Beyond EHR Adoption: Use of EHRs for Care Delivery Reform, Quality Improvement, and Care Coordination

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Panelists

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How do physicians with certified systems use their EHRs?

*Findings from the 2013 National Electronic Health Records Survey.*

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the Office of the National Coordinator for health information technology.
Research Objective

- To examine the extent to which physicians with a certified EHR system in 2012 were using their EHRs in 2013 by using survey information about EHR use and linking it to CMS’ EHR Incentive Program information.

EHR = Electronic Health Records; CMS = Centers for Medicare & Medicaid Services
HITECH Act

- Provides funds to eligible professionals to perform various tasks related to using and sharing patient health information.
- Participants must have a certified EHR system.
- More information is needed about how physicians with certified systems use their EHRs.

HITECH=Health Information Technology for Economic and Clinical Health; EHR =Electronic Health Records; CMS = Centers for Medicare & Medicaid Services
NEHRS data

- Limit analytical population to physicians that are eligible for the EHR Incentive Program.
  - Use of select advanced care processes (comparable to EHR Incentive Program MU requirements).
- Certified EHR systems in 2012
  - Defined by CMS’ EHR Incentive Program data

NEHRS = National Electronic Health Records Survey;
MU= Meaningful Use
Physicians in these analyses were classified as eligible if they met either of the following criteria:

- **Medicare MU eligible:** if the physician treats patients insured by Medicare
- **Medicaid MU eligible**
  - If at least 30% or more patients are insured by Medicaid
  - If pediatric specialty, at least 20% or more are insured by Medicaid

EHR: Electronic Health Records; MU: Meaningful Use
Categories of advanced care processes

**SAFETY**
- Computerized Provider Order Entry
  - For prescriptions
  - For lab orders
- Electronic Prescribing
- Clinical Decision Support
  - Drug interactions or contraindications warnings
  - Reminders for guideline-based interventions or screening tests

**PATIENT ENGAGEMENT**
- Patient Electronic Access
  - Patients receive an electronic copy of their health information
  - Patients can view, download or transmit information from their medical record
- Secure Messaging

**CARE COORDINATION/ELECTRONIC INFO EXCHANGE**
- Medication Reconciliation
- Sharing patient information electronically with other providers
- Electronic report to immunization registry
Population Studied: EHR Incentive Program eligible, office-based physicians that use any EHR system on the 2013 NEHRS (n=3,483).

- Data were linked to the CMS EHR Incentive Program to ascertain whether physicians had certified EHR technology (CEHRT) in 2012.

- Differences were examined across several EHR-related use categories: Safety, patient engagement, and care coordination/electronic information exchange.

- Marginal effects were calculated using multinomial logistic modeling to predict whether or not having a certified EHR in 2012 was associated with use of these specific functions and categories of EHR use.
Analysis

Control Variables:

- medical specialty: (primary care vs. not primary care)
- age: under 50 vs. 50 years or older
- physician size: 1, 2-5, 6-10, 11+
- ownership: physician, group owned, other
- region: Northeast, Midwest, South, West
- located in a MSA: Yes, No
### Match rate of the 2013 NEHRS to the 2012 CMS Attestation

<table>
<thead>
<tr>
<th></th>
<th>Matched to CMS*</th>
<th>Not Matched to CMS</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>MU Eligible</td>
<td>45.0</td>
<td>55.0</td>
<td>96.3</td>
</tr>
<tr>
<td>Not MU Eligible</td>
<td>1.9</td>
<td>98.1</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>42.2</td>
<td>47.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* 2013 NEHRS Survey respondents that were matched to 2012 Centers for Medicare & Medicaid Services EHR Incentive Program data in 2012. (n=4,307)
Proportion of MU-eligible physicians with an EHR using at least one computerized function in the category, by having a certified EHR in 2012, United States 2013

Note: All differences are significant (p<0.0001). Estimates are adjusted for age, primary care specialty, practice size, ownership, MSA status, and region
Safety-related EHR use by having a certified system in 2012, United States 2013

Note: All differences are significant (p<0.0001). Estimates are adjusted for age, primary care specialty, practice size, ownership, MSA status, and region

Patient engagement-related EHR use by having a certified system in 2012, United States 2013

Patient Engagement (at least 1):
- EHR-Not Certified: 73.6%
- EHR-Certified: 91.0%

Secure messaging with patients
- EHR-Not Certified: 49.8%
- EHR-Certified: 67.0%

Any patient electronic access (at least 1*)
- EHR-Not Certified: 70.5%
- EHR-Certified: 88.6%

*Providing patients with an electronic copy of their health information
- EHR-Not Certified: 67.7%
- EHR-Certified: 85.1%

*Provide patients the ability to view online, download, or transmit information from their...
- EHR-Not Certified: 40.6%
- EHR-Certified: 61.4%

Note: All differences are significant (p<0.0001). Estimates are adjusted for age, primary care specialty, practice size, ownership, MSA status, and region. Any patient electronic access includes the categories with (*)
Care coordination/Electronic information exchange-related EHR use by having a certified system in 2012

- **Care coordination and Electronic information exchange (at least 1):**
  - EHR-Not Certified: 53.5%
  - EHR-Certified: 91.8%

- **Medication Reconciliation:**
  - EHR-Not Certified: 40.2%
  - EHR-Certified: 86.2%

- **Sharing any patient health information electronically with other providers:**
  - EHR-Not Certified: 40.8%
  - EHR-Certified: 53.5%

- **Immunization registry:**
  - EHR-Not Certified: 0%
  - EHR-Certified: 25%

Note: All differences are significant (p<0.0001). Estimates are adjusted for age, primary care specialty, practice size, ownership, MSA status, and region.

Results

- In 2013, 96% of physicians were eligible for CMS’ EHR Incentive program.
  - 45% of these eligible physicians had certified EHR systems in 2012.
    - Most eligible physicians with a certified EHR in 2012 reported greater routine use of EHR functionalities related to safety, patient engagement, or care coordination in 2013 compared to physicians that did not have a certified EHR system in 2012 (p<0.01).

EHR =Electronic Health Records; CMS = Centers for Medicare & Medicaid Services
Discussion

• Physicians with CEHRT in 2012 had used more of the EHR functionalities associated with Safety, Patient Engagement, and Care Coordination.

• The biggest difference was appreciated in patient engagement activities (some not Incentive Program requirements until 2014).

• Many functionalities are tools of primary care physicians.
  ▪ May not be relevant to all specialists (e.g., immunization registry reporting, e-Rx).

• Differences may also be related to the survey respondent and their interpretation of EHR functionalities.
Limitations

Temporal limitations:
- May have a CEHRT but did not attest in 2012, leading to misclassification.
  - Underreport having CEHRT
  - Underestimate the association between use of advanced processes and certified health IT.
- Eligibility information was determined in 2013
  - Changes in eligibility before survey response are not accounted.

Self report:
- Data from the NEHRS are self-report and proxy responses for physicians are accepted.
Implications for Policy Delivery, and Practice

- First study to link survey data to CMS’ EHR Incentive Program data.
- The certification program requires that certified health IT products have certain functionalities designed to promote better care, smarter spending, and healthier people.
- Physicians with certified systems are more likely to perform tasks that moves health care delivery toward this triple aim.
Acknowledgements

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- For any questions about this study please contact:
  - Eric Jamoom – ejamoom@cdc.gov
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