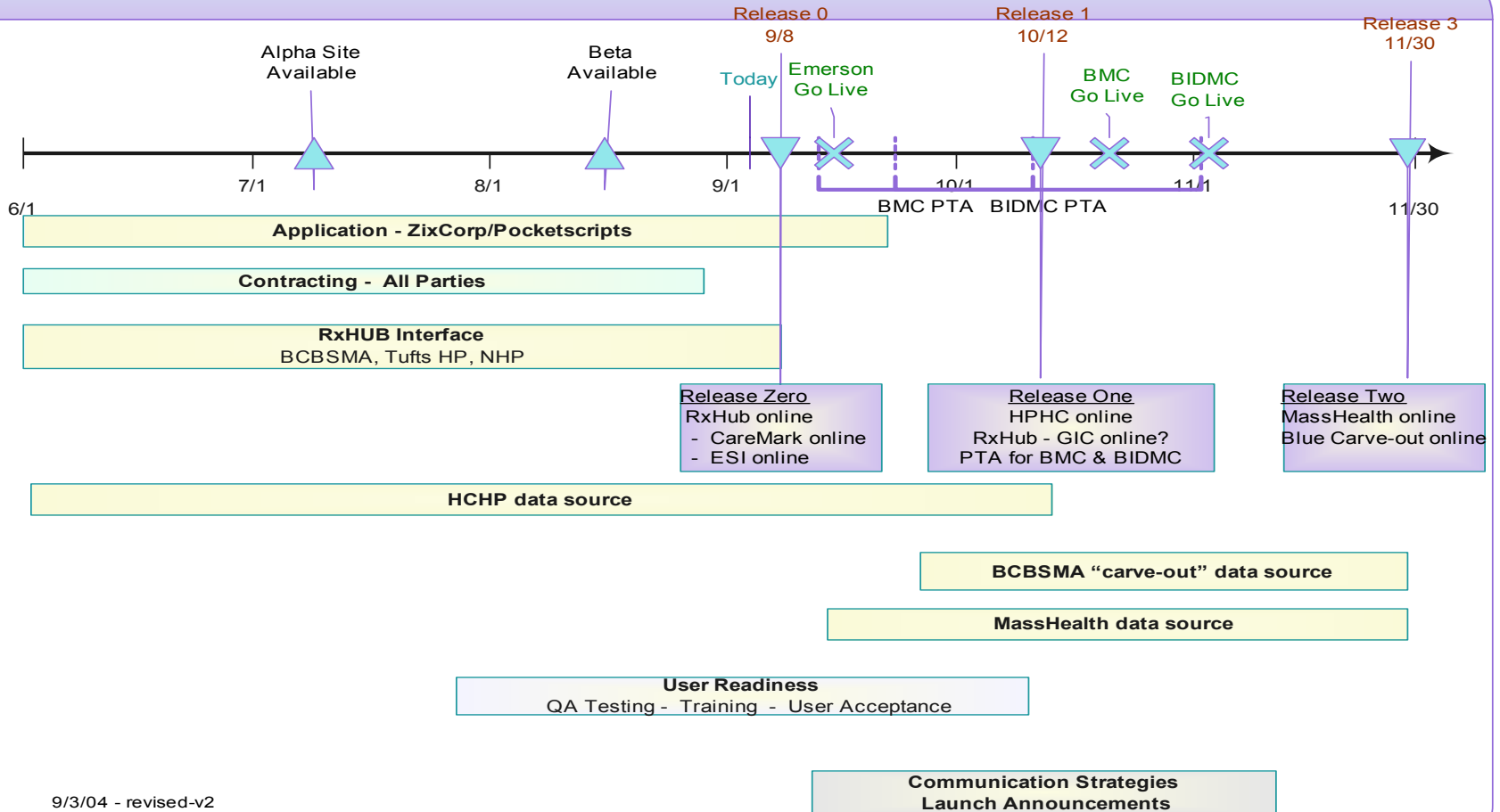
- HIPAA permits release of RX history to ED for treatment without consent, BUT
- Application design will include “Yes/No” to capture patient notification of query capability and opportunity to participate or not
- Pilot will screen-out “sensitive” classes of medications for treatment of HIV/AIDs, Mental Health, Substance Abuse for Mass. Law compliance
- Reviewing acceptable community practice to eventually release all Rx history

## Security Officers agreed:

- Access – unique individual user level sign-on with password
- Audit– requires capture of user & patient level data, no clinical PHI
- Demographic PHI maintained in MPI, must be secured, protected, contractually defined



### MedsInfo Go Live Timeline - Phase 1



# Timeline



**MedsInfo Launch = September 2004**

**After 12 months for team building, strategy & legal**

**After 3 to 6 months of first 3 Pilots = MedsInfo Evaluation Study**

- 1. Clinicians' perceptions of clinical utility**
- 2. System use – Metrics**
- 3. Technology assessment**

**Add 7 "beta" sites – early 2005**

# Evaluation Issues



## Clinical Utility – MD perceptions of the system

- Less time to reconcile meds?
- More complete, accurate med list?
- More confidence in clinical decision making?
- Any changes in decision making?
- Prevent medical errors?
- Better ED visit outcome?
- Better post-visit outcome?
- Ideas for enhancements?

Sources: ED Physicians Pilot Hospitals



# Evaluation Issues



## System Use Metrics

- % of patients agree to participate
- % med history found with 5 data elements  
(last & first name, DOB, gender, zip code)
- Reasons for request failure
- Response time by data source
- Log-on frequency by personnel
- Overall frequency

Sources: ED Physicians Pilot Hospitals

# Evaluation Issues



## Technology Assessment

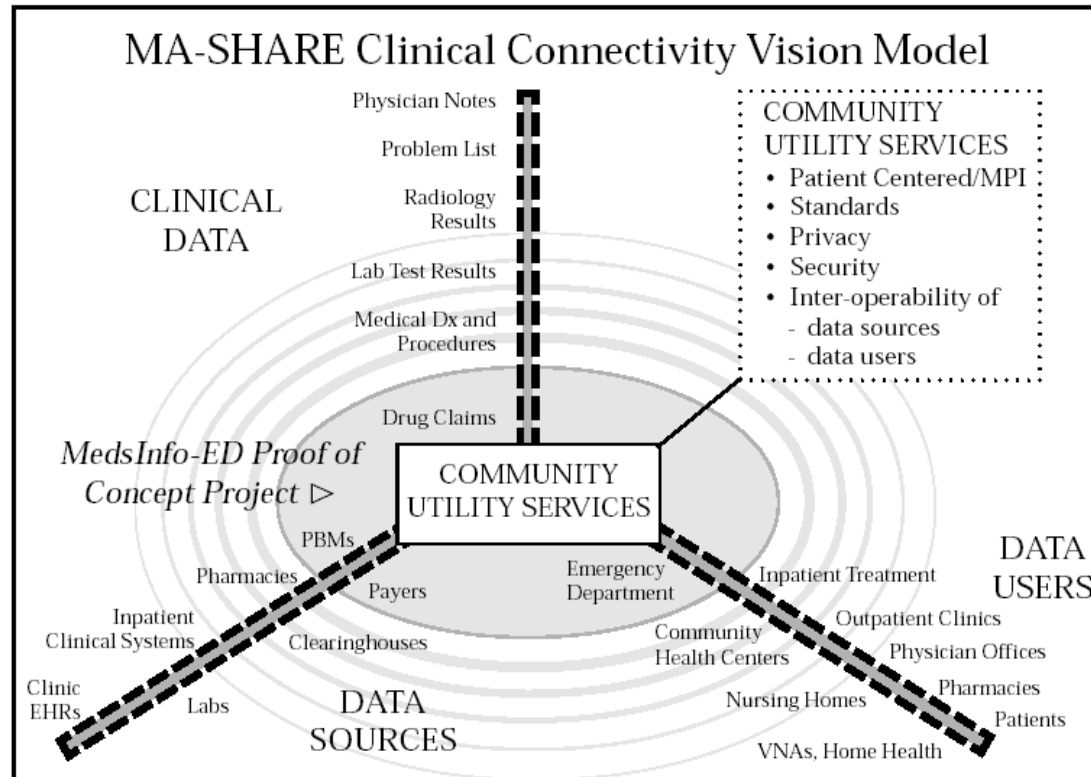
- Costs to develop, implement, maintain
- Ease of use
- Integration/inter-operability with existing system

Sources: ED Physicians Pilot Hospitals

# WHERE?



## MedsInfo fits in Community-Wide Clinical Connectivity

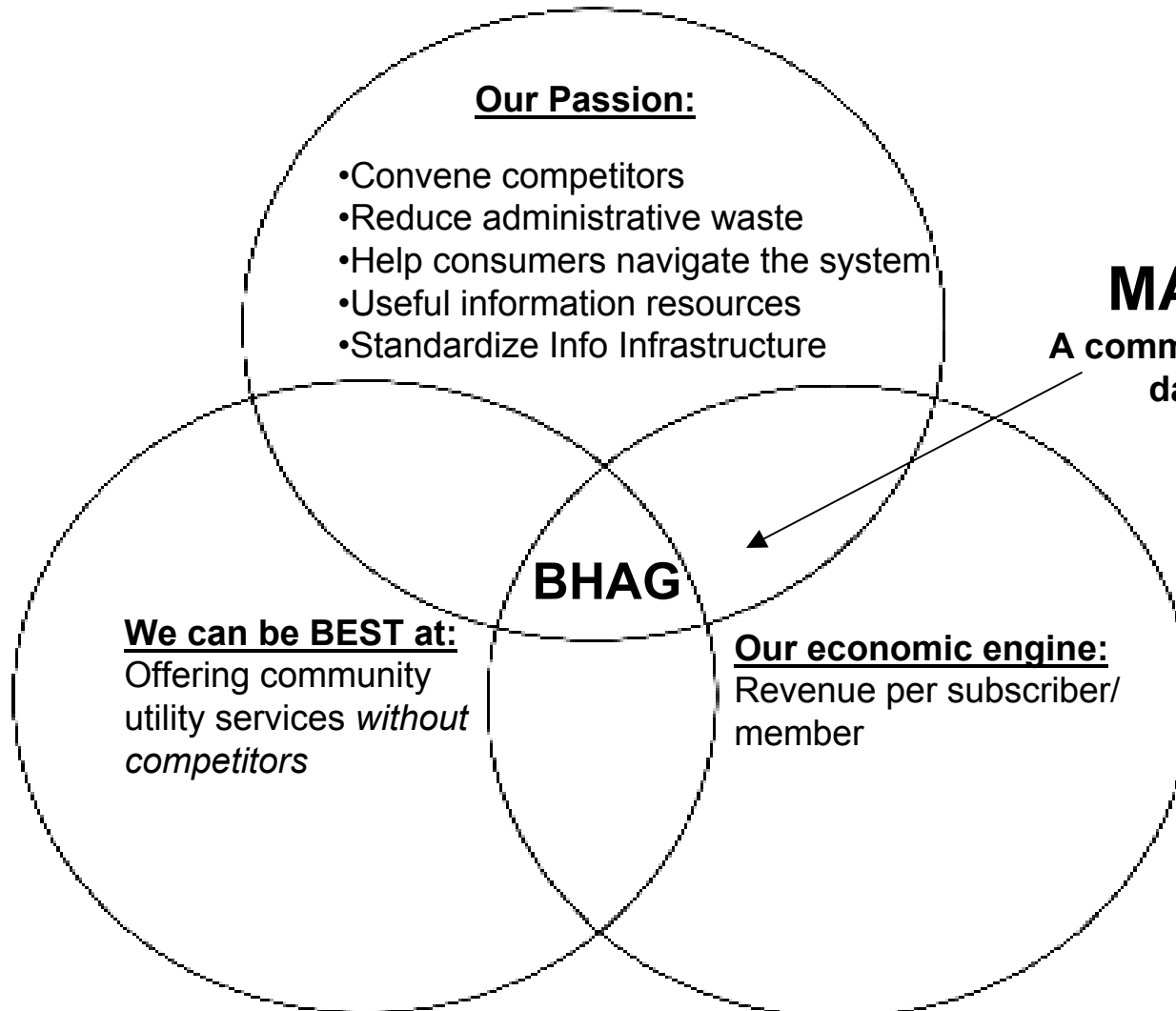




## **“Faster, Cheaper, Better” Strategy**

### **MA-SHARE will develop... community utility services**

- Match patients to available clinical data sources...Master Patient Index
- Identify & contract for distribution of clinical data streams (meds, lab tests, xrays)
- Develop community standards for privacy and security
- Organize all services/technologies common to the success of most clinical connectivity initiatives



**MA-SHARE**  
A community-wide clinical  
data exchange



“Some said we would implement  
Regional Community Connectivity... *when pigs fly*”





**MA-SHARE**  
**MedsInfo-ED**



For More Information Contact  
Elliot Stone  
CEO  
Mass. Health Data Consortium  
460 Totten Pond Road Suite 385  
Waltham, MA 02451  
781-890-6042  
[estone@mahealthdata.org](mailto:estone@mahealthdata.org)