ICU Quality Metrics and Safety

Updated April 2015
Safety and Quality: Why Do We Care?

• Institute of Medicine report raised alarm in 1999 – preventable medical errors account for 44,000-98,000 deaths yearly, and costing over $20 billion dollars a year

• Low quality and high variability in care contribute to high-cost, inequitable systems

• Health care frequently fails to deliver on all 6 domains of quality care (safe, effective, efficient, patient-centered, timely, equitable)

• Organizations now also care because reimbursement and accreditation depend on it
Alphabet Soup of Quality/Safety

- **CMS**: Centers for Medicare and Medicaid Services – falls under Department of Health and Human Services. *Pays* hospitals and *publicly reports* data.
- **AHRQ**: Agency for Healthcare Research and Quality - falls under Department of Health and Human Services
  - Mission: “To produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work within the U.S. Department of Health and Human Services and with other partners to make sure that the evidence is understood and used”
- **NQF**: National Quality Forum – endorses measures
  - Mission: “leads national collaboration to improve health and healthcare quality through measurement”
- **Joint Commission (formerly JCAHO)**: *Accredits* hospitals (but not actually a government organization)
Joint Commission (formerly JCAHO)

3 year accreditation cycles, State Medicaid payments and licensure may depend on accreditation.

Joint Commission establishes “Core Measures” (which may or may not be the same as CMS measures for value-based care.) Generally these measure sets have been endorsed by the National Quality Forum and have been proven to positively impact a quality domain.
CMS: Hospital Value-Based Purchasing (VBP) and Inpatient Quality Reporting (IQR) Programs

• CMS makes “value-based incentive payments” to acute care hospitals, based on performance and quality measures.

• Financial disincentives for falling below benchmarks on quality metrics.

• VBP and IQR involve both payment and public reporting.
Measures Categories

• Process of care measures
• Outcome measures (readmission or mortality for MI/CHF/pneumonia, hospital-acquired conditions (HAC) and other AHRQ patient safety indicators
• ‘Patient experience of care’ measure (HCAHPS)
CMS’ Goals for Measures

• Conditions that confer the greatest morbidity and mortality in the Medicare population
• Conditions that are high volume and high cost for the Medicare program
• Conditions for which wide cost and treatment variation has been reported despite established guidelines
Measure Selection Specifics

• “Have been set forth by one or more national consensus building entities”
• National Quality Forum (NQF) is a national multi-stakeholder organization from which many measures are selected
• CMS may elect to drop an existing measure when it is shown to not align with best clinical practice, or when all hospitals are in compliance (example: pneumonia!)

Inaugural Value-Based Purchasing “Process of Care” Measures

<table>
<thead>
<tr>
<th>Measure ID</th>
<th>Measure description</th>
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<tbody>
<tr>
<td><strong>Clinical Process of Care Measures</strong></td>
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<tr>
<td>AMI-7a</td>
<td>Fibrinolytic Therapy Received Within 30 Minutes of Hospital Arrival.</td>
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<tr>
<td>AMI-8a</td>
<td>Primary PCI Received Within 90 Minutes of Hospital Arrival.</td>
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<td><strong>Heart Failure</strong></td>
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<tr>
<td>HF-1</td>
<td>Discharge Instructions.</td>
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<tr>
<td><strong>Pneumonia</strong></td>
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<tr>
<td>PN-3b</td>
<td>Blood Cultures Performed in the Emergency Department Prior to Initial Antibiotic Received in Hospital.</td>
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<td>PN-6</td>
<td>Initial Antibiotic Selection for CAP in Immunocompetent Patient.</td>
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<td><strong>Healthcare-associated infections</strong></td>
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<tr>
<td>SCIP-Inf-1</td>
<td>Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision.</td>
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<tr>
<td>SCIP-Inf-2</td>
<td>Prophylactic Antibiotic Selection for Surgical Patients.</td>
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<tr>
<td>SCIP-Inf-3</td>
<td>Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time.</td>
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<tr>
<td>SCIP-Inf-4</td>
<td>Cardiac Surgery Patients with Controlled 6AM Postoperative Serum Glucose.</td>
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<tr>
<td><strong>Surgeries</strong></td>
<td></td>
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<tr>
<td>SCIP-Card-2</td>
<td>Surgery Patients on a Beta Blocker Prior to Arrival That Received a Beta Blocker During the Perioperative Period.</td>
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<tr>
<td>SCIP-VTE-1</td>
<td>Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered.</td>
</tr>
<tr>
<td>SCIP-VTE-2</td>
<td>Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery.</td>
</tr>
<tr>
<td><strong>Patient Experience of Care Measures</strong></td>
<td></td>
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<tr>
<td>HCAHPS</td>
<td>Hospital Consumer Assessment of Healthcare Providers and Systems Survey.</td>
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Hospitals following in the bottom quartile for measures of Hospital-Acquired Conditions lose 1% of Medicare DRG payments in fiscal year 2015.

**Initial Value-Based Purchasing “Outcome” Measures**

<table>
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<th>Mortality Measures (Medicare Patients):</th>
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<td>• Acute Myocardial Infarction (AMI) 30-day mortality rate.</td>
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<th>AHRQ Patient Safety Indicators (PSIs), Inpatient Quality Indicators (IQIs) Composite Measures:</th>
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<td>• Complication/patient safety for selected indicators (composite).</td>
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**Hospital Acquired Condition Measures:**
- Foreign Object Retained After Surgery.
- Air Embolism.
- Blood Incompatibility.
- Pressure Ulcer Stages III & IV.
- Falls and Trauma: (Includes: Fracture Dislocation Intracranial Injury Crushing Injury Burn Electric Shock).
- Vascular Catheter-Associated Infection.
- Catheter-Associated Urinary Tract Infection (UTI).
- Manifestations of Poor Glycemic Control.

**Table 3—Finalized Outcome Measures for the FY 2014 Hospital VBP Program**

- Mortality Measures (Medicare Patients):
  - Acute Myocardial Infarction (AMI) 30-day mortality rate.
  - Heart Failure (HF) 30-day mortality rate.
  - Pneumonia (PN) 30-day mortality rate.

- AHRQ Patient Safety Indicators (PSIs), Inpatient Quality Indicators (IQIs) Composite Measures:
  - Complication/patient safety for selected indicators (composite).
  - Mortality for selected medical conditions (composite).

- Hospital Acquired Condition Measures:
  - Foreign Object Retained After Surgery.
  - Air Embolism.
  - Blood Incompatibility.
  - Pressure Ulcer Stages III & IV.
  - Falls and Trauma: (Includes: Fracture Dislocation Intracranial Injury Crushing Injury Burn Electric Shock).
  - Vascular Catheter-Associated Infection.
  - Catheter-Associated Urinary Tract Infection (UTI).
  - Manifestations of Poor Glycemic Control.
Public Reporting

• ACA requires that measures submitted to Inpatient Quality Reporting (IQR) program are made publically available
• (All IQR measures don’t fall into VBP, so you will find some data not described on the previous slides)

• [http://www.hospitalcompare.hhs.gov](http://www.hospitalcompare.hhs.gov)
An Aside on ‘Never Events’

- Established by the National Quality Forum
- Errors in medical care that are unambiguous, serious, and preventable
- Medicare will not pay for these
- Examples: Stage 3 or 4 hospital-acquired pressure ulcer (HAPU), inpatient suicide, mismatched blood, air embolism, any “wrong” in surgery, death or serious injury associated with any medication “wrong,” death or serious injury associated with equipment malfunction

- Sentinel events (“unexpected occurrences that result in death or serious injury to a patient”) and Never Events should prompt reporting and a root-cause analysis to detect latent, systemic error
Choosing Wisely


- Aims to promotes care that is supported by evidence, minimizes harm, and is truly necessary
Future Performance Measures?

• The sepsis story... from sentinel event to Surviving Sepsis to the NQF and back ...

• VAP?
Things that are important to us in the MICU

- Addressing VTE (Joint Commission, Public Reporting)
- Preventing CLABSI & CAUTI (VBP, Public Reporting)
- Avoiding Never Events (ex: HAPU, air embolism, wrong route of drug administration)

You will notice that none of these things depend on one individual to maintain. Addressing safety and quality depends on systems and teams.

- Reporting sentinel events
- Maintaining an eye to cost-effective care
SAN FRANCISCO, CA – In a tragic tale of “I told you so”, three nurses died overnight at Mercy Hospital as a result of eating food and leaving open beverages at the Nurses Station. The night shift nurses working reportedly ordered pizza and since hospital administrators were all gone, they broke the cardinal Joint Commission rule of no eating at the Nurses Station.