HIEs and Pharmacy: State of the Industry

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Disclosure

Marsha Millonig is an employee of Catalyst Enterprises. The conflict of interest was resolved by peer review of the slide content. She declares no other conflicts of interest or financial interest in any product or service mentioned in this program, including grants, employment, gifts, and stock holdings. She is receiving an honorarium.

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Learning Objectives

Following this presentation, attendees should be able to:

1. Define a health insurance marketplace and health insurance exchange.
2. Explain the role of the exchanges in healthcare reform.
3. Describe the current state of HIEs, including the type of data being exchanged and who is using them.
4. Explain how each state is approaching the ACA requirement, including what type of exchange they will offer and how it is structured.
5. Describe how HIEs are being funded and sustained.
What is HIM and HIE?

• Health insurance marketplaces (HIM) organizations facilitating the purchase of health insurance in every state per ACA

• Health insurance exchange (HIE) is the electronic mobilization of healthcare information or data across organizations within a state, region, community or hospital system.
HIM

• Controversy here
• State have three structural choices:
  – part of an existing state agency or office (Operated by State)
  – as an independent public agency (Quasi-governmental)
  – as a non-profit entity (Non-profit)
HIM

• Can be:
  – Federally facilitated (27)
  – State facilitated (17)
  – In partnership (7)
  – As of 11/30/2013

• http://kff.org/health-reform/state-indicator/health-insurance-exchanges/
HIM

- Statistics for US and each state:
  - Eligible
  - Completed application
  - Qualify for Federal Assistance
  - Medicaid Eligible
  - Signed up for a plan

HIE: State of Industry

• HIE moves clinical information among disparate HI systems while maintaining data integrity
• Formal organizations providing this service are health information exchange organizations
• Data exchange also occurs in many organizations that are not formal health information exchange organizations
  – as between a hospital and affiliated independent practices.
Health Information Exchange

Mobilizing Health Information

The Internet

Standards, Specifications and Agreements for Secure Connections
E-Health Initiative

• Comprehensive survey of HIE since 2004
• Picture of progress and HIE growth
• American Recovery and Reinvestment Act (ARRA) in 2009
  – Funding for HIE
  – Tied to Meaningful Use of EHRs
  – Fueled growth
Overview of ARRA HIT Programs

Regional extension centers

Workforce training

Medicare and Medicaid incentives and penalties

State grants for health information exchange

Standards and certification framework

Privacy and security framework

Adoption of EHRs

Meaningful use of EHRs

Improved individual and population health outcomes
Increased transparency and efficiency
Improved ability to study and improve care delivery

Exchange of health information

Research to enhance HIT

American Society for Automation in Pharmacy
2014 Annual Conference
January 16–18 • Amelia Island, Fla. • www.asapnet.org • #ASAPAnnual
2013 Results from Survey on Health Data Exchange:

The Challenge to Connect

• www.ehidc.org
About eHealth Initiative

- Since 2001, eHealth Initiative is the only national, non-partisan group that represents all the stakeholders in healthcare. Represent over 15 different stakeholder groups and 39 states across the nation.
- Mission to promote use of information and technology in healthcare to improve quality, safety and efficiency.
- Last year, over 4500 individuals attended our events and 500+ individuals participated in our national councils and workgroups
- eHealth Initiative focuses its research, education and advocacy efforts in four areas:
  - Data and Analytics
  - IT Infrastructure to Support Accountable Care
  - Technology for Patients with Chronic Disease
  - Data Exchange & Interoperability
About the 2013 Survey

- 10th annual survey
- 199 of 315 identified organizations completed the survey
  - 90 community HIEs, 45 SDEs/state HIEs, 50 healthcare delivery organizations, others include public health, payers
- 91 organizations completed the survey in both 2011 and 2013
Stages of Development

**STAGE 7 Innovating**
Sustainable and fully operational health information organization. Demonstration of expansion of organization to provide value-add services, such as advanced analytics, quality reporting, clinical decision support, PACs reporting and EMS services.

**STAGE 6 Sustaining**
Fully operational health information organization; transmitting data that is being used by healthcare stakeholder and have sustainable business model.

**STAGE 5 Operating**
Fully operational health information organization; transmitting data that is being used by healthcare stakeholder.

**STAGE 4 Piloting**
Well under way with implementation—technical, financial and legal.

**STAGE 3 Planning**
Transferring vision, goal and objectives to tactics and business plan; defining your needs and requirements; securing funding.

**STAGE 2 Organizing**
Getting organized; defining shared vision, goals and objectives; identifying funding sources, setting up legal and governance structures.

**STAGE 1 Starting**
Recognition of the need for health information exchange among multiple stakeholders in your state, region or community.
Stage of Development - Organizations Responding in 2011 and 2013

Stage of Development

- Stage 7: 0 (2011), 0 (2013)

Note: The data for Stage 1 and Stage 2 in 2011 are not available.
Background on Respondents

- 84 have reached stage 5 (operational) or higher
  - Among past respondents, 27 more have reached stages 5, 6, or 7

- Who provides them with data?
  - Hospitals (160), ambulatory care providers (142), independent labs (85), community and/or public health clinics (82)

- Who accesses their data?
  - Ambulatory care providers (159), hospitals (145), community/public health clinics (105), behavioral or mental health (90)
2013 Key Findings

1. Achieving interoperability with disparate information systems is a major concern; sixty-eight initiatives have had to connect to more than 10 different systems.
2. To overcome interoperability challenges, exchanges would like to see standardized pricing and integration solutions from vendors.
3. Many exchanges are not sharing data with competing organizations.
4. Exchanges are focusing on functionalities to support health reform and advance analytics.
5. Patient engagement remains low amongst organizations exchanging data.
6. Patient consent for data exchange generally remains an all-or-nothing proposition.
7. In the last 2 years, more data exchange initiatives have become financially viable. However, hospitals and payers are still expected to fund most exchange activity.
1. Interoperability is a major concern

- 142 respondents cited interoperability as a pressing challenge
- 151 organizations have had to build interfaces with disparate systems
  - 68 have had to build 10 or more
  - 32 have had to build 25 or more
- Challenges to interoperability include the
  - financial costs of building interfaces (179)
  - difficulty constructing interfaces (169)
  - identifying and implementing standards (162)
10 Connections
2. Overcoming interoperability challenges

- Standardized pricing and integration solutions from vendors (124)
- Technology platforms capable of “plug-and-play” (113)
- Greater use of consensus-based standards by providers (113)
- Interoperability solutions that improve workflow (109)
3. Proprietary data sharing

- 33 data exchange efforts restrict participation to only those who are part of an existing network (i.e. private HIE)
- 58 have not connected to other networks such as a community HIE, SDE, or eHealth Exchange
<table>
<thead>
<tr>
<th>Current Functionalities – All Respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity to electronic health records</td>
<td>125</td>
</tr>
<tr>
<td>Health summaries for continuity of care</td>
<td>115</td>
</tr>
<tr>
<td>Master patient index</td>
<td>114</td>
</tr>
<tr>
<td>Results delivery (e.g. laboratory or diagnostic study results)</td>
<td>104</td>
</tr>
<tr>
<td>Provider directory</td>
<td>84</td>
</tr>
<tr>
<td>Connectivity to other health information exchanges, integrated delivery networks, etc.</td>
<td>77</td>
</tr>
<tr>
<td>Record locator service</td>
<td>77</td>
</tr>
<tr>
<td>Reporting to immunization registries</td>
<td>74</td>
</tr>
<tr>
<td>Alerts to providers (e.g. drug interactions, care transitions, etc.)</td>
<td>72</td>
</tr>
<tr>
<td>Reporting to disease registries</td>
<td>53</td>
</tr>
<tr>
<td>Analytics</td>
<td>49</td>
</tr>
<tr>
<td>Quality improvement reporting for clinicians or payers</td>
<td>43</td>
</tr>
<tr>
<td>Patient access to information through the exchange/patient portal</td>
<td>38</td>
</tr>
<tr>
<td>Reminders (e.g. screenings, appointments, etc.)</td>
<td>35</td>
</tr>
</tbody>
</table>
4. Functionalities support health reform

- What services are offered?
  - connectivity to EHRs (125)
  - health summaries for continuity of care (115)
  - MPI (114)
  - results delivery (104)
  - provider directory (84)

- These are considered core data exchange services
<table>
<thead>
<tr>
<th>Functionality</th>
<th>2011</th>
<th>2013</th>
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<td>44</td>
<td>64</td>
</tr>
<tr>
<td>Master patient index</td>
<td>45</td>
<td>64</td>
</tr>
<tr>
<td>Health summaries for continuity of care</td>
<td>30</td>
<td>62</td>
</tr>
<tr>
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<td>54</td>
</tr>
<tr>
<td>Record locator service</td>
<td>35</td>
<td>52</td>
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<tr>
<td>Provider directory</td>
<td>24</td>
<td>47</td>
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</tr>
<tr>
<td>Patient access to information through the exchange/patient portal</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>
4. Functionalities support health reform

- What services are planned?
  - Alerts to providers (83)
  - connectivity to other networks (83)
  - patient access to data (78)
  - analytics (74)
  - image exchange (69)

- Many of these functionalities (e.g. analytics, patient engagement) are critical for health reform
4. Functionalities support health reform

- In addition:
  - 65 participate in an ACO or plan to do so in the future
  - 90 use Direct
    - Transitions of care is the most common use case (65)
  - 30 are NOT planning to use Direct
Direct Project

• Direct Messages are like secure email messages Comply with RFC 5322
Direct Messaging

• Contents can be structured or unstructured - Text and other human-readable representations
  - Consolidated CDA (CCDA), CCD, CCR
  - PDF, TIFF
  - Office documents
  - HL7 lab results
  - IHE XDM specifications
5. Limited patient access

Offering Access to Patients

- 31 organizations offer patients access to their data
- 102 plan to offer in the future
- 56 have no plans to do so
5. Limited patient services

- Patient services
  - offer simple patient-centric services such as the ability to make appointments (24)
  - access educational materials (26)
  - request medication refills (25)

- 30 organizations make patient-reported data available to providers

- 85 want to incorporate patient-reported data in the future
6. Consent is all-or-nothing

- Opt-out is the most common consent model (115)
- 109 organizations do not offer patients the ability to limit sharing of their information based on data type or source.
  - controls for sensitive information are most common (43 of 109)
7. More initiatives are financially viable

Financially viable

- 52 initiatives have received sufficient revenue from participating entities to cover operating expenses (i.e. sustainable)

- How long did it take?
  - 24 achieved sustainability in 1-2 years
  - 22 took 3 or more years
Time to Sustainability

Number of Responses

Years

1 2 3 4 5
14 10 9 5 8

1 2 3 4 5
14 10 9 5 8

0 4 8 12 16

Years

Number of Responses

1 2 3 4 5
14 10 9 5 8

0 4 8 12 16
More Sustainability Since 2011

- Among respondents completing the survey in both 2011 and 2013, a significant number are more sustainable now
- 16 were sustainable in 2011
- 35 are sustainable today
Significant Increase in Revenue Since 2011

- $200,001 to $500,000: 5 (2011), 7 (2013)
- $500,001 to $1 million: 10 (2011), 5 (2013)
- $1 million to $5 million: 16 (2011), 30 (2013)
Unsustainable Models

- 51 organizations are not sustainable
  - 31 receive more than 50% of their funding from public sources
  - 22 are state designated entities (SDEs)
7. Hospitals and payers are expected to fund data exchange

- Who pays the most?
  - hospitals (79)
  - state or federal funding (64)
  - ambulatory care providers (38)
  - private payers (23)
  - Medicaid (15)
Future Expectations

- Who is expected to pay the most?
  - hospitals (97)
  - private payers (48)
  - ambulatory care providers (45)
  - Medicaid (33)
  - state/federal funding (32)
<table>
<thead>
<tr>
<th>Stakeholders Paying Fees/Dues to Participate</th>
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<tbody>
<tr>
<td>Hospitals</td>
<td>87</td>
</tr>
<tr>
<td>Ambulatory care providers (primary care or specialty care)</td>
<td>73</td>
</tr>
<tr>
<td>Behavioral or mental health providers</td>
<td>47</td>
</tr>
<tr>
<td>Community and/or public health clinics</td>
<td>45</td>
</tr>
<tr>
<td>Long-term care providers (hospice, skilled nursing facilities, etc.)</td>
<td>40</td>
</tr>
<tr>
<td>Public health departments (state or local)</td>
<td>33</td>
</tr>
<tr>
<td>Independent laboratories</td>
<td>31</td>
</tr>
<tr>
<td>Home health</td>
<td>29</td>
</tr>
<tr>
<td>Independent radiology/imaging centers</td>
<td>29</td>
</tr>
<tr>
<td>Private payers</td>
<td>28</td>
</tr>
</tbody>
</table>
7. Hospitals and payers are expected to fund data exchange

- Public funding is an important income source: 49 organizations derive more than 50%. 17 of these expect public funding to remain their most substantial source of income.
Thoughts on 2013:

- Addressing Interoperability Concerns
  - Suggestions vendors and providers impact through pricing and integration solutions.

- Reform is Opportunity to Show Value
  - New models and accountable care require complex connections and analysis

- True Barriers to Patient Engagement
  - Research on why services not offered. Is someone else addressing need? Privacy concerns?
Immunization Registries

- CDC calls them Immunization information systems (IIS)
- Confidential, population-based, computerized databases record all immunization doses administered by participating providers to persons residing within a given geopolitical area
- Tools to increase and sustain high vaccination coverage
  - Decision support at point of care
  - Population-based targeting vaccine-preventable illness
- National health objectives for 2020
  - Increase the proportion of children aged < 6 years in operational, population-based immunization registries
IMZ Registries

- HITECH part of ARRA includes immunization reporting as part of the meaningful use standards
- CDC defines functional standards:
  - http://www.cdc.gov/vaccines/programs/iis/func-stds.html
- Use HL7 standards to populate
- **HL7 VERSION 2.5.1: IMPLEMENTATION GUIDE FOR IMMUNIZATION MESSAGING, RELEASE 1.4 [3.7MB/292 PAGES]**
IMZ Registries

• While HL7 is the standard, some systems still report with proprietary but that is fading

• Even though reporting data is HL7, what is required by states and localities differs
  – Who must report
  – What must be reported
  – When it must be reported
  – How it must be reported
Efforts to Harmonize

• Assn State/Territorial Health Officers Report/Task Force

• The ultimate goal is to establish a nationwide network of federal/state/local population-based immunization registries that are capable of sharing information with other immunization systems and health information systems, while maintaining privacy and confidentiality in order to reduce vaccine preventable disease.
Pharmacy-Based IMZ

• Many manual: cumbersome, costly
• System vendors could implement solutions for HL7 for customers
• Surescript offers and IMZ reporting service
  – Nightly batch file according to each state specs
  – 7 days a week
Pharmacy-Based IMZ Future

• Surescripts business model evolution continues, may offer means for smaller providers to report
• From pharmacy system direct to each needed state—requires vendor support
• From pharmacy system through HIE
HIE & IMZ Registries

• Current

| Reporting to immunization registries | 74 |

• Added since 2011

| Reporting to immunization registries | 15 | 37 |
However…..

- Future unknown
- Sustainability questions re’ funding
- 48 responded they expect ambulatory providers to pay
- Will there be transaction costs? What?
- Pharmacy $$$?
But...

- Regardless of potential cost, figuring out HIE for pharmacy necessary for future patient care vision
Future HIT Environment for Pharmacy in the 21st Century & Beyond

Next Generation Pharmacy Systems
- Meet patient care, distribution & practice management needs

EHR & PHR through HIE

Insurers & Other Payers

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Source: J. Owens, APhA, from ASAP Meeting 1-2010
Bottom line...

• Keep looking ahead...

...stay flexible
As things can change quickly...
Thanks for Having Me!

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- 651-905-9002

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