Presents

Fundamentals of Patient Safety

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Accreditation – A Definition

• Usually a voluntary process by which a government or non-government agency grants recognition to health care institutions which meet certain standards that require continuous improvement in structures, processes, and outcomes.
Is Health Care Unsafe?
Deaths Per 100 Million Hours

- Being pregnant: 1
- Traveling by train: 5
- Working at home: 8
- Working in agriculture: 10
- Being in traffic: 50
- Working in construction: 67
- Commercial flying: 100
- Being hospitalized: 2000
What Is Safe Care?
(As Per Lucian Leape)

- Identifying what works – **effective practice**
- Ensuring that the patient gets it – **appropriate use**
- Delivering care flawlessly – **no errors**
What Are Health Care Errors?

(1)

• Failure to diagnose / incorrect diagnosis

• Failure to utilize or act on diagnostic test

• Use of inappropriate or outmoded diagnostic test or procedure
What Are Health Care Errors?

(2)

• Failure to provide follow-up

• Medication error / adverse drug event

• Wrong-site surgery; surgical error

• Transfusion error
Impact of Medical Errors
(1999 IOM Report)

- 44,000 – 98,000 annual deaths
- Medication errors were leading cause followed by surgical errors and complications
- More Americans die from medical errors each year than from breast cancer, AIDS or car accidents
Impact of Medical Errors
(1999 IOM Report)

- Two percent of hospital admissions experience adverse drug event resulting in increased LOS and nearly $4700 increase in cost / event
- Total national cost estimated $8.5 - $29 billion
- 2 million nosocomial infections / year
- Direct and indirect costs – 2.5% of hospital’s annual budget
Why Do We Have Problems?

• Many and varied interactions with technology

• Many individuals involved in care; multiple hand-offs for care; poor communication among caregivers

• High acuity of illness or injury
Why Do We Have Problems?

- Ambient environment prone to distraction
- Need for rapid decisions; time pressures
- High volume, unpredictable patient flow
- Lethargy; short staffing
Similarities to the Aviation Industry

• Importance of interpersonal communication and teamwork in achieving results, such as safety.

  - Many aviation accidents and near misses have been due in part to failures of information transfer

  - Caused by barriers, such as the “authority gradient”
    - Leads to mitigation of communications upward
    - For example, copilot may say, “Do you think we ought to check the wings?”, when the real message is “I see ice on the wings; don’t take off!”
Similarities to the Aviation Industry

- Now, cockpit crews are trained in “crew resource management”…how to overcome the problem of mitigated communication

- High risk of easily confused messages
  - Aviation uses “Alpha”, “Bravo”, “Charlie”…
Similarities to the Aviation Industry

- Work group teams
  - Teamwork in aviation has reduced by 40% safety-related task errors
  - Saved $30 million in aviation
  - Cross monitoring of team members can reduce errors
What Is A Culture of Safety?

1. Acknowledges high-risk, error-prone nature of health care
2. Widespread shared acceptance of responsibility for risk reduction
3. Encourages open communication about safety concerns in non-punitive environment; freedom of fear of reporting problems
What Is a Culture of Safety? (2)

• Facilitates reporting of errors and safety concerns

• Learns from errors and redesigns safer systems

• Embraces accountability for patient safety

• Ensures organizational structure, processes, goals, and rewards are aligned with improving patient safety
Role of Accreditation in Patient Safety

“Accreditation is, at its core, a risk reduction activity.”

- Setting standards
- Guidelines
- Sharing “lessons learned”
- Informing the public
- Influencing national policy
- Other roles:
  - Convener
  - Collaborator
  - Investigator
  - Educator
  - Publisher
The Accréditor’s Tools

- Standards
- Data
- Guidelines
- National Patient Safety Goals
- Education
Key Issues Addressed in Patient Safety Standards

- Responsibility for leadership to create an environment that:
  - encourages error identification and remedial steps to reduce risk of future recurrences, and
  - Minimizes individual blame or retribution for the involved staff and for the reporter
Key Issues Addressed in Patient Safety Standards

- Organizational engagement in proactive systems analysis as an error prevention strategy
- Training at all levels that addresses teamwork and error identification, analysis and prevention
Key Issues Addressed in Patient Safety Standards

- Importance of effective communication in the care delivery process
- Use of knowledge-based information
- Need to inform patient, and when appropriate, patient’s family, of unanticipated outcomes of care
A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof.

Serious injury specifically includes the loss of limb or function.

The phrase, "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome.
Joint Commission’s Sentinel Event Database

- Collects reports from accredited organizations that have experienced a sentinel (adverse) event within their organization—organizations can report voluntarily or the Joint Commission could find out from another source
- Data from reports are collected, aggregated, and analyzed to identify root causes of adverse events
- The root causes are shared with all health care organizations
- The goal is to use the data to prevent similar errors from occurring in other health care organizations
Experience to Date

Of 2840 sentinel events reviewed by the Joint Commission, January 1995 through September 2004:

- 404 inpatient suicides
- 356 events of surgery at the wrong site
- 354 operative/post op complications
- 320 events relating to medication errors
- 213 deaths related to delay in treatment
- 133 patient falls
- 117 deaths of patients in restraints
- 102 assault/rape/homicide
- 80 transfusion-related events
- 79 perinatal death/injury
- 56 deaths following elopement
- 47 fires
- 46 anesthesia-related events
- 45 infection-related events
- 488 “other”

= 2840 RCAs
Settings of the Sentinel Events
January 1995 through December 2003

<table>
<thead>
<tr>
<th>Setting</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>General hospital</td>
<td>1556</td>
</tr>
<tr>
<td>Psychiatric hospital</td>
<td>307</td>
</tr>
<tr>
<td>Out-pt behavioral health</td>
<td>132</td>
</tr>
<tr>
<td>Psychiatric unit</td>
<td>123</td>
</tr>
<tr>
<td>Emergency department</td>
<td>97</td>
</tr>
<tr>
<td>Long term care facility</td>
<td>83</td>
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<tr>
<td>Home care service</td>
<td>49</td>
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<tr>
<td>Ambulatory care setting</td>
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<tr>
<td>Clinical laboratory</td>
<td>6</td>
</tr>
<tr>
<td>Health care network</td>
<td>2</td>
</tr>
<tr>
<td>Office-base surgery</td>
<td>1</td>
</tr>
</tbody>
</table>

Total for all settings = 2405
Root cause analysis …

… a process for identifying the basic or causal factors that underlie variation in performance, including the occurrence or possible occurrence of a sentinel event.
Root Cause Analysis

• Accredited organizations that have experienced a sentinel event are required to conduct a thorough and credible root cause analysis
• Conducting a root cause analysis will help the organization identify where within its processes the error might have occurred
• The organization must then use the results of its root cause analysis to make improvements to prevent a recurrence of the event
How to Conduct a Root Cause Analysis

- Obtain commitment and participation of leaders
  - Administration, nursing, medical staff
- Include “hands-on” care-givers (all disciplines)
- Include QI & RM professionals; legal counsel

Getting started:
- Identify the facts of the case (Who? What? Where? When?)
- Describe the process(es):
  - As designed
  - As usually performed
  - As performed in this case
How to Conduct a Root Cause Analysis

• Keep asking “Why?”

• Treating only symptoms (the obvious [proximate], or special causes) will lead to short-term improvements but will not prevent a recurrence

• Drilling down to root causes is difficult and uncomfortable
  - Don’t mistake obvious causes for root causes
  - Resist the temptation to stop drilling and take action prematurely
Characteristics of an Acceptable Root Cause Analysis

Thorough
- Includes the facts of the case—what happened?
- Includes a description of the processes involved
- Includes an analysis of underlying processes and systems
  - Including at least all the areas on the “Minimum Requirements” matrix
- Identifies possible underlying (root) causes
- Suggests potential improvements
- Includes an action plan
- Includes a strategy for measuring effectiveness
Characteristics of an Acceptable Root Cause Analysis

**Credible**
- Participation by leaders and those closest to the process
- Internally consistent
- Explains areas that are “not applicable” or were not identified as being causes of the adverse event
- Considers relevant literature

**Other tests**
- Applicable to multiple events
- The same “root causes” derive from different events—for example, if communication among staff is identified as a root cause of the event being analyzed, communication problems could lead to adverse events elsewhere
Root Causes of Sentinel Events
(All categories; 1995-2004)

- Communication
- Orientation/training
- Patient assessment
- Availability of info
- Staffing levels
- Physical environment
- Continuum of care
- Competency/credentialing
- Procedural compliance
- Alarm systems
- Organization culture

Percent of events
Communication as a Root Cause

• Mode of communication
  ✷ Oral (55%)
  ✷ Written (35%)
  ✷ Electronic (10%)

• Participants
  ✷ Among staff (60%)
  ✷ With or among physicians (25%)
  ✷ With patient or family (15%)

• Other communication issues
  ✷ Transcription
  ✷ Change-of-shift report
  ✷ Paging systems
**Sentinel Event Alert**

- Data and other information from the Sentinel Event Database are used to identify recommendations to prevent a specific type of adverse event.
- These recommendations are published in *Sentinel Event Alert*, an online newsletter developed by the Joint Commission.
- Each issue of *Sentinel Event Alert* includes expert commentary and recommendations on a particular topic.
- Organizations are encouraged to use the recommendations in *Sentinel Event Alert* to prevent the occurrence of a specific type of adverse event.
New Publication
We are pleased to introduce the first issue of Sentinel Event Alert, a periodic publication dedicated to providing important information relating to the occurrence and management of sentinel events in Joint Commission-accredited health care organizations. Sentinel Event Alert, to be published when appropriate as suggested by trend data, will provide ongoing communication regarding the Joint Commission's Sentinel Event Policy and Procedures, and most importantly, information about sentinel event prevention. It is our expectation and belief that in sharing information about the occurrence of sentinel events, we can ultimately reduce the frequency of medical errors and other adverse events.

Medication Error Prevention -- Potassium Chloride
In the two years since the Joint Commission enacted its Sentinel Event Policy, the Accreditation Committee of the Board of Commissioners has reviewed more than 200 sentinel events. The most common category of sentinel events was medication errors, and of those, the most frequently implicated drug was potassium chloride (KCl). The Joint Commission has reviewed 10 incidents of patient death resulting from misadministration of
Sentinel Event Trends: Potassium Chloride Events

S. E. Alert # 1
February 1998

Conc. KCl
Lab error
Sentinel Event Trends: Medication Errors (% of Total)

S. E. Alert # 11
November 1999

S. E. Alert # 19
May 2001

S.E.A. #23
Sept. 2001

Sentinel Event Alert

1. Potassium chloride
2. Policy issues
3. Policy issues
4. Policy issues
5. Policy issues
6. Wrong site surgery
7. Suicide
8. Restraint deaths
9. Infant abductions
10. Transfusion errors
11. High Alert Medications
12. Op/post-op complications
13. Impact of SE Alert
14. Fatal falls
15. Infusion pumps
16. Proactive risk reduction
17. Home fires (O2 therapy)
18. Kernicterus
19. Look-alike, sound-alike drugs
20. Kreutzfeldt-Jakob disease
21. Medical gas mix-ups
22. Needles & sharps injuries
23. Dangerous abbreviations
24. Wrong-site surgery #2
25. Ventilator-related events
26. Delays in treatment
27. Bed rail deaths & injuries
28. Nosocomial infections
29. Surgical fires
30. Perinatal deaths and injuries
31. Guide to help prevent kernicterus
32. Anesthesia awareness
33. Patient controlled analgesia by proxy
National Patient Safety Goals

- Each year, a set of Goals will be identified from topics published in *Sentinel Event Alert*.
- A small number of specific requirements for each of the Goals will be identified for survey the following year.
- The Goals and their requirements will be published by mid-year.
- Selection of the Goals and requirements will be guided by a panel of experts: the Sentinel Event Advisory Group.
The JCAHO 2005 National Patient Safety Goals

1. Patient identification
2. Communication among caregivers
3. Medication safety
4. Wrong-site surgery
5. Infusion pumps
6. Clinical alarm systems
7. Health care-associated infections
8. Reconciliation of medications
9. Patient falls
10. Flu & pneumonia immunization
11. Surgical fires
12. NPSG implementation by network components
The JCAHO 2005 National Patient Safety Goals

Goal #1: Improve the accuracy of patient identification.

Requirement #1.a.

Use at least 2 patient identifiers (not the patient’s room number) whenever administering medications or blood products; taking blood samples and other specimens for clinical testing; or providing any other treatments or procedures.

Requirement #1.b.

Prior to the start of any surgical or invasive procedure, conduct a verification “time out” to confirm the correct patient, procedure, and site.
The JCAHO 2005
National Patient Safety Goals

Goal #2: Improve the effectiveness of communication among caregivers.

Requirement #2.a.

Implement a “read-back” process for taking verbal or telephone orders, or reports of critical test results.

Requirement #2.b.

Standardize abbreviations, acronyms, and symbols used throughout the organization, including a list of those not to be used.
Wrong-Site Surgery
Provisions of the Universal Protocol

• Preoperative verification process
  - Relevant pre-op tasks completed and information is available and correct

• Surgical site marking
  - Unambiguous mark, visible after prep & drape
  - Right/left, multiple structures or levels

• “Time out” immediately before starting
  - Involves entire team; active communication
  - Fail-safe model: “No go” unless all agree

Applicable to invasive procedures in all settings
The Changing Patient Safety Paradigm

Old Paradigm
• People are the root cause
• Culture of silence
• Culture of blame asks “who?”
• Remediate hazards

New Paradigm
• Systems are the root cause
• Responsible reporting
• Culture of openness asks “why?”
• Identify and eliminate hazards in design phase
Patient Safety Solutions Are Counterintuitive

- Blaming individual practitioners or organizations does not improve patient safety

- Counting and publicly reporting errors, (i.e., body counting) does not improve patient safety

- Filing malpractice claims does not improve patient safety
What Will Improve Patient Safety?

- Professional, organizational and societal cultural changes
- Complete and unabashed support of health care organizational executive leadership
- Design and redesign of safety into health care organizational systems and processes
Critical Steps to Meaningful Improvements In Patient Safety

- Identification of all significant errors
- Analysis of each error to determine root causes
- Compilation of data about error frequencies and root causes
- Dissemination of derived information to permit redesign of systems and processes
- Periodic assessment of effectiveness of risk reduction efforts
For more information:

The Joint Commission Resources Web Site
www.jcrinc.com

The Joint Commission on Accreditation of Healthcare Organizations Web Site
www.jcaho.org