Complexity, Context, Courage: Conquering Preventable HAI

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Learning Objectives

• Provide synopsis of some current efforts to improve patient safety … 10 years since *To Err is Human*

• Explore national focus quality and patient safety; explicit lens on preventable infections

• Discuss Pronovost/Hopkins activities to help reduce central line associated bloodstream infections

• Describe some challenges and opportunities
Where are we Now, 10 years after To Err is Human
Patient Safety at Ten
Wachter Wisdom

- Regulation and Accreditation: A- B+
- Reporting Systems: C B+
  Health Information Technology: B- C+
- Malpractice System and Accountability: D+ C+
- Workforce and Training Issues: B B-
- **Research in Patient Safety** B-
- Engagement of Provider Organizations Leadership: B
- Interventions by National and International Organizations: A-
- Patient Engagement and Involvement: C+
- Payment System Interventions: C+
Quality of Healthcare 2000 - 2005

Median Improvement: 2000-2005

All Selected Measures (117) 1.9%
Heart Disease (n=16) 5.6%
Cancer (n=15) 3.6%
Maternal & Child Health (n=12) 1.5%
Safety (n=25) 1.0%
Diabetes (n=9) 0.6%

National Healthcare Quality Report 2008
Disparities in Healthcare Quality are Staying the Same or Increasing

n=number of core measures
Root Causes of Sentinel Events

(All categories; 2006)

Average number of root causes cited per RCA = 5.3

Percent of 516 events
The National Focus
<table>
<thead>
<tr>
<th>Sensor Leadership Bill</th>
<th>Health Reforms and Affordable Care Act (H.R. 3590)</th>
<th>House Leadership Bill</th>
<th>Affordable Care Act for America Act (H.R. 3942)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid (continued)</td>
<td>Expand the role of the Medicaid and CHIP Payment and Access Commission to include assessments of adult services (including those dually eligible for Medicare and Medicaid). ($11 million in additional funds appropriated for fiscal year 2010)</td>
<td>- Strengthen primary care and care coordination by increasing Medicaid payments for primary care providers to 100% of Medicare rates (phased-in beginning in 2010 through 2012) and providing Medicare bonus payments to primary care practitioners (with larger bonuses paid to primary care practitioners serving in health professional shortage areas) beginning January 1, 2011.</td>
<td></td>
</tr>
<tr>
<td>Primary care</td>
<td>No similar provision.</td>
<td>- Establish the Center for Quality Improvement to identify, develop, evaluate, disseminate, and implement best practices in the delivery of health care services. Develop national priorities for performance improvement and quality measures for the delivery of health care services. (Effective dates vary)</td>
<td></td>
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<tr>
<td>National quality strategy</td>
<td>- Develop a national quality improvement strategy that includes priorities to improve the delivery of health care services, patient health outcomes, and population health. Create processes for the development of quality measures involving input from multiple stakeholders and for selecting quality measures to be used in reporting to and payment under federal health programs. (National strategy due to Congress January 1, 2011)</td>
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<td></td>
<td>- Establish the Community-based Collaborative Care Network Program to support consortiums of health care providers to coordinate and integrate health care services, for low-income uninsured and underinsured populations. (Funds appropriated for five years beginning in FY 2011)</td>
<td>- Establish the Community-based Collaborative Care Network Program to support consortiums of health care providers to coordinate and integrate health care services, manage chronic conditions, and reduce emergency department use for low-income uninsured and underinsured populations. (Funds appropriated for five years beginning FY 2011)</td>
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<tr>
<td>Financial disclosure</td>
<td>Require disclosure of financial relationships between health entities, including physicians, hospitals, pharmacists, other providers, and manufacturers and distributors of covered drugs, devices, biologicals, and medical supplies. (Report due to Congress April 1, 2013)</td>
<td>- Require disclosure of financial relationships between health entities, including physicians, hospitals, pharmacists, and other providers, and manufacturers and distributors of covered drugs, devices, biologicals, and medical supplies. (Effective March 2011)</td>
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<tr>
<td>Disparities</td>
<td>Require enhanced collection and reporting of data on race, ethnicity, sex, primary language, disability status, and for underserved rural and frontier populations. Also require collection of access and treatment data for people with disabilities. Require the Secretary to analyze the data to monitor trends in disparities. (Effective two years following enactment)</td>
<td>- Reduce racial and ethnic disparities by conducting a study on the feasibility of developing Medicare payment systems for language services, providing Medicare demonstration grants to reimburse culturally and linguistically appropriate services and developing standards for the collection of data on race, ethnicity, and primary language. (Report due to Congress one year following enactment)</td>
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</table>

PREVENTION/WELLNESS

| National strategy | Establish the National Prevention, Health Promotion and Public Health Council to coordinate federal prevention, wellness, and public health activities. Develop a national strategy to improve the nation's health. (Strategy due one year following enactment) Create a Prevention and Public Health Fund to expand and sustain funding for prevention and public health programs. (Initial appropriation in fiscal year 2010) Create task forces on Preventive Services and Community Preventive Services to develop, update, and disseminate evidenced-based recommendations on the use of clinical and community prevention services. (Effective upon enactment) | Develop a national strategy to improve the nation’s health through evidenced-based clinical and community-based prevention and wellness activities. Create task forces on Clinical Preventive Services and Community Preventive Services to develop, update, and disseminate evidenced-based recommendations on the use of clinical and community prevention services. |

SIDE-BY-SIDE COMPARISON OF MAJOR HEALTH CARE REFORM PROPOSALS — Last Modified: December 23, 2009
• Patients learn they might have unneeded stents

• Federal probe focusing on procedures

• 369 St. Joseph heart patients affected
Has Your Organization Had a Patient Safety Issue Directly Resulting From an Electronic System?

Friday, February 05, 2010

- 10% of respondents said they have had clients report patient safety or health care quality issues that were a direct result of having an electronic system, according to the survey.
- The survey also found that 29% of respondents said their electronic health record implementation has exceeded or vastly exceeded their expectations, while 22% of respondents said their EHR implementation has not met expectations.
- Results are based on an online survey conducted in January of 217 health IT professionals.
- Source: HIMSS, "Value of Electronic Health Records"
MGH death spurs review of patient monitors

- Heart alarm was off; device issues spotlight a growing national problem

Feb 21, 2010 Boston Globe
Pronovost/Hopkins Experience
Reducing CLABSI
Conceptual Model A
Tensions

Central Mandate

Scientifically Sound

Local Wisdom

Feasible

Technical and Adaptive Work
Closing the Gap
Results: CA BSI rates 2001-2007
### Safety Score Card

#### Keystone ICU Safety Dashboard

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did we harm (BSI) $(median)$</td>
<td>$2.8/1000$</td>
<td>0</td>
</tr>
<tr>
<td>How often do we do what we should</td>
<td>66%</td>
<td>95%</td>
</tr>
<tr>
<td>How often did we learn from mistakes*</td>
<td>100s</td>
<td>100s</td>
</tr>
<tr>
<td>Have we created a safe culture % Needs improvement in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety climate*</td>
<td>84%</td>
<td>43%</td>
</tr>
<tr>
<td>Teamwork climate*</td>
<td>82%</td>
<td>42%</td>
</tr>
</tbody>
</table>

CUSP is an intervention to improve these*
System Factors Impact Safety

Adopted from Vincent
Have we created a culture of safety?

Have we reduced the likelihood of harm?

How often do we do what evidence says we should?

How often do we harm?

Context

Have we created a culture of safety?

Adapted from Donabedian

Conceptual Model for Measuring Safety

Structure  Process  Outcome

IT

QUALITY AND SAFETY RESEARCH GROUP
**IMPROVE**

## Measure

<table>
<thead>
<tr>
<th>Have We Created a Safe Culture?</th>
<th>How Often Do we Harm? Are Patient Outcomes Improving?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Do We know We Learn from Mistakes?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>CUSP</strong></th>
<th><strong>(TRiP)</strong></th>
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<tbody>
<tr>
<td>Comprehensive Unit based Safety program</td>
<td>Translating Evidence Into Practice</td>
</tr>
</tbody>
</table>

1. Educate staff on science of safety
2. Identify defects
3. Assign executive to adopt unit
4. Learn from one defect per quarter
5. Implement teamwork tools

1. Summarize the evidence in a checklist
2. Identify local barriers to implementation
3. Measure performance
4. Ensure all patients get the evidence

[www.safercare.net](http://www.safercare.net)
## Improving Care

### CUSP
1. Educate staff on science of safety
2. Identify defects
3. Assign executive to adopt unit
4. Learn from one defect per quarter
5. Implement teamwork tools

### CLABSI
1. Remove Unnecessary Lines
2. Wash Hands Prior to Procedure
3. Use Maximal Barrier Precautions
4. Clean Skin with Chlorhexidine
5. Avoid Femoral Lines

[www.safercare.net](http://www.safercare.net)
Project Organization

- State-wide effort coordinated by Hospital Association or designated collaborative agency

- Use collaborative model (2 face-to-face meetings, monthly calls)

- Standardized data collection tools and evidence

- Local ICU modification of how to implement interventions
Science of Safety

- Understand that the system determines performance

- Use strategies to improve system performance
  - Standardize
  - Create independent checks for key processes
  - Learn from mistakes

- Apply strategies to both technical work and team work

- Recognize that teams make wise decisions with diverse and independent input
Intervention to Eliminate CLABSI
Translating Evidence into Practice

- Envision the problem within the larger health care system
- Engage Collaborative multi-disciplinary teams centrally (stages 1, 2 & 3) and locally (stage 4)

1. Summarize the Evidence
   - Identify interventions associated with improved outcomes
   - Select interventions with the largest benefits and lowest barriers to use
   - Convert interventions to behaviors

2. Identify local barriers to implementation: understand the process and context of work
   - Observe staff performing the interventions
   - “Walk the process” to identify defects in each step of intervention implementation
   - Enlist all stakeholders to share concerns and identify potential gains / losses associated with intervention implementation

3. Measure Performance
   - Select Measures (Process and/or outcome)
   - Develop and pilot test measures
   - Measure Baseline Performance

4. Ensure all patients receive the interventions
   - Regularly assess performance measures

Explain why the interventions are important

Education
- Share the evidence supporting the interventions

Design an intervention on “toolkit” targeted to barriers employing standardization, independent checks and reminders, and learning from mistakes

Evaluate
- Regularly assess performance measures

Engage
- Explain why the interventions are important

Execute
- Design an intervention on “toolkit” targeted to barriers employing standardization, independent checks and reminders, and learning from mistakes

Pronovost, BMJ 2008
<table>
<thead>
<tr>
<th></th>
<th>Senior leaders</th>
<th>Team leaders</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage</td>
<td><em>How does this make the world a better place?</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educate</td>
<td><em>What do we need to do?</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Execute</td>
<td><em>What keeps me from doing it?</em></td>
<td><em>How can we do it with my resources and culture?</em></td>
<td></td>
</tr>
<tr>
<td>Evaluate</td>
<td><em>How do we know we improved safety?</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pronovost: Health Services Research 2006
Challenges

• Measuring Quality and Patient Safety
• Translating Evidence Into Practice (TRiP)*
• Identifying and Mitigating Hazards
• Improving Culture and Communication
• Building Capacity
• Organizing for Safety
A Safer Healthcare System Requires

1. Leaders committed to measuring quality and patient safety
2. Clear improvement goals and a coordinated, concise strategy to achieve them
3. Clinicians and leaders with skills and knowledge to evolve the strategy
4. Transparent and robust measures
5. Public and institutional accountability for providers
“Never doubt that a small group of thoughtful committed citizens can change the world. Indeed, it’s the only thing that ever has.”

Margaret Meade