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

A patient safety initiative to automate communication of medication history

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**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

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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

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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

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Integrating MedsInfo into ED Workflow

1) Patient **Presents** at ED
2) Patient:
   • **Provides** demographic information
   • Discusses/provides **Notice and Agreement** to patient
3) ED Registrar, RN, or MD, inputs information to MedsInfo Solution, **initiates inquiry**
4) MedsInfo System **returns** Rx history
5) Clinician:
   • **Validates** patient identified by MedsInfo Solution
   • **Uses Rx Information** as appropriate in care of patient
6) Clinician **treats** patient accordingly and communicates as needed

**Proof of Concept Solution Set**

**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

- HPHC
- Medicaid MassHealth
- BCBSMA Carve Out
- BCBSMA
- NHP
- Tufts
- GIC

MedsInfo-ED
Web Application
(Hosted by ZixCorp)
- Presentation
- Data Aggregation
- MPI
- Security Standards

RxHub
MPI

Hospitals
-users

- BMC
- BIDMC
- Emerson
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: Enter

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

Last Name

Patient Identification
Required Fields

Name
First
Middle (optional)
Last

DOB

mm / dd / yyyy

Gender
- Male
- Female

ZIP Code
ZIP Locator

Optional Fields
Use these fields to refine the search

ID 1
Medicaid ID
Health Plan ID

ID 2
Prescription Benefit Plan
Select ID Type...

Other ZIP

Search
Welcome David Jones, Beth Israel Deaconess Medical Center
Not David Jones? Click  Here

MedsInfo

Note: Patient name & data are fictitious

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 Brownling
Data Source: Harvard Pilgrim [01/01/04-03/05/04], BCBS [02/22/03-12/31/03]

<table>
<thead>
<tr>
<th>Medication History</th>
<th>Last 4 months</th>
<th>Qty</th>
<th>Class</th>
<th>Prescriber</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dispensed</strong></td>
<td><strong>Fills</strong></td>
<td><strong>Name</strong></td>
<td>Dosage/Form</td>
<td><strong>Class</strong></td>
</tr>
<tr>
<td>03/05/04</td>
<td>1</td>
<td>Zyrtec</td>
<td>5 mg tablets</td>
<td>Antihistamines</td>
</tr>
<tr>
<td>03/05/04</td>
<td>1</td>
<td>Toprol XL</td>
<td>50 mg tablets</td>
<td>Beta Blocker</td>
</tr>
<tr>
<td>03/05/04</td>
<td>1</td>
<td>Vioxx</td>
<td>25 mg tablets</td>
<td>NSAID</td>
</tr>
<tr>
<td>11/01/03</td>
<td>2</td>
<td>Carafate</td>
<td>1 g tablets</td>
<td>Anti-ulcer</td>
</tr>
<tr>
<td>10/18/03</td>
<td>6</td>
<td>Lipitor</td>
<td>40 mg tablets</td>
<td>Statin</td>
</tr>
<tr>
<td>05/11/03</td>
<td>1</td>
<td>Keflex</td>
<td>500 mg tablets</td>
<td>Antibiotic</td>
</tr>
</tbody>
</table>

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

**Release Zero**
- RxHub online
  - CareMark online
  - ESI online

**Release One**
- HPHC online
- RxHub - GIC online?
- PTA for BMC & BIDMC

**Release Two**
- MassHealth online
- Blue Carve-out online

**Alpha Site Available**
- 7/1

**Beta Available**
- 8/1

**Emerson Go Live**
- 9/1

**BMC PTA**
- 10/1

**BIDMC PTA**
- 11/1

**BIDMC Go Live**
- 11/30

**BMC Go Live**
- 10/12

**Go Live**
- 9/3/04

**Application - ZixCorp/Pocketscripts**

**Contracting - All Parties**

**RxHUB Interface**
- BCBSMA, Tufts HP, NHP

**Release 0**
- 9/8

**Release 1**
- 10/12

**Release 3**
- 11/30

**HCHP data source**

**BCBSMA “carve-out” data source**

**MassHealth data source**

**User Readiness**
- QA Testing - Training - User Acceptance

**Communication Strategies**
- Launch Announcements

9/3/04 - revised-v2
Timeline

MedsInfo Launch = September 2004

After 12 month 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

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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

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Evaluation Issues

Technology Assessment

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

Sources: ED Physicians Pilot Hospitals

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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
Our Passion:

- Convene competitors
- Reduce administrative waste
- Help consumers navigate the system
- Useful information resources
- Standardize Info Infrastructure

We can be BEST at:
Offering community utility services without competitors

Our economic engine:
Revenue per subscriber/member

MA-SHARE
A community-wide clinical data exchange

* "Good to Great": Jim Collins, University of Colorado, Graduate School of Business, 2001
“Some said we would implement
Regional Community Connectivity... when pigs fly"
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