COURSE INTRODUCTION

Imagine that every day for the next year, a jumbo jet full of people crashes and kills all aboard. Would you feel safe about flying? A recent study shows that nearly 195,000 people in the United States die each year due to possible preventable in-hospital medical errors. This is the equivalent of 390 jumbo jets full of people, with one crashing daily for over a year!

This CE module will discuss the Institute of Medicine’s report “To Err is Human: Building a Safer Health System”, types of errors, how errors occur, management of medical errors, improving patient safety, and the 2006 JCAHO National Patient Safety Goals.
Course Objectives

Upon completion of this CE module, the professional will be able to:

1. Identify the estimated number of patients who die each year from preventable medical errors based on reports by HealthGrades, Inc. and the Institute of Medicine.
2. Describe the information discussed in the Institution of Medicine report “To Err is Human: Building a Safer Health System”.
3. List the four general recommendations given by the Institute of Medicine to improve patient safety.
4. Define “medical error”.
5. Define “sentinel event”.
6. Describe the general types of medical errors as identified by the Institute of Medicine.
7. Describe two types of causes for medical errors as described by James Reason.
8. List steps to take in the management of medical errors.
9. Identify 30 safe practices defined by the National Quality Forum to reduce or prevent medical errors.
11. Identify JCAHO Sentinel Events.
12. Describe root cause analysis.

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INTRODUCTION

Do you think medical errors seldom happen? Think again…

“The equivalent of 390 jumbo jets full of people are dying each year due to likely preventable, in-hospital medical errors, making this one of the leading killers in the U.S.”

Samantha Collier, MD
Vice President of Medical Affairs
HealthGrades, Inc.

This is a true statement based on research performed by HealthGrades, Inc. HealthGrades Inc. is a healthcare quality ratings and services company with a mission to improve the quality of healthcare in the United States. In a study released in July of 2004, they described a review of 37 million patient records that documented nearly 195,000 hospitalized people in the U.S. die each year because of potentially avoidable medical errors.

HealthGrades, Inc. conducted the study to determine if patient safety had improved since the landmark paper released by the Institute of Medicine (IOM) in 1999. Based on the HealthGrades, Inc. study, there is little evidence that patient safety has improved.

THE INSTITUTE OF MEDICINE REPORT

In September of 1999, the Institute of Medicine (IOM) published a report that made the evening news and newspaper headlines. The report, “To Err is Human: Building a Safer Health System”, stated that healthcare in the United States is not as safe as it should be and could be. This report stated that at least 44,000 people, and maybe as many as 98,000 people, die in hospitals in the United States each year because of medical errors that could have been prevented. Medical errors result when something that was planned as a part of a patient’s medical care does not work out as planned or when the wrong plan was used in the first place. Using the lower estimate of 44,000, preventable medical errors in hospitals annually exceed the deaths resulting from motor vehicle accidents, breast cancer, and AIDS combined.

Aside from the untold cost of human lives, the IOM report estimates that the cost of preventable medical errors nationwide is between $17 billion and $29 billion per year. The costs include the expense of additional care resulting from the errors, lost income, lost productivity, and disability. Although a monetary value cannot be assigned, the loss of trust in the healthcare system and loss of healthcare professionals’ morale are additional costs that result from medical errors.

The IOM report focused almost exclusively on the hospitalized inpatient setting. This is due largely to the fact that there is insufficient data to quantify the medical mistakes made in physician offices. Doctor’s offices, clinics, outpatient surgical centers, retail pharmacies, nursing homes, and other healthcare institutions treat thousands of patients every day. Adding in the preventable errors that occur in these locations to the number that occur in hospitals, many thousands of additional medical errors occur on a yearly basis.
One of the report’s main conclusions is that the majority of medical errors are not the result of the irresponsible actions of a single individual. More commonly, errors are made due to poor healthcare organization processes. However, errors are bound to happen since humans are not infallible. Medical errors can best be prevented by designing processes that make it harder for healthcare professionals to do something wrong and easier for them to do it right. Healthcare workers must continually be alert and held responsible for their actions. However, when an error occurs, blaming an individual does little to make the process safer and prevent another healthcare professional from making the same error.

The IOM made four general recommendations to improve patient safety:

- Establish a national focus to create leadership, research, tools, and protocols to enhance the knowledge base about safety.
- Identify and learn from errors by developing a mandatory nationwide public reporting system and encourage healthcare organizations and professionals to participate in voluntary reporting of preventable errors.
- Raise performance standards and expectations for improvements in safety through oversight organizations, professional groups, and group purchasers of healthcare.
- Implement safety systems in healthcare organizations to ensure safe practices at the delivery level.

Healthcare accreditation agencies have adopted requirements for evaluating patient safety for the purposes of minimizing medical errors. These agencies include the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the American Association of Accreditation of Ambulatory Surgery Facilities (AAAASF), the College of American Pathologists (CAP), COLA (a physician-directed national organization offering accreditation for medical laboratories and practices), and CMS (Centers for Medicaid and Medicare Services).

**DEFINITIONS**

When reviewing literature about medical errors, terminology often becomes confusing. Different agencies use different terms. Some commonly used definitions follow.

From the American Society of Healthcare Risk Management (ASHRM):

**Adverse Event:** An injury that was caused by medical management rather than the patient’s underlying disease; also sometimes called “harm”, “injury”, or “complication”.

- An adverse event may or may not result from an error.
- “Medical management” refers to all aspects of healthcare, not just the actions or decisions of physicians or nurses.

**Medical Error:** The failure of a planned action to be completed as intended, or the use of a wrong plan to achieve an aim. Medical errors include serious errors, minor errors, and near misses. (Note: A medical error may or may not cause harm. A medical error that does not cause harm does not result in an adverse event.)
From Harvard Hospitals “When Things go Wrong” consensus statement:

**Serious Error:** An error that has the potential to cause permanent injury or transient but potentially life-threatening harm.

**Minor Error:** An error that does not cause harm or have the potential to do so.

**Near Miss:** An error that could have caused harm but did not reach the patient because it was intercepted.

**Preventable adverse event:** An injury (or complication) that results from an error or systems failure. A preventable adverse event can be divided into one of three categories.

- **Type 1:** Error by the attending physician. Example: a technical error made during a surgical procedure.
- **Type 2:** Error by anyone else in the healthcare team. Examples: a nurse gives the wrong medication to a patient; a radiologist missed a lesion on an x-ray film.
- **Type 3:** Systems failure with no individual error. Examples: IV pump failure that causes drug overdose, failure of a system process to communicate an abnormal lab results to the ordering physician.

**Unpreventable adverse event:** An injury or complication that was not due to an error or systems failure and is not always preventable at the current state of scientific knowledge. There are two major categories:

- **Type 1:** Common, well-known hazards of high-risk therapy. Patients understand the risks and accept them in order to receive the benefit of the treatment. Example: complications of chemotherapy.
- **Type 2:** Rare but known risks of ordinary treatments. The patient may or may not have been informed of the risk in advance. Examples: side effects of medications, certain wound infections.

**Incident:** An adverse event or serious error. Sometimes referred to as an event.

From JCAHO:

**Sentinel event:** an unexpected occurrence involving death or serious physical or psychological injury (or even the risk of) to a patient. Requires an immediate investigation and response by the healthcare organization. Investigation must include a “root cause” analysis to identify specific problems and resolutions to the problem.
For the purposes of this CE course, medical errors are those errors that occur when something that was planned as a part of a patient’s medical care does not work out as planned or when the wrong plan was used in the first place.

**TYPES OF ERRORS**

The IOM report classified errors as follows.

<table>
<thead>
<tr>
<th>Diagnostic</th>
<th>Treatment</th>
<th>Preventative</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Error or delay in diagnosis</td>
<td>- Error in the performance of an operation, procedure, or test</td>
<td>- Failure to provide prophylactic treatment</td>
<td>- Failure of communication</td>
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<tr>
<td>- Failure to employ indicated tests</td>
<td>- Error in administering the treatment</td>
<td>- Inadequate monitoring or follow-up of treatment</td>
<td>- Equipment failure</td>
</tr>
<tr>
<td>- Use of outmoded tests or therapy</td>
<td>- Error in the dose or method of using a drug</td>
<td></td>
<td>- Other system failure</td>
</tr>
<tr>
<td>- Failure to act on results of monitoring or testing</td>
<td>- Avoidable delay in treatment or in responding to an abnormal test</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Inappropriate (not indicated) care</td>
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</tbody>
</table>


Some examples of medical errors include hospital-acquired infections, prescription drug errors, wrong site surgery, development of deep vein thrombosis/pulmonary embolism, and failure to diagnose and treat in time.

**HOW ERRORS OCCUR**

Most healthcare professionals are competent individuals who are open to error simply because they are human. In the March 2000 British Medical Journal published the article “Human Error: Models and Management”, James Reason categorized errors according to two types of causes: active failure and latent conditions. Nearly all medical errors involve a combination of active failure and latent conditions.

Active failure is what most people think of when an error has been made. Active failure is usually thought of as an individual act. These errors take the form of:

- slips: doing a familiar action in the wrong way,
- lapses: failures of memory so that a planned action does not happen, and
- mistakes: errors in reasoning that lead to a wrong choice.

Errors resulting from active failure may result from forgetfulness and inattention or may be due to poor motivation, carelessness, negligence, and recklessness.
Latent errors occur when system processes fail. Today’s healthcare system is complex, fast paced, and highly technical. There are many levels of defense against errors in healthcare systems such as procedures, policies, engineering controls, and administrative controls. Mr. Reason described what he called the “Swiss Cheese” theory. Each level of defense can be thought of as a slice of Swiss cheese. The presence of a hole in one slice does not normally lead to an error. However, a single hole in one slice can briefly line up with holes in other slices permitting the opportunity for a damaging error to shoot straight through all the levels of defense.

**MANAGEMENT OF MEDICAL ERRORS**

A medical error should trigger a cascade of responses. Policies and procedures should be written so that the same process occurs with each incident. Following are the generally accepted process steps.

1. Treat the patient immediately to relieve suffering and minimize additional harm. Eliminate any remaining threat to the patient.

2. Protect the evidence by immediately securing implicated equipment, drugs, medical records, and reports.

3. Promptly notify the appropriate administrative and legal members of the healthcare organization.
   - Notify all members of the patient’s healthcare team so they are fully aware of the issues.
   - Decide immediately who will have the primary responsibility for communication to the patient and family about the event.

4. As soon as possible, the patient and family should be informed of the event and the facts as they are known at the time. Early acknowledgement is essential to maintaining the trust of the patient and his/her family.
   - Initial explanations should focus on what happened and how it will affect the patient. Discussion of how or why the event happened should be delayed until an investigation is complete. The patient and family should be informed that the cause of the event is under investigation and the information will be shared with them as soon as it is available.
   - Studies in the medical literature indicate that most patients want to be informed of an event. For moderate and severe events, patients were more likely to initiate a lawsuit if the physician did not disclose the event.
   - Healthcare workers should be open and honest about the event and about what is being done to diminish the injury and to prevent a recurrence. Honesty conveys respect for the patient.
When there has been an event, the most powerful thing a healthcare worker can do is to offer an apology. A sincere apology can help diffuse the patient’s distress and anger.

As soon as it is known, explain what will be done to prevent future events from occurring to other patients.

In some cases, professional counseling for the patient, their family, and even the involved healthcare professionals, may be necessary to deal with issues surrounding the event.

All patient billing should be put on hold pending analysis of the event.

Compensating the patient and/or the family following an event is controversial. However, data exists that indicates the number of lawsuits decreases when a patient and/or the family have been reimbursed for the costs pertaining to the event.

5. As soon as possible, an analysis of the event should be completed, searching for the underlying causes and developing recommendations to prevent recurrence of the event.

Determine the circumstances surrounding the event and factors contributing to the event while the memories of those involved are fresh.

Root causes (see page 15) should be identified and processes revised to prevent another patient from suffering from a similar event.

Assure that the revised processes are implemented and monitored for compliance.

6. Upon discharge from the hospital, the patient and their family should be provided with contact information for future meetings, additional counseling, and financial support. A series of follow-up meetings should be planned to assure the patient and family are kept up-to-date on the progress of the investigation.

**IMPROVING PATIENT SAFETY**

The National Quality Forum (NQF), with the support from the Agency for Healthcare Research and Quality (AHRQ), published 30 safe practices to follow to reduce or prevent medical errors. NQF worked with 260 of the United States leading healthcare providers, purchasers, and consumer organizations. The practices are organized in five broad categories for improving patient safety.

**Create a Culture of Safety**

1. Always look for weak links in processes and anticipate errors before they occur. Encourage the reporting of errors. Avoid punishing those who make errors, within reason. View the occurrence of events as opportunities to learn. Provide employees with in-services about error identification and quality improvement.
Matching Healthcare Needs with Service Delivery Quality Capability

2. Tell and refer, if desired, patients who are to undergo certain high risk, elective surgical procedures and treatments that they will have a reduced chance of complications if the procedures/treatments are done at a facility with proven success.

3. Develop policies and procedures to make sure adequate levels of nursing staff are maintained.

4. Make sure those patients, both adult and pediatric, in general intensive care units are managed by physicians who have specific training and certification in critical care medicine.

5. Pharmacists should actively participate in the medication use process, including, at a minimum, being available for consultation with prescribers on medication ordering, interpretation and review of medication orders, preparations of medications, dispensing of medications, and administration and monitoring of medications.

Facilitating Information Transfer and Clear Communication

6. Verbal orders should be recorded whenever possible and immediately read back to the prescriber in order to verify the accuracy of what was heard.

7. Use only standardized abbreviations and dose regulations.

8. Do not rely on memory to prepare summaries and other reports for the medical record.

9. Make sure that all patient information, especially changes in orders and new diagnostic information, is transferred from one healthcare provider to another in a timely manner.

10. During an informed consent discussion, ask each patient or legal representative to repeat back the information that was discussed.

11. Make sure that a patient’s preferences regarding life-sustaining treatment are prominently displayed on his/her chart.

12. Implement a computerized prescriber-order entry system.

13. Implement a standardized procedure to prevent the mislabeling of x-ray films.

14. Implement a standardized procedure to prevent wrong-site or wrong-patient surgery.

In Specific Settings or Processes of Care

15. Reduce the risk for cardiac ischemia in non-cardiac elective surgery high risk patients by pretreatment with beta-blockers.
16. Evaluate every patient upon admission and on a regular schedule thereafter for the risk of developing pressure ulcers and treat appropriately.

17. Evaluate every patient upon admission and on a regular schedule thereafter for the risk of developing deep vein thrombosis/venous thromboembolism and treat appropriately.

18. Use anticoagulation services that help coordinate management of the patient’s care.

19. Evaluate every patient upon admission and on a regular schedule thereafter for the risk of aspiration and treat appropriately.

20. Follow recommended procedures to prevent central venous catheter-associated blood infections.

21. Evaluate each pre-operative patient for the risk of surgical site infection and, when indicated, use the appropriate antibiotic prophylaxis.

22. Evaluate patients who are at risk for contrast media-induced renal failure and treat as appropriate.

23. Evaluate every patient upon admission and on a regular schedule thereafter for the risk of malnutrition and treat appropriately.

24. When a pneumatic tourniquet is in use, evaluate the patient for the risk of an ischemic and/or thrombotic complication and treat accordingly.

25. Wash or decontaminate hands following the latest hand hygiene guidelines from the Centers for Disease Control and Prevention.

26. Vaccinate healthcare workers against influenza to protect them and the patients they care for.

**Increasing Safe Medication Use**

27. Keep workspaces where medications are prepared clean, orderly, well lit, and free of clutter, distraction, and noise.

28. Standardize methods for storing, packaging, and labeling medications.

29. Identify all “high alert” drugs, including but not limited to anti-thrombotics, concentrated parenteral electrolytes, general anesthetics, chemotherapy agents, narcotics, and opiates.

30. Whenever possible, dispense medications in unit-dose or unit-of-use form.
Are you interested in learning more about patient safety? Refer to the following CEs:

- CDC Hand Hygiene Guideline #1220206
- Infection Control #1220706
- Preventing Wrong Site Surgery #1221306
- Prescription Drug Safety #1221606

**2005 JCAHO NATIONAL PATIENT SAFETY GOALS**

Since 1951, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has maintained state-of-the-art standards that focus on improving the quality and safety of care provided by healthcare organizations. JCAHO inspects

- hospitals,
- ambulatory care centers,
- assisted living facilities,
- behavioral health facilities,
- home care agencies,
- laboratories,
- long-term care facilities, and
- office based surgery practices.

For the last several years, JCAHO has published National Patient Safety Goals (NPSG) to promote specific improvements in patient safety. The 2006 NPSG follow. Note that some requirements may not be applicable for all healthcare organizations.
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<tr>
<th>TARGET</th>
<th>GOAL</th>
<th>REQUIREMENT</th>
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<tbody>
<tr>
<td>Patient Identification</td>
<td>Improve the accuracy of patient identification.</td>
<td>Use at least two patient identifiers (neither to be 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. Prior to the start of any invasive procedure, conduct a final verification process to confirm the correct patient, procedure, site, and availability of appropriate documents. This verification process uses active, not passive, communication techniques.</td>
</tr>
<tr>
<td>Improve Communication</td>
<td>Improve the effectiveness of communication among caregivers.</td>
<td>For verbal or telephone orders or for telephonic reporting of critical test results, verify the complete order or test result by having the person receiving the order or test result &quot;read-back&quot; the complete order or test results. Standardize a list of abbreviations, acronyms, and symbols that are not to be used throughout the organization. Measure, assess, and, if appropriate, take action to improve the timeliness of reporting, and the timeliness of receipt by the responsible licensed caregiver, of critical test results and values. All values defined as critical by the laboratory are reported to a responsible licensed caregiver within time frames established by the laboratory (defined in cooperation with nursing and medical staff). When the patient’s responsible licensed caregiver is not available within the time frames, there is a mechanism to report the critical information to an alternative responsible caregiver. Implement a standardized approach to “hand off” communications, including an opportunity to ask and respond to questions.</td>
</tr>
<tr>
<td>Medication Safety</td>
<td>Improve the safety of using medications.</td>
<td>Standardize and limit the number of drug concentrations available in the organization. Identify and, at a minimum, annually review a list of look-alike/sound-alike drugs used in the organization, and take action to prevent errors involving the interchange of these drugs. Label all medications, medication containers (e.g., syringes, medicine cups, basins), or other solutions on and off the sterile field in perioperative and other procedural settings.</td>
</tr>
<tr>
<td>Wrong Site Surgery</td>
<td>Eliminate wrong site, wrong patient, and wrong procedure surgery.</td>
<td>Create and use a preoperative verification process, such as a checklist, to confirm that appropriate documents (e.g., medical records, imaging studies) are available. Implement a process to mark the surgical site and involve the patient in the marking process.</td>
</tr>
<tr>
<td>Clinical Alarm Systems</td>
<td>Improve the effectiveness of clinical alarm systems.</td>
<td>Implement regular preventive maintenance and testing of alarm systems. Assure that alarms are activated with appropriate settings and are sufficiently audible with respect to distances and competing noise within the unit.</td>
</tr>
<tr>
<td>TARGET</td>
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</table>
| Healthcare Associated Infections | Reduce the risk of healthcare associated infections.                 | ✤ Comply with current Centers for Disease Control and Prevention (CDC) hand hygiene guidelines.  
      ✤ Manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a healthcare associated infection.                                                                                     |
| Reconcile Medications       | Accurately and completely reconcile medications across the continuum of care. | ✤ Implement a process for obtaining and documenting a complete list of the patient’s current medications upon the patient’s admission to the organization and with the involvement of the patient. This process includes a comparison of the medications the organization provides to those on the list.  
      ✤ A complete list of the patient’s medications is communicated to the next provider of service when a patient is referred or transferred to another setting, service, practitioner or level of care within or outside the organization. |
| Reduce Falls                | Reduce the risk of patient harm resulting from falls.                | ✤ Implement a fall reduction program and evaluate the effectiveness of the program.                                                                                                                                                                                                                                                       |
| Influenza and Pneumococcal Disease | Reduce the risk of influenza and pneumococcal disease in institutionalized older adults. | ✤ Develop and implement a protocol for administration and documentation of the flu vaccine.  
      ✤ Develop and implement a protocol for administration and documentation of the pneumococcus vaccine.  
      ✤ Develop and implement a protocol to identify new cases of influenza and to manage an outbreak.                                                                                                                                                                                                                     |
| Surgical Fires              | Reduce the risk of surgical fires.                                   | ✤ Educate staff, including operating licensed independent practitioners and anesthesia providers, on how to control heat sources and manage fuels, and establish guidelines to minimize oxygen concentration under drapes.                                                                                       |
| Implementation of NPSGs    | Implementation of applicable NPSGs and associated requirements by components and practitioner sites. | ✤ Inform and encourage components and practitioner sites to implement the applicable NPSGs and requirements.                                                                                                                                                                                                                              |
| Involvement of Patients and Families | Encourage the active involvement of patients and their families in the patient’s care as a patient safety strategy. | ✤ Define and communicate the means for patients to report concerns about safety and encourage them to do so.                                                                                                                                                                                                                             |
| Pressure Ulcers             | Prevent healthcare associated pressure ulcers (decubitis ulcers).     | ✤ Assess and periodically reassess each resident’s risk for developing a pressure ulcer and take action to address any identified risks.                                                                                                                                                                                                  |
Sentinel Events

JCAHO defines certain occurrences as sentinel events (see page 5). These occurrences point out problematic areas in healthcare. JCAHO calls these events "sentinel" because they signal the need for immediate investigation and response. Sentinel Event Alerts are published for JCAHO accredited organizations and interested healthcare professionals. Each alert identifies a specific sentinel event, describes the common underlying causes, and suggests steps to prevent future occurrences.

Accredited organizations should consider information in an Alert when designing or redesigning relevant processes and consider implementing relevant suggestions or reasonable alternatives.

Sentinel Event Alerts have been issued for the following:

- Potassium chloride
- Proactive risk reduction
- Wrong site surgery
- Home fires (oxygen therapy)
- Suicide
- Kernicterus (newborn jaundice)
- Restraint deaths
- Look alike, sound alike drugs
- Infant abductions
- Creutzfeldt-Jakob Disease
- Transfusion errors
- Medical gas mix-ups
- High alert medications
- Needles and sharps injuries
- Op/post-op complications
- Dangerous abbreviations
- Fatal falls
- Ventilator-related events
- Infusion pumps
- Delays in treatment
- Bed rail deaths and injuries
- Hospital acquired infections (nosocomial)
- Surgical fires
- Perinatal death and injury
- Anesthesia awareness
- Patient controlled analgesia
- Vincristine administration errors
Each JCAHO accredited organization is required to define "sentinel event" for its own purposes and establish procedures to identify, report, and manage these events. At a minimum, an organization's definition must include the following:

- The event has resulted in an unexpected death or major permanent loss of function, not related to the natural course of the patient's illness or underlying condition, or
- The event is one of the following (even if it didn't result in death or major permanent loss of function unrelated to the natural course of the patient's illness or underlying condition)
  - Suicide of any individual receiving care, treatment, or services in a staffed around-the-clock care setting or within 72 hours of discharge,
  - Unexpected death of a full-term infant,
  - Abduction of any individual receiving care, treatment, or services,
  - Discharge of an infant to the wrong family,
  - Rape,
  - Hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities,
  - Surgery on the wrong individual or wrong body part,
  - Unintended retention of a foreign object in an individual after surgery or other procedure.
  - Severe neonatal hyperbilirubinemia (bilirubin >30 mg/dL), and
  - Prolonged fluoroscopy with cumulative dose >1500 rads to a single field, or any delivery of radiotherapy to the wrong body region or >25% above the planned radiotherapy dose.

JCAHO expects accredited organizations to identify and respond appropriately to all events the organization has defined as sentinel events. The response includes the performance of a timely root cause analysis (see following section), what improvements have been put into action to prevent a recurrence of the event, and monitoring the improvements for effectiveness.

JCAHO encourages, but does not require, accredited organizations to report sentinel events to them. However, if an organization does not report a sentinel event and JCAHO becomes aware of the sentinel event from a patient, a patient's family member, the media, an employee, during an inspection, etc., they expect the accredited organization to perform a thorough investigation of the event using root cause analysis and develop an action plan. JCAHO also expects the accredited organization to submit the analysis and action plan to them within 45 days.

**Root Cause Analysis**

Root cause analysis is a method of solving problems and it is not unique to JCAHO. Root cause analysis helps identify what, how, and why something happened, focusing on systems and processes and not individual performance. It identifies the basic or underlying factors that resulted in the occurrence of the sentinel event. These are the real causes (or root causes) of the event. Once the root causes are identified, a plan for improvement can be determined and implemented. By directing corrective measures at the root causes and not at the immediately obvious symptoms, it is hoped that recurrence of the event will be minimized.
Action Plan

The product of the root cause analysis is an action plan that identifies the approach that the organization intends to put into practice to reduce the risk of similar events occurring in the future. The plan should address responsibility for implementation, supervision, time lines, and methods used for measuring the effectiveness of the plan.

CONCLUSION

According to the December 14, 2005 Journal of the American Medical Association (JAMA), hospital patient safety systems in the United States have improved, but they still do not meet recommendations set forth in the IOM report. The JAMA report states that patient safety systems have only moderately improved. For example, while 74% of hospitals have implemented a written patient safety plan, nearly 9% still have no plan. Most hospitals have prescription drug safety systems but only 3% have fully installed computerized physician order entry systems. The JAMA report and the HealthGrades company report discussed in the introduction bring to the forefront the need for all hospitals and other healthcare organizations to develop and implement patient safety programs.
REFERENCES


WebMD. Medical Errors Still Plague U.S. Hospitals. www.webmd.com


Institute of Medicine. To Err is Human: Building a Safer Health System. www.iom.edu

Food and Drug Administration. Make No Mistake: Medical Errors Can Be Deadly Serious. www.fda.gov


Massachusetts Coalition for the Prevention of Medical Errors. When Things Go Wrong-Responding to Adverse Events. www.maccoalition.org

New York Medical College of Family Medicine. Recommended Goal and Objectives for Family Practice Residents on Patient Safety and Medical Error. www.nymc.edu/fammed
1. The report “To Err is Human: Building a Safer Health System” was published by what organization?
   a. HealthGrades, Inc.
   b. Institute of Medicine (IOM)
   c. Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
   d. The Centers for Medicaid and Medicare Services (CMS)

2. Which of the following is a FALSE statement regarding medical errors?
   a. Errors are bound to happen since humans make mistakes.
   b. Most errors are a result of organizational processes that need improvement.
   c. Most medical errors result from the irresponsible actions of a single person.
   d. When an error occurs, blaming an individual does little to make any medical process safer.

3. According to the IOM report, up to ________ hospitalized patients may die in the United States each year because of preventable medical errors.
   a. 44,000
   b. 76,000
   c. 98,000
   d. 195,000

4. The IOM report focused on what type of patients?
   a. clinic patients
   b. hospital inpatients
   c. hospital outpatients
   d. nursing home patients

5. Harvard Hospitals defines an error that could have caused harm but did not reach the patient because it was intercepted as a(n) ________.
   a. adverse event
   b. close call
   c. minor error
   d. near miss
6. A patient experiences a medical error that resulted from an avoidable delay in response to an abnormal test. The IOM would classify this type of error as __________.
   a. diagnostic
   b. preventative
   c. secondary
   d. treatment

7. According to James Reason, errors may result from active failure and/or dynamic conditions.
   a. True
   b. False

8. According to James Reason, a slip results from failure to remember how to perform an action.
   a. True
   b. False

9. The first step following a medical error should be to immediately treat the patient to prevent further injury and relieve any suffering.
   a. True
   b. False

10. Studies indicate that most patients want to be informed if a medical error occurs even if they might otherwise never have known.
    a. True
    b. False

11. When a medical error occurs, healthcare workers should not apologize to a patient and/or their family.
    a. True
    b. False

12. An analysis of a medical error event should include the identification of root causes.
    a. True
    b. False
13. Creating a culture of safety includes which of the following?
   a. Encouraging people to report errors.
   b. Finding weak links in processes and anticipating errors.
   c. Viewing medical errors as opportunities to learn.
   d. All responses are correct.

14. To meet JCAHO’s National Patient Safety Goal requirement to improve the accuracy of patient identification, how many patient identifiers must be used to confirm the identity of the patient?
   a. four
   b. one
   c. three
   d. two

15. Which of the following is NOT considered to be a JCAHO sentinel event?
   a. abduction of a patient
   b. hemolytic transfusion reaction
   c. neonatal bilirubin < 30 mg/dL
   d. patient suicide

*end of test*