Session 4: Health IT Patient Safety Supplemental Items for the AHRQ Hospital Survey on Patient Safety Culture

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Tejal Gandhi and Joann Speer Sorra have no real or apparent conflicts of interest to report.
Agenda

• Importance of a culture of patient safety
• Impact of HIT on patient safety
• Why is a culture of HIT safety important?
• New Health IT Patient Safety Culture Supplemental Item Set
  – Feedback on domains assessed
  – Discuss how to operationalize and plans for development
Learning Objectives

This session will describe Health IT Patient Safety Supplemental Items for the Agency for Healthcare Research and Quality (AHRQ)’s Hospital Survey on Patient Safety Culture (HSOPS), a survey of providers and staff that can be administered by hospitals to raise awareness about patient safety and Health IT and identify strengths and areas for patient safety culture improvement.

• Identify the importance of patient safety culture in hospital settings and a survey tool available for assessing patient safety culture
• Explain the impact of Health IT on patient safety
• Discuss draft survey items on Health IT and Patient Safety for the AHRQ Hospital Survey on Patient Safety Culture (HSOPS)
How Benefits Were Realized for the Value of Health IT

The New AHRQ Health IT Patient Safety Culture Survey Items have an impact on:

Satisfaction

- Provides a mechanism for staff and providers to express patient safety concerns related to Health IT

Treatment/Clinical

- Feedback from the survey items can be used to improve efficiency, safety and quality of care
The Importance of a Culture of Safety

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FREE FROM HARM:
ACCELERATING PATIENT SAFETY IMPROVEMENT
FIFTEEN YEARS AFTER TO ERR IS HUMAN

Report of an expert panel convened by the National Patient Safety Foundation argues for looking at morbidity as well as mortality caused by medical errors and going beyond hospitals to improve safety across the continuum of care.

TO ERR IS HUMAN FRAMED PATIENT SAFETY AS A SERIOUS PUBLIC HEALTH ISSUE (1999 ESTIMATES)

44,000 - 98,000
Annual deaths from medical error among hospitalized patients.\(^{(a)}\)

43,458
Annual deaths from hospital-acquired conditions (2011-2013) as a result of the federal Partnership for Patients initiative.\(^{(b)}\)

42,297
Annual deaths from breast cancer.\(^{(a)}\)

1.3 Million
Estimated reduction in hospital-acquired conditions (2011-2013) as a result of the federal Partnership for Patients initiative.\(^{(b)}\)

16,516
Annual deaths from AIDS.\(^{(a)}\)

BY SOME MEASURES, HEALTH CARE HAS GOTTEN SAFER SINCE TO ERR IS HUMAN

TO UNDERSTAND THE FULL IMPACT OF PATIENT SAFETY PROBLEMS, WE MUST LOOK AT BOTH MORTALITY AND MORBIDITY

1 in 10 patients develops a health care acquired condition (such as infection, pressure ulcer, fall, adverse drug event) during hospitalization.\(^{(b)}\)

1 Billion
Roughly 1 billion ambulatory visits occur in the US each year.\(^{(c)}\)

About 35 million hospital admissions occur annually.\(^{(c)}\)

ADVANCEMENT IN PATIENT SAFETY REQUIRES AN OVERARCHING SHIFT FROM REACTIVE, PIECemeAL INTERVENTIONS TO A TOTAL SYSTEMS APPROACH TO SAFETY\(^{(d)}\)

1. Ensure that leaders establish and sustain a safety culture.
2. Create centralized and coordinated oversight of patient safety.
3. Create a common set of safety metrics that reflect meaningful outcomes.
4. Increase funding for research in patient safety and implementation science.
5. Address safety across the entire care continuum.
7. Partner with patients and families for the safest care.
8. Ensure that technology is safe and optimized to improve patient safety.

To read the full report and detailed set of recommendations, visit www.npsf.org/free-from-harm

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EIGHT RECOMMENDATIONS FOR ACHIEVING TOTAL SYSTEMS SAFETY

From the report of an expert panel convened by the National Patient Safety Foundation: *Free from Harm: Accelerating Patient Safety Improvement* 
Fifteen Years After To Err Is Human

1. **ENSURE THAT LEADERS ESTABLISH AND SUSTAIN A SAFETY CULTURE**
   - Improving safety requires an organizational culture that enables and prioritizes safety.
   - The importance of culture change needs to be brought to the forefront, rather than taking a backseat to other safety activities.

2. **CREATE CENTRALIZED AND COORDINATED OVERSIGHT OF PATIENT SAFETY**
   - Optimization of patient safety efforts requires the involvement, coordination, and oversight of national governing bodies and other safety organizations.

3. **CREATE A COMMON SET OF SAFETY METRICS THAT REFLECT MEANINGFUL OUTCOMES**
   - Measurement is foundational to advancing improvement. To advance safety, we need to establish standard metrics across the care continuum and create ways to identify and measure risks and hazards proactively.

4. **INCREASE FUNDING FOR RESEARCH IN PATIENT SAFETY AND IMPLEMENTATION SCIENCE**
   - To make substantial advances in patient safety, both safety science and implementation science should be advanced, to more completely understand safety hazards and the best ways to prevent them.

5. **ADDRESS SAFETY ACROSS THE ENTIRE CARE CONTINUUM**
   - Patients deserve safe care in and across every setting. Health care organizations need better tools, processes, and structures to deliver care safely and to evaluate the safety of care in various settings.

6. **SUPPORT THE HEALTH CARE WORKFORCE**
   - Workforce safety, morale, and wellness are absolutely necessary to providing safe care. Nurses, physicians, medical assistants, pharmacists, technicians, and others need support to fulfill their highest potential as healers.

7. **PARTNER WITH PATIENTS AND FAMILIES FOR THE SAFEST CARE**
   - Patients and families need to be actively engaged at all levels of health care. At its core, patient engagement is about the free flow of information to and from the patient.

8. **ENSURE THAT TECHNOLOGY IS SAFE AND OPTIMIZED TO IMPROVE PATIENT SAFETY**
   - Optimizing the safety benefits and minimizing the unintended consequences of health IT is critical.

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What is Culture?

• “The way we do things around here.”
  – **Shared** perceptions about what is good, right, important, valued, rewarded, supported, and expected
  – Culture is shaped by:
    • Policies, practices, and procedures
    • The values and personalities of people in the organization
    • **Leadership**
  – We can talk about specific pieces of culture, for example:
    • **Safety climate**: To what extent is safety of patients a priority?
    • **Teamwork climate**: To what extent is collaboration valued and supported?
Safety Culture Definition

The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures.

Culture is Predictive

1. Medication errors
2. Back injuries
3. Patient satisfaction
4. Nurse turnover & absenteeism
5. AHRQ Patient Safety Indicators
6. Nurse satisfaction
7. Urinary tract infections
8. Malpractice claims
...and more.

Useful References for Culture-to-Outcome Linkage:

• Hofmann & Mark (2006)
• Katz-Navon et al. (2005)
• Mark et al. (2007)
• Naveh et al. (2005)
• Singer et al. (2008)
• Vogus & Sutcliffe (2007)
Culture is Measurable

• A survey instrument can most effectively distinguish between a “healthy” culture and an “unhealthy” culture when:
  – A valid instrument is used
    • The Safety Attitudes Questionnaire (SAQ) is one validated and widely-used instrument in healthcare
  – All members of a unit are invited to complete the survey
    • Including people of different roles ensures that each role’s piece of the patient care stream is taken into account
  – The survey response rate is high (at least 60%)
    • A high response rate usually indicates that data are representative of everyone’s perceptions
Culture is Local

Teamwork Climate
What can we do about adverse events? #HIMSS16

Simple strategy to follow:

1. Identify events, near misses, and errors

2. Analyze the errors to determine systems improvements

3. Perform these improvements

Unfortunately, it’s not so simple….
Culture of Blame vs Safety

• Medicine and society have tended to fault the person, not the system
• Health care providers have concern for personal consequences for reporting errors
• Also tedious to report
  – Providers are busy
  – Not a priority
• Need to create a culture of safety, similar to the aviation industry
  – Move beyond blaming and punishing and towards improving the system
  – Reduce fear of reporting
  – Make people feel reporting makes a positive impact
A Balanced Accountability

What system of accountability best supports our values?

Support of system safety and other values

As applied to:
- Providers
- Managers
- Institutions
- Regulators

Blame-free culture

Punitive culture
“The biggest challenge is to get people in hospitals- physicians, pharmacists, nurses, and administrators- to recognize that errors are systems problems and not people problems.”

Lucian Leape, MD
Professor, Harvard School of Public Health
Strategies to Engage Staff

• Walkrounds, but need to be frequent enough
• Other options include:
  – M&M conferences
  – Weekly huddles and debriefings
  – Safety reporting mechanisms
• Key to perform follow-up and provide feedback to staff
• This in turn will lead to culture change and increased reporting
Safety Reporting

• Key to analyze and aggregate safety reports for trends
• Perform improvements
• Critical to provide feedback to reporters so they know action is being taken
  – This then drives culture
  – E.g. monthly email update
Patient Safety Education for Staff

- Increase exposure to patient safety tips via various media
- Develop a core curriculum and competencies for all employees and at orientation
- M&M conferences to focus on the learning from adverse events
Optimizing the Use of HIT to Improve Safety
Optimize the Use of HIT

• We know that some technologies reduce errors significantly
  – Computerized provider order entry (CPOE)
  – Barcoding
  – Electronic prescribing
  – Handoff tools
  – Test result management systems
  – Referral management systems
Use of EHRs in Ambulatory Care

Incentives start

Basic or Comprehensive EHR

<table>
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<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2008</td>
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<tr>
<td>2012</td>
<td>39.6%</td>
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<tr>
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</table>
Use of EHRs Among U.S. Hospitals

Incentives start

Basic or Comprehensive EHR

9.1%  11.9%  15.2%  26.6%  44.6%

2008  2009  2010  2011  2012  2013

Slides courtesy of A. Jha; DesRoches et al. Health Affairs 2013
Optimize the Use of HIT

- Need to optimize these systems
  - Reduce over-alerting
  - Variability across vendors
  - Improve interoperability
- Also, we know there can be unintended consequences
  - Clinical documentation/cut and paste
    - 16% of attendings' notes, 8% of residents' notes, and 38% of nurses' notes went unread by other users, and, overall, 16% of notes were never read by anyone
      - Hripcsak et al. JAMIA 2011
    - Accurate medication and problem lists
      - Who owns them?
Unintended Consequences: Inpatient CPOE

- Workflow/work-arounds
- More work/new work
- Communication
- Overdependence on technology
- Shift in power
- Never-ending technology demands
- Emotions
- New errors
- Cost creep

Ash JS, Sittig DF, Poon EG, et al. JAMIA 2007
EHR as a Source of Burnout

• Primary care physicians using an EMR with a moderate number of functions report more stress and less job satisfaction than physicians with a low number of EMR functions

  Babbott S, et al. JAMIA 2014

• For many physicians, the current state of EHR technology worsened professional satisfaction in multiple ways

  – Poor usability
  – Time consuming data entry
  – Interference with face to face patient care
  – Inefficient and less fulfilling work
  – Degradation of clinical documentation

  RAND study 2013
Sociotechnical Model

• 8 components for successful implementation
  – Hardware and software
  – Clinical content
  – Human computer interface
  – People
  – Workflow and communication
  – Policies, procedures, culture (internal)
  – Rules, regulations (external)
  – Measurement and monitoring

Sittig, Singh BMJ Qual Safety 2010
HIT culture is critical to HIT success

• Creating a culture of HIT safety is a critical foundation to improving safety
  – Is the organization open to hearing about HIT safety issues
  – Is there feedback about safety issues
  – Is there punishment and blame?

• Many strategies exist to make culture change that are relevant to HIT
  – Reporting systems
  – Walkrounds

• Need tools to measure where your HIT culture is
How do you assess Health IT patient safety culture?

Joann Speer Sorra, PhD
Associate Director
Westat
Goals

• Introduce the New AHRQ Health IT Patient Safety Culture Supplemental Item Set

• Obtain your feedback on
  – What types of health IT should be included?
  – What topics should be assessed?
  – Who should respond?
  – How the data can be used?

• Plans for development and release
AHRQ Surveys on Patient Safety Culture (SOPS)

- Hospital (2004)
- Nursing Home (2008)
- Medical Office (2009)
- Community Pharmacy (2012)
- Ambulatory Surgery Center (2015)

AHRQ Hospital Survey Topics Relevant to HIT Implementation and Use

• Teamwork within and across units
• Supervisor/manager expectations and actions
• Organizational learning
• Management support
• Feedback and communication
• Communication openness
• Staffing
• Handoffs and transitions
• Nonpunitive response to error
Health IT Patient Safety Culture Supplemental Item Set

• Supplemental item set that can be added to the Hospital SOPS
• Goals of the item set
  – Raise awareness about impact of Health IT on patient safety
  – Assess the extent to which the culture is sensitive to how the use of Health IT affects patient safety
Defining Health IT: What’s included?

- EHRs/EMRs
- E-prescribing
- Barcoding and electronic medication administration record systems
- CPOE
- Clinical decision support

Other?
- Laboratory information systems
- Smart pumps
- Medical devices
What topics should be assessed?

1. Health IT Patient Safety Issues
2. Health IT Patient Safety Risks
3. Workflow/Work Processes
4. Training
5. Management Support/IT Support
6. Communication
7. Benefits of Health IT
8. Reporting Health IT Problems
Potential Survey Topic: Health IT Patient Safety Issues

In the past 12 months, how often did the following things happen with the Health IT systems you personally work with?

Issues in the patient’s electronic health record:
1. Information was not complete or accurate.
2. Important information was hard to find.
3. Lab or imaging test results were not available when needed.

Issues using the Health IT system:
4. Information was incorrectly copied and pasted which led to a documentation error.
5. Information was entered in the wrong place.
6. In a drop down menu, the wrong selection was chosen.
7. Response time was too slow.
1. Our Health IT systems lower the risk for patient harm.
2. Our Health IT systems help us provide better quality care to patients.
3. Information from our Health IT system enables me to make better decisions about patient care.
4. When our Health IT system is unavailable, the backup way of doing things works adequately.
Potential Survey Topic: Workflow/Work Processes

1. There is sufficient access to Health IT workstations throughout the hospital.

2. Our Health IT systems integrate well with our work flow.

3. Using the Health IT system improves our work flow.

4. There are too many different logins to access different Health IT systems (negatively worded).

5. We have to use workarounds with our Health IT system that may put patients at risk for harm or lead to errors (negatively worded).

6. There are so many alerts in our Health IT systems that it is difficult to pay attention to them all (negatively worded).
Other Potential Topics

1. Health IT Patient Safety Issues
2. Health IT Patient Safety Risks
3. Workflow/Work Processes
4. Training
5. Management Support/IT Support
6. Communication
7. Benefits of Health IT
8. Reporting Health IT Problems
Who should respond to the survey?

- Staff who frequently use the hospital’s Health IT systems
  - Clinical staff (physicians, nurses, nursing assistants and techs)
  - Clinical managers/leaders, department managers
  - Information technology staff?
  - Business office/billing staff?

- Not all staff, as is typical of the Hospital SOPS
  - Excludes housekeeping, dietary, transportation
How will the survey data be used?

1. Assess staff awareness of how health IT affects patient safety
   – As a “vulnerability assessment”
2. Identify health IT-related issues that frustrate staff
   – Are staff able to voice concerns?
   – How are concerns addressed?
3. Identify health IT system issues and inefficiencies
4. Improve how workflow is affected by health IT
5. Prioritize training needs
6. Prioritize where to focus improvement efforts
7. Facilitate the integration of IT, Safety, and Quality in the hospital
8. Get health IT vendors to improve their systems
Development Timeline

2016
1. Background Interviews
   Jan - Feb
2. Cognitive Interviews
   Apr - May

2016-2017
3. Pilot Testing
   Oct - Mar

2018
4. Finalize Instruments
   Jan
How Benefits Were Realized for the Value of Health IT

The New AHRQ Health IT Patient Safety Culture Survey Items have an impact on:

**Satisfaction**

- Provides a mechanism for staff and providers to express patient safety concerns related to Health IT
  - System issues, risks, workflow, training, management and IT support, communication, benefits

**Treatment/Clinical**

- Feedback from the survey items can be used to improve efficiency, safety and quality of care
  - Identify health IT system issues and inefficiencies, training needs, and facilitate the integration of IT, Safety, and Quality

![Image of a circular diagram with four sections: Satisfaction, Treatment/Clinical, Savings, and Engagement and Population Management.](https://www.himss.org/ValueSuite)
Questions or Comments?

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