

**PREVENTING MEDICAL ERRORS: A MULTIDISCIPLINARY
RESPONSIBILITY
2 CONTACT HOURS**

COURSE DESCRIPTION

This course meets the Florida statutory requirement for nurses and many other healthcare providers to complete a two-hour course on the prevention of medical errors for relicensure.

This course provides the learner with the knowledge and skills that are necessary to individually and collectively insure patient safety with the prevention of medical errors. The content of the course includes medical error statistics; current laws, regulations and National Patient Safety Goals relating to medical errors; factors that lead to medical errors, ways to recognize and correct and/or adapt practice to error and problem-prone situations; some processes, such as root cause analysis, reporting of sentinel events as well as "near misses" in a "no blame" environment; high-risk populations associated with medical errors such as the sensory and cognitively impaired, infants, and children; and ways in which medical errors can be prevented.

OBJECTIVES:

At the conclusion of this course, the learner will be able to:

1. Describe the impact of medical errors, current laws, requirements, and regulations relating to patient safety and the prevention of medical errors.
2. Identify frequently encountered error-prone situations and high risk patient populations in respect to medical errors.
3. Apply root cause analysis principles and procedures into one's role in the multidisciplinary team.
4. Detail ways with which medical errors and "near misses" can be eliminated, including the education of patients and family members.

INTRODUCTION

To Err Is Human: Building a Safer Health System, published in 1999 by the Institute of Medicine Committee on Quality of Healthcare in America, is viewed as the powerful vehicle that jolted, awakened and

enlightened the entire healthcare community and the public regarding the seriousness and frequency of medical errors.

This report was the impetus for serious and wide sweeping introspection and change that involved all those in healthcare and the entire nation, including lawmaking bodies at all levels. Necessary healthcare culture changes, laws, and regulatory body mandates in reference to medical errors shortly followed our nationwide awakening and enlightenment as a result of this ground breaking report.

To read *To Err Is Human: Building a Safer Health System* in its entirety online at no cost, go to

www.nap.edu/books/0309068371/html

A couple of years later, in 2001, the Institute of Medicine's Committee on Quality of Health Care in America moved beyond its initial report with their new publication entitled *Crossing the Quality Chasm: A New Health System for the 21st Century*. This publication made many suggestions and recommendations for change with the aim of decreasing and eliminating any proneness to medical errors. Technology and the use of technological advances, among other recommendations, were emphasized in this work

To read *Crossing the Quality Chasm* in its entirety, go to

www.nap.edu/books/0309072808/html.

Many equate "medical errors" with "medication errors", which is not accurate. Although medication errors are an example of a medical error, they are only one of many types of medical errors. Some other medical errors include:

- Wrong site surgeries
- Suicides
- Faulty laboratory testing
- Lack of a timely and complete psychiatric evaluation
- Blood and blood product errors
- Diagnostic errors
- Equipment failures and malfunctions
- Falls

- Infections and
- Others

MEDICAL ERRORS: A SERIOUS PROBLEM IN HEALTHCARE

To Err Is Human: Building a Safer Health System underscores the urgency and necessity of preventing medical errors throughout our nation. This report states that at least 44,000 and as many as 98,000 Americans die every year as the result of medical errors. (American Hospital Association, 1999; Committee on Quality of Health Care in America, 1999). Even using the lower estimate, the authors report that “deaths due to medical errors exceed the number attributable to the eighth leading cause of death.” (Committee on Quality of Health Care in America, 1999).

Although medical errors occur most often in hospitals, they also jeopardize the safety of healthcare clients in nursing homes, physicians’ offices, home care, laboratories, diagnostic centers, pharmacies and all other healthcare settings. These medical errors are not only costly in terms of the well-being of the client, they are also financially costly. It is estimated that medical errors cost our country nearly \$37.6 billion each year. Approximately \$17 billion of those costs result from preventable medical errors and about 59% of the costs associated with preventable medical errors are for direct, rather than indirect, health care costs associated with the preventable errors. (Agency for Healthcare Research and Quality, 2000)

The prevention of medical errors is the responsibility of all healthcare providers, at all levels of the organization. All of our attention must be focused on the contract that we have with the consumer when we provide care and healthcare related services. We have the legal, ethical and moral responsibility to protect the consuming public and to preserve their safety. All of our efforts and attention will also serve to decrease the unnecessary, direct and indirect healthcare costs associated with medical errors and to facilitate compliance with laws and external regulations, such as those of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

LAWS, REQUIREMENTS, REGULATIONS AND CULTURAL CHANGES

Our federal government, many states and other regulatory bodies, such as JCAHO, began to mandate the necessity of addressing this severe problem immediately after the release of this landmark report.

For example, the U.S. and President Clinton responded only a couple of months after the release of *"To Err is Human"* with a comprehensive plan to improve patient safety which included:

- a new Center for Quality Improvement and Patient Safety and the allocation of the finances necessary for this group to conduct research on patient safety, to translate these research findings into practice, to develop national patient safety goals, to educate the public and to produce an annual report of progress;
- a call for a new Health Care Financing Administration (HCFA) regulation to insure that the more than 6,000 hospitals who participate in Medicare system have medical error reduction programs in place;
- the need for new Food and Drug Administration (FDA) regulations regarding drug names that avoid look alike and/or sound alike drug names, packaging and labeling that includes information about drug interactions, and the online reporting of adverse drug reactions;
- a mandate to improve patient safety at Department of Veterans Affairs and Department of Defense healthcare facilities; and
- a nationwide medical error reporting system.

Since 1985, Florida State has mandated the reporting of certain serious adverse incidents within the control of the healthcare industry as well as other conditions, such as epidemic outbreaks, that are primarily outside of the control of the healthcare industry.

Florida Statute 395.0197 requires that certain sentinel events be reported to the State. These sentinel events include ones that result in the death of a patient; brain or spinal damage to a patient; the performance of a surgical procedure on the wrong patient; the performance of a wrong-site surgical procedure; and the performance of a wrong surgical procedure.

Additionally, the Florida Statute requires extensive investigation and follow-up reporting to the State within 15 days of the above sentinel events and also that the patient and/or family member be told about the error. JCAHO also requires this patient and family disclosure. For more information about Florida Statutes go to this link:

<http://www.leg.state.fl.us/Statutes/index.cfm?Mode=View%20Statutes&Submenu=1&Tab=statutes>

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has also instituted new standards after the publication of *"To Err is Human"* in 1999.

JCAHO mandates that every healthcare facility has formal mechanisms to identify, analyze, and prevent medical errors. They mandate that all sentinel events, affecting patients, staff, and/or visitors, are analyzed and addressed with a corrective action plan. Although JCAHO strongly *encourages* healthcare facilities to send the results of all of their timely, thorough, and credible root cause analyses as well as the correlate corrective action plans, it is *mandatory* that all those analyses and corrective plans associated with a death or serious injury, such as one of the following, be submitted to them:

- unanticipated major loss of function;
- the suicide of a patient in a setting where the patient receives around-the-clock care;
- infant abduction or the discharge of an infant or child to the wrong family;
- rape;
- a hemolytic transfusion reaction involving the administration of blood or blood products with major blood group incompatibilities; or
- surgery on the wrong patient or the wrong body part.

CAN MEDICAL ERRORS BE PREVENTED?

"Errors can be prevented by designing systems that make it hard for people to do the wrong thing and easy for people to do the right thing."

— William Richardson, president of the W. K. Kellogg Foundation

Fortunately, many medical errors are preventable:

- "One of the landmark studies on medical errors indicated 70 percent of adverse events found in a review of 1,133 medical records were preventable; 6 percent were potentially preventable; and 24 percent were not preventable.
- A study released last year, based on a chart review of 15,000 medical records in Colorado and Utah, found that 54 percent of

surgical errors were preventable.” (Agency for Healthcare Research and Quality, 2000)

How then can medical errors be eliminated and prevented? The answer to this question is quite simple but, as usual, the solution to this complex problem is not as simple as just answering the question.

Medical errors can be eliminated by creating systems, processes and mechanisms that make it IMPOSSIBLE for a person to do the wrong thing and VERY EASY for people to do the right thing. An ideal process is one that is simple, known by all, and which leaves no room for error. Ideal processes make it impossible for humans to err, or make a mistake. They have built in checks and balances; they have redundancies that insure safety and defy human error. (Agency for Healthcare Research and Quality, 2000; Committee on Quality of Health Care in America, 1999)

Some examples of re-engineered systems, or processes, that have had a positive impact on the reduction of medical errors include:

- “A 1999 study indicated that including a pharmacist on medical rounds reduced the errors related to medication ordering by 66 percent, from 10.4 per 1,000 patient days to 3.5 per 1,000 patient days.
- The specialty of anesthesia has reduced its error rate by nearly sevenfold, from 25 to 50 per million to 5.4 per million, by using standardized guidelines and protocols, standardizing equipment, etc.
- One hospital in the Department of Veterans Affairs uses hand-held, wireless computer technology and bar-coding, which has cut overall hospital medication error rates by 70 percent. This system is soon to be implemented in all VA hospitals.” (Agency for Healthcare Research and Quality, 2000)

Before better and safer processes can be put in place, however, it is necessary for each healthcare facility to identify which processes are not ideal. Reporting incidents, “near misses” and hazardous conditions is essential to the identification of these less than ideal, faulty processes. Reporting will decrease, and perhaps halt altogether, when the threat of punishment and blame prevails throughout the organization. The frequency of reporting of sentinel events and “near misses” will increase when there is no threat of punishment or blame. We must, therefore, discard our old ways of identifying, blaming and punishing the person at fault. Instead, we must look at the processes and blame the systems, or processes, for the mistake or error. We

have to move beyond blame and into a new arena of system analysis. (Committee on Quality of Health Care in America, 1999)

A blameless culture is necessary in order for us to eliminate medical errors in healthcare. Instead of asking, "Who did it?" we must ask, "What happened?" and "Why did it happen?" The challenge before us requires that all healthcare providers and healthcare organizations ask, "What systems or processes failed?" or "What systems or processes were not adequate enough to prevent the human error?" (Committee on Quality of Health Care in America, 1999)

The new paradigmatic shift not only moves us into a new cultural environment of "no blame", but also into the area of identifying and reporting things that were not reported before this shift. In the past, we reported only errors that lead to actual patient harm or injury. More accurate and proactive reporting of erroneous acts of omission and commission, with and without any harm or injury, in addition to reporting "near misses" as well as hazardous conditions is necessary in order for us to identify and correct the systems and processes that have failed. "*No blame*", a *proactive stance* and the *accurate reporting* of sentinel events, "near misses" and hazardous conditions are necessary in order for us to identify and correct faulty processes, or systems. The goal of reporting is to prevent an error from ever happening or from happening again.

A **sentinel event** is defined as "an unexpected occurrence involving death or serious physical or psychological injury or the *risk thereof*." A **near miss** is a sentinel event that has been thwarted as the result of good luck or the highly astute insight of a healthcare provider who acted in such a way that it prevented an actual sentinel event. "Near misses" are red flags that require immediate action. Healthcare workers must also report **hazardous conditions**, that is, circumstances, environmental conditions, or other potentially adverse conditions that could, in the future, lead to a medical error and actual harm. These, too, require immediate action in order to prevent a disaster in the making.

Two examples of sentinel events that can, and sometimes do, lead to death or serious injury are:

- A transfusion reaction that results from the administration of the incorrect blood product, and
- The suicide of a person who has not been properly assessed for suicide risk

Two examples of *sentinel events*, without injury or death, that have the "risk thereof" include:

- The uneventful administration of a blood product to the wrong patient who just happened to be the same blood type as the intended recipient, and
- Allowing a rarely used defibrillator to remain uncharged on the crash cart for over two weeks. When the defibrillator was not needed, it remained a sentinel event without harm but with the "risk thereof", however, if that defibrillator was needed and not operable, it would then may become a sentinel event with death or serious injury.

Two examples of "near misses" are:

- discovering that a newly admitted patient had not been assessed for medication allergies, suicide risk, and/or falls risk, and
- stopping a phlebotomy in progress when you realize that you were about to draw blood from the wrong patient.

Some examples of *hazardous conditions*:

- biomedical equipment that has not had preventive maintenance and safety checks,
- insufficient numbers of qualified staff,
- the lack of well lit emergency exit signs, and
- poor communication among members of the healthcare team.

ERROR PRONE SITUATIONS

Between January of 1995 and December 31, 2004, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has reviewed a total of 2,966 sentinel events. These sentinel events and their reporting permits us to be forewarned about the types of situations and circumstances that are at high risk for error. Each year, JCAHO updates and publishes a compilation of all sentinel events, and other information, in order to communicate this valuable data to all healthcare providers and the public.

Below is a table that shows each type of sentinel event, in descending order of frequency for the year 2004, the number of cases and the percent of all cases for that year. Below that table is another that displays the degree of injury that resulted from the compiled sentinel events. Finally, the last table depicts the settings where the sentinel events occurred, and how the sentinel events were identified, or discovered.

2004

**Type of
Sentinel Event**

#

%

Patient suicide

415

14%

Wrong-site surgery

370

12.5%

Op/post-op complication

365

12.3%

Medication error

326

11%

Delay in treatment

221

7.5%

Patient fall

144

4.9%

Pt. death/injury in restraints

124

4.2%

Assault/rape/homicide

107

3.6%

Transfusion error

85

2.9%

Perinatal death/loss of function

84

2.8%

Infection-related event

57

1.9%

Patient elopement

57

1.9%

Fire

51

1.7%

Anesthesia-related event

49

1.7%

Ventilator death/injury

39

1.3%

Maternal death

38

1.3%

Med equipment-related

37

1.2%

Infant abduction/wrong family

21

0.7%

Utility systems-related event

18

0.6%

Other less frequent types

358

12.1%

Sentinel Event Outcomes

#

%

Patient death

2,279

74%

Loss of function

312

10%

Other

492

16

Total patients impacted

3,083

100%

Source: JCAHO Sentinel Event Statistics, December 31, 2004

http://www.jcaho.org/accredited+organizations/sentinel+event/se_stats_1204.pdf

Settings of Sentinel Events

#

%

General hospital

1,935

65.2%

Psychiatric hospital

361

12.2%

Behavioral health facility

157

5.3%

Psych unit in general hospital

150

5.1%

Emergency department

124

4.2%

Long term care facility

99

3.3%

Ambulatory care

74

2.5%

Home care

57

1.9%

Clinical laboratory

6

0.2%

Health care network

2

0.1%

Office Based Practice

1

0.0%

Sources for the Sentinel Event Identification

#

%

Self-report

1,885

63.6%

Complaints

308

10.4%

Media

263

8.9%

Identified during survey

224

7.6%

CMS or State reports

160

5.4%

Source: JCAHO Sentinel Event Statistics, December 31, 2004

http://www.jcaho.org/accredited+organizations/sentinel+event/se_stats_1204.pdf

POPULATIONS AT RISK FOR MEDICAL ERRORS

Some groups of patients are more at risk for medical errors than others. Some of the client populations that are at risk for medical errors include infants and children as well as members of a population that has a:

- decreased level of consciousness
- cognitive impairment and/or language barrier
- sensory disorder and/or
- developmental or psychiatric disorder

Accurate Patient/Resident/Client Identification

One area that must consistently be addressed, whether or not the person is in a high risk for medical errors population or not, is patient/resident/client identification. Accurate identification is necessary for all aspects of diagnosis and treatment. JCAHO requires that at least two (2) unique identifiers, other than room number, are used prior to the administration of medications, blood and blood products, blood and other laboratory specimens and other treatments and procedures. Some examples of unique identifiers include the person's:

- first, middle and last name;
- unique code number assigned to that person upon admission;
- social security number;
- birthday in terms of month, day and year;
- photograph; and
- encoded bar code containing two (2) or more unique identifiers.

Special Measures to Prevent Medical Errors Among Populations at Risk

Other measures that can be used to prevent medical errors among populations at high risk for medical errors are described below.

Decreased level of consciousness. Patients that are not alert, awake and oriented to time, place and person are at high risk for medical errors. Levels of consciousness can be altered by a number of factors

including anesthesia, medications, delirium, head injuries and other forces. Patient identification is absolutely necessary when providing care to a person with a diminished, or compromised, level of consciousness. At times, a family member or friend who is visiting this patient/resident/client can assist with this identification process and also serve as a person to question you about questionable treatments and to ask questions of you. All of these things will help to avoid medical errors among the members of this high-risk group.

Cognitive impairments. Lower levels of cognition place a person at risk for medical errors. Clients that are confused, disoriented, demented or with delirium are at risk for all sentinel events because of the challenges associated with accurate patient identification and the hazards of impaired cognition. Some of these hazards include the risk for falls, elopement, death or injury as a result of restraint use, transfusion errors, fire and infection. Again, patient identification is highly important. It is also helpful, depending on the person's level of cognition, to communicate with the affected person in a way that is understandable to them and to listen to them carefully, especially if they cue you to an impending error, either verbally or nonverbally. The use of pictures and drawings may help you to communicate with a person that is affected with a cognitive disorder, or impairment. The elderly population is most often affected by cognitive impairment.

Language barriers. One of our best defenses against medical errors is an alert, oriented, mentally competent person who is well educated and informed about their disease process, all of their diagnostic tests and all of treatments that they are, or will be, getting. These "ideal" patients are not frequently encountered. More often, our patients pose challenges, including a language barrier. A person with a language barrier can be as challenging as a person with a cognitive impairment. People with language barriers and cognitive impairments may not understand what you are saying or asking, and, you do not understand them. You may not know what they are saying or asking. The use of interpreters, family or friends, pictures and drawings should be maximized to overcome a language barrier. Additionally, it is very wise to learn some basic medical terminology and useful foreign language phrases for the populations you frequently care for.

Sensory disorders. Auditory and visual impairments can also lead to medical errors. A patient that is visually impaired, or even blind, may not be able to detect that an erroneous medication is about to be given or an incorrect treatment is about to be done. Additionally,

patients with a visual impairment are at greater risk for falls than those without such an impairment.

Patients with auditory impairments may not hear the healthcare provider's explanation about what they are about to do and why they are doing it. They may not even be able to hear the nurse, pharmacist or laboratory technician call them by the incorrect name. All of these issues lead to medical errors.

Assistive devices, such as eyeglasses, hearing aids, must be consistently provided to the impaired person in order to protect their safety. Additionally, the use of large print or Braille reading materials and magnifying glasses may be helpful for the visually impaired; and speaking loudly while facing the patient with an auditory impairment may offer some protection against medical errors.

Infants and children.

For natural and obvious reasons, infants and children are not cognitively or developmentally able to participate in care and decision making. They are usually unaware of what medications, treatments and procedures they should and should not be getting. They are unable to verbalize questions and concerns regarding erroneous medications, treatments or surgeries. Until they reach a certain age, they are not even able to state their name. Infants and children are at risk for virtually all types of sentinel events, especially abduction, placing the infant with the wrong parents, poisoning, falls and other physical injuries. Eliciting the support and presence of the family is one way to prevent medical errors among this high risk population.

Developmental disorders.

The same concerns and interventions described above for infants and children apply to those with developmental disorders, as specific to the degree of their developmental delay.

Psychiatric disorders.

Lastly, patients/residents/clients with a psychiatric disorder are at risk for sentinel events for a variety of reasons including medications and the nature of their illness. Some psychotropic medications have sedating effects, thus posing some of the same challenges that those with decreased levels of consciousness have. Also, depressed patients may be at risk for suicide, the most frequently occurring sentinel event according to JCAHO. Additionally, patients with a psychiatric disorder

may also be aggressive and violent, thus causing harm to self or others.

This population is also at risk because they may be delusional and out of touch with reality. They may not be able to reliably even state their correct name; they may not be legally, mentally competent enough to accept or reject care or to ask questions.

ROOT CAUSE ANALYSIS

Root cause analysis, also referred to as fault tree analysis, is a goal-directed and systematic process that uncovers the most basic underlying factors that have contributed to, or have the potential, to contribute to a sentinel event. The purpose of this analysis is to identify what changes can be made to systems and processes in order to prevent a recurrence of the sentinel event or to reduce the risk of a future "close call", or "near miss".

Root cause analysis is expected to drill down to the deepest, underlying or root causes that led to, or could lead to, a sentinel event. Once these root causes are identified, organizational systems and processes that can be altered to reduce the likelihood of error in the future.

Root causes can be grouped into categories, such as human, communication, environmental, supplies and equipment, and policies and procedures.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires that root cause analysis be done on all sentinel events, with or without injury, and they recommend that the same process be used for "near misses". All root cause analysis must be thorough and credible.

In order for it to be *thorough*, it must include:

- "a determination of the human and other factors most directly associated with the sentinel event, and the process(es) and systems related to its occurrence;
- analysis of the underlying systems and processes through a series of "Why?" questions to determine where redesign might reduce risk;

- inquiry into all areas appropriate to the specific type of event as described in the current edition of "Minimum Scope of Review of Root Cause Analysis" (attached).
- identification of risk points and their potential contributions to this type of event;
- a determination of potential improvement in processes or systems that would tend to decrease the likelihood of such events in the future, or a determination, after analysis, that no such improvement opportunities exist.

To be *credible*, the root cause analysis must:

- include participation by the leadership of the organization and by the individuals most closely involved in the processes and systems under review;
- be internally consistent, i.e., not contradict itself or leave obvious questions unanswered;
- provide an explanation for all findings of "not applicable" or "no problem;" and
- include consideration of any relevant literature. (Joint Commission on Accreditation of Healthcare Organizations, 2002)

STEPS IN A ROOT CAUSE ANALYSIS

1. Data and document review. The first step of the root cause analysis process is to review pertinent policies and procedures, the incident or occurrence report that alerted the facility to the sentinel event (adverse event or "near miss") or hazardous circumstance(s), and relevant professional literature, some of which may statistically substantiate the frequency and/or severity of the sentinel event under scrutiny. Aggregated and analyzed data relating to similar or identical sentinel events within the organization and patient data are also sometimes included for discussion.

2. Detailing the sequence of events. Most of the processes employed in healthcare facilities are highly complex and involve multiple steps, multiple contacts with the patient, and multiple healthcare providers from several departments or areas. For example, a patient admitted to a hospital through the emergency department has had contact with the triage nurse, the emergency medicine physician and nurse, the

admitting department, and often the EKG, laboratory, and radiology departments before he or she is even admitted to the patient care unit. Once admitted to the unit, the patient is assessed by a nurse, an attending physician, and perhaps even healthcare professionals from the respiratory care, nutrition and food services, social work, and rehabilitation areas. Few, if any, processes involve a single step, a single patient contact, or a single person or department.

The root cause team will detail and record the sequence of events that lead up to the sentinel event during this second step of the root cause analysis process. After that actual sequence of events is done, the group should then detail and record the sequence of events as it should have been. Were steps skipped? Was the policy and procedure followed, as established?

3. Evaluate the effectiveness of barriers that could have prevented the sentinel event. Barriers are usually thought of as an obstacle to progress, however, in the context of systems and procedures, barriers are “safeguards that can prevent or mitigate (or could have prevented or mitigated) an unwanted event or occurrence. It offers a structured way to visualize the events related to system failure or the creation of a problem” (Joint Commission on Accreditation of Healthcare Organizations, 2005). In this context, barriers are protective safeguards that can be physical or procedural. An alarm system in a newborn nursery is an example of a physical barrier. A procedure that requires a nurse to check blood with another nurse before hanging it is an example of a procedural barrier that has put in place to prevent an error. If barriers are ineffective or absent, effective barriers must be built into the processes that led to the sentinel event under analysis.

4. Identify possible root causes. During this step, the root cause analysis team should brainstorm about all the possible root causes by repeatedly asking, “Why?”. Remember, it is not the person that should be blamed because it was the process or system, not the person that was at fault. Why did the sentinel event happen? One person in the group may respond by saying, “Because the unit was too busy for the social worker to verbally report the patient’s suicidal thoughts, and social workers usually write their progress notes in their office at the end of the day,” Further *why?* and *how could that have happened?* questions should continue until no more responses can be given.

5. Classify all the root causes as contributory or noncontributory. After all possible root causes have been exhausted, the group should then decide whether each is contributory to the sentinel event or

noncontributory to the sentinel event. Under *no* circumstances should all identified possible root causes be labeled as noncontributory. Noncontributory causes and contributory causes are both documented. Noncontributory root causes should be documented along with the rationale behind identifying them as noncontributory, rather than contributory.

6. *Generate a corrective action plan.* At least one corrective action must be implemented for each and every contributory root cause. "An action plan will be considered acceptable if it

- identifies changes that can be implemented to reduce risk, or formulates a rationale for not undertaking such changes; and
- where improvement actions are planned, identifies who is responsible for implementation, when the action will be implemented (including any pilot testing), and how the effectiveness of the actions will be evaluated." (Joint Commission on Accreditation of Healthcare Organizations, 2002)

PREVENTING MEDICAL ERRORS

On an annual basis, for the last several years, JCAHO has published National Patient Safety Goals for hospitals, long term care and assisted living facilities, ambulatory care, behavioral health care, critical access hospitals, office based surgery, home care, laboratory, healthcare networks and disease specific care. All of these Patient Safety Goals include not only goals but also, more importantly, ways that these commonly occurring root causes can be prevented. All of the National Patient Safety Goals can be accessed at the Joint Commission on Accreditation of Healthcare Organization's website at www.jcaho.org

The JCAHO (2005) Patient Safety Goals for *Hospitals* are as follows:

"Goal: Improve the accuracy of patient identification.

- 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.

Goal: Improve the effectiveness of communication among caregivers.

- 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 "read-back" the complete order or test result.

- 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.

Goal: Improve the safety of using medications.

- Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >0.9%) from patient care units.
- 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.

Goal: Improve the safety of using infusion pumps.

- Ensure free-flow protection on all general-use and PCA (patient controlled analgesia) intravenous infusion pumps used in the organization.

Goal: Reduce the risk of health care-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 health care-associated infection.

Goal: Accurately and completely reconcile medications across the continuum of care.

- During 2005, for full implementation by January 2006, develop 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 it refers or transfers a patient

to another setting, service, practitioner or level of care within or outside the organization.

Goal: Reduce the risk of patient harm resulting from falls.

- Assess and periodically reassess each patient's risk for falling, including the potential risk associated with the patient's medication regimen, and take action to address any identified risks." (JCAHO, 2005)

JCAHO (2005) has set forth these *Long Term Care Patient Safety Goals*

"Goal: Improve the accuracy of resident identification.

- Use at least two resident identifiers (neither to be the resident'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, such as a "time out," to confirm the correct resident, procedure and site, using active—not passive—communication techniques.

Goal: Improve the effectiveness of communication among caregivers.

- 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 "read-back" the complete order or test result.
- Standardize a list of abbreviations, acronyms and symbols that are not to be used throughout the organization.

Goal: Improve the safety of using medications.

- Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >0.9%) from resident care units.
- 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.

Goal: Improve the safety of using infusion pumps.

- Ensure free-flow protection on all general-use and PCA (resident controlled analgesia) intravenous infusion pumps used in the organization.

Goal: Reduce the risk of health care-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 health care-associated infection.

Goal: Accurately and completely reconcile medications across the continuum of care.

- During 2005, for full implementation by January 2006, develop a process for obtaining and documenting a complete list of the resident's current medications upon the resident's admission to the organization and with the involvement of the resident. This process includes a comparison of the medications the organization provides to those on the list.
- A complete list of the resident's medications is communicated to the next provider of service when it refers or transfers a resident to another setting, service, practitioner or level of care within or outside the organization.

Goal: Reduce the risk of resident harm resulting from falls.

- Assess and periodically reassess each resident's risk for falling, including the potential risk associated with the resident's medication regimen, and take action to address any identified risks.
- Implement a fall reduction program, including a transfer protocol, and evaluate the effectiveness of the program.

Goal: 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.” (JCAHO, 2005)

PATIENT AND FAMILY EDUCATION

Patient and family education is a valuable defense against medical errors. A well informed and thoroughly involved patient is a safer patient than one that is not well informed.

The Agency for Healthcare Research and Quality, in 2000, published 20 patient safety rules to inform the public about what they can, and must do, to prevent medical errors during their healthcare contacts. These rules are as follows:

- “1. The single most important way you can help to prevent errors is to be an active member of your health care team.
2. Make sure that all of your doctors know about everything you are taking. This includes prescription and over-the-counter medicines, and dietary supplements such as vitamins and herbs.
3. Make sure your doctor knows about any allergies and adverse reactions you have had to medicines.
4. When your doctor writes you a prescription, make sure you can read it.
5. Ask for information about your medicines in terms you can understand—both when your medicines are prescribed and when you receive them.
6. When you pick up your medicine from the pharmacy, ask: Is this the medicine that my doctor prescribed?
7. If you have any questions about the directions on your medicine labels, ask.
8. Ask your pharmacist for the best device to measure your liquid medicine. Also, ask questions if you're not sure how to use it.
9. Ask for written information about the side effects your medicine could cause.
10. If you have a choice, choose a hospital at which many patients have the procedure or surgery you need.

11. If you are in a hospital, consider asking all health care workers who have direct contact with you whether they have washed their hands.
12. When you are being discharged from the hospital, ask your doctor to explain the treatment plan you will use at home.
13. If you are having surgery, make sure that you, your doctor, and your surgeon all agree and are clear on exactly what will be done.
14. Speak up if you have questions or concerns.
15. Make sure that someone, such as your personal doctor, is in charge of your care.
16. Make sure that all health professionals involved in your care have important health information about you.
17. Ask a family member or friend to be there with you and to be your advocate (someone who can help get things done and speak up for you if you can't).
18. Know that "more" is not always better.
19. If you have a test, don't assume that no news is good news.
20. Learn about your condition and treatments by asking your doctor and nurse and by using other reliable sources." (Agency for Healthcare Research and Quality, 2000)

SUMMARY

Medical errors and mistakes are a serious nationwide health threat. The frequency and severity of medical errors, as supported by the statistics, are staggering. An active and vigilant approach is necessary in order to protect the safety of the public.

Each and every single healthcare professional must be acutely aware of and report all sentinel events, all "near misses" and all hazardous conditions. Lead and support a work environment that is conducive to a collective commitment to the safety of the patients you serve. It is the systems, not the people, that fail. It takes the entire multidisciplinary team to make a difference with the eradication of medical errors.

MEDICAL ERROR PREVENTION RESOURCES

ONLINE FACT SHEETS AND BROCHURES

This section includes links to specific fact sheets and brochures that are available on the Internet including those in Spanish.

GENERAL PATIENT SAFETY RESOURCES

This section includes Web sites and contact information for organizations involved with patient safety that provide overview information, or include information in several categories (including consumers, nursing, medication safety, etc.)

STATE RESOURCES FOR PATIENT SAFETY

Although these sites are organized by state, many of the sites include extensive general information on patient safety, as well as state-specific information. An additional link is given to a list of State Health Departments and Medical Boards.

MEDICATION SAFETY AND PHARMACEUTICAL RESOURCES

This section focuses on organizations in the pharmaceutical industry and/or medication safety specifically.

ANESTHESIA PATIENT SAFETY RESOURCES

This section includes some general patient safety information, as well as information on anesthesia safety.

PATIENT SAFETY RESOURCES FOR PATIENTS AND FAMILIES

Sites in this category are devoted solely to consumers, and some sites are sub-links of those in the general category. However, please note that there is a lot of information for consumers included on the general sites that may not be included here.

NURSING PATIENT SAFETY RESOURCES

This section includes nursing organizations, or patient safety information specific to nursing.

INTERNATIONAL RESOURCES ON PATIENT SAFETY

This section is devoted to patient safety activities in other countries.

QUALITY OF CARE RESOURCES

Sites in this section may include some information related to patient safety, but are primarily focused on quality of care.

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