Effecting Change in Healthcare:

What's possible,
What's necessary,
And how do we do it in Rhode Island?

Jonathan Leviss, MD
Chief Medical Officer, RIQI
Physician, Thundermist Health Center
Clinical Asst. Prof. of Health Services, Policy & Practice, Brown University
Some questions you might have…

- What is the Rhode Island Quality Institute?
- How is RIQI helping to change healthcare in RI?
- Are we ready for change?
- Is the speaker a Rhode Islander?
- What is my role during this discussion?
Rhode Island Quality Institute is a center of collaborative innovation that advances health and healthcare transformation.

Our mission is to improve the quality, safety and value of healthcare and share knowledge that advances the field of healthcare improvement.
What We Do

CurrentCare
Operate the state’s Health Information Exchange, a secure electronic network that stores and exchanges patient care data.

RI REC
Provide hands-on assistance to providers as they adopt EHRs, meet Meaningful Use standards, and qualify for substantial subsidies for EHR use.

Beacon / Analytics
Help practices be successful under value-based payment systems by using data to assess clinical quality, patient health and patient experience.
If we keep practicing medicine as we know it today, healthcare will become an unbearable burden…. We are in a real race between healthcare innovation that can change this trend and the resistance to change….

- Elias Zerhouni, MD, former Director, NIH

…the post-PC world…[with] its power of many; its Gucci of gadgets; its cloud ecosystem; its ‘Arab Spring’ of apps; and its ubiquitous, calm computing; with disruptive innovations in biomedicine…

- Eric Silfen, MD, CMO, Philips Healthcare

Real healthcare reform has not yet begun, but it will.

- Jeffrey Immelt, CEO, General Electric

SAFE?

I look to the left,
I look to the right,
Before I ever
Move my feet.
No cars to the left,
No cars to the right,
I guess it’s safe
To cross the street.....
Put the knowledge in the system

The Transportation System works because the knowledge is in the system

(HIMSS 2013) Larry Weed, MD
CurrentCare: connecting the knowledge in the system

Secure repository containing healthcare data of enrolled patients (292,000)

- 6.7 million (29%) posted to patient records

27.4 million transactions processed

CurrentCare Viewer
Providers access the CurrentCare Viewer to view patient data

CurrentCare Hospital Alerts
PCPs receive email notification of ADT

Telehealth Alerts
Telehealth reports to providers/Viewer

A service of the Rhode Island Quality Institute
CurrentCare Information Sources

**Labs**

Hospital Labs
Hasbro Children’s Hospital
Kent Hospital
The Miriam Hospital
Newport Hospital

Independent Labs
- EAST SIDE CLINICAL LABORATORY
- Quest Diagnostics

**Medications**

- CVS
- CAREMARK

**Current Statistics**
- More than 285,000 patients; growing 8,000+ per month
- 27.4 million transactions processed; 6.7 million posted to CurrentCare patient records
- 35 data feeds with more in progress

**EHR Platforms Interoperable with CurrentCare**

Coming Soon:
- Polaris/Epichart
- NextGen HIE
- Allscripts
- Amazing Charts
- Essentia (Beh Health)

- NetSmart EHR
- GECentricity
- Greenway
CurrentCare Information Sources

**Clinical Summaries***
- Blackstone Valley Community Health Center
- Cumberland Primary Care
- Kristine Cunniff, DO
- Stuart V. Demirs, MD
- Family Health Sports Medicine
- Lynn Ho, MD
- NRI Medical Services
- South County Internal Medicine
- University Family Medicine
- UMG/Pontiac Ave.
- Warren Family Practice
- WellOne

**Coming Soon:**
- East Bay CAP
- Family Care/MHRI
- South County Hospital Family Medicine
- South Shore Center

**Adm/DC/Tfer***
- Hasbro Children’s Hospital
  - The Pediatric Division of Rhode Island Hospital
  - A Lifespan Partner
- Rhode Island Hospital
  - A Lifespan Partner
- KENT HOSPITAL
- The Miriam Hospital
  - A Lifespan Partner
- Newport Hospital
  - A Lifespan Partner
- Women & Infants

*Continuity of Care Document (CCD)  **Admission/Discharge/Transfer
### Chemistry

<table>
<thead>
<tr>
<th>Order Item</th>
<th>Cumulative</th>
<th>Result 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BMP</td>
<td></td>
<td>10/24/2011 15:00</td>
<td></td>
</tr>
<tr>
<td>Glu BUN Cr Electrolytes</td>
<td></td>
<td>09/21/2011 09:17</td>
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### Hematology

<table>
<thead>
<tr>
<th>Order Item</th>
<th>Cumulative</th>
<th>Result 1</th>
<th>Result 2</th>
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<tbody>
<tr>
<td>Type and Screen</td>
<td></td>
<td>09/21/2011 09:17</td>
<td></td>
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<tr>
<td>Differential Manual</td>
<td></td>
<td>09/21/2011 09:00</td>
<td>09/16/2011 16:00</td>
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<tr>
<td>CBC w Diff and PLT</td>
<td></td>
<td>09/16/2011 16:00</td>
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</table>
### Medications Started Last 90 Days

<table>
<thead>
<tr>
<th>Order Item</th>
<th>Directions</th>
<th>Qty Dispensed</th>
<th>Duration</th>
<th>Status</th>
<th>Source</th>
<th>Prescribed By</th>
<th>Date Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen 500 mg</td>
<td>2 tablets by mouth every 8 hours</td>
<td>100</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>Albert Puernini</td>
<td>10/11/2011</td>
</tr>
<tr>
<td>Acetaminophen 500 mg</td>
<td>1 tablet by mouth every 6 hours</td>
<td>30</td>
<td>15 days</td>
<td>Verified</td>
<td>RiteAid</td>
<td>Albert Puernini</td>
<td></td>
</tr>
<tr>
<td>Vicodin 5/500 mg</td>
<td>1 tablet by mouth every 6 hours</td>
<td>20</td>
<td>10 days</td>
<td>Verified</td>
<td>RiteAid</td>
<td>Albert Puernini</td>
<td></td>
</tr>
<tr>
<td>Amoxicillin 875 mg</td>
<td>1 tablet by mouth every 12 hours</td>
<td>100</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td></td>
</tr>
</tbody>
</table>

### Medications Started Past 4-12 Months

<table>
<thead>
<tr>
<th>Order Item</th>
<th>Directions</th>
<th>Qty Dispensed</th>
<th>Duration</th>
<th>Status</th>
<th>Source</th>
<th>Prescribed By</th>
<th>Date Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lopressin 40 mg</td>
<td>1 tablet daily</td>
<td>50</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td>08/09/2011</td>
</tr>
<tr>
<td>Lovastatin 20 mg</td>
<td>1 tablet daily</td>
<td>20</td>
<td>32 days</td>
<td>Inactive</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td>08/03/2011</td>
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<tr>
<td>Accupril 40 mg</td>
<td>1 tablet daily</td>
<td>100</td>
<td>821 days</td>
<td>Inactive</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td>06/13/2005</td>
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<tr>
<td>Lopressin 40 mg</td>
<td>1 tablet daily</td>
<td>50</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td></td>
</tr>
<tr>
<td>Lovastatin 20 mg</td>
<td>1 tablet daily</td>
<td>20</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td></td>
</tr>
<tr>
<td>Accupril 40 mg</td>
<td>1 tablet daily</td>
<td>100</td>
<td>30 days</td>
<td>Verified</td>
<td>Family Health and Sports Medicine</td>
<td>RiteAid</td>
<td></td>
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</table>
## Who is using the CurrentCare Viewer?

<table>
<thead>
<tr>
<th>Our colleagues in large and small practices find value in the Viewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchor Medical Associates</td>
</tr>
<tr>
<td>Bayside OBGYN</td>
</tr>
<tr>
<td>Blackstone Valley Community Health</td>
</tr>
<tr>
<td>East Bay Community Action Program</td>
</tr>
<tr>
<td>Daniel Hochberger, MD</td>
</tr>
<tr>
<td>Plus others...</td>
</tr>
</tbody>
</table>
What does a Hospital Alert look like?

19,208 Hospital Alerts sent (as of March 2013)
## Who is receiving Hospital Alerts?

Our colleagues in large and small practices find value in Hospital Alerts

<table>
<thead>
<tr>
<th>Practice Site</th>
<th>Provider(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquidneck</td>
<td>Hillside Family &amp; Community Medicine</td>
<td>South County Internal Medicine</td>
</tr>
<tr>
<td>Arcand Family Medicine</td>
<td>Thomas Puleo, MD</td>
<td><strong>University Family Medicine, Inc.</strong></td>
</tr>
<tr>
<td>Broadway Medical Treatment</td>
<td>Jamiel Ambrad, MD</td>
<td><strong>University Medical Group</strong></td>
</tr>
<tr>
<td><strong>Coastal Medical</strong></td>
<td>North Kingstown Family Practice</td>
<td>Valley Primary Care</td>
</tr>
<tr>
<td>Coventry Primary Care</td>
<td>NRI Community Services</td>
<td>Warren Family Practice Associates</td>
</tr>
<tr>
<td>Daniel Hochberger, MD</td>
<td>Ocean State Medical</td>
<td>Wickford Internists</td>
</tr>
<tr>
<td>East Bay Community Action</td>
<td>Peter Yasigian, MD Blackstone Valley Pediatric and Adolescent</td>
<td></td>
</tr>
</tbody>
</table>

**Plus others... 63 practice sites in all (215 providers)**

**Multiple Sites**
CurrentCare Telehealth Integration Project

VNA of Care New England

Data collected from devices in patient homes

Data monitored remotely by nurse

VNA nurse triggers message to CurrentCare with telehealth report attached

CurrentCare Viewer

Providers can view telehealth report

CurrentCare Telehealth Alerts

Providers receive email notification with Telehealth Report attached
Population specific alerts

Brigham and Women’s CARDIOVASCULAR Associates at Kent Hospital

2013 CMS Bundled Payments for Care Improvement participant

Financial and performance accountability for episodes of care

Assists families of the most vulnerable premature infants

Shown to reduce rehospitalizations after infants leave the NICU

Transition Home Plus Neonatal Follow-up Program

NEXT: Hospital Alerts for a community mental health organization with 2000+ patients
CurrentCare Metrics

Beacon Community Aggregate Values - 4Q 2012

Based on Data Reported to ONC on 1/15/2013
Released 2/8/2013

% of Patients Attaining Targeted Outcomes - Practice Aggregate

- Beacon Target

<table>
<thead>
<tr>
<th>Metric</th>
<th>Patients to Goal</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM A1c Poor Control (-9%)</td>
<td>697</td>
<td>4203</td>
<td>17533</td>
</tr>
<tr>
<td>DM BP Good Control (-130/80)</td>
<td>-455</td>
<td>7363</td>
<td>17269</td>
</tr>
<tr>
<td>DM LDL Good Control (-100 mg/dL)</td>
<td>217</td>
<td>8556</td>
<td>17544</td>
</tr>
<tr>
<td>Depression Screen</td>
<td>-48174</td>
<td>164867</td>
<td>33253</td>
</tr>
<tr>
<td>Tobacco Cessation</td>
<td>-1666</td>
<td>26606</td>
<td></td>
</tr>
</tbody>
</table>
Safer Care

“As a physician, I didn’t have the frustration of not having the medication information that clients don’t – or can’t – always provide. Client care and safety are improved....”

- Behavioral Health Physician
  Providence, RI
What RI providers are saying…

Up-to-the-Minute Information

“Previously, our office would learn of hospital admissions days or weeks after discharge. ...Hospital Alerts tells us what we need to know. And our patients love that we are aware of everything that’s happening with their care.”

- Nurse Care Manager,
  East Greenwich, RI
What RI providers are saying…

Better Care

“The…Viewer has already helped me improve patient care. I looked the patient up...and the lab results were right there. No need for duplicate testing, and I was able to discuss the results with the patient in a timely manner.”

-Primary Care Physician
Wakefield, RI
2012 Top 10 Query-based HIE (ONC report)
2013 1st HIE in the US to integrate behavioral health and substance abuse data (42 CFR Part 2)
Almost 1/3 of the RIers have “opted in” (45% of 65-74 yo)
ADT feeds from every major hospital and ED (all but 3 small ones)
80-90% of Medications *dispensed*
Over 80% of all lab results
Only HIE to integrate data from mult. EHR platforms (5+)
Analytics platform for the statewide PCMH project
What about the systems issues

“The most fundamental change that will be needed if hospitals are to make meaningful progress in error reduction is a cultural one.”

Leape, JAMA, 1994
Not everyone want CurrentCare

Comments we have heard:
• I don’t have time to log in to another system
• My practice doesn’t have that problem
  – Coordinating care after ED/Hospital admissions
  – Not having access to lab results ordered by another provider
  – Treating a patient who is taking an unknown medication
• The problem with CurrentCare is that patients have to be enrolled
• We don’t have computers in our exam rooms
Although hospital-based quality reporting and pay-for-performance have yielded some impressive results, it is uncertain whether the same will hold true in the performance of individual physicians. Underlying questions about individual performance include uncertainties about how to assess the influence of individual physicians in teams and systems of care and the role financial incentives should have in motivating physicians.”

Christine Cassel & Sachin Jain

Payment Reform May Change Physician Performance

Performance improvement requires that clinicians and patients be enabled to make better health care decisions…making it easy to do the right thing.

Clinicians and patients need information about patients' personal health and medical evidence relevant to their decisions.

Clinicians need environmental supports and financial incentives to choose diagnostic and therapeutic pathways that maximize the value of care.

Organizational arrangements must support collaboration, teamwork, and coordination of care.

David Blumenthal
Consumer forces

Smart Patients will push the many stakeholders in health to accelerate change as medicine adapts to a new work of information technology.

Mehmet Oz, MD
NYPresbyterian/Columbia Univ. (Topol)
Coming in 2013-14…(needed yesterday)

- Broader adoption (PCPs, specialists, behav health, VNAs…)
- More depth (labs, meds, EHRs…)
- More breadth (diagnostic imaging, d/c summaries, ECGs…)
- New Markets (consumer portal, consumer apps…)
- Proof of broad impact
“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”

R. Buckminster Fuller
Questions?