Challenges with Meaningful Use

EHR Satisfaction & Usability Diminishing

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Conflict of Interest Disclosure
Alan Brookstone, MD

Has no real or apparent conflicts of interest to report.
Conflict of Interest Disclosure
William Underwood, MPH

• Ownership Interest (stocks, stock options or other ownership interest excluding diversified mutual funds):
  – Small holdings in GE
Objectives

1. Describe barriers to achieving meaningful use - the clinician's perspective

2. Identify how the variability of EHR system usability impacts specific meaningful use measures

3. Recognize how factors (such as training) impact the user experience and insights into the training needs of clinicians in order to optimize the ability to meet meaningful use

4. List the strategies to mediate the challenges presented in this presentation

5. Discuss insights on the performance of EHR systems across practice sizes and specialties using a meaningful use scorecard
Methodology

- 139-question online survey on nationally certified EHR use and satisfaction
- 2010 - CCHIT and ONC-ATCB certification used to identify EHRs
- Survey expanded to 155 questions in 2012 to evaluate MU Stage 2 criteria
- May skip or answer ‘do not know’ to questions
- Data is continuously collected and updated on www.AmericanEHR.com
Data

• Surveys conducted in conjunction with 10 different professional societies between March 2010 and December 2012

• Worked with each society to identify appropriate membership to be surveyed

• Clinicians verified by their professional society or via the AMA’s Physician Verification Service (PVS)

• Survey distributed to users and non-users of EHRs as EHR usage information by society members not available
## Categories & Specialties (n = 4,279)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Specialties</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care</td>
<td>General Internal Medicine, General Practice/Family Practice, General Pediatrics, Geriatrics, Adolescent Medicine</td>
<td>1,899</td>
</tr>
<tr>
<td>Medical Specialties</td>
<td>Including medical and pediatric sub-specialties</td>
<td>1,273</td>
</tr>
<tr>
<td>Surgery</td>
<td>General surgery, OBGYN and surgical sub-specialties</td>
<td>697</td>
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<tr>
<td>Hospital Medicine</td>
<td>Emergency Medicine, Critical care medicine, Hospital Medicine/Hospitalists, Neonatal/Perinatal medicine, Radiation Oncology, Anesthesiology</td>
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<tr>
<td>Diagnostic</td>
<td>Radiology and Pathology</td>
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<tr>
<td>Other</td>
<td>Ophthalmology, Psychiatry, Community Health, Sports Medicine</td>
<td>143</td>
</tr>
</tbody>
</table>
Size of Practice – FTE Physician Respondents

- FTE Physicians 1-3: 41%
- FTE Physicians 4-10: 30%
- FTE Physicians 11-25: 17%
- FTE Physicians 25+: 12%

- Practices of 10 physicians or less: 71%
- Solo practice: 23%
Intention to Participate in the Meaningful Use Incentive Program

- Yes: 82%
- No: 28%
- Do Not Know: 12%

2010 (n=408)
2011 (n=1498)
2012 (n=1494)
Top 10 EHR Systems by Overall User Satisfaction

Average rating 3.39/5  
n=4,029

Source: AmericanEHR Partners – Overall EHR User Satisfaction as of January 11, 2012
Top 10 Ambulatory EHR Products by Frequency of Attestation - 2012

Source: CMS Meaningful Use Attestation Data – Attestation Year 2011. Limited to ambulatory EHRs up to and including October 2012 (n=117,539)
EHR Products by Satisfaction & Attestation

- 3 [Top 10] EHR Products by user satisfaction (e-MDs, MEDENT, Practice Fusion) are also Top 10 products by attestation (2012)

- Average satisfaction rating - 3.39/5 (n=4,029)

- These EHRs comprise 6.5% of attestations
Would you Recommend this Product to a Colleague?

- Yes: 45%
- No: 24%
- Do Not Know: 39%

39% would not recommend their EHR to a colleague.
Would you Purchase this EHR Again?

- 2010 (n=1263)
- 2011 (n=1500)
- 2012 (n=1416)

- 42% in 2010
- 38% in 2011
- 25% in 2012

38% would not purchase their EHR again.
User Feedback - Workload

• The promise that the EHR will reduce **workload** and improve error rates and patient care has not materialized.

*Oct 2012 – Oncologist Hematologist – 7 FTE – Community Health Center*
### Satisfaction With Ability to Decrease Workload

<table>
<thead>
<tr>
<th></th>
<th>2010 (n=1158)</th>
<th>2011 (n=1500)</th>
<th>2012 (n=1414)</th>
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</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neither</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied</td>
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<td></td>
</tr>
<tr>
<td>Very Satisfied</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do Not Know</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15% increase in very dissatisfied users from 2010-2012
User Feedback - Productivity

• Changing to this EHR has decreased productivity and markedly increased time to complete documentation

Nov 2012 – General Internal Medicine – 6 Physician Multi-specialty clinic
Length of time to overcome initial productivity challenges typical with beginning to use an EHR system?

- 32% have not returned to initial productivity levels in 2012.
Satisfaction With Features and Functionality

- **Dissatisfied**: 20% (2010), 32% (2011), 61% (2012)
- **Satisfied**: 61% (2010), 51% (2011), 20% (2012)

- **Neither**: 20% (2010), 32% (2011), 51% (2012)

- **Do Not Know**: 20% (2010), 32% (2011), 51% (2012)

12% increase in dissatisfaction from 2010-2012
Average Satisfaction With Features and Functionality Over Time for Three Most Rated EHR Products
Satisfaction With Ease of Use

- Dissatisfied: 23%
- Neither: 37%
- Satisfied: 61%
- Do Not Know: 48%

14% increase in dissatisfaction from 2010-2012
Average Satisfaction with Ease of Use Over Time for 3 Most Rated EHR Products
Basic Functionality - How Easy or Difficult is it to Document a Progress Note for Each Encounter

- 13% found it difficult (2010)
- 21% found it difficult (2011)
- 8% increase in difficulty from 2010-2012
Intermediate Functionality - How Easy or Difficult is it to Use Clinical Decision Support

2010 (n=1181)  
2011 (n=1505)  
2012 (n=1461)

2% increase in difficulty 2010-2012
26% do not know
User Feedback - Patient Care

• The workflow is horrible! "Task" has become a 4 letter word. I’ve added several hours a week to my workload, and I do not feel that patient care has improved.

Feb 2011 – Nephrologist – 5 FTE – Private Ambulatory Clinic
Satisfaction with Ability to Improve Patient Care

10% increase in very dissatisfied users from 2010-2012

Percent
Satisfaction with Ability to Improve Patient Care by Specialty Group

- **Primary care** - most satisfied
- **Surgical specialty** - least satisfied

**Primary Care (n=1813)**
- Satisfied: 23%
- Very Satisfied: 20%
- Dissatisfied: 12%
- Very Dissatisfied: 13%

**Medical Specialty (n=1204)**
- Satisfied: 25%
- Very Satisfied: 20%
- Dissatisfied: 15%
- Very Dissatisfied: 12%

**Surgical Specialty (n=660)**
- Satisfied: 27%
- Very Satisfied: 23%
- Dissatisfied: 18%
- Very Dissatisfied: 14%

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Average Satisfaction with the Ability to Improve Patient Care by Specialty Group Over Time

- **Primary Care**: 3.57, 3.48, 3.23
- **Medical Specialty**: 3.30, 2.94, 2.86
- **Surgical**:

Satisfaction levels decreased for all specialty groups.
User Feedback - Patient Portals

• We have used our system over many years so we have upgraded as we have gone along. One of our next upgrades will be to add a patient portal.

*July 2011 – General Internal Medicine – 3 Physician Private Ambulatory Clinic*
Does your Practice Use a Patient Portal?

2010 (n=407)
2011 (n=1500)
2012 (n=1419)

20% increase in use of patient portals 2010-2012
User Feedback - Support

• I have continued to visit with others and all agree that it is the **support and technical backup** that makes a good EHR company. Our EHR put all of the other companies to shame.

*April 2010 – General Internal Medicine – 1 FTE Private Ambulatory Care Clinic*
Overall Satisfaction with Customer Support

- Dissatisfied: 22% (2010), 33% (2011), 46% (2012)
- Neither: 52% (2010), 46% (2011), 46% (2012)
- Satisfied: 22% (2010), 33% (2011), 46% (2012)
- Do Not Know: 52% (2010), 46% (2011), 46% (2012)

11% increase in dissatisfaction from 2010-2012
Satisfaction increased 2012
User Feedback - Training

• Our biggest problem has been vendor support and **lack of training**. We have requested numerous times for in house training and can’t get anyone to come out. We are turning now to our RECs to help us capture the information for Meaningful Use. Hopefully they will be able to help us.

*Dec 2012 – Pediatrician – 2 FTE Private Ambulatory Care Clinic*
Ease of Use: Importing a Medication List from an External Source by Length of Initial Training (n=650)

Correlation of Training Duration with EHR Usability and Satisfaction
AmericanEHR Partners
October 2011

Overall EHR User Satisfaction

10% increase in very dissatisfied users from 2010-2012
Selected Observations

• Satisfaction and usability ratings are dropping
  – This holds true regardless of specialty type and across multiple vendors

• Patient portals are increasingly being implemented
  – Potential positive impact on patient engagement

• Providers struggling with workload and productivity
Hypotheses

• Why is this happening?
  – Speed of change - Too much too fast
  – Different populations - Different expectations
    e.g. early adopters vs. mid-late majority
  – Usability issues with EHR products
  – Specialty related problems

• Will clinicians adopt and embrace MU Stages 2 & 3?
Recommendations

• Increase awareness of trends and issues regarding EHR satisfaction

• Government and vendors need to manage and address problems
  – Design programs that fit today’s providers

• Initial and follow up training
  – Train users at all stages of adoption

• Improve existing technology rather than just add new technologies
  – User satisfaction with basic functionality is not improving, it is declining

• Re-balance workload within the practice
  – Clinicians have limited capacity to take on new tasks
  – Payment models impact financial ability for providers to add to workload

If not addressed, clinician satisfaction and willingness to use systems will continue to decrease
Thank You!

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Supplemental Data & Clinician Comments
Data Sample \((n = 4,301)\)

<table>
<thead>
<tr>
<th>Professional Societies</th>
<th>Respondents</th>
</tr>
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<tbody>
<tr>
<td>American Medical Association</td>
<td>1,284</td>
</tr>
<tr>
<td>American Academy of Allergy Asthma &amp; Immunology</td>
<td>155</td>
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<tr>
<td>American College of Physicians</td>
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<td>American College of Surgeons</td>
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<tr>
<td>American Osteopathic Association</td>
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<tr>
<td>American Society of Clinical Oncology</td>
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<tr>
<td>Infectious Diseases Society of America</td>
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<tr>
<td>Renal Physicians Association</td>
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<tr>
<td>Other – American Academy of Physician Assistants / Organic</td>
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## Practice Type ($n = 4,106$)

<table>
<thead>
<tr>
<th>Practice Type</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic medical center (AMC)/medical school</td>
<td>643</td>
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<tr>
<td>Community health center/clinic</td>
<td>160</td>
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<tr>
<td>Federal government hospital (e.g. Military or VA)</td>
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</tr>
<tr>
<td>Multispecialty clinic</td>
<td>538</td>
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<tr>
<td>Nursing home</td>
<td>6</td>
</tr>
<tr>
<td>Private ambulatory care office</td>
<td>1,660</td>
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<tr>
<td>Private community hospital (excluding AMC)</td>
<td>352</td>
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<tr>
<td>State or local government hospital</td>
<td>41</td>
</tr>
<tr>
<td>Hospital Owned Ambulatory Practice</td>
<td>278</td>
</tr>
<tr>
<td>Other</td>
<td>294</td>
</tr>
</tbody>
</table>
Unexpected Events, Problems, or Costs after Initial Contract for EHR System was Signed

- **2010 (n=1051)**: 27.02%
- **2011 (n=504)**: 36.40%
- **2012 (n=717)**: 56.07%

36.4% had unexpected events, problems or costs in 2012.
Ability to Reconcile an Imported Medication List with Medications Listed in a Patient Record

- 2010 (n=410)
- 2011 (n=1505)
- 2012 (n=1445)

Percent:
- Difficult: 36% (2010), 28% (2011), 28% (2012)
- Neither: 37% (2010), 29% (2011), 32% (2012)
- Do Not Know: 0% (2010), 0% (2011), 0% (2012)
Ability to Generate a List of All Patients with a Chronic Condition

- Difficult: 21% (2010), 26% (2011), 24% (2012), 21% (Do Not Know)
- Neither: 21% (2010), 21% (2011)
- Do Not Know: 2010 (n=1159), 2011 (n=1501), 2012 (n=1423)

Improvement of 5% from 2011-2012
User Feedback - Workload

• This system is extremely dysfunctional, adds to **workload**, and has the potential to create dangerous patient situations. It is completely non-intuitive and does not generate any useful population-based data for our facility.

Jan 2011 – Infectious Diseases – 8 FTE - Academic Medical Centre
User Feedback - Productivity

• I definitely feel we made a good choice. The work for a successful implementation is tremendous however. Still **decreased productivity** but I anticipate things will improve. Was able to meet MU and get reimbursement for same very quickly. REC center and special training provided by EHR vendor helped a lot.

*Nov 2012 – General Internal Medicine – 2 Physician Private Ambulatory Clinic*
User Feedback - Patient Care

• I do house calls on elderly patients. Most of the Meaningful Use criteria are time-consuming to enter and don’t improve patient care. For example, it doesn’t matter if a 90 year old with dementia is a former smoker or never smoked.

Oct 2012 – Geriatrician – 50 FTE – Academic Medical Center
User Feedback - Patient Portals

• We have used our system over many years so we have upgraded as we have gone along. One of our next upgrades will be to add a patient portal.

July 2011 – General Internal Medicine – 3 Physician Private Ambulatory Clinic
User Feedback - Support

• Even after 3 years, the physician time per patient encounter is longer than prior, but many benefits to practice. Importance of vendor support we found to be critical, but costly.

April 2010 – Gastroenterologist – 3 FTE Private Ambulatory Care Clinic
User Feedback - Training

• [The EHR Vendor] **Never trained** us properly and sent a representative up for three days only. Rest by an unsuccessful attempt at telephone conferencing where half of the time was spent trying to get their system to work and little time actually educating us.

*Dec 2012 – OBGYN – 1 FTE Private Ambulatory Care Clinic*