Adoption of Health Information Technology among U.S. Ambulatory and Long-term Care Providers

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Background

• The 2009 American Recovery and Reinvestment Act (ARRA)
  – Meaningful use incentives

• The 2010 Affordable Care Act
  – Accountable care organizations
  – Bundled payment initiative
Objectives

• To examine adoption of electronic health record (EHR) systems among ambulatory and long-term care providers

• To examine whether physicians’ EHRs meet MU criteria

• To examine the current state of health information exchange in physicians’ offices and residential care facilities
<table>
<thead>
<tr>
<th>Survey</th>
<th>Type of provider</th>
<th>Data year analyzed</th>
<th>Average responding sample size</th>
<th>Data collection method</th>
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<tr>
<td>NHAMCS</td>
<td>Hospital outpatient department (OPD) and emergency departments (ED)</td>
<td>2001-2010</td>
<td>480 hospitals</td>
<td>Personal interview</td>
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<td>NNHS</td>
<td>Nursing homes</td>
<td>2004</td>
<td>1,200 nursing homes</td>
<td>Computer-assisted personal interview</td>
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<td>NHHCS</td>
<td>Hospices and home health agencies</td>
<td>2007</td>
<td>1,000 agencies</td>
<td>Self-administered questionnaire and computer-assisted personal interview</td>
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<td>NSRCF</td>
<td>Residential care facilities</td>
<td>2010</td>
<td>2,300 facilities</td>
<td>Computer-assisted personal interview</td>
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EMR/EHR measures

• Any EMR/EHR system
  – “Yes” to the question “Does this _____ use EMR/EHR (not including billing records)?”

• Basic system

• Fully functional system
Meaningful use measures

• Physicians’ readiness for 10 of 15 Stage 1 meaningful use objectives

• Physicians and residential care facilities exchange of health information
Percent of ambulatory care providers using any EMR/EHR systems, by setting: United States, 2001-2010, and preliminary 2011

Source: CDC/NCHS, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey
Percent of ambulatory care providers with basic systems, by setting: United States, 2007-2010, and preliminary 2011

Source: CDC/NCHS, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey

* Figure does not meet standards of reliability or precision.
Source: CDC/NCHS, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey
EHR adoption in long-term care settings

• 2004 National Nursing Home Survey
  – Any EMR/EHR: 42.7%
  – Basic system: 19.9%

• 2007 National Home and Hospice Care Survey
  – Any EMR/EHR: 41.0%
  – Basic system: 9.9%

• 2010 National Survey of Residential Care Facilities
  – Any EMR/EHR: 17.4%
  – Basic system: 3.0%
Physicians’ Readiness for 10 Stage 1 Core Set Objectives by Intention to Apply, 2011

- Intention to apply, ready: 10.5%
- Intention to apply, not ready: 40.7%
- Not applying, ready: 0.2%
- Not applying, not ready: 15.8%
- Uncertain if applying, ready: 3.8%
- Uncertain if applying, not ready: 29.0%

SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey.
Health information exchange

Physicians’ offices
2011 NAMCS mail survey

- 29.4% of physicians electronically exchanged patient clinical summary

- Mechanisms
  - EMR/EHR vendor: 64.2%
  - Hospital-based systems: 27.5%
  - Secure email attachment: 19.5%
  - Other mechanisms or unknown: 15.1%
  - Health information organization or state exchange: 4.6%
Health information exchange (cont.)

Long-term care setting
2010 NSRCF, percentage of residential care facilities supporting electronic health information exchange with:

- Pharmacy: 8.2%
- Physicians: 7.4%
- Corporate office: 5.6%
- Hospital: 5.4%
- Nursing home: 4.7%
- Laboratory: 4.4%
- Other health or long-term care provider: 3.7%
- Resident’s personal health record: 3.4%
- Public health reporting: 2.9%
- One or more specified providers: 15.5%
Conclusions

• Increasing trend for adoption of any EMR/EHR systems and basic systems in ambulatory care settings

• Adoption of any EMR/EHR systems in hospital ambulatory care settings was higher than physicians’ offices

• Significant increase in adoption of fully functional systems in hospital ambulatory care settings between 2009 and 2010

• Adoption in long-term care settings varies
Conclusions (cont.)

• In 2011, few physicians both intended to apply for the meaningful use incentives and had EHRs with the capabilities to support 2/3 of the stage 1 core objectives.

• Less than 1/3 of physicians exchanged patient clinical summaries

• Few residential care facilities supported electronic health information exchanged with other providers
Policy implications

• More widespread adoption is needed for physicians to meet the federal schedule for meaningful use incentives

• EHR adoption by long-term care providers is essential in care coordination
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