Measuring Interoperability in a Federated Network

Empirical transactions data, consistently self-reported quarterly since 2014

Scott Stuewe
President and CEO, DirectTrust
Measurement Goals

• Accurate
  • Ideally empirical data

• Meaningful
  • Maps to multiple value propositions

• Timely
  • Capture data that reflects recent changes

• Complete
  • Inpatient, Ambulatory, LTPAC, Other

• Consistent
  • Collect the same data over time
Measuring Interoperability in a Federated Network

**Facts about us:**
HISPs report only what they can see

**What we know:**
- Number of Addresses
- Number of Consumer/Patients
- Number of Organizations Connected
- Number of Provider Users
- Number of Messages

**What we WANT to know:**
- What Payloads?
- What Workflows?
- What Purposes or Use Cases?
- Where is the Traffic?
- Percentage “Response”?

**Anecdote from the CDC:**

<table>
<thead>
<tr>
<th>NHSN CDA Submission Growth</th>
<th>2018 Totals</th>
<th>2018%</th>
<th>2019 Totals</th>
<th>2019%</th>
<th>YOY Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA files submitted manually (via the UI)</td>
<td>1,242,988</td>
<td>62.89%</td>
<td>1,119,550</td>
<td>56.17%</td>
<td>-123,438</td>
<td>-9.93%</td>
</tr>
<tr>
<td>CDA files submitted via Direct</td>
<td>733,557</td>
<td>37.11%</td>
<td>873,437</td>
<td>43.80%</td>
<td>139,880</td>
<td>19.07%</td>
</tr>
<tr>
<td>Total number of CDA files submitted to NHSN</td>
<td>1,976,545</td>
<td>100%</td>
<td>1,992,987</td>
<td>100%</td>
<td>16,442</td>
<td>0.83%</td>
</tr>
</tbody>
</table>

In 2019, 7,058 healthcare facilities using the services of 71 vendors submitted 873,437 files over the Direct Trust network.
Measuring Interoperability in a Federated Network

DirectTrust™

C-Suite
Support

HISP

Provider Organization

38 HISPs

Over 300 Systems

238k+ Organizations

Millions of Users
(2.28 Million Addresses)

AHA Survey 6,146 Hospitals (63% is 3,871)
# Improving Measurement in Federated Approaches

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Examples/Analogies</th>
<th>Benefits</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys of Knowledgeable Resources</td>
<td>AHA Survey/ONC Data Brief</td>
<td>Consistent questions</td>
<td>Depends on participant knowing Hard to extrapolate volumes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good response rate</td>
<td>Hard to assess value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good measure of participation</td>
<td></td>
</tr>
<tr>
<td>Empirical data from Gateways (Self-reported)</td>
<td>DirectTrust HISP Metrics</td>
<td>Consistent questions</td>
<td>Self-reported data variable</td>
</tr>
<tr>
<td></td>
<td>Carequality Implementer Volume</td>
<td>Good measure of volume</td>
<td>Limited to volume, participation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good measure of participation</td>
<td></td>
</tr>
<tr>
<td>Build surveillance into Standard or Profile</td>
<td>IHE/XDS ATNA Audit Log</td>
<td>Assumed element of deployment</td>
<td>No mechanism for aggregation</td>
</tr>
<tr>
<td>Build surveillance into EHR (Certification requirement)</td>
<td>Meaningful Use, Quality Reporting</td>
<td>Accurate, timely</td>
<td>New work for EHR companies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complete (for Certified systems)</td>
<td>Possibly new work for HCOs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capture use-cases, payload, value</td>
<td></td>
</tr>
<tr>
<td>Mandatory Reporting of Measures from Health Care Organizations</td>
<td>Reporting Requirements</td>
<td>Could be complete, timely, capture use-cases, payload, and value</td>
<td>Likely seen as Burdensome</td>
</tr>
<tr>
<td>Statistically Significant Sampling of Care Organizations</td>
<td>None in our market</td>
<td>Benefits of mandatory reporting without burden</td>
<td>Costly to execute</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Measuring Interoperability in a Federated Network**                      |                                             |                                                                          |                                                                           |
Contact ONC

Scott Stuewe, 
President and CEO, DirectTrust 
Scott.Stuewe@DirectTrust.org 
@DirectTrustOrg

Phone: 202-690-7151

Health IT Feedback Form: 
https://www.healthit.gov/form/healthit-feedback-form

Twitter: @onc_healthIT

LinkedIn: Search “Office of the National Coordinator for Health Information Technology”

Subscribe to our weekly eblast at healthit.gov for the latest updates!