Dr. Peters has declared no conflicts of interest related to the content of his presentation.
Practice Management in an Electronic Environment

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NAMDRC 2013
Disclosure

- No financial conflicts
- No off-label usages
- If specific vendors are named, will be only for general comparative purposes
Practice Management

- Overview Electronic Medical Record (EMR) environment
- Review basic and comprehensive features of EMR
- Assess benefits, risks, economic factors
- Review external regulatory factors, incentives, burdens
EMR vs. EHR

EMR:
- Legal record
- Clinical repository
- Documentation
- Orders
- Owned by provider

EHR:
- Interoperability
- Sharing across organizations
- Data from multiple caregivers
- Access by patient

For CMS, “certified EHR” implies Meaningful Use
EMR Benefits

- Timely, available
- Completeness, legibility, accuracy
- Safety, e.g. allergy checking
- Clinical Decision Support (CDS)
- Compliance with legislative, regulatory, coding, billing requirements
- Track and report Quality metrics
Desirable Functions of EMR

- Inviting interface, automate clerical tasks
- Capture data, information (e.g. diagnoses, allergies, meds, hospital charting)
- Results (labs, reports)
- Order Entry (CPOE) and Clinical Decision Support (CDS)
- Electronic availability, connectivity
- Patient support (e.g. access to records, disease management)
- Administrative process support
- Facilitate reporting, compliance
**EHR Adoption**

Decker SL et al. Health Affairs 2012;31:1108–14

**US Physicians With Electronic Health Record (EHR) Systems, 2002–11**

**Percent (unadjusted)**

- Any EHR
- Basic EHR

**Source** Authors’ analysis of data from the National Ambulatory Medical Care Survey, 2002–11.

**Notes** Numbers are unadjusted. “Any EHR” use is explained in the text. Basic EHR systems have the following functionalities: recording patient demographic information, clinical notes, and patient problem lists; viewing laboratory and imaging results; and using computerized prescription ordering.
EHR Adoption
Decker SL et al. Health Affairs 2012;31:1108–14

US Physicians With Any Electronic Health Record (EHR) System Or With A Basic EHR System, By Practice Size, 2002–11

Percent (unadjusted)

- 10 or more MDs with any EHR
- 3–9 MDs with any EHR
- 1–2 MDs with any EHR
- 10 or more MDs with basic EHR
- 3–9 MDs with basic EHR
- 1–2 MDs with basic EHR

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011
Hospital EHR Adoption

Trends in EHR adoption show increasing use of advanced functionality.

Figure 3: Percent of non-federal acute care hospitals with adoption of EHR systems by level of functionality: 2008-2011

- 2008: 13.4%
  - Comprehensive EHR: 1.6%
  - Basic EHR with Clinician Notes: 7.8%
  - Basic EHR without Clinician Notes: 4.0%
- 2009: 16.1%
  - Comprehensive EHR: 2.8*
  - Basic EHR with Clinician Notes: 9.4*
  - Basic EHR without Clinician Notes: 3.9
- 2010: 19.1%
  - Comprehensive EHR: 3.6
  - Basic EHR with Clinician Notes: 12.0*
  - Basic EHR without Clinician Notes: 3.5
- 2011: 34.8%
  - Comprehensive EHR: 8.8*
  - Basic EHR with Clinician Notes: 18.8*
  - Basic EHR without Clinician Notes: 7.2*
Which one of the following is true regarding EMR adoption in the United States?

A. Of groups >10, only 25% have basic EMR in outpatient practice
B. More than 50% of hospitals have a comprehensive EMR
C. A portal for patient access is an expectation of an Electronic Health Record
D. Most EMR vendors can share results directly
E. Health Information Exchange (HIE) national standards are well-established for sharing of results and reports
<table>
<thead>
<tr>
<th>VITALS/INTAKE-OUTPUT(MD)</th>
<th>Most Recent</th>
<th>SMH 13 Nov 10</th>
<th>SMH 12 Nov 10</th>
<th>SMH 11 Nov 10</th>
<th>SMH 10 Nov 10</th>
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<td>One Day Columns</td>
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<td>Vitals Meas.</td>
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<td>Vital Signs(MD View)</td>
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<td>Pulse Rate/min</td>
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<td>73 @01</td>
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<td>46 @03</td>
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<td>Respiratory Rate/min</td>
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<td>26 @01</td>
<td>24 @01</td>
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<td>SpO2 (%)</td>
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<td><strong>Diet</strong></td>
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<td>31.4 *</td>
<td>31.4 *</td>
<td>33.4 *</td>
<td>32.2 * @08</td>
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<td>5.2</td>
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<td>13.5 *</td>
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<td>Platelet Count..............2097 ROCLIS</td>
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<td>116 *</td>
<td>148 *</td>
<td>136 * @08</td>
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<td>Prothrombin Time(P)...........9236 ROCLIS</td>
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<td>Creatinine..................2790 ROCLIS</td>
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<td>BUN (Bld Urea Nitrogen).....81793 ROCLIS</td>
<td>17</td>
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<td>13 Nov 10</td>
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<tr>
<td>Chloride....................2795 ROCLIS</td>
<td>104</td>
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<td>Chloride, S/P...............8460 ROCLIS</td>
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## Medication Administration Record (MAR)

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<th>Medications 1 day intervals</th>
<th>Most Recent</th>
<th>SMH 02Jan13</th>
<th>SMH 01Jan13</th>
<th>SMH 31Dec12</th>
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<tr>
<td>Acetaminophen PO TAB</td>
<td>1000 MG</td>
<td>1000 MG</td>
<td>1000 MG</td>
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<tr>
<td>Acyclovir TOP CREAM</td>
<td>1 APPLICATN</td>
<td>2 APPLICATN</td>
<td>7 APPLICATN</td>
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<tr>
<td>Albuterol INHAL HFA AERO(G...</td>
<td>2 PUFF</td>
<td>2 PUFF</td>
<td>4 PUFF</td>
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</tr>
<tr>
<td>Azathioprine PO TAB</td>
<td>50 MG</td>
<td>50 MG</td>
<td>50 MG</td>
<td></td>
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<tr>
<td>Azithromycin PO TAB</td>
<td>250 MG</td>
<td>250 MG</td>
<td>250 MG</td>
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<tr>
<td>Calcium citrate/vitamin d PO...</td>
<td>1 TAB</td>
<td>1 TAB</td>
<td>1 TAB</td>
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<tr>
<td>Cholecalciferol(vit d3) PO TAB</td>
<td>1000 UNIT</td>
<td>1000 UNIT</td>
<td>1000 UNIT</td>
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<tr>
<td>Colistin INHAL VIAL</td>
<td>75 MG</td>
<td>75 MG</td>
<td>150 MG</td>
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<tr>
<td>Darbepoetin alfa SQ SYRINGE</td>
<td>Not Admin 3</td>
<td>40 MG &amp; 802</td>
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<td></td>
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<tr>
<td>Ferrous gluconate PO TAB</td>
<td>325 MG</td>
<td>325 MG</td>
<td>325 MG</td>
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<tr>
<td>Fluticasone INHAL AEROSOL</td>
<td>2 PUFF</td>
<td>2 PUFF</td>
<td>4 PUFF</td>
<td></td>
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<tr>
<td>Fluticasone propionate NASA...</td>
<td>1 SPRAY</td>
<td>1 SPRAY</td>
<td>1 SPRAY</td>
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<tr>
<td>Furosemide IV SYRINGE</td>
<td>20 MG</td>
<td>30Dec12</td>
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<tr>
<td>Heparin IV SYRINGE</td>
<td>1000 UNIT</td>
<td>1300 UNIT</td>
<td>1100 UNIT</td>
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<tr>
<td>Heparin SQ INJECTION</td>
<td>5000 UNIT</td>
<td>15000 UNIT</td>
<td>15000 UNIT</td>
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<td>Hydralazine PO TAB</td>
<td>50 MG</td>
<td>80 MG</td>
<td>150 MG</td>
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<td>Insulin nh human SQ INJECT...</td>
<td>20 UNIT</td>
<td>26 UNIT</td>
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<td>Insulin aspart SQ INJECTION</td>
<td>Zero</td>
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<td>Magnesium sulfate IV INJECT...</td>
<td>2 GM</td>
<td>2 GM</td>
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<td>Magnesium chloride PO TAB</td>
<td>71.5 MG</td>
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<td>Mercocen IV VIAL +</td>
<td>Not Admin 3</td>
<td>5000 MG &amp; 806</td>
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<td>Metoprolol succinate PO TAB</td>
<td>100 MG</td>
<td>150 MG</td>
<td>150 MG</td>
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<tr>
<td>Montelukast PO TAB</td>
<td>10 MG</td>
<td>10 MG</td>
<td>10 MG</td>
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<tr>
<td>Nystatin TOP POWDER</td>
<td>1 APPLICATN</td>
<td>1 APPLICATN</td>
<td>2 APPLICATN</td>
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<tr>
<td>Omeprazole PO CAP DR</td>
<td>40 MG</td>
<td>40 MG</td>
<td>40 MG</td>
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<tr>
<td>Piperacillin/tazobactam IV S...</td>
<td>3.375 GM</td>
<td>6.75 GM</td>
<td>6.75 GM</td>
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<td>Prednisone PO TAB</td>
<td>5 MG</td>
<td>8 MG</td>
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<td>Rose geranium in sesame oil</td>
<td>1 SPRAY</td>
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<td>2 SPRAY</td>
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<td>Sodium polystyrene sulfonate</td>
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<td>30 Dec12</td>
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<td>Sodium polystyrene sulfonate</td>
<td>30 GM</td>
<td>30 Dec12</td>
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<td>Sodium chloride 0.9% IV SYR...</td>
<td>5 ML</td>
<td>5 ML</td>
<td>15 ML</td>
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<td>Tacrolimus PO CAP</td>
<td>0.2 MG</td>
<td>0.2 MG</td>
<td>0.4 MG</td>
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<td>Sulfamethoxazole/trimeth...</td>
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<td>Tobramycin/sodium chloride...</td>
<td>Not Admin 3</td>
<td></td>
<td>Not Admin 3</td>
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<td>Vancomycin IV VIAL +</td>
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<td>1200 MG</td>
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<td>Veroncason PO TAB +</td>
<td>200 MG</td>
<td>200 MG</td>
<td>400 MG</td>
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### TV Fluids/Nutrition
- Sodium chloride 0.9% IV SOL... | NewBag/Sy$ | NewBag/Sy$ | NewBag/Sy$ |
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<td>4/18/20</td>
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<td>4/20/20</td>
<td>4/21</td>
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<td>Neuraphos</td>
<td>4/18/20</td>
<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
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<td>Neprod</td>
<td>4/18/20</td>
<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
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<td>Lasix</td>
<td>4/18/20</td>
<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
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<td>Vancomycin</td>
<td>4/18/20</td>
<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
</tr>
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<td>Ceftpine</td>
<td>4/18/20</td>
<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
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<td>4/19</td>
<td>4/20/20</td>
<td>4/21</td>
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<td>4/20/20</td>
<td>4/21</td>
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<td>4/19</td>
<td>4/20/20</td>
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</table>
### CPOE Order Sets

#### Orders - Institutional OrderSets

**Patient Problem List**

- All
- Active
- Persistent problem association

<table>
<thead>
<tr>
<th>St.</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Lymphangiomyomatosis</td>
</tr>
<tr>
<td>A</td>
<td>Supraventricular Tachycardia</td>
</tr>
<tr>
<td>A</td>
<td>Dyspnea</td>
</tr>
<tr>
<td>A</td>
<td>Depression Major Episodes Full Remission</td>
</tr>
<tr>
<td>A</td>
<td>Fibroblastic Breast</td>
</tr>
<tr>
<td>A</td>
<td>Antibiotic Allergy Penicillin Peps Hk</td>
</tr>
<tr>
<td>A</td>
<td>Anemia Iron Deficiency</td>
</tr>
<tr>
<td>A</td>
<td>Osteoporosis Concerns Screening</td>
</tr>
<tr>
<td>A</td>
<td>Debility</td>
</tr>
<tr>
<td>A</td>
<td>Dysphagia Oropharyngeal Phase</td>
</tr>
<tr>
<td>A</td>
<td>Chylothorax</td>
</tr>
</tbody>
</table>

**Unissued Patient Orders**

<table>
<thead>
<tr>
<th>Order Description</th>
<th>Problem</th>
</tr>
</thead>
</table>

**Order Count:** 0

- Save Session
- Edit
- Delete
- Confirm

---

**Orders must be confirmed and issued to become active**

---

**Search**

- Admit/Transfer
- Geriatric Adm/Trans
- Acute MI/Angina
- Heart Failure
- Stroke/TIA

**Test/Proc/Care**

- Severe Sepsis (ICU)
- Sepsis Initial Tx
- Insulin SQ Daily
- Insulin Correction
- Insulin N/
- DKA/HHS

**Medications**

- Alcohol Withdrawal
- Delirium Mgmt/Acute
- COPD Exacerbation
- Moderate Sedation
- End-of-Life Comfort
- General Comfort

**Consults**

- Warfarin Therapy
- Heparin Nomograms
- PULM HTN

**Hosp Order Sets**

- Adult Tube Feeding
- Parenteral N

**Divisional Orders**

- Electrolyte Repl
- IVG
Nephrogenic Systemic Fibrosis - MRI Screening

Description
Screening is necessary for all patients who are scheduled to undergo a procedure requiring the intravenous administration of gadolinium-containing contrast agent that can be administered during MRI procedures. Although NSF (Nephrogenic Systemic Fibrosis) or NFD (Nephrogenic Fibrosing Dermopathy) is a rare condition, recent studies have suggested that there is an association between the administration of gadolinium contrast agents and the development of NSF/NFD in people with severe kidney insufficiency or dysfunction.

Frequently asked questions
- What do I need to know as an ordering provider?
- What do I need to know as a Radiologist?
- What do I need to know as a patient?
- If a person develops NSF/NFD, what possible treatment is available?
- What is NSF/NFD?
- What is gadolinium and its use?
Decision Support for Pharmacogenomics: Abacavir

Pharmacogenomics Rule: HLA-B*5701 Results Required

Lab orders or results for HLA-B*5701 (HL570) cannot be found on CERTPT, AZLAURASEVEN. Please place an HL570 order or document HLA-B*5701 results from an outside lab using "Outside Results Review".

Screening for carriage of the HLA-B*5701 allele is recommended prior to initiating treatment with abacavir. Screening is also recommended prior to reinitiation of abacavir in patients of unknown HLA-B*5701 status who have previously tolerated abacavir.

Please refer to AskMayoExpert for additional information.

Alert Action

- Cancel medication order
- Ignore alert, proceed with medication order

Add Order for:

- HLAB 5701 Abacavir Genotype Saliva MML.

Outside Lab
CPOE Feedback

- Physicians value
  - Remote access to system
  - Order sets, standardized processes
  - Guidelines, integrated information

- Nurses value legibility and accuracy

- Junior medical staff value decision support

- Senior staff often frustrated by alerts

- Pharmacists value medication error reduction, clinical decision support, formulary management
Effective Decision Support

- Response time
- Anticipation of needs
- Workflow, usability
- Resist stopping, favor change of direction
- Simple interventions; not complex guidelines
- Respond to feedback
- Maintain decision support systems
CPOE and Med Errors

Koppel R et al. JAMA. 2005;293:1197–203

- Systems not integrated
- Assumed doses
- Failure to D/C med
- Failure to D/C linked order
- Failure to renew antibiotic
- Diluent errors

- Allergies missed
- Failure of conflicts, duplications
- Wrong patient
- Wrong med
- Missed postop meds
- Down time, inefficiency
Which common prescribing alert is most likely to be ignored or over-ridden by a physician?

A. Drug-major allergy
B. Drug-drug interaction
C. Decimal point or ten-fold dosing error
D. Drug not on formulary
E. Relevant lab alert (e.g. INR, K+)
## Asthma Charting and CDS

### Flowsheet Charting: ASTHMA VISIT RECORD

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>AsthmaHealthCareUse</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ED Visits/12 months</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hosp/12 months</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>OfficeVisits&gt;4/12mo</td>
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<tr>
<td>Rescue Med&gt;1can/3mo</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>#ED Visits/12 mos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#Hosp/12 mos</td>
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<td></td>
</tr>
<tr>
<td>#OfficeVisits/12 mos</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#RescueMedCans/3 mos</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>HEDIS Criteria</td>
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<td>Met</td>
<td>Met</td>
<td>.</td>
</tr>
<tr>
<td>OralSteroidUsed/12mo</td>
<td>4</td>
<td>4</td>
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<td>4</td>
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<tr>
<td>Adherence To Rx (%)</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>50</td>
</tr>
<tr>
<td>WkSchoolDayMiss/12mo</td>
<td>10+</td>
<td>10+</td>
<td>0</td>
<td>.</td>
</tr>
</tbody>
</table>

### AsthmaControlTestACT

| Productivity Impact | 3 | 3 | 3 | 3 |
| Dyspnea Frequency | 1 | 2 | 2 | 2 |
| Sleep Disruption | 2 | 2 | 4 | 1 |
| Rescue Med Use | 1 | 3 | 3 | 1 |
| Self Rated Control | 2 | 3 | 2 | 1 |
| Total ACT Score | 9 | 12 | 14 | 9 |

**ACT Interpretation**
- Uncontrol

**Triggers Present**
- Add Column
- Update
- Change Time
- Display Details
- Support Team Use
- NsgOrdEntry
- OutPt Meds
Population and Disease Management

Generic Disease Management System

Summary for diseases and preventive services

- Glucose: 70 - 100 mg/dL, 01/22/2013
- HbA1c: 4.0-6.0 %, 11/14/2012
- AST (SGOT): 0 - 40 U/L, 01/31/2013
- ALT (SGPT): 7-55 U/L, 11/14/2012
- Creatinine: 0.8 - 1.3 mg/dL, 01/31/2013
- eGFR: >=60 ml/min/1.73 m², 01/31/2013
- PSA: 0.79 ng/mL, 11/14/2012
- Total cholesterol: 124 mg/dL, 11/14/2012
- Triglycerides: 129 mg/dL, 11/14/2012

Preventive services
- Bone density screening: 11/14/2012
- AAA screening: 11/11/2012
- Influenza vaccine: 09/19/2012

My Road to Better Health with Diabetes
- Daily Weight Diary
  **Diabetes Decision Aid**
  **Statin Decision Aid**

Alerts
- Colon cancer screening recommended because of family history of colon cancer.
- Tdap immunization due.
- Eye exam due.
- Preventive care due within 90 days.
Outpatient Service Recognition

Service Recognition/Charge Entry

- N6 - Comprehensive, > 90 Min 99205 & 99354
- N5 - Comprehensive-High, > 60 Min 99205
- N4 - Comprehensive-Moderate, 45 Min 99204
- N3 - Detailed-Low, 30 Min 99203
- N2 - Expanded Prob Focus-Strfwd, 20 Min 99202
- N1 - Problem Focused-Strfwd, 10 Min 99201
- ___Established Patients___
- E7 - Comp-Prolong High > 115 Min
- E6 - Comprehensive High >70 Min 99215 & 99354
- E5 - Comprehensive-High, > 40 Min 99215
- E4 - Detailed-Moderate, 25 Min 99214
- E3 - Expanded Prob Focused-Low, 15 Min 99213
- E2 - Problem Focused-Strfwd, 10 Min 99212
- E1 - Brief Visit, 5 Min 99211
- ___Follow-up Visits___
- F7 - Follow-up Visit >115 Min-Prolonged
- F6 - Follow-up Visit >70 Min-Prolonged
- F5 - Follow-up Visit >40 Min or More 99215
- F4 - Follow-up Visit 25 Min 99214
- F3 - Follow-up Visit 15 Min 99213
- F2 - Follow-up Visit 10 Min 99212
Mobile Devices

[Image of a tablet displaying medical monitoring data and an X-ray of a chest with annotations]

AP
Se: 1 / Im: 1 of 1
Pitfalls of EMR

- Dependence on vendor systems
- Expense
- Multiple “standards”
- Frequent maintenance, upgrades
- Outages
- Response times
- Back-up procedures
- Disaster recovery
- Access to devices
- Physician acceptance
- Complexity
- New processes
- New errors?
Institute Of Medicine Slams Sellers Of Electronic Health Records

Nov, 2011

The government-mandated push to implement electronic health records is supposed to centralize patient data, and reduce human medical errors in the process. However, EHRs can introduce a different set of errors, namely software glitches. Just last week, Lifespan which runs five hospitals in Rhode Island disclosed that a prescription mix-up may have affected 2,000 patients. It blamed it on software used to generate medication instructions.
Better collaboration between industry and practitioners
Design, usability, interoperability
User training
Anticipate workflow changes, communication issues
Incorporate safety, e.g. order sets, decision support
Address “Big Bang” vs. staged roll-out, rapid change vs. dual systems
HITECH and Meaningful Use

- Pres. Bush State of the Union 2004, “…an Electronic Health Record for every American by the year 2014…”
- Pres. Obama 2009, “…computerize all health records within five years…”
- American Recovery and Reinvestment Act (ARRA) 2009 stimuli:
  - Health Information Technology for Economic and Clinical Health Act (HITECH)
  - $19B for HIT
Meaningful Use EP Core Objectives

- Computerized physician order entry (CPOE)
- e-Prescribing (eRx)
- Report ambulatory clinical quality measures to CMS/States
- Implement one clinical decision support rule
- Provide patients with an electronic copy of their health information, upon request
- Provide clinical summaries for patients for each office visit
- Drug–drug and drug–allergy interaction checks
- Record demographics
- Maintain an up-to-date problem list of current and active diagnoses
- Maintain active medication list
- Maintain active med allergy list
- Record and chart changes in vital signs
- Record smoking status for patients 13 years or older
- Capability to exchange key clinical information among providers of care and patient–authorized entities electronically
- Protect electronic information
### Meaningful Use Incentives

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<tr>
<td><strong>Payment Amount for 2011</strong></td>
<td>$18,000.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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<td><strong>Payment Amount for 2012</strong></td>
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<td><strong>Payment Amount for 2013</strong></td>
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<td>$12,000.00</td>
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<td><strong>Payment Amount for 2014</strong></td>
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<td>$8,000.00</td>
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<td><strong>Payment Amount for 2015</strong></td>
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<td>$4,000.00</td>
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<td><strong>Payment Amount for 2016</strong></td>
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<td><strong>Total Payment Amount</strong></td>
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<td>$39,000.00</td>
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Stage Two Objectives

- CPOE
- E-Prescribing (EP)
- Demographics
- Vital Signs
- Smoking Status
- Decision Support
- Providing data to patients
- Clinical Summaries (EP)
- Lab Test Results
- Lists of Patients
- Patient Reminders (EP)
- eMAR (hospital)
- Summary of Care
- Patient Education
- Secure Messaging from Patients (EP)
- Medication Reconciliation

- Immunization Registry
- Lab Result Registry (hospital)
- Syndromic Surveillance Registry (hospital)
- Security
- Imaging Results
- Patient Family Health History
- Advance Directives
- Electronic Notes
- Provide Lab Results to EPs (hospital)
- Cancer Registry (EP)
- Specialized Registry (EP)
- E-Prescribing (hospital)
- Syndromic Surveillance Registry (EP)
In Discussion for Stage 3

- Follow-up on later and abnormal lab test results
- Patient provided health information
- Patient amendment requests
- Non-English languages for patient education
- Query research enrollment systems to identify Clinical Trials
- Electronic notification of significant events
Accuracy of Automated Reporting for Meaningful Use

- Sampled 1154 unique patients
- Measures including cancer screening, diabetes, asthma, preventive screening
- Sensitivity of reporting 46–98%
- Specificity 62–97%
- Underestimated compliance rate for
  - Asthma appropriate meds 38% vs. 77%
  - Pneumococcal vaccine 27% vs. 48%
FOR IMMEDIATE RELEASE
February 17, 2012

HHS Secretary Kathleen Sebelius announces major progress in doctors, hospital use of health information technology

Kansas City, MO – Today, U.S. Department of Health and Human Services’ Secretary Kathleen Sebelius announced the number of hospitals using health information technology (IT) has more than doubled in the last two years. She also announced new data showing nearly 2,000 hospitals and more than 41,000 doctors have received $3.1 billion in incentive payments for ensuring meaningful use of health IT, particularly certified Electronic Health Records (EHR).
HHS Warns Hospital Groups on EHR Fraudulent Billing

Oct 17, 2012 02:08 pm  |  posted by Chris Dimick  |  Coding & reimbursement & Compliance

Federal officials have sent a letter to several healthcare associations warning their members that the use of electronic health record (EHR) systems to “upcode” and inflate medical bills will result in prosecution.

The letter has sparked debate in the industry on whether EHRs foster medical billing fraud or merely allow physicians to now properly code for delivered services.

The September 24 letter from Department of Health and Human Services' (HHS) Secretary Kathleen Sebelius and US Attorney General Eric Holder was sent to the American Hospital Association (AHA), three other hospital groups, and the Association of American Medical Colleges.
Nearly two weeks after receiving a letter from four House Republicans calling for a freeze on all Meaningful Use incentive payments, U.S. Department of Health & Human Services Secretary Kathleen Sebelius received a similar letter from Republicans in the Senate, "Healthcare Informatics" reports. The letter--sent by
Emergency Dept Billing Patterns
Complexity, Better Data Capture, or Fraud?

Changes in Use of the Billing Code for Level 5 ED Visits, in the Age Range of Medicare Patients Discharged from the ED, and in the Use of Diagnostic Technology and IV Fluids, 2001–2010.

Lines represent estimates from the public-use files of the National Hospital Ambulatory Medical Care Survey, excluding the 2010 estimates, which were not available. The average sample of Medicare discharges was 3747. All slopes are statistically nonzero at P<0.01 in logistic-regression models, with survey years defined as a continuous variable. CPT denotes Current Procedural Terminology.

AMA to HHS: Make Medicare EHR program more reasonable, achievable

The proposed requirements for Stage 3 of the Medicare electronic health record (EHR) meaningful use program need revisions if

- The program needs an external, independent evaluation process to guide future program stages.
- A 100 percent pass rate is unreasonable. The letter points out that failing to meet a single measure by just one percent would make a physician ineligible for incentives and subject to financial penalties.
- Requirements should be more flexible and structured to accommodate various practice patterns and specialties.
- The EHR certification process needs to address physicians' concerns about usability.
- Health IT infrastructure barriers must be resolved to allow physicians to exchange health information.
Question 3

Which is true regarding Meaningful Use Stage 2?

A. Patient reminders and secure messaging are expected
B. Medication reconciliation is not a requirement
C. Notes must be transmitted to the patient in any language requested
D. No prescriptions can be printed
E. Automated reporting from the EHR is approximately 25% accurate compared to chart review
Potential for better data capture, improved measurement e.g. problem list vs. billing Dx

Reality that early efforts mimicked paper chart and claims

Many elements not neatly recorded, e.g. outside test or immunization

Difficult to capture non- or contra-indications

Should workflow change for the sake of measurement?
A Model for Capturing Quality Using EMR and CDR

Meaningful Use Reporting

Core EMRs

Embed EMR rules to optimize compliance

Clinical Data Repository

Applications, Rules, Concurrent review of metrics

Ad hoc Reports, Registries

“Actionable” CDS alert, flowsheet, order, etc, for care or documentation

Document discrete response

Recommended actions, or “If-not-why-not”

Identify gaps, deviations from Best Practice

Omission or commission

Additional Clinical Decision Support (CDS), proactive alerting

Satisfy Quality, Safety, PQRS, CMS, JC, VBP, ACO, etc.
EMR Economics

- Revenue enhancement:
- Improved coding and reimbursement?
- Decreased administrative costs, chart handling
- Transcription, supplies
- Improved efficiency, productivity ?!
EMR Economics

- In–Out
- Revenue enhancement + incentives vs.
- Cost of systems, penalties (e.g. 5% MU, 2% e–Rx)
- Average time 5–7 yrs to recoup EMR start–up
All of the following could lead to failure to capture a quality measure EXCEPT which one?

- A. An immunization administered elsewhere
- B. Not administering DVT prophylaxis in hospital because you are concerned about bleeding
- C. Recording an asthma action plan only in a clinical note
- D. Staff education of a patient not documented
- E. In a CPOE order set, documenting hypotension as a contraindication to ACE-inhibitor in CHF
EMR failure is not an option (short of retirement)

Many advantages, but potential for new errors

Medical documentation is evolving, more structured, elemental data, problem-based

Typical E&M document increasing role in data capture, risk of losing value as communication

Reimbursement and penalties increasingly tied to performance and outcomes

Acceptance, success heavily dependent upon workflow and process