Plumbing
Plumbing vs. Fixtures
Plumbing vs. Fixtures vs. Use

Dr. Ignaz Semmelweis 1847

http://www.nytimes.com/2013/05/29/nyregion/hospitals-struggle-to-get-workers-to-wash-their-hands.html?_r=0

http://www.huffingtonpost.com/2015/03/20/doctors-handwashing_n_6910804.html
Common Challenges

• Interoperability
• Security & Privacy
• Stakeholder Trust
• Financial Uncertainty

(Adler-Milstein, DesRoches, & Jha, 2011; Frankel et al., 2013; Grossman et al., 2008; Kern et al., 2011; Vest, 2010).
HIEs (noun) Have A Few Strikes Against Them

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Organizations</th>
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<tbody>
<tr>
<td>1990’s</td>
<td>Community Health Information Networks (CHINS)</td>
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<tr>
<td>1998-2007</td>
<td>Regional Health Information Networks (RHIOs)</td>
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<td>2008-now</td>
<td>Health Information Organizations (HIOs)</td>
</tr>
<tr>
<td>2017</td>
<td>vs.</td>
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</table>

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Admit Discharge & Transfer (ADT) Use Case

ADT Notice triggers Care coordination

ALERT!

Schedule follow up visit within 7-14 days

Readmission Avoided

Hospital
A Multi-Stakeholder Problem

<table>
<thead>
<tr>
<th></th>
<th>Stakeholder A</th>
<th>Stakeholder B</th>
<th>Stakeholder C</th>
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<tbody>
<tr>
<td>Hospital</td>
<td></td>
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</tr>
<tr>
<td>Doctor</td>
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<td>$360</td>
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<tr>
<td>Health Plan</td>
<td></td>
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<td>$9,640</td>
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</table>

$(10,000)$
Financial Incentives

Health Systems

Physician Organization

Patient List
Patient1
Patient2
Patient3
...
PatientN

Physician Info
NPI#, practice, electronic address, etc
Accelerating Value

Financial Incentives or Disincentives

Use Case

Policy & Regulatory Levers
“Use Case Collection: Statewide ADT Notification Service”
Statewide Health Provider Directory

- Contains Electronic Service Information (ESI) used to route information to providers
- Flexibility to maintain multiple distribution points for single provider or single distribution for organization
- Manages organizations, providers and the multiple relationships between them
Active Care Relationship Service

**Patient Information**
- Source Patient ID
- First Name
- Middle Initial
- Last Name
- Suffix
- Date of Birth
- Gender
- SSN – Last 4 digits
- Address 1 & Address 2
- City, State, Zip
- Home & Mobile Phones

**Physician Information**
- NPI
- First Name
- Last Name
- Practice Unit ID
- Practice Unit Name
- Physician Organization ID
- Physician Org Name
1) Patient goes to hospital which sends message to TDSO then to MiHIN
2) MiHIN checks patient-provider attribution and identifies providers
3) MiHIN retrieves contact and delivery preference for each provider from HPD
4) Notifications routed to providers based on electronic address and preferences
New Statewide Use Cases

MED REC + Active Care Relationships + Statewide Health Provider Directory

Care Plan + Active Care Relationships + Statewide Health Provider Directory
Statewide ADT & Learning “Virtuous Cycles”

1. Assemble Experience Data
2. Analyze Data
3. Interpret Results
4. Take Action
5. Decision to Study
6. Tailored Messages to Decision-Makers

A Problem of Interest
Custom Tailored Messages

Health Plan Claims  Patient Activation  Readmission Risk

Data Enrichment

Joan's Specialist
Joan's Primary Care Provider
Joan's Hospital

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SiWP Service Data Flow

Statewide Consumer Directory

Joan Chen’s SCD Profile
Preferences for Data Sharing

Share Information with Patient Service

Medication Reconciliation Service

Joan’s Hospital

Joan’s Primary Care Provider

Joan’s Specialist

Research Repository

Clinical Trial

PHR

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Reducing Provider Burdens
Alignment of Quality Measures

<table>
<thead>
<tr>
<th>Set</th>
<th># of Measures</th>
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<tbody>
<tr>
<td>PQRS</td>
<td>254</td>
</tr>
<tr>
<td>EP eCQM</td>
<td>64</td>
</tr>
<tr>
<td>Medicaid Core Sets</td>
<td>45</td>
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<tr>
<td>HEDIS</td>
<td>78</td>
</tr>
<tr>
<td>QRS</td>
<td>43</td>
</tr>
<tr>
<td><strong>Overlap</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Set: PQRS, eCQM, HEDIS, Medicaid Core Sets, QRS, Overlap.
Current State of Supplemental Data Transfer

- PO 1: Allscripts
- PO 2: NextGen
- PO 3: eCW
- PO 4: Wellcentive
- PO 5: Meridian Format

Priority Health

HL7 Format

“Group to BCN” Format

HEDIS

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Simplifying Quality Data Collection

PO
Epic
Allscripts

Cerner

MIDIGATE®
inbox@direct.mihin.org
“Catch, Detach, Dispatch”

Supplemental Clinical Data File

“Group to BCN” Format

Meridian Format

HL7 Format

HEDIS

BlueCross BlueShield

Priority Health

MIDIGATE®

SNCF

NCQA

NCQA

NCQA

NCQA

NCQA
Questions?

Thank you

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