Data Analytics Update

Health IT Policy Committee Meeting
January 14, 2014
Hospital and Professional Progress to Meaningful Use
Note: Categories are hierarchical and mutually exclusive. For example, a hospital that has attested and received AIU payment and is enrolled with an REC is counted only in the Attested MU category. See Data Sources and Definitions slides for more details.
Hospitals attesting to Meaningful Use, through November 2013

Note: Large = 400+ staffed beds; Medium = 100-399 staffed beds; Small = <100 staffed beds. Rural = non-metropolitan; Urban = metropolitan. See Data Sources and Definitions slides for more details.
Eligible professional progress to Meaningful Use, November 2013

Note: Categories are hierarchical and mutually exclusive. For example, a professional that has attested and received AIU payment and is enrolled with an REC is counted only in the Attested MU category. See Data Sources and Definitions slides for more details.
Professionals attesting to Meaningful Use, through November 2013
2014 Certification update
Hospitals attested to stage 1 MU by 2014 edition certification status of primary vendor

89% of EHRs that have attested to Stage 1 used a primary vendor that had any 2014 Edition product as of 12/31/13

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).

Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Hospitals attested to stage 1 MU by 2014 edition certification status of primary vendor

Vendor has 2011 edition product only:
- Healthland, Inc. 5%
- Indian Health Service 1%
- Prognosis Health Information Systems 1%
- QuadraMed Corporation 1%
- Other (43 vendors, <1% each) 4%

Vendor has 2014 edition product not meeting Base EHR definition:
- MEDHOST 1%
- Health Care Systems, Inc. 1%
- Other (5 vendors, <1% each) 1%

Vendor has 2014 edition product meeting Base EHR definition:
- MEDITECH 21%
- Cerner Corporation 14%
- Epic Systems Corporation 14%
- CPSI (Computer Programs and Systems), Inc. 11%
- McKesson 10%
- Healthcare Management Systems, Inc. 6%
- Allscripts 4%
- Siemens Medical Solutions USA Inc 5%
- NextGen Healthcare 1%
- GE Healthcare <1%

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).

Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Hospitals attested to stage 1 MU by size/type/location and 2014 edition certification status of primary vendor

- Large: 94% (Vendor has 2014 edition product(s) meeting Base EHR definition)
- Medium: 92% (Vendor has 2014 edition product(s) meeting Base EHR definition)
- Small Urban: 86% (Vendor has 2014 edition product(s) meeting Base EHR definition)
- Small Rural: 82% (Vendor has 2014 edition product(s) meeting Base EHR definition)
- Critical Access: 76% (Vendor has 2014 edition product(s) meeting Base EHR definition)

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Professionals attested to stage 1 MU by 2014 edition certification status of primary vendor

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Professionals attested to stage 1 MU by 2014 edition certification status of primary vendor

Vendor has 2011 edition product only:

- Practice Fusion: 3%
- Community Computer Service, Inc.: 1%
- Compulink: 1%
- AmazingCharts.com, Inc.: 1%
- BioMedix Vascular Solutions: 1%
- MedPlus, A Quest Diagnostics Company: 1%
- Integrated Practice Solutions, Inc.: 1%
- Other (420 vendors, <1% each): 17%

Vendor has 2014 edition product not meeting Base EHR definition:

- Eyefinity/OfficeMate: 2%
- Partners Healthcare System: 1%
- Other (17 vendors, <1% each): 2%

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Professionals attested to stage 1 MU by 2014 edition certification status of primary vendor, cont.

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).
Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Professionals attested to stage 1 MU by specialty and 2014 edition certification status of primary vendor

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).

Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
Professionals attested to stage 1 MU by specialty and 2014 edition certification status of primary vendor

Note: Primary EHR vendors are the vendors whose products are certified to the most 2011 Edition certification criteria in the provider’s EHR system (in cases where a provider used certified products from multiple vendors to attest).

Sources: ONC Certified HIT Products List (CHPL) (12/31/2013), CMS Attestation Data (11/30/2013).
New evidence on impacts of MU
New systematic review of health IT studies

Review of 493 studies published from July 2007 to August 2013 found:

- Meaningful use functionalities have predominantly positive effects on quality, safety, and efficiency outcomes.
- Health IT effects varied by type of outcome but were mostly positive overall.
- The Health IT literature is expanding rapidly.
- Future health IT evaluation studies need more details on how context and implementation affect value.


MU functionalities have predominantly positive effects on health care outcomes

Updated Systematic Review of Effects of Meaningful Use Functionalities on Quality, Safety and Efficiency:
% of Reviewed Studies By Study Outcome

- Positive: 60%
- Mixed-Positive: 24%
- Neutral: 9%
- Negative: 8%

Health IT evaluation studies, 2007-2013 (n=493). Positive defined as health IT improved key aspects of care but none worse off; Mixed-positive defined as positive effects of health IT outweighed the negative effects; Neutral defined as health IT not associated with change in outcome; Negative defined as negative effects of health IT on outcome.
MU functionalities have predominantly positive effects on health care outcomes.

Updated Systematic Review of Effects of Meaningful Use Functionalities on Quality, Safety and Efficiency: % of Reviewed Studies By Intervention and Study Outcome

Health IT evaluation studies, 2007-2013 (n=493). Positive defined as health IT improved key aspects of care but none worse off; Mixed-positive defined as positive effects of health IT outweighed the negative effects; Neutral defined as health IT not associated with change in outcome; Negative defined as negative effects of health IT on outcome.
Health IT evidence base is rapidly expanding

- 1000+ health IT studies published in peer-review since 1995
- Some MU functionalities like CDS, CPOE studied extensively
- Other functionalities related to health information exchange and patient access not as well-studied
- Reporting on context and implementation was poor
- Need more research on how health IT can be used to realize value


National physician survey finds key benefits from EHR use

Analysis of nationally representative survey of office based physicians

- Majority of physicians report EHR led to clinical, efficiency, and financial benefits
- Some types of benefits are experienced at lower rates
- Physicians using MU EHRs are more likely to report benefits, especially those with longer EHR experience

“Clinical Benefits of Electronic Health Record Use: National Findings”
King J, Patel V, Jamoom E, Furukawa MF. *Health Services Research* online 21 Dec 2013.

Jamoom E, Patel V, King J, Furukawa MF. NCHS data brief, no 129.
http://www.cdc.gov/nchs/data/databriefs/db129.htm
Percent of physicians with EHRs agreeing their EHR has the following impacts
2011

<table>
<thead>
<tr>
<th>Impact</th>
<th>EHR does not meet MU criteria or unknown</th>
<th>EHR meets MU criteria</th>
<th>EHR meets MU criteria with 2+ years EHR experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produces clinical benefits for my practice</td>
<td>79</td>
<td>88</td>
<td>92</td>
</tr>
<tr>
<td>My practice functions more efficiently</td>
<td>75</td>
<td>79</td>
<td>85</td>
</tr>
<tr>
<td>Produces financial benefits for my practice</td>
<td>55</td>
<td>67</td>
<td>72</td>
</tr>
</tbody>
</table>

Summary:
The majority of office-based physicians with EHRs reported their EHRs had clinical, efficiency, and financial benefits for their practice. Physicians with EHRs meeting MU criteria were more likely to report some benefits than physicians with other EHRs. Among physicians with MU EHRs, those with 2 or more years EHR experience were more likely to report benefits than those with less experience.
Physicians using MU EHRs more likely to report benefits from EHR use

<table>
<thead>
<tr>
<th>Benefit Description</th>
<th>EHR does not meet MU criteria or unknown</th>
<th>EHR meets MU criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, enhanced patient care</td>
<td>69</td>
<td>79</td>
</tr>
<tr>
<td>Helped you access patient chart remotely</td>
<td>62</td>
<td>64</td>
</tr>
<tr>
<td>alerted you to a potential medication error</td>
<td>55</td>
<td>65</td>
</tr>
<tr>
<td>Helped you order more on-formulary drugs</td>
<td>37</td>
<td>49</td>
</tr>
<tr>
<td>Reminded you to provide preventive care</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>Reminded you of clinical guidelines for chronic conditions</td>
<td>29</td>
<td>49</td>
</tr>
<tr>
<td>Helped you order fewer tests</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>Helped you identify needed lab tests</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>Facilitated direct communication with a patient</td>
<td>21</td>
<td>32</td>
</tr>
</tbody>
</table>

Physicians using MU EHRs with longer EHR experience more likely to report EHR benefits

<table>
<thead>
<tr>
<th>Benefit</th>
<th>1 year or less EHR experience</th>
<th>2 years or more EHR experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, enhanced patient care</td>
<td>57</td>
<td>85</td>
</tr>
<tr>
<td>Helped you access patient chart remotely</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td>Alerted you to a potential medication error</td>
<td>43</td>
<td>70</td>
</tr>
<tr>
<td>Alerted you to critical lab values</td>
<td>34</td>
<td>55</td>
</tr>
<tr>
<td>Helped you order more on-formulary drugs</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>Reminded you to provide preventive care</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td>Reminded you of clinical guidelines for chronic conditions</td>
<td>17</td>
<td>37</td>
</tr>
</tbody>
</table>

Data Source: CDC/NCHS, Physician Workflow study, 2011, N=1,727.
Thank you