Interoperability and Patient Access in Healthcare

EHRs, Data Exchange, Regulations and Your Medical Record
Interoperability Today

- Confusing, duplicative, incomplete
- Many options/types – too many?
- Standards taking hold
- Feds pushing strongly
Types of Interoperability

- Individual Longitudinal Health Record
- Specialized/Departmental Data
- Between Care Settings
- Marketplace – Pop Health
Current Stats

- 88% of hospitals send records to ambulatory providers
- 80% of providers report Data Exchange improves practice
- 100% of hospitals/55% of practices use SHIN-NY

- 1 in 10 Patients Report Test Redo – missing data
- 78% of hospitals use more than one electronic method to send records
- About 40% used five or more methods to send records
Successfulness at Sharing Medical Data

- Within your own health system: 28% Extremely Successful, 41% Very Successful, Net Highly Successful: 69%
- With payers: 20% Extremely Successful, 38% Very Successful, Net Highly Successful: 58%
- With patients: 18% Extremely Successful, 39% Very Successful, Net Highly Successful: 57%
- With pharma: 14% Extremely Successful, 37% Very Successful, Net Highly Successful: 51%
- With other health systems: 8% Extremely Successful, 29% Very Successful, Net Highly Successful: 37%
- With other partners: 8% Extremely Successful, 27% Very Successful, Net Highly Successful: 35%
oh, so you are also implementing eHealth?
Effects of Interoperability Challenges

Interoperability Challenges Limit Organizational Efforts To...

(%) rating 5, 6, 7 where 7 is significantly limiting

- Improve workflow: 42%
- Enable new models of care: 41%
- Improve population health: 39%
- Reduce the cost of care: 36%
- Advance your capabilities: 36%
- Improve patient experience and engagement: 35%
- Improve care coordination: 34%
- Improve competitive position relative to other health systems: 30%
- Directly impact patient care: 29%
Current Options

Health Information Exchange/QE/RHIO

• SHIN-NY
  – QE delivers
  – Routing and oversight
  – Push Delivery
  – Aggregate
Current Options

SHIN-NY – Required QE Services

• Patient Record Lookup
• Alerts
• Secure Messaging
• Results Delivery
• Clinical Query
• Consent Management
Data Exchanges/Collaboratives

- Direct Trust
- Sequoia
  - eHealth Exchange
  - Carequality
- Commonwell
Data Exchanges/Collaboratives

• Direct Trust
  – Digital address for providers
  – Secure exchange – like email
  – National
  – CMS proposes to require provider digital address in NPPES
Data Exchanges/Collaboratives

- Sequoia - eHealth Exchange

<table>
<thead>
<tr>
<th>We connect:</th>
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<tbody>
<tr>
<td>All 50 States</td>
<td>70,000</td>
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<td>Medical Groups</td>
<td></td>
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<tr>
<td>Four Federal Agencies</td>
<td>3,400+</td>
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<td>(DoD, VA, CMS, SSA)</td>
<td>Dialysis Centers</td>
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<td>75% of U.S. Hospitals</td>
<td>8,300</td>
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<td>Pharmacies</td>
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<td>Supporting more than 120 million patients</td>
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<td>59 Regional and State HIEs</td>
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Data Exchanges/Collaboratives

- Commonwell
  - Cerner
  - Record locator

- Carequality
  - Epic – also has Care Everywhere
  - Network connector
Organizational Steps Toward Overcoming Interoperability Challenges

- Moving to a single, integrated EHR: 57%
- Hiring new talent: 44%
- Partnering with interoperability technology vendors: 40%
- Upskilling the analytics skill set of existing employees: 39%
- Leveraging Health Information Exchanges (HIEs): 38%
- Adopting healthcare exchange standards like HL7 FHIR®, DICOM, or IHE XDS: 37%
- Adopting a unified data governance approach: 33%
- Investing in self-service analytics tools/solutions: 31%
- Leveraging natural language processing/voice recognition: 28%
- Adopting an enterprise imaging strategy: 26%
- Adopting a formal integration strategy for connecting applications using APIs: 23%
- Investing in Artificial Intelligence or Machine Learning: 23%
- Investing in blockchain or distributed ledger technology: 9%
Standards

HL7
- Messaging
- Documents – C-CDA
- FHIR API
- Davinci Project
Standards

• Gravity Project

• DirectTrust starts push for an instant messaging standard
# Interoperability Standards and Protocols for Patient Data Interoperability

## Interoperability and Data Sharing Technologies

<table>
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<tr>
<th>Email</th>
<th>FHIR</th>
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<tbody>
<tr>
<td>TCP/IP</td>
<td>APIs</td>
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<td>DICOM</td>
<td>HTTP</td>
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<td>IHE</td>
<td>Web Services</td>
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<td>FTP</td>
<td>HL7</td>
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<tr>
<td>X12 and Other Application Protocols</td>
<td>Direct</td>
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<tr>
<td>Open EHR</td>
<td>Open HIE</td>
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Regulatory Environment

- CMS – Info blocking
- ONC – Open API
- TEFCA
- Patient Matching
CMS Proposal

- ADT Event Notification
- Claims Access through Open APIs
- Digital Contact Database
- Must connect to network – TEFCA
ONC Info Blocking

- Uses EHR Certification for leverage
- APIs
- Decides Fees allowable
- Information blocking exceptions
- Applications – register with providers
Your previous provider refused to share your electronic medical records, but not to worry—I was able to obtain all of your information online.”
CMS/ONC Interop Rules

• 5% of providers believe their organization is "very prepared.

• 17% of health care executives surveyed are "completely unaware" of the requirements.

* according to an Accenture survey,
CMS/ONC Interop Rules

• Ensure that technology and compliance leaders are familiar with the new rules.
• Assess and analyze the organization's current interoperability provisions.
• Complete gap analyses and develop remediation plans for a 12- to 18-month timeframe.
• Manage both internal and external communications to help health care professionals and consumers adapt to the new rules.
Interoperability Proving Ground

- open, community platform
- can share, learn, and be inspired by interoperability projects occurring
Seven Critical Domains of a Successful Interoperability Strategy

1. Patient Centricity
2. Business Capability/Function
3. Ecosystem Scope and Scale
4. Open API
5. Standards and Networks
6. Commercial Model
7. Performance/Availability

Organized Around the Patient Context and Their Information Across the Care Continuum

- Exchange data and work
- Accurate, full context diagnosis and treatment
- Enhanced care team productivity
- Enhanced patient experience
- Effective cost management
- Connected care

Source: Gartner
ID: 380260
TEFCA

Goals

• Provide Single on ramp
• EHI Securely follow you
• Nationwide scalability
TEFCA Proposed Structure

How Will the Common Agreement Work?

RCE provides oversight and governance for QHINs.

QHINs connect directly to each other to facilitate nationwide interoperability.

Each QHIN represents a variety of Participants that they connect together, serving a wide range of Participant Members and Individual Users.
Patient Matching

- No single ID allowed
- Differing algorithms – no standard
- Referential
- Nearly 20% of records are duplicates
Patient Access

• Apple Healthkit
• Google/Android
• Open API Access for any App
• Commons Project
• Privacy – Trusted Network Accreditation Program
Conclusions

• Uneven adoption across care settings
• Shifting regulations
• Health plans previously not sharing
• Vendor issues
• Beyond EHR data – SDOH, Claims, Images
• Lots of options – no single answer
• Can’t fit into workflow
Thank you.