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PREVENTION OF MEDICAL ERRORS IN HEALTHCARE

4CEUINC COURSE CODE:	ME020
CONTACT HOURS:	2
COURSE LEVEL:	Basic
CE BROKER #:	20-794490

Provider
Reports CE/CME

24 HOURS

ce broker

- - COURSES ARE REVIEWED EVERY 2 YEARS - -

COURSE OBJECTIVES

At the end of this course you will be able to:

1. Recall the various government agencies involved in developing programs to prevent Medical Errors.
2. Discuss the common causes of Medical Errors.
3. Recall common terminology associated with Medical Errors.
4. Recall the different types of Medical Errors and those most commonly encountered.
5. Discuss the factors involved in preventing Medical Errors
6. Discuss investigating Medical Errors, listing the steps involved in performing a Root Cause Analysis.
7. Recall ways to keep your patients safe.

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ABOUT THE AUTHOR

Deborah L. Buckley, MBA, MT(ASCP) is the Program Administrator for Continuing Education Unlimited. In addition, she is also the Managing Director of www.Jobs4Lab.com and www.Jobs4Nursing.com, both Continuing Education Unlimited companies. Deborah received a Bachelor of Science degree in Medical Technology from Florida Institute of Technology in 1983 and a Master's Degree in Business Administration in 1995.

Prior to joining the management team at 4CEUINC, Deborah was the Laboratory Manager at a privately owned Medical Lab in South Florida. In addition to her management experience, she also brings experience as a generalist in the laboratory, specializing in Microbiology and Hematology, has worked for a top U.S. Infectious Disease Specialist, authored medical articles & course material, and taught Microbiology at a community college during her 30+ years in the medical industry.

LinkedIn: https://www.linkedIn.com/in/debbiebuckley

Email: debbie@4ceuinc.com

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PREVENTION OF MEDICAL ERRORS IN HEALTHCARE

CE Broker Provider #: 50-2256 | **CE Broker Course ID:** 20-794490 | **Contact Hours:** 2

1.) The report To Err Is Human: Building A Safer Health System was released by IOM in
_____.   (Review Pg. 1)

    A. 1983
    B. 1999
    C. 2004

2.) _____ means any untoward medical occurrence or injury that results from a
medical intervention rather than an underlying condition. (Review Pg. 4)

    A. Medical Error
    B. Adverse Event
    C. Sentinel Event

3.) The majority of all medical errors can fit into one of these _____ error types. (Review Pg. 5)

    A. two
    B. four
    C. six

4.) Year over year, complications from surgical or invasive procedures tend to remain at
or near the top of the reported sentinel events spot. (Review Pg. 6)

    A. True
    B. False

5.) Medication management is one of the most critical places where medical errors occur.
(Review Pg. 8)

    A. True
    B. False

6.) Each year about 1 in ____ U.S. hospital patients are diagnosed with at least one infection
related to hospital care alone (Review Pg. 10)

    A. 5
    B. 10
    C. 25

7.) Infant abduction is considered a(n) _____. (Review Pg. 11)
- **A.** Care Management Event
- **B.** Protection Event
- **C.** Environmental Event

8.) Employee competency is an important part of patient safety, so when employees are hired for a position, it's important to ensure that they are qualified for the job they are going to do. (Review Pg. 13)
- **A.** True
- **B.** False

9.) The joint commission has created a _____-step guideline on how to perform a successful RCA. (Review Pg. 16)
- **A.** 4
- **B.** 16
- **C.** 21

10.) The National Patient Safety Goals focus on problems in healthcare safety and how to solve them.   (Review Pg. 18)
- **A.** True
- **B.** False

****END OF QUIZ****

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INTRODUCTION

A spotlight on safety in healthcare came into focus more than 20 years ago when The Institute of Medicine (IOM) Quality of Healthcare in America Committee was formed in June 1998 to develop a strategy to improve healthcare quality over ten years. On November 29, 1999 the IOM released a report "To Err is Human: Building a Safer Health System".

In their 1999 report, the IOM calculated that between 44,000 and 98,000 Americans died each year, not from the medical conditions they presented with, but from preventable medical errors, which occurred during their course of treatment. In addition, there were significant numbers of hospitalized patients who suffered pain, injury, disability, disorder, or some degree of preventable health impairment that were not reported as attributable to medical error. At that time, the total national costs annually associated with preventable adverse events were estimated to be between $17 billion and $29 billion, with health care costs alone representing over half of those figures. Those national costs also included lost income, lost household production, disability and other health care costs associated with those errors.

Additional efforts to combat the problem were, including:

- Quality Interagency Coordination Task Force (QuIC) was established in 1998 to enable the participating federal agencies to coordinate their activities.

- Dec. 7, 1999 Bill Clinton ordered a federal task force to give recommendations on preventing medical errors and patient safety within 60 days.

- Feb. 8, 2000 the Medical Error Reduction Act of 2000 is introduced to the Senate.

- Feb. 16, 2000 the Medication Errors Act of 2000 is introduced into the House.

- Feb. 2000 JCAHO (Joint Commission) addressed the senate laying out five critical information-based tasks for effective error reduction strategies.

- April 2001 HHS established the Patient Safety Task Force to coordinate the efforts of HHS with state and private sector issues identified by QuIC.

- 2001 Florida Legislature enacts a law requiring all healthcare licensees to complete a 2 hour course in Prevention of Medical Errors. The law was enacted through the Florida Commission on Excellence in Healthcare.

There continues to be cooperation at all levels of government to coordinate better error reduction planning and education.

2016 JOHNS HOPKINS STUDY

A 2016 study[1] conducted by Johns Hopkins patient safety experts concluded that medical errors were now the third leading cause of death, only behind cardiovascular disease, and cancer.

FIGURE 1: Medical Errors As 3rd Most Common Cause of Death

Causes of death, US, 2013

Cancer 585k
Medical error 251k
Heart disease 611k
All causes 2,597k
COPD 149k
Suicide 41k
Motor vehicles 34k
Firearms 34k
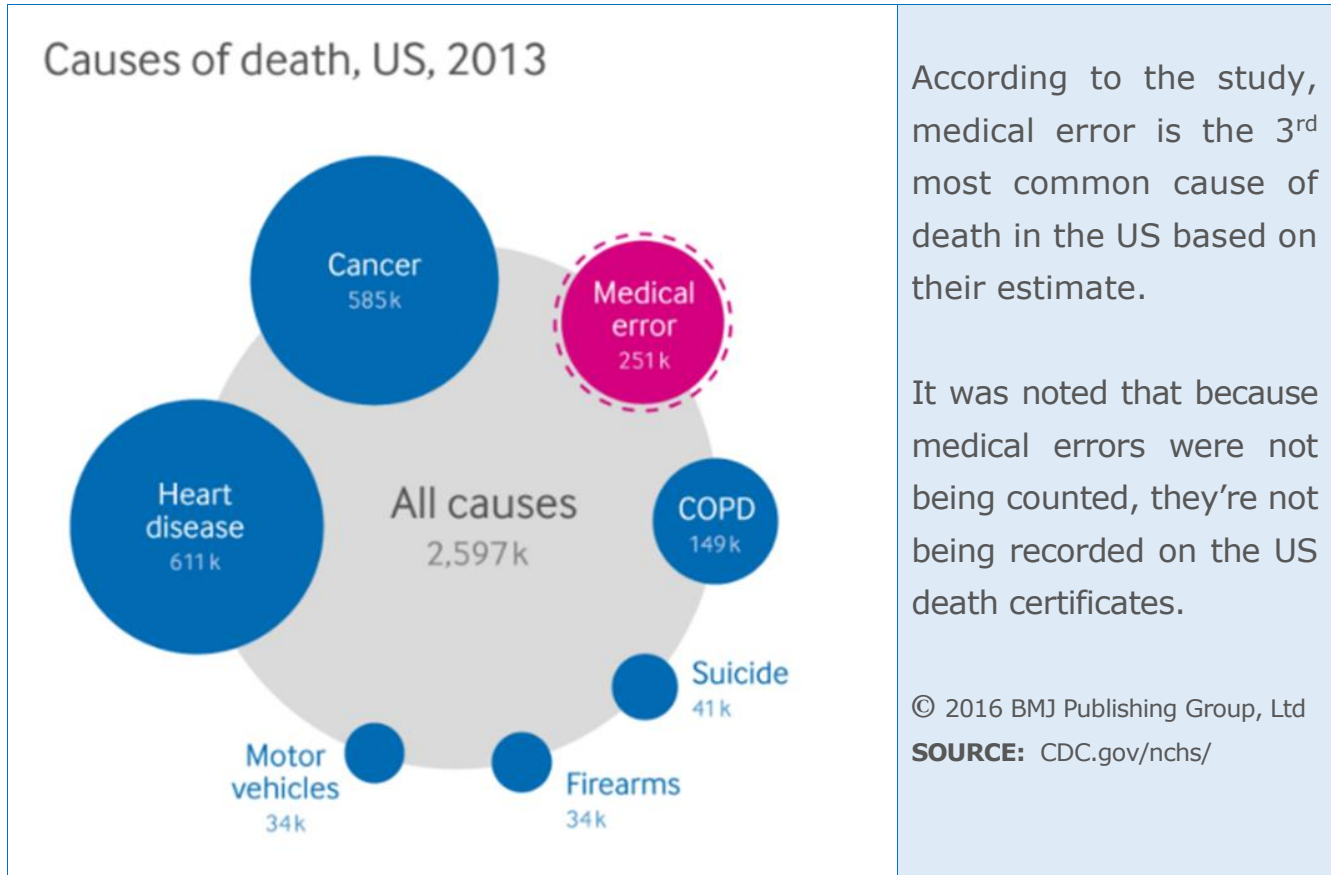
According to the study, medical error is the 3rd most common cause of death in the US based on their estimate.

It was noted that because medical errors were not being counted, they're not being recorded on the US death certificates.

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SOURCE: CDC.gov/nchs/

The study analyzed medical death rate data over an eight-year period, with the patient safety experts calculating more than 250,000 deaths per year are due to medical error in the U.S. Their figure published May 3, 2016 in *The BMJ*, surpasses the U.S. Centers for Disease Control and Prevention's (CDC's) third leading cause of death, listed as respiratory diseases, which kills close to 150,000 people per year.

The premise is that the way CDC collects national health statistics fails to classify medical errors separately on the death certificate and the researchers are advocating for updated criteria for classifying those deaths on death certificates.

Dr. Martin Makary, MD, MPH says "Incidence rates for deaths directly attributable to medical care gone awry haven't been recognized in any standardized method for collecting national statistics. The medical coding system was designed to maximize billing for physician services, not to collect national health statistics, as it is currently being used." He continues to say that in 1949 the U.S. adopted an international form that used International Classification of Diseases (ICD) billing codes to tally causes of death. "At that time, it was under-recognized that diagnostic errors, medical mistakes and the absence of safety nets could result in someone's death, and because of that, medical errors were unintentionally excluded from national health statistics."

ADDITIONAL INFORMATION FOR 2016 STUDY CAN BE FOUND HERE:

- **The BMJ:** Link to Article

- **Johns Hopkins News and Publications** = Link to Article Summary

- **Podcast with Dr. Martin Makary, MD, MPH:** Link to Podcast

COMMON CAUSES OF MEDICAL ERRORS

When an error occurs, it's usually human nature to look for someone to blame. It should be noted, however, that many errors occur due to multiple contributing factors, many of which are system errors. Occasionally, errors can be due to the inattention or negligence of just one individual, in which case the error would probably not be considered reoccurring, especially after training or disciplinary measures. Errors can occur because of a break down in <u>any part</u> of a system as a whole.

Some of the more common reasons that cause errors to occur, include:

- Not paying attention
- Understaffing
- Extended work hours
- Overwhelming workload
- Stress
- Personal problems, leading to work distraction

- "Goofing off", leading to inattention
- Illegible handwriting leading to order errors
- Lack of adequate training
- Lack of supervision
- Misdiagnosis leading to incorrect treatment
- Limited knowledge or inexperience with task

COMMON MEDICAL ERROR TERMINOLOGY

Several terms are commonly used when discussing medical errors, including:

Medical Error: A medical error is a preventable adverse effect of care, whether or not it is evident or harmful to the patient.   Errors can include problems in practice, products, procedures, or systems.

Adverse Event: Adverse event means any untoward medical occurrence or injury that results from a medical intervention rather than an underlying condition.

Sentinel Event: A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or risk thereof.   The phrase, "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome.

Such events are called **"sentinel"** because they signal the need for immediate investigation and response.

> The terms **Sentinel Event** and **Error** are not synonymous. Not all sentinel events occur because of an error, and not all errors result in sentinel events.

Root Cause Analysis: A root cause analysis (RCA) is a structured method used to analyze serious adverse events.

Near Miss: A near miss is an unplanned event that did not reach the patient, but which may have resulted in harm if it had. Also referred to as a "close-call" or "good catch," the only difference between a **near miss** and an actual event is the outcome.

Never Events: A never event is the "kind of mistake that should never happen" in the field of medical treatment. They are errors in healthcare that are clearly identifiable, preventable, and serious in their consequences for patients, and that indicate a real problem in the safety and credibility of a health care facility.

MEDICAL ERRORS – A CLOSER LOOK

Unfortunately, medical errors happen throughout the healthcare system for any number of reasons, but all occur because of a breakdown at some point in the system. In this section we'll take a closer look at the different categories medical errors fall into and what the most common types of errors are.

CATEGORIZING THE FOUR TYPES OF MEDICAL ERRORS

There are almost an unlimited number of medical errors and medical error scenarios that can occur, but most fall into four basic types or categories, including:

- Diagnostic
- Treatment

- Preventative
- Other

The majority of all medical errors can fit into one of these four error types. In the table below, you will find additional details on each type.

TABLE 1: Most Common Types of Medical errors

DIAGNOSTIC	- Error or delay in diagnosis - Failure to act on test results - Failure to order indicated tests - Use of outdated tests
TREATMENT	- Error or delay in treatment - Error in performance of an operation, procedure, or test - Error in dose or method of using a medication - Inappropriate care - Use of outdated medication
PREVENTIVE	- Inadequate monitoring in order to reduce risk of serious medical error - Failure to provide prophylactic treatment
OTHER	- Communication failure - Equipment failure - Other system failure

COMMONLY ENCOUNTERED MEDICAL ERRORS

Using the chart in Appendix 1 as a guide, this section focuses on the most reported and reviewed sentinel events by The Joint Commission during the past 42 months. Please note that 'most commonly encountered' medical errors can change over time.

SURGICAL OR INVASIVE EVENTS

Year over year, complications from surgical or invasive procedures tend to remain at or near the top of the reported sentinel events spot. There are several errors in this category that can occur either during or after the procedures, including:

- Burns
- Op / Post-op complications
- Retention of foreign body
- Wrong implant
- Wrong patient
- Wrong procedure
- Wrong site
- Wrong site surgery

During the 42 months highlighted in the report, unintended retention of a foreign body remains the most common surgical error reported, followed by wrong site surgery, wrong site procedure, operative or post-op complications, and wrong procedure.

Although not directly procedure related, anesthesia-related events have also been reported during surgical procedures.

CARE MANAGEMENT EVENTS

Care management events cover a wide range of sentinel events, including:

- Clinical alarm response
- Delay in treatment
- Patient Falls
- Infection related
- Lab, radiology, pathology related
- Medication management
- Other
- Perinatal event
- Pressure injury
- Restraint related event
- Severe maternal morbidity
- Transition of care
- VTE - Venous Thromboembolism

Patient Falls

The most common Care Management Event reported are patient falls. Each year, somewhere between 700,000 and 1,000,000 people in the United States fall in the hospital, and about 1.3 million residents in nursing facilities fall. Falls can lead to serious injuries, decreased ability to function, reduced quality of life, increased fear of falling, and increased health care use. **Click Here** for AHRQ's tools, training, and research on preventing falls in hospitals and nursing homes. [2]

Vulnerable patients should be assessed for their risk of falls and appropriate preventive measures should be instituted, such as bed alarms, ambulatory aids, etc.

Delay in Treatment

A delay in treatment can often result in a negative outcome for the patient, especially if a serious disease goes undetected or untreated. Delays can result due to a number of factors, such as failure to recognize or identify symptoms, failure to order appropriate testing, delays in testing, etc. Many times, treatment delays may be benign and have no effect on the outcome of the disease, however, in more serious cases, such as sepsis, surgery, cancer, heart disease and more, delays can result in tragic outcomes for the patient.

Calendar year 2020 has posed a unique problem for both healthcare practitioners and patients alike. COVID-19 created a situation where many healthcare facilities had limited capabilities for several months, due to required scaled back operations. During this time, patients were extremely reluctant to visit a doctor or Emergency Room, even if they had concerning symptoms. Even after medical offices and facilities resumed operations, some patients still are reluctant to visit because COVID-19 is still a major concern as of this writing.

According to a CDC article, 41% of US adult respondents reported having delayed or avoided any medical care, including urgent, emergency, and routine care due to concerns over COVID-19.

Medication Management

Medication management is one of the most critical places where medical errors occur. Medication errors can occur at any number of points in the process, including:

- Prescribing
  - Wrong medication
  - Incorrect dosage
- Pharmacy / Dispensing Errors
  - Interpreting errors
  - Wrong medication
  - Incorrect dosage
  - Compounding errors

- Patient Administration Errors
  - Wrong medication
  - Incorrect dosage
  - Wrong patient
  - Forgot to dose (omission)
- Patient Self administration
  - Over/Under medicating
  - Forgets to take medication
  - Incorrect timing

MEDICATION SAFETY

Adverse drug events (ADEs) are medication events that result in harm to the patient. They include traditional medication errors, but also include allergic reactions, and side effects. To help prevent side effects and allergic reactions, it's important to take a thorough patient history and make sure to ask the patient specific medication related questions, in the event that they forgot or didn't recognize that some of symptoms may be medication related.

According to the CDC, 82% of US adults take at least one medication, while 29% take five or more, which increases the possibility of a medication related error. It's estimated ADEs cause ~1.3 million emergency department visits and 350,000 hospitalizations each year, resulting in $3.5 billion in excess medical costs each year.

10 RIGHTS OF MEDICATION SAFETY

Following the guidance of the 10 Rights of Medication Safety can help to minimize or eliminate medication errors.

1. Right patient
2. Right medication
3. Right dosage
4. Right route
5. Right time
6. Right documentation
7. Right patient education
8. Right to refuse
9. Right patient history / assessment
10. Right post-medication evaluation

LIST OF ERROR-PRONE ABBREVIATIONS

The Institute for Safe Medication Practices (ISMP) has created a list of error-prone abbreviations for medications. The following abbreviations are frequently misinterpreted and involved in medication errors. These abbreviations, dose designations, and symbols should never be used when communicating or prescribing medication information.

TABLE 2: List of Most Error-Prone Medication Abbreviations

Do Not Use	Correct Abbreviation	Do Not Use	Correct Abbreviation
μg	mcg	q.d. or QD**	Daily
AD, AS, AU	Right ear, Left ear, Each ear	qhs	Nightly
OD, OS, OU	Right eye, Left eye, Each eye	qn	Nightly or Bedtime
BT	Bedtime	q.o.d. or QOD**	Every other day
cc	mL	q1d	Daily
D/C	Discharge or Discontinue	q6PM, etc	Daily at 6pm or 6PM daily
ij	Injection	SC, SQ, sub q	Subcutaneously or Subcut
IN	Intranasal or NAS	ss	Sliding scale, one-half, or ½
HS	Half-Strength or Bedtime	SSRI	Sliding scale (insulin)
hs	Half-Strength or Bedtime	SSI	Sliding scale (insulin)
IU**	Units	i/d	1 daily
o.d. or OD	Daily	TIW or tiw	3 times weekly
OJ	Orange Juice	U or u**	Unit
Per os	PO, By Mouth, or Orally	UD	As directed

LIST OF CONFUSED DRUG NAMES

The ISMP also an extensive list of confused drug names, which can be accessed by clicking here.

SIMPLE COMMON DOSING CONSIDERATIONS

FIGURES 2 & 3:   Simple Considerations in Regard to Medication Dosing

Infection Related

Healthcare Associated Infections (HAIs) pose a serious threat to patients. They are typically acquired from the patient's surrounding environment or through lax infection control measures. Common HAIs include:
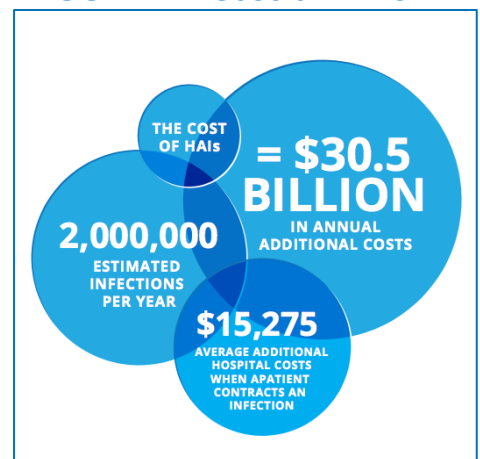
- Central line-associated bloodstream infections (CLABSI)
- Catheter-associated urinary tract infections (CAUTI)
- Surgical site infection (SSI)
- Ventilator-associated pneumonia (VAP)

Any time an organism is introduced into a sterile environment you have the possibility of acquiring an HAI. Each year about 1 in 25 U.S. hospital patients are diagnosed with at least one infection related to hospital care alone; additionally, infections related to care can occur in other healthcare settings as well.

Many HAIs are caused by the most serious antibiotic-resistant (AR) bacteria that may lead to sepsis or death.

To prevent HAIs from occurring, it's imperative that all healthcare personnel follow strict infection control protocols, including handwashing and environmental hygiene procedures.

FIGURE 4: Cost of HAIs

THE COST OF HAIs = $30.5 BILLION IN ANNUAL ADDITIONAL COSTS

2,000,000 ESTIMATED INFECTIONS PER YEAR

$15,275 AVERAGE ADDITIONAL HOSPITAL COSTS WHEN A PATIENT CONTRACTS AN INFECTION

VIDEO 1:

HAI Overview

Right click the link below, then open in new window or browser.

VIDEO LINK:

https://www.youtube.com/watch?v=-FfMCv8FUXI

LENGTH: (1.32)

* SEE OUR HAND HYGIENE COURSE FOR MORE DETAILED INFORMATION ON PROPER HANDWASHING TECHNIQUE *

PROTECTION EVENTS

Protection Events are serious in nature and create harm to the patient in some way. The events reviewed include:

- Assault
- Drug overdose (OD)
- Elopement
- Homicide
- Infant abduction
- Rape / Sexual assault
- Self-harm

While patients are under the care of a medical facility, it's their job to ensure that the patients they care for are safe from any harm that may arise, including physical harm. Harm can come from family members, visitors, intruders, medical staff, or even the patient themselves.

It's important to ensure that safety precautions are in place to protect the patients. Those precautions can vary widely, depending on the type of facility and the patients being cared for and can include:

- Staff background checks
- 2nd staff member in room during care
- Security cameras
- Locked facilities
- Secured areas, accessible only with employee badge
- Patient Check-in upon entry
- Visitor Check-in

Safety should be a top priority while caring for patients. Well written procedures and protocols should be available to all staff and to help guide them if an incident occurs. Safety drills with various scenarios, such as infant abduction, may also be practiced to keep staff on top of how to handle different incidents.

SUICIDE

Obviously, suicide is one of the most serious sentinel events that can occur. Suicide events are defined by The Joint Commission as "Suicide of any patient receiving care, treatment, or services in a staffed around-the-clock care setting or within 72 hours of discharge, including from a hospital's emergency department". In the Summary of Sentinel Events report, suicide is broken down into three areas:

- Suicide - Emergency Department
- Suicide - Inpatient
- Suicide - within 72 hrs. of discharge

Regardless of the setting of patient suicide, it's a shock not only to the patient's family, but to the medical staff as well. It's been shown that these incidents occur even though appropriate and thorough assessments were conducted, showing no indication of suicidal intention.

Many of these suicidal incidents often occur in patients being treated for mental health issues, trauma incidents, chronic illness, or those who have received a sudden, life-changing diagnosis, such as terminal cancer. Medical staff should be closely engaged in the patient's care, especially their mental health status, when being treated for any of these types of illness. Staff should also make sure that the patient understands their illness, symptoms to expect, and what treatment options are available. These patients, whether inpatient or outpatient, should all be presented with options for speaking to a mental health professional about their condition.

ENVIRONMENTAL EVENTS

Environmental events, although uncommon, occasionally do occur and include:

- External environmental issues
- Fire
- Implantable device
- Med/Surg supplies
- Medical Equipment
- Physical environment

Environmental events occur either from your environment or from things in your environment, such as faulty medical equipment. In the previous 42 months, fire was the most prevalent environmental event, followed by medical equipment.

One of the most important ways to keep your patients safe in the event of a fire is to understand fire safety. Know what items are flammable in the patient's environment and remember the acronym R.A.C.E. for responding to fires, should they occur.

It's also vitally important for medical staff to understand how to properly operate the medical equipment used with their patients, so that no errors occur. Medical staff should also be trained in general environmental safety measures with all equipment, treatment devices, or other diagnostic equipment; for example, making sure to keep metal objects out of the room housing an MRI machine, patient wheelchair safety, etc.

FIVE MOST COMMON MEDICAL ERRORS IN FLORIDA

Rule 64B8-13.005, Florida Administrative Code and the Florida Board of Medicine, require that the Prevention of Medical Errors course contain the five most misdiagnosed medical conditions in Florida for the previous two years.

Currently, as of 2020, the most misdiagnosed conditions in listed on the Florida Medical Board's website are:

- Cancer related issues
- Neurological/spine related issues
- Cardiac and stroke related issues
- Infectious and communicable diseases
- Pulmonary related issues

PREVENTING MEDICAL ERRORS

Preventing the medical errors from occurring is one of the most important steps in patient safety. Many factors go into making sure patient safety is front and foremost at the workplace, including:

WORKPLACE CULTURE

Workplace culture starts at the top and is one of the driving forces in patient safety. Following The Joint Commission's recommendation of providing a 'blame-free' workplace environment, you encourage the reporting of serious adverse events, unsafe practices, and medical errors when they occur.

In addition to a blame-free environment, employers should provide a safe, encouraging, organized place to work. Employees should know exactly what is expected of them and feel comfortable going to their supervisor or upper management to report any errors or potential problems without repercussions.

EMPLOYEE COMPETENCY

When employees are hired for a position, it's important to ensure that they are qualified for the job they are going to do. Human Resources should ensure their education, work experience, references, and in some cases professional license and

a background check all qualify for the position they are applying for. Some positions may also require a competency skills test as part of the hiring or orientation process.

Once an employee is hired, competency is typically assessed on an annual basis.

CONTINUOUS TRAINING

Continuous training is important for all employees, whether that includes continuing education courses, internal training, or training on medical devices and equipment. Staying up to date keeps your patients safe during treatment and care.

QUALITY CONTROL MEASURES

Quality control and maintenance should be performed routinely on all medical and diagnostic equipment. This ensures that the equipment is functioning properly.

COMMUNICATION

Communication is often one of the areas that breaks down and creates an environment where errors occur. In today's busy workplace, it may be hard to find time for good communication with your patients or coworkers. Whether it's communicating or listen carefully to your patients or giving report at the end of your work shift to your coworkers, good communication is vital in preventing errors.

CHECKS AND BALANCES

Checks and balances should always be built into work tasks, whether they're as simple as a check list or requiring another employee to review and sign off on the task.

INVESTIGATING MEDICAL ERRORS WHEN THEY OCCUR

When errors do occur it's important to perform a thorough and credible investigation so that future errors can be avoided. The Joint Commission's Sentinel Event Policy requires accredited healthcare organizations to conduct a comprehensive, systematic analysis in the wake of a sentinel event.

This comprehensive review would seek to go beyond an individual's performance issues to determine what system failures (policies and safety systems) may have contributed to the event occurring. Once those failures are determined, changes in policies and procedures should be made that would prevent future events from occurring.

ROOT CAUSE ANALYSIS

When a sentinel event occurs, it's essential that there be an intensive investigation of all the potential causes underlying the event. Those responses are referred to as "root cause" analyses -- a term borrowed from the engineering world's response to a systems approach both to solving problems and to producing desired outcomes.

FIGURE 5: Root Cause

A root cause analysis focuses primarily on the organization's systems and processes, as opposed to the individual's performance. While an individual is invariably the central cause of a mistake, it's the systems failures surrounding the error itself that caused it to occur. To be successful, the Root Cause Analysis (RCA) must not assign blame to the individual, but rather determine the process which caused the error to occur and correct it.

THE GENERAL PROCESS

Root cause analysis (RCA) is a structured method that should follow a specified protocol. The analysis must be comprehensive, thorough, and credible, and engage the personnel involved in all aspects of the care-giving and support processes.
The RCA essentially collect data and reconstructs the event through review of the documentation and participant interviews. A multi-disciplinary team should them review the events to determine why and how it occurred. The ultimate goal of the RCA is to prevent future harm by instituting changes in the policies and procedures.

RCA's are complex and time-consuming investigations, and their complexity may require external technical assistance. The Joint Commission has developed several comprehensive guides on how to conduct a RCA, including this document.

STEPS IN A ROOT CAUSE ANALYSIS

The joint commission has created a 21-step guideline on how to perform a successful RCA:

Preparing for the Root Cause Analysis

1. Organize a Team
2. Define the Problem
3. Study the Problem

Determine Proximate and Underlying Causes

4. Determine what Happened
5. Identify Contributing Factors
6. Identify Contributing Factors
7. Measure - Collect and Assess Data on Proximate and Underlying Causes
8. Design and Implement Immediate Changes

Identifying Root Causes

9. Identify which Systems are Involved - The Root Cause
10. Prune the List of Root Causes
11. Confirm Root Causes and Consider Their Interrelationships

Designing and Implementing a Corrective Action Plan for Improvement

12. Explore and Identify Risk Reduction Strategies
13. Formulate Improvement Actions
14. Evaluate Proposed Improvement Actions
15. Design Improvements
16. Ensure Acceptability of the Corrective Action Plan
17. Implement the Improvement Plan
18. Development Measures of Effectiveness and Ensure Their Success
19. Evaluate Implementation Efforts
20. Take Additional Action
21. Communicate the Results

Details for each of these steps can be found in The RCA in Healthcare document.

DIAGRAMMING THE ROOT CAUSE

The most common way to determine how and why the event has occurred is to use a Fishbone Diagram. The example shown below is a more elaborate example of the basic fishbone diagrams, but it gives you some of the main elements that you will be investigating.

FIGURE 6: Diagramming the Root Cause with a Fishbone Diagram
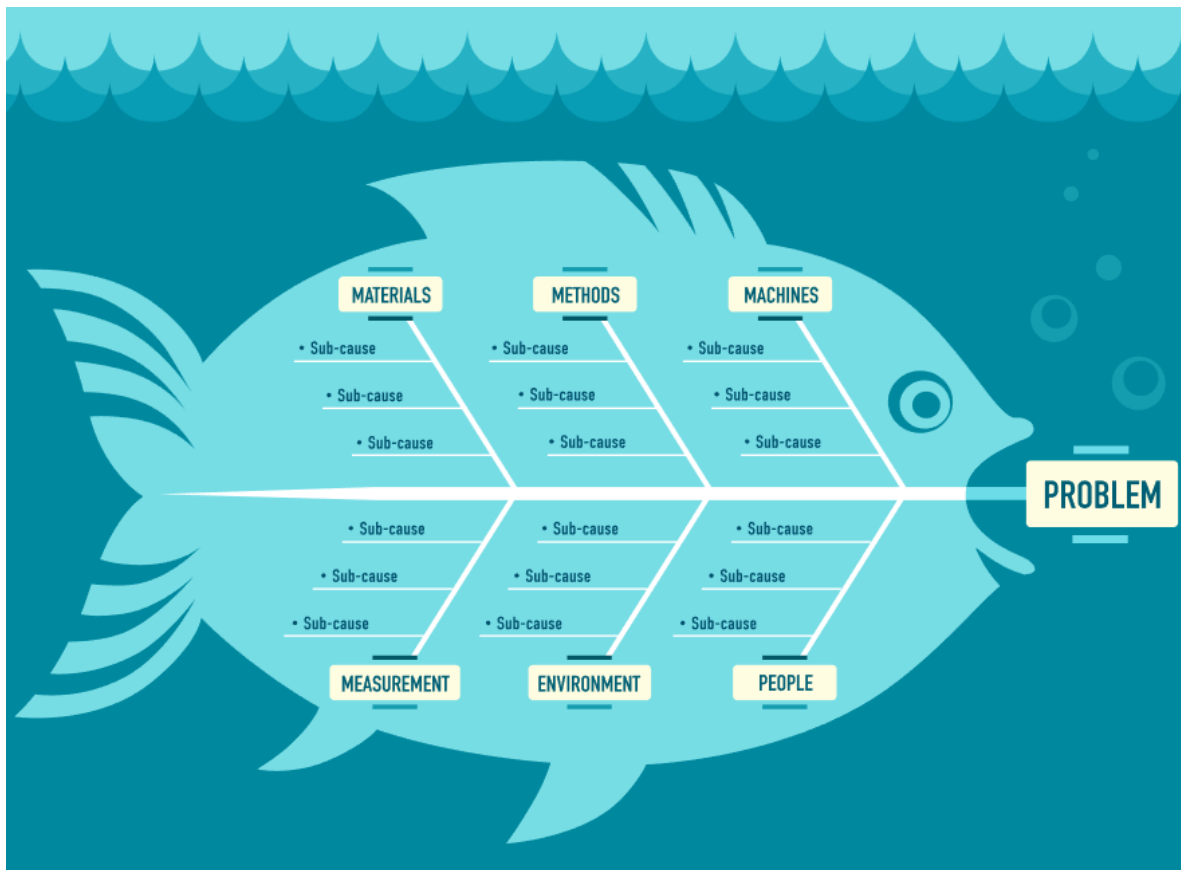
KEEPING YOUR PATIENTS SAFE

Keeping your patients safe should always be your #1 goal and there are several ways to achieve that including, helping the vulnerable, the National Patient Safety Goals, the Speak Up campaign, and the 20 Tips to Help Prevent Medical Errors.

SPECIAL ATTENTION FOR THOSE THAT ARE VULNERABLE

It's important to recognize patients that are vulnerable and may need extra help understanding their medical diagnosis and care. Certain groups that may need extra help include the elderly, those that are hard of hearing or deaf, those with a cognitive or mental disability, and those that speak a different language.

Special care should be taken in each of these situations to assist the patient with the needs that are unique to them so that they can understand and feel comfortable

with their care. Special accommodations, such as having a family member or guardian, sign language specialist, or interpreter present at medical visits or procedures can help with any communication barrier.

NATIONAL PATIENT SAFETY GOALS

The purpose of the National Patient Safety Goals is to improve patient safety. The goals focus on problems in healthcare safety and how to solve them.

There are goals appropriate for different types of healthcare settings and can be accessed by clicking the link in the blue box, then selecting the type of setting appropriate for your patients. These goals provide a set of guidelines for you and your staff, which when followed, will help keep your patients safe. The example table below is based on hospital settings.

> **NATIONAL PATIENT SAFETY GOALS:**   https://www.jointcommission.org/standards_information/npsgs.aspx
>
> You will find informattion for National Patient Safety Goals at the link above for Ambulatory Health Care | Behavioral Health Care | Critical Access Hospital | Home Care | Hospitals (see Table 1) | Laboratory | Nursing Care Center | Office-Based Surgery

TABLE 1: National Patient Safety Goals for Hospitals

IDENTIFY PATIENTS CORRECTLY: NPSG.01.01.01	Use at least two ways to identify individuals served. For example, use the individual's name and date of birth. This is done to make sure that each individual served gets the correct medicine and treatment.
IMPROVE STAFF COMMUNICATION: NPSG.02.03.01	Get important test results to the right staff person on time.
USE MEDICINES SAFELY: NPSG.03.04.01	Before a procedure, label medicines that are not labeled. For example, medicines in syringes, cups and basins. Do this in the area where medicines and supplies are set up.
NPSG.03.05.01	Take extra care with patients who take medicines to thin their blood.
NPSG.03.06.01	Record and pass along correct information about a patient's medicines. Find out what medicines the patient is taking. Compare those medicines to new medicines given to the patient. Give the patient written information about the medicines they need to take. Tell the patient it is important to bring their up-to-date list of medicines every time they visit a doctor.
USE ALARMS: NPSG.06.01.01	Make improvements to ensure that alarms on medical equipment are heard and responded to on time.

PREVENT INFECTION: NPSG.07.01.01	Use the hand cleaning guidelines from the Centers for Disease Control and Prevention or the World Health Organization. Set goals for improving hand cleaning. Use the goals to improve hand cleaning.
PREVENT MISTAKES IN SURGERY:	
UP.01.01.01	Make sure that the correct surgery is done on the correct patient and at the correct place on the patient's body.
UP.01.02.01	Mark the correct place on the patient's body where the surgery is to be done.
UP.01.03.01	Pause before the surgery to make sure that a mistake is not being made.

SPEAK UP CAMPAIGN

The Speak Up™ campaign was initiated in 2002 with the help of TJC and urges patients to get involved in their care. In May of 2018 TJC revamped and relaunched the program through feedback from patients and their caregivers – links below.

> **SPEAK UP:** https://www.jointcommission.org/speakup.aspx
>
> **SPEAK UP CAMPAIGNS:** https://www.jointcommission.org/topics/speak_up_campaigns.aspx
>
> **GOAL:** The goal of Speak Up™ is to help patients and their advocates become active in their care.

Patients are urged to embrace the following steps:

Speak up if you have questions or concerns, and if you don't understand, ask again. It's your body and you have a right to know.

Pay attention to the care you are receiving. Make sure you're getting the right treatments and medications by the right health care professionals. Don't assume anything.

Educate yourself about your diagnosis, the medical tests you are undergoing, and your treatment plan.

Ask a trusted family member or friend to be your advocate.

Know what medications you take and why you take them. Medication errors are the most common health care mistakes.

Use a hospital, clinic, surgery center, or other type of health care organization that has undergone a rigorous on-site evaluation against established, state-of-the-art quality and safety standards, such as that provided by The Joint Commision.

Participate in all decisions about your treatment. You are the center of the health care team.

20 TIPS TO HELP PREVENT MEDICAL ERRORS

See Appendix 2 for the three-page brochure that a lays out 20 tips for patients to help prevent medical errors.

CONCLUSION

Patient safety should be a top priority for any facility or healthcare provider, so any type of adverse event that occurs is serious. The best way to prevent these errors from occurring is to provide an organized, encouraging, blame-free workplace for your employees.

When an event does occur, a Root Cause Analysis should be conducted, and policy changes implemented.

APPENDIX

APPENDIX 1: 2020 - SUMMARY OF SENTINEL EVENT DATA

See Page 21. This summary provides a 42-month snapshot of the most commonly reported errors.

APPENDIX 2: 20 TIPS TO HELP PREVENT MEDICAL ERRORS

See Pages 22-24. This brochure gives 20 tips to help patients prevent medical errors from occurring.

The Joint Commission

## Summary Data of Sentinel Events Reviewed by The Joint Commission

Data Limitations: The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of events or trends in events over time.

Total number of Sentinel Events reviewed by The Joint Commission 1995 through 2020Q2

Reported Sentinel Events by Year by Source, 2005 to 2020Q2

Sentinel Event Settings, 2005-2020Q2
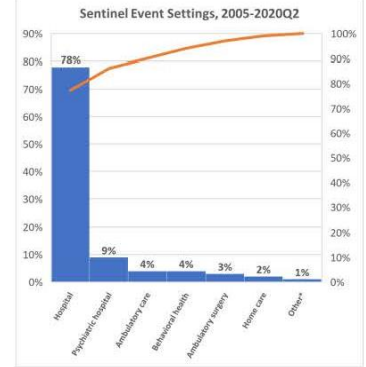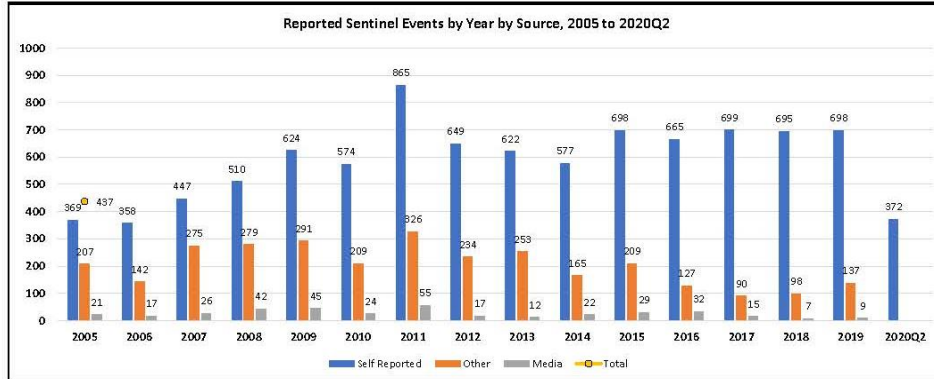
Type of Sentinel Event	2017	2018	2019	2020Q2	Total
Anesthesia-Related Event	25	13	20	0	58
Care Management Events	326	304	311	165	1106
Clinical alarm response	1	15	7	11	34
Delay in treatment	92	69	70	28	259
Fall	120	124	143	81	468
Infection related	3	3	5	0	11
Lab, Radiology, Pathology related events	10	5	8	3	26
Medication Management	36	33	29	19	117
Other	18	1	0	0	19
Perinatal Event	19	27	24	10	80
Pressure injuries	1	7	9	2	19
Restraint Related Event	4	7	5	0	16
Severe maternal morbidity	22	12	10	7	51
Transition of Care	0	1	1	3	5
VTE - Venous Thromboembolism	0	0	0	1	1
Environment Events	15	42	45	12	114
External environmental issues	0	0	2	0	2
Fire	15	20	27	12	74
Implantable device	0	2	0	0	2
Med/surg supply including disposable product	0	4	7	0	11
Medical equipment	0	15	8	0	23
Physical Environment	0	1	1	0	2
Product or Device Events	13	0	0	4	17
Med/surg supply including disposable product	3	0	0	0	3
Medical equipment	10	0	0	4	14
Protection Events	95	86	87	38	306
Assault	26	19	16	6	67
Drug OD	13	1	0	0	14
Elopement	20	9	14	6	49
Homicide	2	4	3	2	11
Infant abduction	1	0	0	1	2
Rape/sexual assault	11	12	21	6	50
Self-harm	22	41	33	17	113
Suicide	89	83	96	41	309
Suicide - emergency dept	2	3	8	1	14
Suicide - inpatient	38	38	39	14	129
Suicide - offsite w/in 72 hours	49	42	49	26	166
Surgical or Invasive Procedure Events	241	272	237	131	881
Burns	2	0	6	1	9
Op/Post-op complications	30	25	19	8	82
Other	0	5	5	0	10
Unintended retention of a foreign object	126	132	124	66	448
Wrong implant	5	7	9	2	23
Wrong patient	10	14	9	3	36
Wrong procedure	8	8	13	11	40
Wrong site	60	81	52	40	233
Unassigned**	0	0	48	46	94
Total	804	800	844	437	2885

Sentinel Event Outcome 2005 through 2020Q2	#	%
Patient death	6550	48.7%
Permanent harm	225	1.7%
Permanent loss of function	886	6.6%
Severe temporary harm	1199	8.9%
Psychological impact	395	2.9%
Unexpected additional care	3332	24.8%
Unassigned**	47	0.3%
Unknown	5	0.0%
Other	818	6.1%
Total patients impacted***	13457	100.0%

Percent Self Reported of Sentinel Events, 2014 to 2020Q2
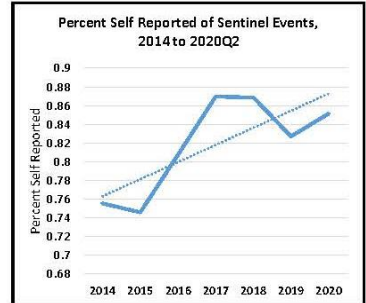
*Other settings include: Disease Specific Care, Diagnostic Imaging, Hospice Care

**Category unassigned at the time of report.

***Multiple patients may be impacted by a single event.

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