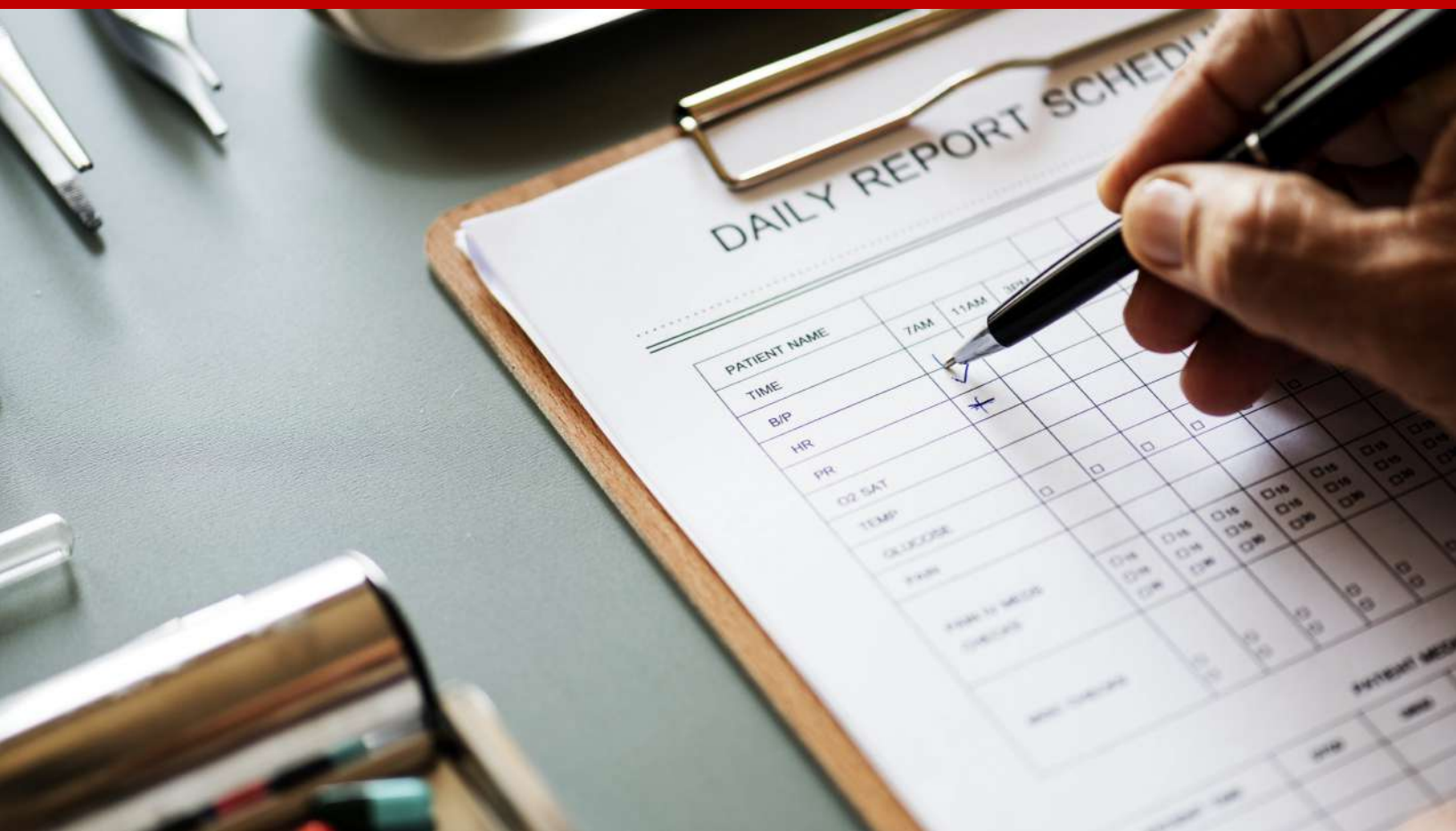
Care CEUs

Continuing Education for Nursing Home Administrators

Preventing Medical Errors



Introduction

Medical errors are one of the leading causes of death in the United States. Thus, health care professionals should understand how to prevent medical errors from occurring. With that in mind, this course reviews recommendations that were developed to help health care professionals prevent medical errors, increase patient safety, and, ultimately, optimize patient care.

Section 1: The Joint Commission's Recommendations for Medical Error Prevention

The term medical error may refer to a preventable adverse effect of care that may or may not be evident or causes harm to a patient (Joint Commission, 2022). In an ideal health care climate, medical errors would not occur - however, the simple truth of the matter is, that they do. Because medical errors do occur, organizations such as the Joint Commission developed national patient safety goals and recommendations to help health care professionals prevent medical errors from occurring. Due to the importance of the Joint Commission's recommendations, this section of the course will focus on the Joint Commission's national patient safety goals and their related recommendations. Each of the Joint Commission's national patient safety goals will be presented below followed by related recommendations. The information found in this section was derived from materials provided by the Joint Commission (Joint Commission, 2022).

Patient Identification Goal: Improve the Accuracy of Patient Identification

The rationale behind the goal - patient errors occur in virtually all stages of diagnosis and treatment. The intent for this goal is two-fold: first, to reliably identify the individual as the person for whom the service or treatment is intended; second, to match the service or treatment to that individual. Acceptable identifiers may be the individual's name, an assigned identification number, telephone number, or other person-specific identifier.

Newborns are at higher risk of misidentification due to their inability to speak and lack of distinguishable features. In addition to well-known misidentification errors such as wrong patient/wrong procedure, misidentification has also resulted in feeding a mother's expressed breast milk to the wrong newborn, which poses a risk of passing

bodily fluids and potential pathogens to the newborn. A reliable identification system among all providers is necessary to prevent error. Essentially, the reason the aforementioned goal was established was to make sure the right patient receives the right treatment/health care.

Related recommendations - to ensure the right patient receives the right treatment/ health care, health care professionals should follow the following recommendations.

- Use at least two patient identifiers when providing care, treatment, or services.
- Use at least two patient identifiers when administering medications, blood, or blood components; when collecting blood samples and other specimens for clinical testing; and when providing treatments or procedures. The patient's room number or physical location is not used as an identifier.
- Label containers used for blood and other specimens in the presence of the patient.
- Use distinct methods of identification for newborn patients. Examples of methods to prevent misidentification may include the following:
    - Distinct naming systems could include using the mother's first and last names and the newborn's gender (for example, "Smith, Judy Girl" or "Smith, Judy Girl A" and "Smith, Judy Girl B" for multiples).
    - Standardized practices for identification banding (for example, using two body sites and/or bar coding for identification).
    - Establish communication tools among staff (for example, visually alerting staff with signage noting newborns with similar names).
- Eliminate transfusion errors related to patient misidentification by:
    - Before initiating a blood or blood component transfusion; match the blood or blood component to the order; match the patient to the blood or blood component; use a two-person verification process or a one-person verification process accompanied by automated identification technology, such as bar coding.
    - When using a two-person verification process, one individual conducting the identification verification is the qualified transfusionist who will administer the blood or blood component to the patient.

- When using a two-person verification process, the second individual conducting the identification verification is qualified to participate in the process, as determined by the hospital.

Communication Goal: Improve the Effectiveness of Communication Among Caregivers

The rationale behind the goal - critical results of tests and diagnostic procedures fall significantly outside the normal range and may indicate a life-threatening situation. The objective is to provide the responsible licensed caregiver these results within an established time frame so that the patient can be promptly treated. In essence, this goal was established to ensure health care professionals receive vital patient information in a timely manner.

Related recommendations - to ensure health care professionals receive vital patient information in a timely manner, health care professionals/health care organizations should adhere to the following recommendations.

- Develop written procedures for managing the critical results of tests and diagnostic procedures that address the following:
    - The definition of critical results of tests and diagnostic procedures.
    - By whom and to whom critical results of tests and diagnostic procedures are reported.
    - The acceptable length of time between the availability and reporting of critical results of tests and diagnostic procedures.
- Implement the procedures for managing the critical results of tests and diagnostic procedures.
- Evaluate the timeliness of reporting the critical results of tests and diagnostic procedures.

Medication Goal: Improve the Safety of Using Medications

The rationale behind the goal - medications or other solutions in unlabeled containers are unidentifiable. Errors, sometimes tragic, have resulted from medications and other solutions removed from their original containers and placed into unlabeled containers.

This unsafe practice neglects basic principles of safe medication management, yet it is routine in many organizations. The labeling of all medications, medication containers, and other solutions is a risk-reduction activity consistent with safe medication management. This practice addresses a recognized risk point in the administration of medications in perioperative and other procedural settings (note: medication containers include syringes, medicine cups, and basins). In other words, this goal was established to ensure the right patient receives the right medication.

Related recommendations - to ensure the right patient receives the right medication, health care professionals should follow the following recommendations.

- Label all medications, medication containers, and other solutions on and off the sterile field in perioperative and other procedural settings.
- In perioperative and other procedural settings both on and off the sterile field, label medications and solutions that are not immediately administered. This applies even if there is only one medication being used (note: an immediately administered medication is one that an authorized staff member prepares or obtains, takes directly to a patient, and administers to that patient without any break in the process).
- In perioperative and other procedural settings both on and off the sterile field, labeling occurs when any medication or solution is transferred from the original packaging to another container.
- In perioperative and other procedural settings both on and off the sterile field, medication or solution labels include the following:
    - Medication or solution name
    - Strength
    - Amount of medication or solution containing medication (if not apparent from the container)
    - Diluent name and volume (if not apparent from the container)
    - Expiration date when not used within 24 hours
    - Expiration time when expiration occurs in less than 24 hours (note: the date and time are not necessary for short procedures, as defined by the hospital)

- Verify all medication or solution labels both verbally and visually. Verification is done by two individuals qualified to participate in the procedure whenever the person preparing the medication or solution is not the person who will be administering it.
- Label each medication or solution as soon as it is prepared, unless it is immediately administered. (note: an immediately administered medication is one that an authorized staff member prepares or obtains, takes directly to a patient, and administers to that patient without any break in the process).
- Immediately discard any medication or solution found unlabeled.
- Remove all labeled containers on the sterile field and discard their contents at the conclusion of the procedure (note: this does not apply to multiuse vials that are handled according to infection control practices).
- All medications and solutions both on and off the sterile field and their labels are reviewed by entering and exiting staff responsible for the management of medications.

Anticoagulant Therapy Goal: Reduce the Likelihood of Patient Harm Associated with the Use of Anticoagulant Therapy

The rationale behind the goal - anticoagulation therapy can be used as therapeutic treatment for a number of conditions, the most common of which are atrial fibrillation, deep vein thrombosis, pulmonary embolism, and mechanical heart valve implant. However, it is important to note that anticoagulation medications are more likely than others to cause harm due to complex dosing, insufficient monitoring, and inconsistent patient compliance. This National Patient Safety Goal has great potential to positively impact the safety of patients on this class of medications and result in better outcomes.

To achieve better patient outcomes, patient education is a vital component of an anticoagulation therapy program. Effective anticoagulation patient education includes face-to-face interaction with a trained professional who works closely with patients to be sure that they understand the risks involved with anticoagulation therapy, the precautions they need to take, and the need for regular International Normalized Ratio (INR) monitoring. The use of standardized practices for anticoagulation therapy that include patient involvement can reduce the risk of adverse drug events associated with heparin (unfractionated), low molecular weight heparin, and warfarin. Essentially, the

aforementioned goal was developed to help patients receiving anticoagulation therapy avoid adverse events related to their anticoagulation therapy (note: this requirement applies only to hospitals that provide anticoagulant therapy and/or long-term anticoagulation prophylaxis (for example, atrial fibrillation) where the clinical expectation is that the patient's laboratory values for coagulation will remain outside normal values. This requirement does not apply to routine situations in which short term prophylactic anticoagulation is used for venous thrombo-embolism prevention (for example, related to procedures or hospitalization) and the clinical expectation is that the patient's laboratory values for coagulation will remain within, or close to, normal values).

Related recommendations - to reduce the likelihood of patient harm associated with the use of anticoagulant therapy, health care professionals should follow the following recommendations.

- Use only oral unit-dose products, prefilled syringes, or premixed infusion bags when these types of products are available (note: for pediatric patients, prefilled syringe products should be used only if specifically designed for children).
- Use approved protocols for the initiation and maintenance of anticoagulant therapy.
- Before starting a patient on warfarin, assess the patient's baseline coagulation status; for all patients receiving warfarin therapy, use a current International Normalized Ratio (INR) to adjust this therapy. The baseline status and current INR are documented in the medical record (note: the patient's baseline coagulation status can be assessed in a number of ways, including through a laboratory test or by identifying risk factors such as age, weight, bleeding tendency, and genetic factors).
- Use authoritative resources to manage potential food and drug interactions for patients receiving warfarin.
- When heparin is administered intravenously and continuously, use programmable pumps in order to provide consistent and accurate dosing.
- A written policy addresses baseline and ongoing laboratory tests that are required for anticoagulants.
- Provide education regarding anticoagulant therapy to prescribers, staff, patients, and families. Patient/family education includes the following:

    - The importance of follow-up monitoring
    - Compliance
    - Drug-food interactions
    - The potential for adverse drug reactions and interactions
- Evaluate anticoagulation safety practices, take action to improve practices, and measure the effectiveness of those actions in a time frame determined by the organization.

Medication Information Goal: Maintain and Communicate Accurate Patient Medication Information

The rationale behind the goal - there is evidence that medication discrepancies can affect patient outcomes. Medication reconciliation is intended to identify and resolve discrepancies - it is a process of comparing the medications a patient is taking (and should be taking) with newly ordered medications. The comparison addresses duplications, omissions, and interactions, and the need to continue current medications. The types of information that clinicians use to reconcile medications include (among others) medication name, dose, frequency, route, and purpose. Organizations should identify the information that needs to be collected to reconcile current and newly ordered medications and to safely prescribe medications in the future.

Related recommendations - to achieve the medication information goal, health care professionals should follow the following recommendations.

- Obtain information on the medications the patient is currently taking when he or she is admitted to the hospital or is seen in an outpatient setting. This information is documented in a list or other format that is useful to those who manage medications (notes: current medications include those taken at scheduled times and those taken on an as-needed basis; a good faith effort to obtain this information from the patient and/or other sources will be considered as meeting the intent of the goal.
- Define the types of medication information to be collected in non-24-hour settings and different patient circumstances; examples of non-24-hour settings include the emergency department, primary care, outpatient radiology, ambulatory surgery, and diagnostic settings; examples of medication information that may be collected include name, dose, route, frequency, and purpose.

- Compare the medication information the patient brought to the hospital with the medications ordered for the patient by the hospital in order to identify and resolve discrepancies (note: discrepancies include omissions, duplications, contraindications, unclear information, and changes. A qualified individual, identified by the hospital, does the comparison).
- Provide the patient (or family as needed) with written information on the medications the patient should be taking when he or she is discharged from the hospital or at the end of an outpatient encounter (for example, name, dose, route, frequency, purpose); when the only additional medications prescribed are for a short duration, the medication information the hospital provides may include only those medications.
- Explain the importance of managing medication information to the patient when he or she is discharged from the hospital or at the end of an outpatient encounter (note: examples include instructing the patient to give a list to his or her primary care physician; to update the information when medications are discontinued, doses are changed, or new medications (including over-the-counter products) are added; and to carry medication information at all times in the event of emergency situations).

Alarm Systems Goal: Reduce the Harm Associated with Clinical Alarm Systems

The rationale behind the goal - clinical alarm systems are intended to alert caregivers of potential patient problems, but if they are not properly managed, they can compromise patient safety. This is a multifaceted problem. In some situations, individual alarm signals are difficult to detect. At the same time, many patient care areas have numerous alarm signals and the resulting noise and displayed information tends to desensitize staff and cause them to miss or ignore alarm signals or even disable them. Other issues associated with effective clinical alarm system management include too many devices with alarms, default settings that are not at an actionable level, and alarm limits that are too narrow. These issues vary greatly among hospitals and even within different units in a single hospital.

There is general agreement that this is an important safety issue. Universal solutions have yet to be identified, but it is important for a hospital to understand its own situation and to develop a systematic, coordinated approach to clinical alarm system

management. Standardization contributes to safe alarm system management, but it is recognized that solutions may have to be customized for specific clinical units, groups of patients, or individual patients.

Related recommendations - to help achieve this goal, health care professionals and health care organizations should follow the following recommendations.

- Improve the safety of clinical alarm systems.
- Leaders establish alarm system safety as a hospital priority.
- Identify the most important alarm signals to manage based on the following:
    - Input from the medical staff and clinical departments
    - Risk to patients if the alarm signal is not attended to or if it malfunctions
    - Whether specific alarm signals are needed or unnecessarily contribute to alarm noise and alarm fatigue
    - Potential for patient harm based on internal incident history
    - Published best practices and guidelines
- Establish policies and procedures for managing alarms, at a minimum, address the following:
    - Clinically appropriate settings for alarm signals
    - When alarm signals can be disabled
    - When alarm parameters can be changed
    - Who in the organization has the authority to set alarm parameters
    - Who in the organization has the authority to change alarm parameters
    - Who in the organization has the authority to set alarm parameters to “off”
    - Monitoring and responding to alarm signals
    - Checking individual alarm signals for accurate settings, proper operation, and detectability

- Educate staff and licensed independent practitioners about the purpose and proper operation of alarm systems for which they are responsible.

Health Care-Associated Infections Goal: Reduce the Risk of Health Care-Associated Infections

The rationale behind the goal - according to the Centers for Disease Control and Prevention, each year, millions of people acquire an infection while receiving care, treatment, and services in a health care organization. Consequently, health care-associated infections (HAIs) are a patient safety issue affecting all types of health care organizations. One of the most important ways to address HAIs is by improving the hand hygiene of health care staff. Compliance with the World Health Organization (WHO) or Centers for Disease Control and Prevention (CDC) hand hygiene guidelines will reduce the transmission of infectious agents by staff to patients, thereby decreasing the incidence of HAIs. To ensure compliance with this National Patient Safety Goal, an organization should assess its compliance with the CDC and/or WHO guidelines through a comprehensive program that provides a hand hygiene policy, fosters a culture of hand hygiene, and monitors compliance and provides feedback. Essentially, this goal was established to increase hand hygiene effectiveness and decrease the incidence of HAIs.

Related recommendations - to help achieve this goal, health care professionals and health care organizations should follow the following recommendations.

- Implement a program that follows categories IA, IB, and IC of either the current Centers for Disease Control and Prevention (CDC) or the current World Health Organization (WHO) hand hygiene guidelines.
- Set goals for improving compliance with hand hygiene guidelines.
- Improve compliance with hand hygiene guidelines based on established goals.

Central Line Goal: Prevent Central Line-Associated Bloodstream Infections

The rationale behind the goal - as previously mentioned, according to the CDC, each year, millions of people acquire an infection while receiving care, treatment, and services in a health care organization. Consequently, HAIs are a patient safety issue affecting all

types of health care organizations. One of the most important ways to address HAIs is by preventing central line-associated bloodstream infections.

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Educate staff and licensed independent practitioners who are involved in managing central lines about central line-associated bloodstream infections and the importance of prevention. Education occurs upon hire or granting of initial privileges and periodically thereafter as determined by the organization.
- Prior to insertion of a central venous catheter, educate patients and, as needed, their families about central line-associated bloodstream infection prevention.
- Implement policies and practices aimed at reducing the risk of central line-associated bloodstream infections.
- Conduct periodic risk assessments for central line-associated bloodstream infections, monitor compliance with evidence-based practices, and evaluate the effectiveness of prevention efforts. The risk assessments are conducted in time frames defined by the hospital, and this infection surveillance activity is hospital wide, not targeted.
- Provide central line-associated bloodstream infection rate data and prevention outcome measures to key stakeholders, including leaders, licensed independent practitioners, nursing staff, and other clinicians.
- Use a catheter checklist and a standardized protocol for central venous catheter insertion.
- Use a standardized supply cart or kit that contains all necessary components for the insertion of central venous catheters.
- Perform hand hygiene prior to catheter insertion or manipulation.
- Use maximum sterile barrier precautions during central venous catheter insertion.
- For adult patients, do not insert catheters into the femoral vein unless other sites are unavailable.

- Use an alcoholic chlorhexidine antiseptic for skin preparation during central venous catheter insertion unless contraindicated.
- Use a standardized protocol to disinfect catheter hubs and injection ports before accessing the ports.
- Evaluate all central venous catheters routinely and remove nonessential catheters.

Surgical Site Infection Goal: Prevent Surgical Site Infections

The rationale behind the goal - surgical site infections can lead to increased patient morbidity and mortality rates - thus, health care professionals and health care organizations should make attempts to prevent surgical site infections whenever possible.

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Educate staff and licensed independent practitioners involved in surgical procedures about surgical site infections and the importance of prevention. Education occurs upon hire, annually thereafter, and when involvement in surgical procedures is added to an individual's job responsibilities.
- Educate patients, and their families as needed, who are undergoing a surgical procedure about surgical site infection prevention.
- Implement policies and practices aimed at reducing the risk of surgical site infections. These policies and practices meet regulatory requirements and are aligned with evidence-based guidelines (for example, the CDC and/or professional organization guidelines).
- As part of the effort to reduce surgical site infections:
    - Conduct periodic risk assessments for surgical site infections in a time frame determined by the hospital.
    - Select surgical site infection measures using best practices or evidence-based guidelines.

    - Monitor compliance with best practices or evidence-based guidelines.
    - Evaluate the effectiveness of prevention efforts (note: surveillance may be targeted to certain procedures based on the hospital's risk assessment).
- Measure surgical site infection rates for the first 30 or 90 days following surgical procedures based on National Healthcare Safety Network (NHSN) procedural codes.
- Provide process and outcome (for example, surgical site infection rate) measure results to key stakeholders.
- Administer antimicrobial agents for prophylaxis for a particular procedure or disease according to methods cited in scientific literature or endorsed by professional organizations.
- When hair removal is necessary, use a method that is cited in scientific literature or endorsed by professional organizations.

Urinary Tract Infection Goal: Prevent Indwelling Catheter-Associated Urinary Tract Infections

The rationale behind the goal - urinary tract infections may impact a patient's health and overall well-being. That being said, indwelling catheters may lead to urinary tract infections. Thus, health care professionals should attempt to prevent indwelling catheter-associated urinary tract infections (CAUTI).

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Educate staff and licensed independent practitioners involved in the use of indwelling urinary catheters about CAUTI and the importance of infection prevention. Education occurs upon hire or granting of initial privileges and when involvement in indwelling catheter care is added to an individual's job responsibilities. Ongoing education and competence assessment occur at intervals established by the organization.
- Educate patients who will have an indwelling catheter, and their families as needed, on CAUTI prevention and the symptoms of a urinary tract infection.

- Develop written criteria, using established evidence-based guidelines, for placement of an indwelling urinary catheter. Written criteria are revised as scientific evidence changes.

  Examples of criteria for placement of an indwelling urinary catheter include the following:

  - Critically ill patients who need accurate urinary output measurements.
  - Patients with acute urinary retention or bladder outlet obstruction.
  - Patients who require prolonged immobilization (for example, a potentially unstable thoracic or lumbar spine or multiple traumatic injuries such as pelvic fractures).
  - Incontinent patients with an open sacral wound or perineal wounds.
  - Perioperative use for selected surgical procedures, such as patients undergoing urologic surgery or other surgery on contiguous structures of the genitourinary tract; patients who will have a prolonged duration of surgery (catheters inserted for this reason should be removed in a post-anesthesia care unit); patients anticipated to receive large-volume infusions or diuretics during surgery; patients needing intraoperative monitoring of urinary output.
  - End-of-life care.
  - Neurogenic bladder.

- Follow written procedures based on established evidence-based guidelines for inserting and maintaining an indwelling urinary catheter. The procedures address the following:

  - Limiting use and duration.
  - Performing hand hygiene prior to catheter insertion or maintenance care.
  - Using aseptic techniques for site preparation, equipment, and supplies.
  - Securing catheters for unobstructed urine flow and drainage.
  - Maintaining the sterility of the urine collection system.
  - Replacing the urine collection system when required.

    - Collecting urine samples (note: there are medical conditions that require a prolonged use of an indwelling urinary catheter in order to avoid adverse events and promote patient safety; examples can include, but are not limited to, patients with a spinal cord injury, multiple sclerosis, Parkinson's disease, and spina bifida).

- Measure and monitor catheter-associated urinary tract infection prevention processes and outcomes in high-volume areas by doing the following:
    - Selecting measures using evidence-based guidelines or best practices.
    - Having a consistent method for medical record documentation of indwelling urinary catheter use, insertion, and maintenance.
    - Monitoring compliance with evidence-based guidelines or best practices.
    - Evaluating the effectiveness of prevention efforts (note: surveillance may be targeted to areas with a high volume of patients using in-dwelling catheters).

Safety Risk Goal: The Health Care Organization Identifies Safety Risks Inherent in its Patient Population

The rationale behind the goal - the suicide of a patient while in a staffed, round-the-clock care setting is a frequently reported type of sentinel event (note: the term sentinel event may refer to an unanticipated event in a health care setting that results in death or serious physical or psychological injury to a patient(s), not related to the natural course of the patient's illness). Identification of individuals at risk for suicide while under the care of or following discharge from a health care organization is an important step in protecting these at-risk individuals.

Related recommendations - to help achieve this goal, health care professionals and health care organizations should follow the following recommendations.

- For psychiatric hospitals and psychiatric units in general hospitals: the hospital conducts an environmental risk assessment that identifies features in the physical environment that could be used to attempt suicide; the hospital takes necessary action to minimize the risk(s) (e.g., removal of anchor points, door hinges, and hooks that can be used for hanging).

- For nonpsychiatric units in general hospitals and other health care facilities: the organization implements procedures to mitigate the risk of suicide for patients at high risk for suicide, such as one-to-one monitoring, removing objects that pose a risk for self-harm if they can be removed without adversely affecting the patient's medical care, assessing objects brought into a room by visitors, and using safe transportation procedures when moving patients to other parts of the hospital (note: nonpsychiatric units in general hospitals do not need to be ligature resistant; health care facilities should routinely assess clinical areas to identify objects that could be used for self-harm and remove those objects, when possible, from the area around a patient who has been identified as high risk for suicide).
- Screen all patients for suicidal ideation who are being evaluated or treated for behavioral health conditions as their primary reason for care using a validated screening tool (note: the Joint Commission requires screening for suicidal ideation using a validated tool starting at age 12 and above).
- Use an evidence-based process to conduct a suicide assessment of patients who have screened positive for suicidal ideation. The assessment should directly asks about suicidal ideation, plan, intent, suicidal or self-harm behaviors, risk factors, and protective factors.
- Document patients' overall level of risk for suicide and the plan to mitigate the risk for suicide.
- Follow written policies and procedures addressing the care of patients identified as at risk for suicide. Such policies and procedures should include the following: training and competence assessment of health care staff who care for patients at risk for suicide; guidelines for reassessment; monitoring patients who are at high risk for suicide.
- Follow written policies and procedures for counseling and follow-up care at discharge for patients identified as at risk for suicide.
- Monitor implementation and effectiveness of policies and procedures for screening, assessment, and management of patients at risk for suicide and take action as needed to improve compliance.

Procedure Verification Goal: Procedure Verification

The rationale behind the goal - hospitals should always make sure that any procedure is what the patient needs and is performed on the right person. The frequency and scope of the verification process will depend on the type and complexity of the procedure.

The preprocedure verification is an ongoing process of information gathering and confirmation. The purpose of the preprocedure verification process is to make sure that all relevant documents and related information or equipment are:

- Available prior to the start of the procedure.
- Correctly identified, labeled, and matched to the patient's identifiers.
- Reviewed and are consistent with the patient's expectations and with the team's understanding of the intended patient, procedure, and site.

Preprocedure verification may occur at more than one time and place before the procedure. It is up to the hospital to decide when this information is collected and by which team member, but it is best to do it when the patient can be involved. Possibilities include the following:

- When the procedure is scheduled.
- At the time of preadmission testing and assessment.
- At the time of admission or entry into the facility for a procedure.
- Before the patient leaves the preprocedure area or enters the procedure room.

Missing information or discrepancies are addressed before starting the procedure.

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Conduct a preprocedure verification process.
- Implement a preprocedure process to verify the correct procedure, for the correct patient, at the correct site (note: the patient is involved in the verification process when possible).

- Identify the items that must be available for the procedure and use a standardized list to verify their availability. At a minimum, these items include the following:
    - Relevant documentation (for example, history and physical, signed procedure consent form, nursing assessment, and preanesthesia assessment).
    - Labeled diagnostic and radiology test results (for example, radiology images and scans, or pathology and biopsy reports) that are properly displayed.
    - Any required blood products, implants, devices, and/or special equipment for the procedure (note: the expectation of this element of performance is that the standardized list is available and is used consistently during the preprocedure verification; it is not necessary to document that the standardized list was used for each patient).
- Match the items that are to be available in the procedure area to the patient.

Surgery Goal: Wrong Site Surgery Should Never Happen

The rationale behind the goal - wrong site surgery should never happen - yet, it is an ongoing problem in health care that compromises patient safety. Marking the procedure site is one way to protect patients; patient safety is enhanced when a consistent marking process is used throughout the hospital. Site marking is done to prevent errors when there is more than one possible location for a procedure. Examples include different limbs, fingers and toes, lesions, level of the spine, and organs. In cases where bilateral structures are removed (such as tonsils or ovaries) the site does not need to be marked.

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Mark the procedure site.
- Identify those procedures that require marking of the incision or insertion site. At a minimum, sites are marked when there is more than one possible location for the procedure and when performing the procedure in a different location would negatively affect quality or safety (note: for spinal procedures, in addition to

preoperative skin marking of the general spinal region, special intraoperative imaging techniques may be used for locating and marking the exact vertebral level).

- The procedure site is marked by a licensed independent practitioner who is ultimately accountable for the procedure and will be present when the procedure is performed. In limited circumstances, the licensed independent practitioner may delegate site marking to an individual who is permitted by the organization to participate in the procedure and has the following qualifications:
    - An individual in a medical postgraduate education program who is being supervised by the licensed independent practitioner performing the procedure, who is familiar with the patient, and who will be present when the procedure is performed.
    - A licensed individual who performs duties requiring a collaborative agreement or supervisory agreement with the licensed independent practitioner performing the procedure (that is, an advanced practice registered nurse [APRN] or physician assistant [PA]), who is familiar with the patient, and who will be present when the procedure is performed (note: the hospital's leaders define the limited circumstances, if any, in which site marking may be delegated to an individual meeting these qualifications).
- The method of marking the site and the type of mark is unambiguous and is used consistently throughout the hospital (note: the mark is made at or near the procedure site and is sufficiently permanent to be visible after skin preparation and draping; adhesive markers are not the sole means of marking the site).
- A written, alternative process is in place for patients who refuse site marking or when it is technically or anatomically impossible or impractical to mark the site (for example, mucosal surfaces or perineum). Examples of other situations that involve alternative processes include:
    - Minimal access procedures treating a lateralized internal organ, whether percutaneous or through a natural orifice
    - Teeth
    - Premature infants, for whom the mark may cause a permanent tattoo

Time Out Goal: A Time-Out is Performed Before the Procedure

The rationale behind the goal - The purpose of the time-out is to conduct a final assessment that the correct patient, site, and procedure are identified. This requirement focuses on those minimum features of the time-out. Some believe that it is important to conduct the time-out before anesthesia for several reasons, including involvement of the patient. A hospital may conduct the time-out before anesthesia or may add another time-out at that time. During a time-out, activities are suspended to the extent possible so that team members can focus on active confirmation of the patient, site, and procedure.

A designated member of the team initiates the time-out and it includes active communication among all relevant members of the procedure team. The procedure is not started until all questions or concerns are resolved. The timeout is most effective when it is conducted consistently across the hospital. In essence, time-outs are necessary to help establish that the right patient is undergoing the right procedure.

Related recommendations - to help achieve the aforementioned goal, health care professionals and health care organizations should follow the following recommendations.

- Conduct a time-out immediately before starting an invasive procedure.
- The time-out should have the following characteristics: the time-out is standardized, as defined by the health care organization; the time-out is initiated by a designated member of the team; the time-out involves the immediate members of the procedure team (e.g., the health care professional performing the procedure, the anesthesia providers, the circulating nurse, the operating room technician, and other
  active participants who will be participating in the procedure from the beginning).
- When two or more procedures are being performed on the same patient, and the health care professional performing the procedure changes, perform a time-out before each procedure is initiated.
- During the time-out, the team members agree, at a minimum, on the following: correct patient identity; the correct site; the procedure to be done.
- Document the completion of the time-out (note: the health care organization determines the amount and type of documentation).

Section 1 Summary

Medical errors can occur in any health care facility, at any time. Thus, health care professionals should be aware of how to prevent medical errors from occurring. With that in mind, the Joint Commission developed national patient safety goal and recommendations to help health care professionals prevent medical errors. Health care professionals should follow the Joint Commission's recommendations to help prevent medical errors, increase patient safety, and optimize care to those in need.

Section 1 Key Concepts

- Health care professionals should be familiar with the Joint Commission's recommendations for medical error prevention.

Section 1 Key Terms

Medical error - a preventable adverse effect of care, whether it is evident or causes harm to a patient

Medication reconciliation - a process of comparing the medications a patient is taking (and should be taking) with newly ordered medications

Sentinel event - an unanticipated event in a health care setting that results in death or serious physical or psychological injury to a patient(s), not related to the natural course of the patient's illness

Section 1 Personal Reflection Question

How can health care professionals use the Joint Commission's national patient safety goals and related recommendations to optimize patient care?

Section 2: Additional Recommendations for Medical Error Prevention

As previously mentioned, medical errors can occur in any health care facility, at any time. Therefore, the Joint Commission developed recommendations to help health care professionals prevent medical errors. Along with the Joint Commission other

organizations, such as the CDC, developed recommendations to help health care professionals prevent medical errors. With that in mind, this section of the course will focus on additional recommendations for medical error prevention. The information found in this section of the course was derived from materials provided by the CDC unless, otherwise, specified (CDC, 2018). Health care professionals should note that some of the following recommendations may appear to overlap with the Joint Commission's recommendations. That being said, the following recommendations are meant to parallel and supplement the Joint Commission's recommendations regarding medical error prevention.

Limit Shift Durations for Health Care Professionals

- Evidence shows that acute and chronically fatigued health care professionals are more likely to make mistakes. Health care professionals and health care organizations should ensure that individuals get ample sleep and adhere to 80-hour workweek limits. Additionally, residents and other health care professionals who work 30-hour shifts should only administer care to patients for up to 16 hours and should have a 5-hour protected sleep period between 10 p.m. and 8 a.m.

Work to Reduce and/or Avoid Burn-Out

- To build on the previous recommendation, health care professionals should work to reduce and/or avoid burn-out. Burn-out may refer to a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed (World Health Organization [WHO], 2019). Health care professionals should note that burn-out is characterized by the following three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one’s job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy (WHO, 2019). Health care professionals should also note that the use of the collaborative staffing model may serve as a method to help reduce burn-out in health care settings. Specific information regarding the collaborative staffing model may be found below. The information found below was derived from materials provided by the American Association of Critical-Care Nurses (American Association of Critical-Care Nurses, 2018).
- The collaborative staffing model may refer to an employee staffing model that encourages and allows health care managers and health care professionals to

work together to create schedules and/or fill required open shifts across a health care organization.

- The collaborative staffing model helps remove the traditional hierarchical structure of a health care organization that may not be relevant in the modern era of health care.
- In order for the collaborative staffing model to be effective, health care organizations must have a means for health care professionals to view and fill schedules/open shifts.
- In order for the collaborative staffing model to be effective, health care organizations must have a means for health care professionals to communicate information regarding schedules/open shifts.
- In order for the collaborative staffing model to be effective, health care organizations must establish channels for effective horizontal communication (note: horizontal communication may refer to the flow of communication between individuals and/or departments that are on the same level of a given organization).
- The collaborative staffing model can help reduce some of the scheduling burden for health care managers, while providing them additional time to focus on other vital issues or concerns.
- The collaborative staffing model can help health care organizations fill schedules/ open shifts to help meet the demands of the coronavirus disease 2019 (COVID-19) pandemic (note: coronavirus disease 2019 [COVID-19] may refer to a respiratory illness that can spread from person to person, which is caused by a virus known as the severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]).
- The collaborative staffing model can help foster professional teamwork, which in turn could help health care professionals create professional bonds that may impact employee burn-out, and, subsequently, employee retention.
- The collaborative staffing model can help increase employee satisfaction. Health care professionals should note the following: some of the most cited reasons why health care professionals leave health care organizations are related to scheduling issues and low employee satisfaction; the collaborative staffing model can help

health care organizations address the aforementioned reasons why health care professionals leave health care organizations.

Identify and/or Assist Health Care Professionals that may be Dealing with Substance Abuse

- Due to the stress and burn-out often associated with caring for patients, health care professionals may suffer from substance abuse.
- Substance abuse may refer to the harmful or hazardous use of a psychoactive substance such as alcohol and illicit drugs.
- Health care professional-related substance abuse may act as a catalyst for medical errors.
- Signs of alcohol and illicit drug use include the following: slurred speech, an active tremor, shakiness, poor coordination, sweating, nausea, vomiting, aggression, agitation, compulsive behavior, craving, red eyes, dry mouth, drowsiness, involuntary eye movements, dilated pupils, nasal congestion, mouth sores, reduced consciousness, lack of pain sensation, intolerance to loud noise, dizziness, confusion, lack of awareness to surroundings, and needle marks.

Practice Effective Hand Hygiene

As previously mentioned, health care-associated infections are a patient safety issue affecting all types of health care organizations. One of the most effective ways to address health care-associated infections is by practicing effective hand hygiene. Specific information regarding hand hygiene may be found below.

- Hand hygiene may refer to the process of cleaning hands in order to prevent contamination and/or infections.
- Hand hygiene is most effective when dirt, soil, microorganisms, and other contaminates are removed from the hands.
- Health care professionals may use a variety of different products to carry out effective hand hygiene. The following products are typically available to health care professionals and may be used to carry out effective hand hygiene:

detergents, plain soap, antimicrobial (medicated) soap, antiseptic agents, and alcohol-based handrubs.

- Hand hygiene can help prevent the transmission of COVID-19.
- The major indications for hand hygiene can be broken down into the following key moments: before patient contact; before an aseptic procedure or task; after a body fluid exposure risk occurs; after touching a patient; after contact with a patient's surroundings.
- Health care professionals should wash their hands with soap and water when they are visibly dirty or visibly soiled with blood or other body fluids or after using the toilet.
- Health care professionals should engage in hand hygiene if exposure to potential spore-forming pathogens is strongly suspected or proved (note: handwashing with soap and water is the preferred means in the previous case).
- Health care professionals should engage in hand hygiene before handling an invasive device for patient care.
- Health care professionals should engage in hand hygiene after contact with body fluids or excretions, mucous membranes, non-intact skin, or wound dressings.
- Health care professionals should engage in hand hygiene if moving from a contaminated body site to another body site during the care of the same patient.
- Health care professionals should engage in hand hygiene after contact with inanimate surfaces and objects (including medical equipment) in the immediate vicinity of a patient.
- Health care professionals should engage in hand hygiene after removing sterile or non-sterile gloves.
- Health care professionals should engage in hand hygiene before handling medications (note: hand hygiene in the previous case may include the use an alcohol-based handrub or handwashing with either a plain or antimicrobial soap and water).
- Health care professionals should engage in hand hygiene before preparing food (note: hand hygiene in the previous case may include the use an alcohol-based handrub or handwashing with either a plain or antimicrobial soap and water).

- To carry out effective hand hygiene, health care professionals should follow the following steps when using soap and water (health care professionals should note that the duration of the entire hand washing procedure with soap and water should last between 40 - 60 seconds).

  Hand Hygiene Procedure with Soap and Water

  1. The health care professional should wet his or her hands with water.
  2. The health care professional should apply enough soap to cover all hand surfaces.
  3. The health care professional should rub his or her hands palm to palm.
  4. The health care professional should rub the right palm over the left dorsum with interlaced fingers and vice versa.
  5. The health care professional should rub his or her hands palm to palm with fingers interlaced.
  6. The health care professional should rub the backs of fingers to opposing palms with fingers interlocked.
  7. The health care professional should engage in rotational rubbing of the left thumb clasped in the right palm and vice versa.
  8. The health care professional should engage in rotational rubbing, backwards and forwards with clasped fingers of the right hand in the left palm and vice versa.
  9. The health care professional should then rinse his or her hands with water.
  10. The health care professional should then dry his or her hands thoroughly with a single use towel.
  11. Finally, the health care professional should use a towel to turn off the faucet.

- Health care professionals may also use an alcohol-based formulation when practicing effective hand hygiene. Health care professionals should follow the steps in the following procedure when using an alcohol-based formulation to optimize hand hygiene results. The duration of the entire procedure should last between 20 - 30 seconds. When using an alcohol-based formulation health care professionals should note the following: alcohol-based handrubs with optimal

antimicrobial efficacy usually contain 75% to 85% ethanol, isopropanol, or n-propanol, or a combination of the aforementioned products. Health care professionals should also note that when engaging in hand hygiene, soap and an alcohol-based handrub should not be used concomitantly.

Hand Hygiene Procedure with an Alcohol-based Formulation

1. The health care professional should first apply a palmful of alcohol-based product in a cupped hand, making sure to cover all surfaces.
2. The health care professional should then rub his or her hands palm to palm.
3. The health care professional should rub the right palm over the left dorsum with interlaced fingers and vice versa.
4. The health care professional should rub his or her hands palm to palm with fingers interlaced.
5. The health care professional should rub the backs of his or her fingers to opposing palms with fingers interlocked.
6. The health care professional should engage in the rotational rubbing of the left thumb clasped in the right palm and vice versa.
7. The health care professional should engage in rotational rubbing, backwards and forwards with clasped fingers of the right hand in the left palm and vice versa.
8. Finally, health care professionals should note that their hands are safe once they are dry.

- Alcohol-based handrubs should be located at the point-of-care (i.e., the place where a patient, a health care professional, and care or treatment involving contact with a patient and/or his or her surroundings all come together). The previous concept embraces the need to perform hand hygiene at recommended moments exactly where care delivery takes place. This requires that alcohol-based handrub products are easily accessible and as close as possible - within arm's reach of where patient care or treatment is taking place. Point-of-care products should be accessible without health care professionals having to leave the patient zone. The patient zone may refer to the zone or area which contains a patient and his or her immediate surroundings.

- Health care professionals should use an alcohol-based handrub when their hands are not visibly soiled to reduce bacterial counts.
- When using an alcohol-based handrub, health care professionals should use sufficient product to keep hands and forearms wet with the handrub throughout the surgical hand preparation procedure.
- When using an alcohol-based surgical handrub product with sustained activity, health care professionals should follow the manufacturer's instructions for application times. Apply the product to dry hands only. Do not combine surgical hand scrub and surgical handrub with alcohol-based products sequentially.

Don Personal Protective Equipment (PPE) When Applicable

Another way health care professionals can help limit health care-associated infections is by donning personal protective equipment (PPE). PPE can refer to equipment designed to protect, shield, and minimize exposure to hazards that may cause serious injury, illness, and/or disease. Essentially, donning PPE can prevent the spread of infectious materials and agents to patients (note: the use of PPE can help prevent the transmission of COVID-19). PPE can include a variety of different types of equipment such as: gowns, masks, goggles, face shields, respirators and, of course, gloves. Specific information regarding individual pieces of PPE may be found below.

Gown

Background information - The gown may be one of the most recognizable pieces of PPE. The purpose of a gown is to protect an individual's torso and arms from potential contamination. Gowns are typically clean or sterile and often resistant to fluids. Gowns that protect against microorganisms are available to health care professionals; for health care activities with low, medium, or high risk of contamination, surgical gowns may be used (note: the term surgical gown may refer to a type of gown intended to be worn by various health care professionals during surgical procedures).

Donning PPE - When putting on a gown, a health care professional should make sure the gown completely covers his or her torso from the neck to the knees. The gown should also completely cover a health care professional's arms and wrists. Additionally, a gown should be wrapped around the back and fastened at the back of the neck and waist.

Removing PPE - To effectively remove a gown, a health care professional should unfasten the gown's ties and pull the gown away from the neck and shoulders. When the gown is removed from the body, it should be rolled or folded and placed in the appropriate waste container. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Mask

Background information - The mask is another very recognizable piece of PPE. The purpose of a mask is to protect a health care professional's face from potentially infectious materials.

Donning PPE - When putting on a mask, a health care professional should make sure the mask completely covers his or her mouth and nose. A health care professional should also ensure a mask fits snugly to the face and below the chin. Often masks can be secured to the head and neck via separate ties.

Removing PPE - To effectively remove a mask, a health care professional should untie the bottom ties, if applicable, followed by the upper ties. The mask should then be pulled off and discarded in the appropriate waste container. A health care professional should not touch a contaminated mask. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Goggles

Background information - Goggles are typically worn with a mask. The purpose of goggles is to protect the eyes from potentially infectious materials.

Donning PPE - When putting on goggles, a health care professional should make sure the goggles fit snugly around the eyes. If a health care professional wears personal prescription lenses, the goggles should fit snugly around his or her personal prescription lenses. Furthermore, goggles should be properly adjusted on the face to maximize vision and protection.

Removing PPE - To effectively remove goggles from the face, a health care professional should take off the goggles from the back by lifting the goggle's band and pulling them forward. If the goggles are not reusable they should be placed in the appropriate waste container. A health care professional should not touch contaminated goggles. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Face Shields

Background information - A face shield can be worn in place of goggles. The purpose of a face shield is to protect the eyes, nose, and mouth from potentially infectious materials.

Donning PPE - When putting on a face shield, health care professionals should make sure the face shield covers the forehead, extends below the chin, and wraps around the side of the face.

Removing PPE - To effectively remove a face shield, a health care professional should take off the face shield from the back by lifting the face shield's band and pulling it forward. If the face shield is not reusable, it should be placed in the appropriate waste container. A health care professional should not touch a contaminated face shield. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Respirator

Background information - The purpose of a respirator is to protect a health care professional from hazardous and/or infectious aerosols. There are many types of respirators available to health care professionals including: particulate respirators, half-face elastomeric respirators, full-face elastomeric respirators, and powered air purifying respirators. The most common type of respirators used by health care professionals are particulate respirators. When selecting a specific type of respirator, health care professionals should consider the type of exposure risk associated with patient care. A "fit test" may be required to determine the appropriate size respirator needed for each individual health care professional. Health care professionals may also require training regarding how and when to use a respirator.

Donning PPE - When putting on a respirator, a health care professional should make sure the respirator completely covers his or her mouth and nose. Health care professionals should also ensure the respirator fits snug to the face and below the chin. Additionally, a health care professional should be sure the respirator is properly sealed.

Removing PPE - To effectively remove a respirator, a health care professional should untie the bottom ties, if applicable, followed by the upper ties. The respirator should then be pulled off and discarded in the appropriate waste container. A health care professional should not touch a contaminated respirator. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Gloves

Background information - Gloves are often the most common piece of PPE used by health care professionals. The two main reasons why health care professionals should wear gloves include the following - to reduce the risk of contamination of health care professionals' hands with blood and other body fluids and to reduce the risk of germ dissemination to the environment and/or transmission from the health care worker to the patient and vice versa, as well as from one patient to another. When wearing gloves, health care professionals should avoid touch contamination. Touch contamination may refer to touching one's self and/or other surfaces such as tables, light switches, and doors while wearing gloves. Touch contamination may lead to contamination and/or the passing of potentially infectious materials. Health care professionals should also remember to change their gloves as they administer care to different patients, i.e., a new patient means a new pair of gloves.

Donning PPE - When putting on a pair of gloves, a health care professional should make sure the gloves extend to cover the wrists of isolation gowns, if applicable. Gloves are often the last piece of PPE donned when putting on required PPE. When donning gloves, health care professionals should adhere to the following steps:

1. Health care professionals should note the following - when an indication for hand hygiene precedes contact that also requires glove usage, hand rubbing with an alcohol-based handrub or hand washing with soap and water should be performed before donning gloves.
2. Take out a glove from its original box.
3. Health care professionals should be sure to touch only a restricted surface of a glove corresponding to the wrist (at the top edge of the cuff).
4. Don the first glove.
5. Take the second glove with the bare hand and be sure to touch only a restricted surface of a glove corresponding to the wrist (at the top edge of the cuff).
6. Health care professionals should note the following - to avoid touching the skin of the forearm with the gloved hand, turn the external surface of the glove to be donned on the folded fingers of the gloved hand, thus permitting to glove the second hand (don the second glove).

7. Health care professionals should note the following - once both hands are gloved, hands should not touch anything else that is not defined by indications and conditions for gloved use.

Removing PPE - To effectively remove a pair of gloves, a health care professional should use one gloved hand to grasp the palm area of the other gloved hand. Once the health care professional has a firm grip on the palm of one gloved hand, the health care professional should then peel off the first glove. After removing the first glove, the health care professional should then hold that glove in one hand. Using his or her fingers, the health care professional should slide the fingers off his or her ungloved hand under the remaining glove at the wrist and peel off the second glove right over the first glove. Both gloves should then be placed in the appropriate waste container.

If heath care professionals are wearing a gown with gloves, they may also remove their gloves when they are removing their gowns. To do so, health care professionals should peel off each glove as they roll or fold their gowns before disposal. Both the gloves and the gown should then be discarded in the appropriate waste container. When removing a pair of gloves with a gown, health care professionals should ensure they do not touch the gloves or the gown with their bare hands. Health care professionals should wash their hands or use an alcohol-based hand sanitizer after removing all PPE.

Safe Injection Practices

In addition to hand hygiene and PPE, safe injection practices can be used to prevent health care-associated infections. Specific information regarding safe injection practices may be found below.

- Safe injection practices may refer to practices that are intended to prevent the transmission of infectious diseases between one patient and another, and/or between a patient and a health care professional during the preparation and administration of parenteral (e.g., intravenous or intramuscular injection) medications.
- Health care professionals should prepare injections using aseptic technique in a clean area.
- Health care professionals should disinfect the rubber septum on a medication vial with alcohol before piercing.

- Health care professionals should not use needles or syringes for more than one patient (note: this includes manufactured prefilled syringes and other devices, such as insulin pens).
- Medication containers (e.g., single and multidose vials, ampules, and bags) should be entered with a new needle and new syringe, even when obtaining additional doses for the same patient.
- Health care professionals should use single-dose vials for parenteral medications when possible.
- Health care professionals should not use single-dose (single-use) medication vials, ampules, and bags or bottles of intravenous solution for more than one patient.
- Health care professionals should not combine the leftover contents of single-use vials for later use.
- Health care professionals should dedicate multidose vials to a single patient, when applicable.
- If multidose vials will be used for more than one patient, they should be restricted to a centralized medication area and should not enter the immediate patient treatment area to prevent inadvertent contamination.
- If a multidose vial enters the immediate patient treatment area, it should be dedicated for single-patient use and discarded immediately after use.
- Health care professionals should date multidose vials when first opened and discard within 28 days, unless the manufacturer specifies a shorter or longer date for the opened vial.
- Health care professionals should not use fluid infusion or administration sets (e.g., IV bags, tubings, connections) for more than one patient.

Safe Handling of Potentially Contaminated Equipment or Surfaces in the Patient Environment

The safe handling of potentially contaminated equipment or surfaces in the patient environment may help prevent the transmission of infectious agents found on surfaces and/or objects. Specific information regarding the safe handling of potentially contaminated equipment or surfaces in the patient environment may be found below.

- Health care professionals should wear appropriate PPE, when applicable.
- Health care professionals should handle equipment and or objects soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of pathogens to health care professionals, patients, and/or the environment.
- Health care professionals should work to prevent skin and mucous membrane exposure and contamination of clothing, when applicable.
- Health care professionals should use adequate procedures for the routine cleaning and disinfection of environmental and other frequently touched surfaces, when applicable.
- Health care professionals should clean the countertops and surfaces where medication preparation occurs at least daily and when visibly soiled.
- Puncture-resistant, leak-proof sharps containers should be located in every patient-care area.
- All sharps should be disposed of in the designated sharps container; health care professionals should not bend, recap, or break used needles before discarding them into the container.
- Health care professionals should handle and treat waste contaminated with blood, body fluids, secretions, and excretions as clinical waste, in accordance with organizational and state/federal regulations.

Cleaning and Disinfecting Procedures

Additionally, cleaning and disinfecting procedures can help prevent health care-associated infections. Specific information regarding cleaning and disinfecting procedures may be found below.

- Cleaning and disinfecting procedures may refer to any actions taken to remove infectious agents/materials from surfaces or objects.
- Cleaning surfaces and/or objects with a cleaning product that contains soap or detergent reduces the amount of germs on surfaces and decreases the risk of infection from surfaces; disinfecting kills any remaining germs on surfaces and reduces the spread of infectious agents.

- Health care administrators should ensure the routine cleaning/disinfecting of frequently touched surfaces such as: tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, sinks, and any relevant health care-related equipment.
- Health care professionals should always follow the instructions on the label of a cleaning/disinfecting product; cleaning/disinfecting product labels should include instructions on how to use the product and specific instructions to keep individuals safe; many products recommend keeping the surface wet with a disinfectant for a certain period of time; health care professionals should keep cleaning/disinfecting products away from patients, especially children.
- If a disinfectant product does not have a cleaning agent, health care professionals should clean visibly dirty surfaces with household cleaners containing soap or detergent before disinfecting.
- Health care professionals should read disinfectant product labels to make sure the product meets relevant needs.
- Health care professionals should use the amount of cleaning/disinfecting product recommended on the label.
- If diluting with water is indicated for use on cleaning/disinfection product labels, health care professionals should use water at room temperature, unless stated otherwise on the cleaning/disinfection product label.
- Health care professionals should label all diluted cleaning/disinfection solutions, when applicable.
- Health care professionals should not mix products or chemicals.
- Health care professionals should not eat, drink, breathe, or inject cleaning and disinfection products into the body or apply directly to the skin.
- Health care professionals should ensure adequate ventilation when using any cleaning/disinfection product (e.g., open a nearby window or door).
- Health care professionals should use gloves when using cleaning/disinfection products (note: additional PPE [e.g., goggles] may be required based on the cleaning/disinfection products being used and whether there is a risk of splash).

- Health care professionals should engage in hand hygiene after handling dirty laundry.
- Health care professionals should follow the manufacturer's instructions for cleaning electronic devices.
- Health care professionals should use gloves when removing garbage bags and handling and disposing trash (note: additional PPE [e.g., goggles] may be required based on whether there is a risk of splash when removing garbage bags and handling and disposing trash).
- Health care professionals should engage in hand hygiene after removing garbage bags and after the handling and disposing of trash.

Insert Chest Tubes Safely

A chest tube may refer to a tube that is used to drain fluid, or remove air, from the lungs. At times, chest tubes can be vital to patients' survival. Thus, it is imperative that health care professionals adequately and safely insert chest tubes into patients. To adequately insert chest tubes into patients, health care professionals should remember and follow the following recommendations: practice effective hand hygiene, don PPE when applicable, prep the patient's skin, and use extensive draping.

Possess Insight into Anticoagulation Therapy

As previously highlighted, anticoagulation therapy can be used as a therapeutic treatment option for a number of conditions such as: atrial fibrillation, deep vein thrombosis, pulmonary embolism, and mechanical heart valve implant. That being the case, it is important to note that anticoagulation medications are more likely than others to cause serious harm due to complex dosing, insufficient monitoring, and inconsistent patient compliance. Thus, health care professionals should possess insight into anticoagulation therapy/medications to help prevent any harm to patients on such therapy. Information regarding commonly prescribed anticoagulation therapies/ medications may be found below. The information found below was derived from materials provided by the United States Food and Drug Administration (FDA) (United States Food and Drug Administration [FDA], 2022).

Heparin sodium

Medication notes - Heparin sodium is an anticoagulant indicated for: prophylaxis and treatment of venous thromboembolism and pulmonary embolism, atrial fibrillation with embolization, treatment of acute and chronic consumptive coagulopathies (disseminated intravascular coagulation), prevention of clotting in arterial and cardiac surgery, prophylaxis and treatment of peripheral arterial embolism, and anticoagulant use in blood transfusions, extracorporeal circulation, and dialysis procedures. The most common adverse reactions associated with heparin sodium include the following: hemorrhage, thrombocytopenia, heparin-induced thrombocytopenia (HIT) and heparin-induced thrombocytopenia and thrombosis (HITT), hypersensitivity reactions, and elevations of aminotransferase levels.

Safety notes - Warnings and precautions associated with heparin sodium include the following: confirm choice of correct strength prior to administration, use caution in conditions with increased risk of hemorrhage, monitor for signs and symptoms and discontinue if indicative of HIT and HITT. Contraindications associated with heparin sodium include: history of HIT and HITT, known hypersensitivity to heparin or pork products, in whom suitable blood coagulation tests cannot be performed at appropriate intervals. Health care professionals should note the following heparin sodium monitoring recommendation: blood coagulation tests guide therapy for full-dose heparin; monitor platelet count and hematocrit in all patients receiving heparin.

Considerations for special patient populations - Health care professionals should note that a higher incidence of bleeding has been reported in patients over 60 years of age.

Enoxaparin sodium injection (Lovenox)

Medication notes - Lovenox is a low molecular weight heparin (LMWH) indicated for: prophylaxis of deep vein thrombosis (DVT) in abdominal surgery, hip replacement surgery, knee replacement surgery, or medical patients with severely restricted mobility during acute illness, inpatient treatment of acute DVT with or without pulmonary embolism, outpatient treatment of acute DVT without pulmonary embolism, prophylaxis of ischemic complications of unstable angina and non-Qwave myocardial infarction [MI], and treatment of acute ST-segment elevation myocardial infarction [STEMI] managed medically or with subsequent percutaneous coronary intervention [PCI]. The most common adverse reactions associated with Lovenox include the following: bleeding, anemia, thrombocytopenia, elevation of serum aminotransferase, diarrhea, and nausea.

Safety notes - Lovenox carries the following warnings: epidural or spinal hematomas may occur in patients who are anticoagulated with LMWH or heparinoids and are receiving neuraxial anesthesia or undergoing spinal puncture; these hematomas may result in long-term or permanent paralysis; consider these risks when scheduling patients for spinal procedures; factors that can increase the risk of developing epidural or spinal hematomas in these patients include: the use of indwelling epidural catheters, concomitant use of other drugs that affect hemostasis, such as non-steroidal anti-inflammatory drugs (NSAIDs), platelet inhibitors, other anticoagulants, a history of traumatic or repeated epidural or spinal punctures, a history of spinal deformity or spinal surgery. Monitor patients frequently for signs and symptoms of neurological impairment. If neurological compromise is noted, urgent treatment is necessary; consider the benefits and risks before neuraxial intervention in patients anticoagulated or to be anticoagulated for thromboprophylaxis. Additional warnings and precautions associated with Lovenox include: use with caution in patients at risk for bleeding, obtain hemostasis at the puncture site before sheath removal, use with caution in patients with bleeding diathesis, uncontrolled arterial hypertension or history of recent gastrointestinal ulceration, diabetic retinopathy, renal dysfunction, or hemorrhage, use with caution in patients with a history of HIT, monitor thrombocytopenia closely, do not exchange with heparin or other LMWHs, and pregnant women with mechanical prosthetic heart valves and their fetuses, may be at increased risk and may need more frequent monitoring and dosage adjustment. Contraindications associated with Lovenox include: active major bleeding, thrombocytopenia with a positive in vitro test for anti-platelet antibody in the presence of enoxaparin sodium, hypersensitivity to enoxaparin sodium, hypersensitivity to heparin or pork products, hypersensitivity to benzyl alcohol (for multi-dose formulation only).

Considerations for special patient populations - Health care professionals should note the following: doses of Lovenox should be adjusted for patients with creatinine clearance <30mL/min.

Warfarin (Coumadin)

Medication notes - Coumadin is a vitamin K antagonist indicated for the following: prophylaxis and treatment of venous thrombosis and its extension, pulmonary embolism; prophylaxis and treatment of thromboembolic complications associated with atrial fibrillation and/or cardiac valve replacement; reduction in the risk of death, recurrent myocardial infarction, and thromboembolic events such as stroke or systemic

embolization after myocardial infarction. The most common adverse reactions associated with Coumadin are fatal and nonfatal hemorrhage from any tissue or organ.

Safety notes - Warnings associated with Coumadin include the following: Coumadin can cause major or fatal bleeding; perform regular monitoring of INR in all treated patients; drugs, dietary changes, and other factors affect INR levels achieved with Coumadin therapy; instruct patients about prevention measures to minimize risk of bleeding and to report signs and symptoms of bleeding. Contraindications associated with Coumadin include the following: pregnancy, except in women with mechanical heart valves; hemorrhagic tendencies or blood dyscrasias. Health care professionals should note the following Coumadin monitoring recommendation: obtain daily INR determinations upon initiation until stable in the therapeutic range; obtain subsequent INR determinations every 1 to 4 weeks.

Considerations for special patient populations - Use with caution in a nursing woman; monitor breast-feeding infants for bruising or bleeding.

Apixaban (Eliquis)

Medication notes - Eliquis is a factor Xa inhibitor anticoagulant indicated to reduce the risk of stroke and systemic embolism in patients with nonvalvular atrial fibrillation. The most common adverse reactions associated with Eliquis are related to bleeding.

Safety notes - Warnings associated with Eliquis include the following: discontinuing Eliquis places patients at an increased risk of thrombotic events; an increased rate of stroke was observed following discontinuation of Eliquis in clinical trials in patients with nonvalvular atrial fibrillation; if anticoagulation with Eliquis must be discontinued for a reason other than pathological bleeding, coverage with another anticoagulant should be strongly considered. Contraindications associated with Eliquis include active pathological bleeding and severe hypersensitivity to Eliquis.

Considerations for special patient populations - Health care professionals should note the following recommendations: the use of Eliquis is not recommended in pregnant patients or in patients with severe hepatic impairment; discontinue Eliquis or discontinue nursing.

Apply Fall Precautions to All Patients

Falls can be very dangerous to patient care and possess the potential to dramatically impact patients' health and overall well-being. With that said, all patients may be at risk for falls. Thus, it is essential that health care professionals apply fall precautions to all patients, independent of age, diagnosis, or treatment. In other words, fall precautions constitute the basics of patient safety and should be applied in all health care facilities to all patients. Specific fall precautions may be found below. The information found below was derived from materials provided by the CDC (CDC, 2021).

Fall Precautions

- Familiarize the patient with the environment
- Have the patient demonstrate call light use
- Maintain call light within reach
- Keep the patient's personal possessions within patient's safe reach
- Have sturdy handrails in patient bathrooms, room, and hallway
- Place the hospital bed in low position when a patient is resting in bed; raise bed to a comfortable height when the patient is transferring out of bed
- Keep hospital bed brakes locked
- Keep wheelchair wheel locks in the locked position when stationary
- Keep nonslip, comfortable, well-fitting footwear on the patient
- Use night lights or supplemental lighting
- Keep floor surfaces clean and dry
- Clean up all spills promptly
- Keep patient care areas uncluttered
- Follow safe patient handling practices

Determine Patients' Risk for Falls

To build on the previous recommendation, health care professionals should screen specific patients to determine if they are at risk for falls. Health care professionals can effectively screen patients to determine if they are at risk for falls by using the Stay Independent 12-question tool (note: the Stay Independent 12-question tool may be used to screen older adult patients). Specific information regarding the Stay Independent 12-question tool may be found below. The information found below was derived from materials provided by the CDC (CDC, 2021).

- **Stay Independent 12-question tool** - the Stay Independent 12-question tool can help health care professionals determine if an older adult is at risk for falls. The Stay Independent 12-question tool includes the following questions, which older adults should honestly answer and health care professionals should appropriately score: I have fallen in the past year; I use or have been advised to use a cane or walker to get around safely; sometimes I feel unsteady when I am walking; I steady myself by holding onto furniture when walking at home; I am worried about falling; I need to push with my hands to stand up from a chair; I have some trouble stepping up onto a curb; I often have to rush to the toilet; I have lost some feeling in my feet; I take medicine that sometimes makes me feel light-headed or more tired than usual; I take medicine to help me sleep or improve my mood; I often feel sad or depressed. Health care professionals should note the following: each "yes" answer to questions 1 and 2 should receive 2 points; each "yes" answer to questions 3 - 12 should receive 1 point; each "no" answer to any of the 12 questions should receive zero points; health care professionals should add up the total number of points once the older adult has answered all 12 questions to the best of his or her ability. Health care professionals should also note the following: if an older adult's total score is 4 points or more, he or she may be at risk for falling.

Avoid, Identify, and Report Patient Abuse

Patient abuse may refer to an intentional act or failure to act that causes or creates a risk of harm to a patient in a health care facility. Health care professionals should work to avoid, identify, and report patient abuse. Specific information regarding patient abuse may be found below. The information found below was derived from materials provided by the CDC and the National Institute on Aging unless, otherwise, specified (CDC, 2021; National Institute on Aging, 2020).

- The major types of patient abuse include: physical abuse, verbal/emotional abuse, psychological abuse, sexual abuse, financial exploitation/abuse, health care financial fraud, confinement, neglect, and elder abandonment.

- **Physical abuse** - physical abuse may refer to the intentional use of physical force against an individual that leads to illness, pain, injury, functional impairment, distress, and/or death. Health care professionals should note the following examples of the types of physical force/abuse that may be used against a patient: hitting, punching, kicking, pushing, pinching, slapping, biting, and burning. The potential signs of physical abuse may include the following: bruises, hand marks, grip marks, sprains, dislocated joints, broken bones, burns, and missing teeth. Health care professionals should also note that physical abuse against patients may include the inappropriate use of drugs, as well as physical punishment of any kind (e.g., pinching or slapping patients because they dropped food or spilled a liquid).

- **Verbal/emotional abuse** - verbal/emotional abuse may refer to verbal and/or nonverbal behaviors that inflict anguish, mental pain, fear, or distress on an individual. Examples of verbal/emotional abuse include the following: yelling, swearing, humiliating an individual, repeatedly threatening an individual, making insulting or disrespectful comments towards an individual, and habitual blaming and/or scapegoating (note: scapegoating may refer to the act of assigning responsibility to an individual for wrong doing, who is not necessary responsible for said wrong doing, so the individual assumes fault and any related suffering). The potential signs of verbal/emotional abuse may include the following: unexplained stress, unexplained fear, unexplained suspicions towards others or one specific individual, evasive behavior, unresponsive behavior, memory gaps, and sleep disturbance. Health care professionals should note that verbal/ emotional abuse may be intentionally used by an individual to control and/or manipulate a patient.

- **Psychological abuse** - psychological abuse may refer to a type of coercive or threatening behavior that establishes a power differential between two or more individuals. Examples of psychological abuse may include treating a patient like a child and preventing a resident from interacting with family members and/or friends. The potential signs of psychological abuse may include the following: unexplained or uncharacteristic changes in behavior, a lack of interest in socializing with others, isolating behavior, and agitation. Health care professionals

should note that psychological abuse may also be intentionally used by an individual to control and/or manipulate a patient.

- **Sexual abuse** - sexual abuse may refer to any forced or unwanted sexual interaction with an individual (i.e., a sexual interaction with an individual that occurs without the individual's consent). Examples of sexual abuse include: unwanted sexual contact (e.g., touching; foundling; grabbing), unwanted sexual intercourse, rape, coerced nudity (e.g., one individual persuades or threatens another individual to get nude in front of him or her), forcing an individual to look at pornographic materials, photographing an individual while he or she is nude and/or partially nude, and sexual harassment (note: the term sexual harassment may refer to any act characterized by unwelcomed and/or inappropriate sexual remarks/behavior). The potential signs of sexual abuse may include the following: unexplained bruising on the legs or thighs, unexplained bruising around the genitals, bite marks on the body and/or around the genitals, bleeding from the genitals and/or anus, ripped clothes and/or undergarments, vaginal infections, and the signs/symptoms of newly acquired sexually transmitted diseases (STDs). Health care professionals should note that sexual abuse may be one of the most underreported types of patient abuse.

- **Financial exploitation/abuse** - financial exploitation/abuse may refer to the illegal, unauthorized, or improper use of an individual's money, benefits, belongings, property, and/or assets. Examples of financial exploitation include: misuse of an individual's funds, denying an individual access to his or her own funds, taking money under false pretenses, using an individual's credit card for personal use without consent, embezzlement, fraud, identity theft, forgery, forced property transfers, as well as the improper use of a power of attorney (note: the term power of attorney may refer to any written, legally binding authorization and/or authority that grants powers to an individual to act on another individual's behalf). The potential signs of financial exploitation/abuse may include the following: confusion regarding money, benefits, belongings, property, and/or assets; unexplained loss of money, benefits, belongings, property, and/or assets; unexplained withdrawals from bank accounts; and unexplained signatures on checks. Health care professionals should note that financial exploitation/abuse may be inflicted on a patient by a member of his or her family as well as friends, personal acquaintances, and outside sources such as telephone and internet scams.

- **Health care financial fraud** - health care financial fraud may refer to any unethical action, involving finances/money, towards an individual receiving health care by a health care professional (e.g., doctor; nurse; physical therapist). Examples of health care financial fraud include the following: charging for health care services that were not performed, overcharging for health care services, and patient coercion. The potential signs of health care financial fraud may include the following: unexplained charges on health care bills, unexplained disappearance of medications, unexplained disappearance of health care supplies, unexplained harm when in the presence of a health care professional, and untreated conditions, diseases, and/or illnesses. Health care professionals should note that victims of health care financial fraud may ask specific, potentially odd, questions or make specific, potentially odd, statements about their health, health care therapy, and/or about a specific health care professional. Health care professionals should note that health care financial fraud may occur in any health care facility.

- **Confinement** - confinement may refer to any action that restrains or confines an individual for reasons unrelated to health care. Examples of confinement may include the following: locking an individual in his or her residence so he or she cannot get out, locking an individual in his or her bedroom, locking an individual in a closet, and preventing an individual from leaving his or her bed or a specific area of his or her residence. The potential signs of confinement may include the following: a family member or friend reports that he or she has not seen or heard from the patient in question, bruises that appear to be from restraints or confinements, and rope burns on the wrists and/or body. Health care professionals should note that confinement may be used by individuals to prevent patients from reporting incidents of patient abuse.

- **Neglect** - neglect may refer to a failure to meet an individual's basic needs. Examples of neglect include the following: a failure to provide a patient with food and/or water, a failure to provide a patient with shelter, a failure to provide a patient with appropriate clothing, a failure to provide a patient with the means to maintain adequate hygiene, and a failure to provide a patient with required medications and/or health care services. The potential signs of neglect may include the following: the patient in question may appear to be malnourished; the patient in question may appear to be dehydrated; the patient in question may appear to be disheveled and/or wearing dirty clothing; poor hygiene; a lack of required health care aids (e.g., eye glasses; hearing aids; canes; walkers); and the

presence of untreated wounds. Health care professionals should note the following: patients may suffer from self-neglect; self-neglect may refer to a failure to meet one's own basic needs (i.e., an individual is no longer able to carry out basic tasks such as feeding themselves and/or maintaining adequate hygiene); self-neglect may include: an inability to feed one's self, compulsive hoarding, self-harm, and substance abuse.

- **Elder abandonment** - elder abandonment may refer to the act of intentionally deserting an older adult that is dependent on others for care and/or incapable of self-care (note: the term older adult may refer to an individual 65 years or older). Examples of elder abandonment include the following: a family member leaves an older adult at a health care facility without notifying the health care facility of the older adult's arrival or returning to pick up the older adult; a family member leaves an older adult with another individual without making arrangements for the older adult's care with the individual; someone caring for an older adult leaves his or her duties without notification or a follow-up. The potential signs of elder abandonment may include the following: the older adult in question may be confused about where he or she is; the older adult in question may be confused about how he or she arrived at a health care facility; and the older adult in question may have been left alone in his or her residence for an indeterminable amount of time. Health care professionals should note that elder abandonment can occur at any point in an older adult's care.

- Patients victimized by patient abuse may appear/present in a variety of different states. They may appear malnourished, dehydrated, stressed, confused, agitated, fearful, suspicious of others, nonresponsive, and/or evasive. Additionally, patients potentially victimized by patient abuse may present/appear with the physical signs of patient abuse such as: bruises, hand marks, grip marks, sprains, dislocated joints, broken bones, missing teeth, rope burns, and/or untreated wounds. Also, as previously mentioned, a potential victim of patient abuse may simply just appear at a health care facility alone and without any idea or clue as to why he or she is there. Furthermore, patients potentially victimized by patient abuse may display body language indicating that they were abused (e.g., slouching; excessive flinching; unable to maintain eye contact).

- Patients suffering from dementia may be especially vulnerable to patient abuse. Dementia may refer to a cluster of symptoms centered around an inability to remember, think clearly, and/or make decisions. Health care professionals should

work to identify patients suffering from dementia because patients suffering from dementia may be more susceptible to patient abuse. Health care professionals should note the following symptoms of dementia, which include problems with: memory, attention, communication, reasoning, judgment, and/or problem solving. Health care professionals should also note the following signs of dementia: getting lost in a familiar area; forgetting the names of close family and friends; and not being able to complete tasks independently. Additionally, health care professionals should note that dementia is not a normal part of aging.

- Due to the complex effects of patient abuse, those victimized by patient abuse may experience suicidal ideation. Suicidal ideation may refer to thoughts of suicide and/or thoughts of planning suicide. Health care professionals should be very aware that patients victimized by patient abuse may be suicidal or may have attempted suicide (note: suicide may refer to a death caused by self-directed injurious behavior with any intent to die as a result of the behavior; a suicide attempt may refer to a non-fatal self-directed and potentially injurious behavior with any intent to die as a result of the behavior). Health care professionals should make every effort to identify the potential for suicide and prevent patient suicide, when applicable.

- Health care professionals should provide counseling and education to patients about patient abuse and how to report patient abuse, so they may be able to effectively acknowledge and identify patient abuse and adequately report it to family members, friends, health care professionals, and organizations such as the National Adult Protective Services Association. Health care professionals should note that the National Adult Protective Services Association is an organization that works to provide services (e.g., protection against financial exploitation/ abuse) to individuals victimized by abuse.

- Health care professionals should foster effective communication when engaging with patients. Effective communication occurs when information and messages are adequately transmitted, received, and understood. Working to foster effective communication when engaging with patients can help health care professionals obtain relevant information that may be used to effectively identify and, ultimately, prevent patient abuse. Health care professionals can foster effective communication when engaging with patients by speaking clearly, actively listening to patients when they speak, maintaining eye contact with patients when speaking to them, asking questions, maintaining emotional stability, and by

limiting interruptions and distractions. Health care professionals should note the following: when engaging with patients, health care professionals should work to avoid miscommunication; when miscommunication occurs between individuals, intended meaning may be lost; health care professionals can work to avoid miscommunication by removing physical barriers when communicating with other individuals, remaining professional, clarifying points of confusion, and by allowing for a free flow of information between individuals.

- Health care professionals should report any potential patient abuse. Reporting potential patient abuse can prevent patient abuse, and ultimately, stop it from occurring. Health care professionals should note that they may report patient abuse, internally, within their health care organizations or to outside organizations, such as the National Adult Protective Services Association.
- Health care facilities may have specific internal channels for reporting patient abuse. Health care professionals should be aware of such channels to effectively report potential patient abuse. If such channels do not exist, health care professionals should consider developing internal channels, within their health care organizations, for reporting patient abuse. Health care professionals should note that they may find information regarding patient abuse and the reporting of patient abuse within their specific health care organizations' policies and procedures.
- Health care professionals should be sure to effectively document the presence of any potential patient abuse. Effective health care documentation can provide a record of any potential patient abuse, observed signs of the potential patient abuse, and any related complications. Such information may be used to review and determine the presence of patient abuse. Additionally, effective health care documentation, regarding patient abuse, may be used to alert other health care professionals of the possible presence of patient abuse. Health care professionals should note the following: in order for health care documentation to be considered effective, it must function as a viable form of communication, as well as a means to establish a detailed record of health care administration.

Ensure Patients' Rights are Upheld

Patients have specific rights protected by law, especially if they are a resident of a health care facility. Upholding patients' rights can help establish safe and effective health care,

and, subsequently, help prevent medical errors from occurring. Patients' rights can be found in Title 42 Part 483. Specific patient rights, as well as related requirements, regulations, and laws included in Title 42 Part may be found below. The information found below was derived from materials provided by the U.S. government unless, otherwise, specified (Code of Federal Regulations, 2022).

- Patients have the right to receive care that is free of medical errors.
- Patients have a right to a dignified existence, self-determination, and communication with and access to persons and services inside and outside the facility.
- A health care facility must treat each patient with respect and dignity and care for each patient in a manner and in an environment that promotes maintenance or enhancement of his or her quality of life, recognizing each patient's individuality. The facility must protect and promote the rights of the patient.
- A health care facility must provide equal access to quality care regardless of diagnosis, severity of condition, or payment source. A facility must establish and maintain identical policies and practices regarding transfer, discharge, and the provision of services under the State plan for all patients regardless of payment source.
- Patients have the right to exercise their rights as a patient of a health care facility and as a citizen or resident of the United States.
- A health care facility must ensure that the patient can exercise his or her rights without interference, coercion, discrimination, or reprisal from the facility.
- The patient has the right to be free of interference, coercion, discrimination, and reprisal from the facility in exercising his or her rights and to be supported by the facility in the exercise of his or her rights.
- In the case of a patient who has not been adjudged incompetent by the state court, the patient has the right to designate a representative, in accordance with State law and any legal surrogate so designated may exercise the patient's rights to the extent provided by state law. The same-sex spouse of a patient must be afforded treatment equal to that afforded to an opposite-sex spouse if the marriage was valid in the jurisdiction in which it was celebrated.

- The patient representative has the right to exercise the patient's rights to the extent those rights are delegated to the patient representative.
- The patient retains the right to exercise those rights not delegated to a patient representative, including the right to revoke a delegation of rights, except as limited by State law.
- In the case of a patient representative whose decision-making authority is limited by State law or court appointment, the patient retains the right to make those decisions outside the representative's authority.
- The patient's wishes and preferences must be considered in the exercise of rights by the representative.
- The patient has the right to be informed of, and participate in, his or her treatment, including: the right to be fully informed in language that he or she can understand of his or her total health status, including but not limited to, his or her medical condition; the right to participate in the development and implementation of his or her plan of care, including but not limited to: the right to participate in the planning process, including the right to identify individuals or roles to be included in the planning process, the right to request meetings and the right to request revisions to the plan of care; the right to participate in establishing the expected goals and outcomes of care, the type, amount, frequency, and duration of care, and any other factors related to the effectiveness of the plan of care; the right to be informed, in advance, of changes to the plan of care; the right to receive the services and/or items included in the plan of care; the right to see the care plan, including the right to sign after significant changes to the plan of care.
- The health care facility shall inform the resident of a health care facility of the right to participate in his or her treatment and shall support the resident in this right. The planning process must facilitate the inclusion of the resident and/or the resident's representative; include an assessment of the resident's strengths and needs; incorporate the resident's personal and cultural preferences in developing goals of care.
- Patients have the right to be informed, in advance, of the care to be furnished and the type of care given or professional that will furnish care.

- A patient has the right to be informed in advance, by the physician or other practitioner or professional, of the risks and benefits of proposed care, of treatment and treatment alternatives or treatment options and to choose the alternative or option he or she prefers.
- Patients have the right to request, refuse, and/or discontinue treatment, to participate in or refuse to participate in experimental research, and to formulate an advance directive.
- The resident of a health care facility has a right to participate in family groups.
- The resident of a health care facility has a right to have family member(s) or other resident representative(s) meet in the facility with the families or resident representative(s) of other residents in the facility.
- The resident of a health care facility has a right to participate in other activities, including social, religious, and community activities that do not interfere with the rights of other residents in the facility.
- The resident of a health care facility has a right to choose to or refuse to perform services for the facility and the facility must not require a resident to perform services for the facility. The resident may perform services for the facility, if he or she chooses, when the facility has documented the resident's need or desire for work in the plan of care; the plan specifies the nature of the services performed and whether the services are voluntary or paid; compensation for paid services is at or above prevailing rates; the resident agrees to the work arrangement described in the plan of care.
- The resident of a health care facility has a right to manage his or her financial affairs; this includes the right to know, in advance, what charges a facility may impose against a resident's personal funds.
- Patients have the right to patient autonomy (note: patient autonomy may refer to a patient's right to make decisions regarding his or her own personal health care, without the direct influence of a health care professional).
- Patients have the right to receive medications, when appropriate/deemed necessary by a health care professional.
- Patients have a right to be treated with consideration, respect, and dignity, recognizing each patient’s individuality.

- Patients have the right to a safe, sanitary, and comfortable environment that helps prevent the development and transmission of communicable diseases and infections.
- A health care facility should develop and implement policies and procedures to ensure that all staff are fully vaccinated for COVID-19 (note: staff are considered fully vaccinated if it has been two weeks or more since they completed a primary vaccination series for COVID-19; the completion of a primary vaccination series for COVID-19 is defined as the administration of a single-dose vaccine, or the administration of all required doses of a multi-dose vaccine).
- Patient's have the right to ethical care.

Use Evidence-Based Hospital Design Principles

Health care organizations should follow evidence-based principles for hospital design to improve patient safety and quality. Examples of evidence-based principles for hospital design include the following: provide well-designed patient rooms and bathrooms; offer single bed rooms to patients; create decentralized nurses' stations that allow easy access to patients; improve air filtration systems within health care facilities; provide multiple convenient locations for hand washing; and offer well-lit, quiet, private spaces to health care professionals so they may complete vital tasks undisturbed.

Consider Working with a Patient Safety Organization

Health care professionals should consider reporting and sharing patient safety information with Patient Safety Organizations (PSOs) to help others avoid preventable errors. By providing both privilege and confidentiality, PSOs create a secure environment where clinicians and health care organizations can use common formats to collect, aggregate, and analyze data that can improve quality by identifying and reducing the risks and hazards associated with patient care.

Section 2 Summary

Organizations, such as the CDC, developed recommendations to help health care professionals prevent medical errors. Health care professionals should be aware of relevant organizations' recommendations regarding medical errors. Finally, health care professionals should note the following: organizations, such as the CDC, frequently

update their medical error-related recommendations; health care professionals should work to remain up to date on medical error prevention recommendations.

Section 2 Key Concepts

- Health care professionals should work to remain up to date on medical error prevention recommendations.
- Health care organizations should follow evidence-based principles for hospital design to improve patient safety and quality.
- Health care professionals should consider reporting and sharing patient safety information with PSOs to help others avoid preventable medical errors.

Section 2 Key Terms

Burn-out - a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed (WHO, 2019)

Collaborative staffing model - an employee staffing model that encourages and allows health care managers and health care professionals to work together to create schedules and/or fill required open shifts across a health care organization

Horizontal communication - the flow of communication between individuals and/or departments that are on the same level of a given organization

Coronavirus disease 2019 (COVID-19) - a respiratory illness that can spread from person to person, which is caused by a virus known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

Substance abuse - the harmful or hazardous use of a psychoactive substance such as alcohol and illicit drugs

Hand hygiene - the process of cleaning hands in order to prevent contamination and/or infections

Patient zone - the zone or area which contains a patient and his or her immediate surroundings

Personal Protective Equipment (PPE) - equipment designed to protect, shield, and minimize exposure to hazards that may cause serious injury, illness, and/or disease

Surgical gown - a type of gown intended to be worn by various health care professionals during surgical procedures

Touch contamination - touching one's self and/or other surfaces such as tables, light switches, and doors while wearing gloves

Safe injection practices - practices that are intended to prevent the transmission of infectious diseases between one patient and another, and/or between a patient and a health care professional during the preparation and administration of parenteral medications

Cleaning and disinfecting procedures - any actions taken to remove infectious agents/ materials from surfaces or objects

Chest tube - a tube that is used to drain fluid, or remove air, from the lungs

Patient abuse - an intentional act or failure to act that causes or creates a risk of harm to a patient in a health care facility

Physical abuse - the intentional use of physical force against an individual that leads to illness, pain, injury, functional impairment, distress, and/or death

Verbal/emotional abuse - verbal and/or nonverbal behaviors that inflict anguish, mental pain, fear, or distress on an individual

Scapegoating - the act of assigning responsibility to an individual for wrong doing, who is not necessary responsible for said wrong doing, so the individual assumes fault and any related suffering

Psychological abuse - a type of coercive or threatening behavior that establishes a power differential between two or more individuals

Sexual abuse - any forced or unwanted sexual interaction with an individual

Sexual harassment - any act characterized by unwelcomed and/or inappropriate sexual remarks/behavior

Financial exploitation/abuse - the illegal, unauthorized, or improper use of an individual's money, benefits, belongings, property, and/or assets

Health care financial fraud - any unethical action, involving finances/money, towards an individual receiving health care by a health care professional

Confinement - any action that restrains of confines an individual for reasons unrelated to health care

Neglect - a failure to meet an individual's basic needs

Self-neglect - a failure to meet one's one basic needs

Elder abandonment - the act of intentionally deserting an older adult that is dependent on others for care and/or incapable of self-care

Older adult - an individual 65 years or older

Dementia - a cluster of symptoms centered around an inability to remember, think clearly, and/or make decisions

Suicidal ideation - thoughts of suicide and/or thoughts of planning suicide

Suicide - a death caused by self-directed injurious behavior with any intent to die as a result of the behavior

Suicide attempt - a non-fatal self-directed and potentially injurious behavior with any intent to die as a result of the behavior

Patient autonomy - a patient's right to make decisions regarding his or her own personal health care, without the direct influence of a health care professional

Section 2 Personal Reflection Question

How can health care professionals apply the above recommendations to patient care?

Section 3: COVID-19 Prevention

In the current health care climate, health care professionals should consider COVID-19 when working to prevent medical errors. With that in mind, this section of the course will review the CDC's Interim Infection Prevention and Control Recommendations, as well as the requirements outlined in the Occupational Safety and Health Administration's (OSHA's) COVID-19-related Occupational Safety and Health Standards (note: Occupational Safety and Health Administration [OSHA] may refer to the regulatory agency of the United States Department of Labor responsible for ensuring safe and healthful working conditions for workers by setting and enforcing standards and by

providing training, outreach, education, and assistance). The information found within this section of the course was derived from materials provided by the CDC and OSHA unless, otherwise, specified (CDC, 2022; Occupational Safety and Health Administration [OSHA], 2021).

The CDC's Interim Infection Prevention and Control Recommendations

- Interim Infection Prevention and Control Recommendations should be part of routine health care delivery to all patients.
- Health care organizations should develop internal policies and procedures to ensure the Interim Infection Prevention and Control Recommendations are appropriately applied in their facility.
- Health care organizations should provide education to health care professionals, patients, and visitors about the importance of performing hand hygiene immediately before and after any contact with their facemask or cloth mask.
- Health care organizations should arrange seating in waiting rooms to allow patients to sit at least six feet apart.
- Health care organizations should explore options, in consultation with facility engineers, to improve indoor air quality in all shared spaces.
- Health care organizations should optimize the use of engineering controls (e.g., physical barriers; dedicated pathways) to reduce or eliminate exposures by shielding health care professionals and other patients from infected individuals.
- Health care organizations should optimize air-handling systems.
- Health care organizations should develop a process for notifying the health department about suspected or confirmed cases of COVID-19, and should establish a plan, in consultation with local public health authorities, for how exposures in a health care facility will be investigated and managed and how contact tracing will be performed (note: the term contact tracing may refer to the process of identifying individuals who may have come into contact with an infected individual and subsequent collection of further information about contacts).
- Health care organizations should develop plans for staffing shortages.

- Airborne Infection Isolation Rooms (AIIRs) should be used, when applicable.
- Health care professionals should wear a facemask, also referred to as a surgical mask or a procedure mask, at all times while they are in their health care facility of employment, including in break rooms or other spaces where they might encounter co-workers.
- Health care professionals should note the following: the potential for exposure to the COVID-19 virus is not limited to direct patient care interactions; transmission can occur through unprotected exposures to asymptomatic or pre-symptomatic co-workers in break rooms or co-workers or visitors in other common areas.
- Health care professionals should note the following: facemasks are preferred over cloth face masks for health care professionals as facemasks offer both source control and protection for the wearer against exposure to splashes and sprays of infectious material from others (note: the term source control may refer to the use of well-fitting masks or facemasks to cover a person's mouth and nose to prevent spread of respiratory secretions when talking, sneezing, or coughing).
- Health care professionals should note the following: cloth masks are not considered to be PPE and should not be worn for the care of patients with suspected or confirmed COVID-19 or other situations where the use of a respirator or a facemask is recommended.
- Cloth masks should not be worn instead of a respirator or facemask if more than source control is required.
- To reduce the number of times health care professionals touch their face and put themselves at potential risk for self-contamination, health care professionals should consider continuing to wear the same respirator or facemask throughout their entire work shift, instead of intermittently switching back to their cloth mask.
- Health care professionals should wear eye protection in addition to their facemasks to ensure the eyes, nose, and mouth are protected from exposure to respiratory secretions during patient care encounters, when applicable.
- Health care professionals should ensure that eye protection is compatible with a respirator, when applicable, so there is not interference with proper positioning of the eye protection or with the fit or seal of the respirator.

- Health care professionals should wear an N95 or equivalent or higher-level respirator, instead of a facemask, for aerosol generating procedures and/or surgical procedures that might pose higher risk for transmission if the patient has COVID-19 (note: a N95 respirator may refer to a particulate-filtering, face piece respirator that filters at least 95% of airborne particles; a N95 respirator should fit firmly against the face in a manner that does not leave any open gaps between the skin and the N95 respirator seal).
- Health care professionals should perform a user seal check when utilizing a respirator (note: a user seal check may refer to a procedure conducted by the respirator wearer to determine if the respirator is being properly worn).
- Health care professionals should note the following: during a positive pressure user seal check, the respirator user should exhale gently while blocking the paths for air to exit the facepiece; a successful check is when the facepiece is slightly pressurized before increased pressure causes outward leakage.
- Health care professionals should note the following: during a negative pressure user seal check, the respirator user inhales sharply while blocking the paths for air to enter the facepiece; a successful check is when the facepiece collapses slightly under the negative pressure that is created with this procedure.
- Health care professionals should note the following: not every respirator can be checked using both positive and negative pressure; health care professionals should refer to the manufacturer's instructions for conducting user seal checks on any specific respirator.
- Health care professionals who enter the room of a patient with suspected or confirmed COVID-19 should adhere to Standard Precautions and use a NIOSH-approved N95 or equivalent or higher-level respirator (or facemask if a respirator is not available), gown, gloves, and eye protection, when applicable.
- Health care professionals should perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE, including gloves (note: hand hygiene after removing PPE is particularly important to remove any pathogens that might have been transferred to bare hands during the removal process).

- Health care professionals should remove their respirator or facemask, perform hand hygiene, and put on their cloth mask when leaving the health care facility at the end of their shift, when applicable.
- Health care professionals should use dedicated medical equipment when caring for patients with suspected or confirmed COVID-19.
- All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and facility policies.
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly.
- Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label) are appropriate for the COVID-19 virus in health care settings, including those patient-care areas in which aerosol generating procedures are performed.
- Management of laundry, food service utensils, and medical waste should also be performed in accordance with routine procedures.
- Health care professionals working in areas with minimal to no community transmission should continue to adhere to Standard Precautions and Transmission-Based Precautions based on anticipated exposures and suspected or confirmed diagnoses (note: Standard Precautions and Transmission-Based Precautions may include the use of eye protection, an N95 or equivalent or higher-level respirator, as well as other PPE).
- Empiric use of Transmission-Based Precautions (quarantine) is recommended for patients who have had close contact with someone with SARS-CoV-2 infection if they are not up to date with all recommended COVID-19 vaccine doses.
- A test-based strategy and (if available) consultation with infectious disease experts is now recommended for determining the duration of Transmission-Based Precautions for patients with SARS-CoV-2 infection who are moderately to severely immunocompromised.

- Health care professionals should advise patients to put on their own mask before entering the health care facility.
- Health care professionals should instruct patients to call ahead of their arrival to a health care facility if they are experiencing COVID-19 symptoms.
- Health care professionals should reschedule patients' appointments, when applicable, if a patient reports that he or she is experiencing COVID-19 symptoms.
- Screen and triage everyone entering a health care facility for signs and symptoms of COVID-19 (note: the signs/symptoms of COVID-19 may include: fever, chills, cough, shortness of breath, aches and pain, fatigue, headaches, nasal congestion, runny nose, sore throat, nausea, vomiting, and diarrhea).
- Health care professionals should take steps to ensure that everyone adheres to source control measures and hand hygiene practices while in a health care facility (e.g., post signs at the entrance and in strategic places).
- If a patient does not have a face covering, they should be offered a facemask or mask (note: patients may remove their mask when in their rooms but should put it back on when around others [e.g., when visitors enter their room or leaving their room]).
- Health care professionals should note the following: facemasks and cloth masks should not be placed on young children under age two, anyone who has trouble breathing, or anyone who is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- Provide supplies for respiratory hygiene and cough etiquette, including alcohol-based hand sanitizer, tissues, and no-touch receptacles for disposal, at health care facility entrances, waiting rooms, and patient check-ins (note: patients should be encouraged to use such supplies).
- Limit and monitor points of entry to the health care facility.
- Establish a process to ensure that everyone (e.g., patients, health care professionals, and visitors) entering a health care facility is assessed for COVID-19 signs/symptoms (note: fever can be either a measured temperature ≥ 100.0°F or a subjective fever [e.g., patient reported fever]; individuals might not notice symptoms of a fever at the lower temperature threshold that is used for those

entering a health care facility; individuals should be encouraged to actively take their temperature at home or have their temperature taken upon arrival).

- Properly manage anyone with suspected or confirmed COVID-19 virus infection or who has had contact with someone with suspected or confirmed COVID-19 virus infection.
- Health care professionals suspected of COVID-19 virus infection should be excluded from work and should notify occupational health services to arrange for further evaluation.
- Health care professionals with COVID-19 should be excluded from work.
- Patients should be isolated in an examination room with the door closed, when applicable.
- If an examination room is not immediately available, COVID-19 patients should not wait among other patients seeking care.
- Patients should be separated by six or more feet.
- Allow patients to wait in a personal vehicle or outside the health care facility where they can be contacted by mobile phone when it is their turn to be evaluated, when applicable.
- Screening for fever and symptoms of COVID-19 should be incorporated into the daily assessments of all admitted patients.
- All patient fevers and symptoms consistent with COVID-19 among admitted patients should be properly managed and evaluated (e.g., place any patient with unexplained fever or symptoms of COVID-19 on appropriate Transmission-Based Precautions and evaluate).
- Targeted COVID-19 testing of patients without signs or symptoms of COVID-19 should be considered (note: testing results might inform decisions about rescheduling elective procedures or about the need for additional Transmission-Based Precautions when caring for a patient; limitations of using such testing include obtaining negative results in patients during the COVID-19 incubation period who later become infectious).
- Limit visitors to the facility to only those individuals essential to the patient's physical or emotional well-being and care (e.g., partner; parent).

- Visitors who are not able to wear a cloth mask or facemask should be encouraged to use alternatives to on-site visits with patients (e.g., telephone or internet communication), especially if the patient being visited is at increased risk for severe illness from COVID-19.
- Encourage use of alternative mechanisms for patient and visitor interactions such as video-call applications on cell phones or tablets.
- If visitation to patients with COVID-19 occurs, visits should be scheduled and controlled.
- Visitors should be instructed to only visit the intended patient's room; visitors should not go to other locations in the health care facility.
- Health care professionals should provide instruction to visitors, before they enter patients' rooms, on the following areas of note: hand hygiene, limiting surfaces touched, and use of PPE according to current health care facility policy.
- Finally, telehealth services should be applied, when applicable, to help prevent the transmission of the COVID-19 virus. Specific information regarding telehealth may be found below.
    - Telehealth may refer to the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health, and health administration.
    - A range of technologies may be used to support the delivery of telehealth including the following: text messaging, smartphone apps for mobile phones, websites and computers, standard and wireless telephones, live and asynchronous video, virtual reality, and/or artificial intelligence (AI).
    - The different categories or types of telehealth include the following: live video, store-and-forward, remote patient monitoring, and mobile health.
    - **Live video** - live video, in the context of telehealth services, may refer to a live stream, two-way interaction between a patient and a health care professional(s) where both parties are communicating from different locations. Health care professionals should note that live video telehealth services, typically, occur in real time (note: the term real time may refer to

the actual time during which a meeting, interaction, process, or event occurs; live).

- **Store-and-forward** - store-and-forward may refer to a type of telehealth which involves the transmission of recorded health information (e.g., an x-ray or prerecorded video) through electronic communication systems to a health care professional who evaluates the information and provides a health care-related service to a patient(s). Health care professionals should note that store-and-forward telehealth services do not, typically, occur in real time.

- **Remote patient monitoring** - remote patient monitoring may refer to the use of telehealth-related technologies to collect individuals' health care-related data in one location and electronically transmit it to health care professionals in a different location for assessment and recommendations.

- **Mobile health** - mobile health may refer to the use of mobile communication devices (e.g., smart phones and tablets) to support health care, public health, and education. Health care professionals should note that mobile health applications can help individuals manage chronic conditions, track sleep patterns or fitness, schedule health care appointments, and/or send public health alerts via text message.

- The potential benefits of telehealth include the following: telehealth has the potential to reach more individuals compared to traditional in-person programs; patient convenience; telehealth services may be used to help prevent patient exposure to infectious diseases; timely access to locally unavailable health care services; increased communication; telehealth services can allow for real-time interactions between patients and health care professionals; telehealth services can allow for the transmission of recorded health information (e.g., an x-ray or prerecorded video); telehealth services can allow for remote patient monitoring; telehealth services can allow access to mobile health; patient prescriptions may be ordered via telehealth technologies; potential reductions in health care costs; improved patient outcomes; and improved patient satisfaction.

OSHA's COVID-19-Related Occupational Safety and Health Standards

- OSHA's COVID-19-related Occupational Safety and Health Standards indicate that the term aerosol-generating procedure refers to a medical procedure that generates aerosols that can be infectious and are of respirable size.
- OSHA's COVID-19-related Occupational Safety and Health Standards indicate that the term airborne infection isolation room (AIIR) refers to a dedicated negative pressure patient-care room, with special air handling capability, which is used to isolate persons with a suspected or confirmed airborne-transmissible infectious disease (e.g., a booth, tent, or other enclosure designed to operate under negative pressure).
- OSHA's COVID-19-related Occupational Safety and Health Standards indicate that the term close contact refers to being within six feet of any other person for a cumulative total of 15 minutes or more over a 24-hour period during that person's potential period of transmission (note: the potential COVID-19 transmission period runs from two days before an individual feels sick [or, for asymptomatic individuals, two days prior to test specimen collection] until the time an individual is isolated).
- OSHA's COVID-19-related Occupational Safety and Health Standards indicate that the term direct patient care refers to hands-on, face-to-face contact with patients for the purpose of diagnosis, treatment, and monitoring.
- OSHA's COVID-19-related Occupational Safety and Health Standards indicate that the term fully vaccinated means two weeks or more following the final dose of a COVID-19 vaccine.
- The employer must develop and implement a COVID-19 plan for each workplace. If the employer has multiple workplaces that are substantially similar, its COVID-19 plan may be developed by workplace type rather than by individual workplace so long as all required site specific information is included in the plan.
- If the employer has more than 10 employees, a COVID-19 plan must be written.
- The employer must designate one or more workplace COVID-19 safety coordinators to implement and monitor the COVID-19 plan. The COVID-19 safety coordinator(s) must be knowledgeable in infection control principles and practices as they apply to the workplace and employee job operations. The

identity of the safety coordinator(s) must be documented in any written COVID-19 plan. The safety coordinator(s) must have the authority to ensure compliance with all aspects of the COVID-19 plan.

- The employer must conduct a workplace-specific hazard assessment to identify potential workplace hazards related to COVID-19.
- The employer must seek the input and involvement of non-managerial employees and their representatives, if any, in the hazard assessment and the development and implementation of the COVID-19 plan.
- The employer must monitor each workplace to ensure the ongoing effectiveness of the COVID-19 plan and update it as needed.
- The COVID-19 plan must address the hazards identified by an assessment, and include policies and procedures to minimize the risk of transmission of COVID-19 for each employee.
- When employees of different employers share the same physical location, each employer must effectively communicate its COVID-19 plan to all other employers, coordinate to ensure that each of its employees is protected, and adjust its COVID-19 plan to address any particular COVID-19 hazards presented by the other employees (note: the aforementioned requirement does not apply to delivery people, messengers, and other employees who only enter a workplace briefly to drop off or pick up items).
- Employers should limit and monitor points of entry to the setting.
- Employers should screen and triage all clients, patients, residents, delivery people, and other visitors and other non-employees entering the setting.
- Employers must develop and implement policies and procedures to adhere to Standard and Transmission-Based Precautions in accordance with the CDC's ''Guidelines for Isolation Precautions.''
- Employers must provide, and ensure that employees wear facemasks.
- The employer must ensure a facemask is worn by each employee over the nose and mouth when indoors and when occupying a vehicle with other people for work purposes; the employer must provide a sufficient number of facemasks to each employee and must ensure that each employee changes them at least once

per day, whenever they are soiled or damaged, and more frequently as necessary (e.g., patient care reasons) (note: facemask exceptions include: when an employee is alone in a room; while an employee is eating and drinking at the workplace, provided each employee is at least six feet away from any other person, or separated from other people by a physical barrier.)

- When it is important to see a person's mouth (e.g., communicating with an individual who is deaf or hard of hearing) and the conditions do not permit a facemask that is constructed of clear plastic (or includes a clear plastic window), the employer must ensure that each employee wears an alternative to protect the employee, such as a face shield, if the conditions permit it.
- When employees cannot wear facemasks due to a medical necessity, medical condition, or disability as defined in the Americans with Disabilities Act, or due to a religious belief; exceptions must be provided for a narrow subset of persons with a disability who cannot wear a facemask or cannot safely wear a facemask, because of the disability, as defined in the Americans with Disabilities Act, including a person who cannot independently remove the facemask.
- When employees have exposure to a person with suspected or confirmed COVID-19, the employer must provide: a respirator to each employee and ensure that it is provided and used; gloves; an isolation gown or protective clothing; and eye protection to each employee; and ensure that the PPE is used.
- For aerosol-generating procedures performed on an individual with suspected or confirmed COVID-19, the employer must provide: a respirator to each employee and ensure that it is provided and used; gloves; an isolation gown or protective clothing; and eye protection to each employee and ensure that the PPE is used.
- When an aerosol-generating procedure is performed on a person with suspected or confirmed COVID-19, the employer must limit the number of employees present during the procedure to only those essential for patient care and procedure support; the employer must ensure that the procedure is performed in an existing AIIR, if available; after the procedure is completed, the employer must clean and disinfect the surfaces and equipment in the room or area where the procedure was performed.
- The employer must ensure that each employee is separated from all other people by at least six feet when indoors unless the employer can demonstrate that such physical distancing is not feasible for a specific activity (e.g., hands-on medical

care) (note: the aforementioned provision does not apply to momentary exposure while people are in movement [e.g., passing in hallways or aisles]).

- In patient care areas, resident rooms, and for medical devices and equipment, the employer must follow standard practices for cleaning and disinfection of surfaces and equipment in accordance with the CDC's "COVID-19 Infection Prevention and Control Recommendations" and the CDC's "Guidelines for Environmental Infection Control."

- The employer must provide alcohol-based hand rub that is at least 60% alcohol or provide readily accessible hand washing facilities.

- The employer must screen each employee before each work day and each shift. Screening may be conducted by asking employees to self-monitor before reporting to work or may be conducted in-person by the employer (note: if a COVID-19 test is required by the employer for screening purposes, the employer must provide the test to each employee at no cost to the employee).

- The employer must require each employee to promptly notify the employer when the employee: is COVID-19 positive (i.e., confirmed positive test for, or was diagnosed by a licensed health care professional with, COVID-19); or was told by a licensed health care professional that he or she is suspected to have COVID-19; or is experiencing recent loss of taste and/or smell with no other explanation; or is experiencing both fever (≥100.4 °F) and new unexplained cough associated with shortness of breath.

- When an employer is notified that a person who was in the workplace(s) is COVID-19 positive, the employer must, within 24 hours: notify each employee who was not wearing a respirator and any other required PPE and has been in close contact with that person in the workplace (note: the notification must state the fact that the employee was in close contact with someone with COVID-19 along with the date(s) that contact occurred); notify all other employees who were not wearing a respirator and any other required PPE and worked in a well-defined portion of a workplace (e.g., a particular floor) in which that person was present during the potential transmission period; notify other employers whose employees were not wearing respirators and any other required PPE and have been in close contact with that person, or worked in a well-defined portion of a workplace (e.g., a particular floor) in which that person was present, during the potential transmission period.

- If an employer knows an employee is COVID-19 positive or meets other related criteria, the employer must immediately remove that employee and keep the employee removed until he or she meets related return to work criteria.
- The employer must make decisions regarding an employee's return to work after a COVID-19-related workplace removal.
- The employer must support COVID-19 vaccination for each employee by providing reasonable time and paid leave (e.g., paid sick leave) to each employee for vaccination and any side effects experienced following vaccination.
- The employer must ensure that each employee receives training, in a language and at a literacy level the employee understands, and so that the employee comprehends at least the following: COVID-19, including how the disease is transmitted, the importance of hand hygiene to reduce the risk of spreading COVID-19 infections, ways to reduce the risk of spreading COVID-19 through the proper covering of the nose and mouth, the signs and symptoms of the disease, risk factors for severe illness, and when to seek medical attention; employer-specific policies and procedures on patient screening and management; tasks and situations in the workplace that could result in COVID-19 infection; workplace-specific policies and procedures to prevent the spread of COVID-19 that are applicable to the employee's duties (e.g., policies on Standard and Transmission-Based Precautions, physical distancing, physical barriers, ventilation, aerosol generating procedures); employer-specific multi-employer workplace agreements related to infection control policies and procedures, the use of common areas, and the use of shared equipment that affect employees at the workplace; employer-specific policies and procedures for PPE, including: when PPE is required for protection against COVID-19; limitations of PPE for protection against COVID-19; how to properly put on, wear, and take off PPE; how to properly care for, store, clean, maintain, and dispose of PPE; and any modifications to donning, doffing, cleaning, storage, maintenance, and disposal procedures needed to address COVID-19 when PPE is worn to address workplace hazards other than COVID-19; workplace-specific policies and procedures for cleaning and disinfection; employer-specific policies and procedures on health screening and medical management; available sick leave policies, any COVID-19-related benefits to which the employee may be entitled under applicable federal, state, or local laws, and other supportive policies and practices (e.g., telework, flexible hours); the identity of the safety coordinator(s) specified in the COVID-19 plan; and how

the employee can obtain copies of employer specific policies and procedures, including the employer's written COVID-19 plan, if required.

- The employer must ensure that each employee receives additional training whenever: changes occur that affect the employee's risk of contracting COVID-19 at work (e.g., new job tasks); policies or procedures are changed; or there is an indication that the employee has not retained the necessary understanding or skill.
- The employer must ensure that COVID-19 training is overseen or conducted by a person knowledgeable in the covered subject matter as it relates to the employee's job duties.
- The employer must ensure that COVID-19 training provides an opportunity for interactive questions and answers with a person knowledgeable in the covered subject matter as it relates to the employee's job duties.
- The employer must inform each employee that: employees have a right to required protections; and employers are prohibited from discharging or in any manner discriminating against any employee for exercising his or her right to required protections, or for engaging in actions that are required.
- Employers with more than 10 employees must retain all versions of the implemented COVID-19 plan.
- Employers should establish and maintain a COVID-19 log to record each instance identified by the employer in which an employee is COVID-19 positive, regardless of whether the instance is connected to exposure to COVID-19 at work.
- The COVID-19 log must contain, for each instance, the employee's name, one form of contact information, occupation, location where the employee worked, the date of the employee's last day at the workplace, the date of the positive test for, or diagnosis of, COVID-19, and the date the employee first had one or more COVID-19 symptoms, if any were experienced.
- The information in the COVID-19 log must be recorded within 24 hours of the employer learning that the employee is COVID-19 positive and must be maintained as though it is a confidential medical record and must not be disclosed except as required by federal law.

Section 3 Summary

Health care professionals should be familiar with the CDC's Interim Infection Prevention and Control Recommendations, as well as OSHA's COVID-19-related Occupational Safety and Health Standards. Health care professionals should ensure that the requirements outlined by the CDC's Interim Infection Prevention and Control Recommendations and OSHA's COVID-19-related Occupational Safety and Health Standards are met and followed within their health care facility. Finally, health care professionals should regularly review internal policies and procedures to ensure they meet the recommendations, requirements, and regulations provided by the CDC, and included in OSHA's COVID-19-related Occupational Safety and Health Standards.

Section 3 Key Concepts

- Health care professionals should be familiar with the CDC's Interim Infection Prevention and Control Recommendations, and OSHA's COVID-19-related Occupational Safety and Health Standards.

Section 3 Key Terms

Occupational Safety and Health Administration (OSHA) - the regulatory agency of the United States Department of Labor responsible for ensuring safe and healthful working conditions for workers by setting and enforcing standards and by providing training, outreach, education, and assistance

Contact tracing - the process of identifying individuals who may have come into contact with an infected individual and subsequent collection of further information about contacts

Source control - the use of well-fitting masks or facemasks to cover a person's mouth and nose to prevent spread of respiratory secretions when talking, sneezing, or coughing

N95 respirator - a particulate-filtering, face piece respirator that filters at least 95% of airborne particles

User seal check - a procedure conducted by the respirator wearer to determine if the respirator is being properly worn

Live video (within the context of telehealth services) - a live stream, two-way interaction between a patient and a health care professional(s) where both parties are communicating from different locations

Real time (within the context of telehealth services) - the actual time during which a meeting, interaction, process, or event occurs; live

Store-and-forward - a type of telehealth which involves the transmission of recorded health information (e.g., an x-ray or prerecorded video) through electronic communication systems to a health care professional who evaluates the information and provides a health care-related service to a patient(s)

Remote patient monitoring - the use of telehealth-related technologies to collect individuals' health care-related data in one location and electronically transmit it to health care professionals in a different location for assessment and recommendations

Mobile health - the use of mobile communication devices (e.g., smart phones and tablets) to support health care, public health, and education

Aerosol-generating procedure - a medical procedure that generates aerosols that can be infectious and are of respirable size

Airborne infection isolation room (AIIR) - a dedicated negative pressure patient-care room, with special air handling capability, which is used to isolate persons with a suspected or confirmed airborne-transmissible infectious disease

Close contact - being within six feet of any other person for a cumulative total of 15 minutes or more over a 24-hour period during that person's potential period of COVID-19 transmission

Direct patient care - hands-on, face-to-face contact with patients for the purpose of diagnosis, treatment, and monitoring

Fully vaccinated - two weeks or more following the final dose of a COVID-19 vaccine

Section 3 Personal Reflection Question

Why is it important for health care professionals to consider the CDC's Interim Infection Prevention and Control Recommendations, and OSHA's COVID-19-related Occupational Safety and Health Standards while working to prevent medical errors?

Case Study: Medical Errors

A medical error-related case study is presented below to review the concepts found in this course. A case study review will follow the case study. The case study review includes the types of questions health care professionals should ask themselves when attempting to prevent medical errors from occurring. Additionally, reflection questions will be posed to encourage further internal debate and consideration regarding the presented case study and medical errors.

Case Study

A 72-year-old, lucid female patient, with no known drug allergies, enters a health care facility. Upon admission, the patient is brought to her room. The patient is helped into bed and a health care professional answers a few of the patient's questions. However, the health care professional does not take the time to orient the patient to her room or make sure the patient understands how to use the call light. Additionally, the patient's personal effects are kept out of the reach of the patient. Furthermore, no efforts are made to ensure the patient's comfort.

48 hours after the patient is admitted into the health care facility, the patient is initiated on Coumadin therapy. A baseline INR is taken, however subsequent INR levels are not ordered for the patient. Also, a medication reconciliation is never completed to determine what medications the patient was on prior to admission.

72 hours after the initiation of Coumadin therapy, the patient attempts to get out of bed. The patient is able to make it out of bed - however, after taking a few steps forward towards her personal effects, the patient falls. Eventually, health care professionals enter the patient's room and help her up. Unfortunately, the patient sustains several physical injuries as well as uncontrolled bleeding and subsequent bruising as a result of her fall.

A few days pass and attempts are made to help the patient physically recover from her fall. As the patient recovers, health care professionals observe that her overall demeanor has changed. Essentially, the patient has become more anxious and agitated since her fall. Additionally, the patient begins to voice her discontent for the health care facility and the health care professionals taking care of her. As time passes, the patient's discontent grows and the patient begins to refuse therapy. Attempts are made to encourage the patient to engage in therapy, but the patient refuses to adhere to the advice and recommendations of the health care professionals around her.

In time, the patient begins to take some of her medications, but continues to refuse much of her therapy. Also, the patient begins to eat less and less and appears to be having trouble sleeping. Ultimately, the patient's health begins to deteriorate and she starts making comments such as the following: "I want to go to sleep and never wake up," "I wish this was my last day," "I want to end it all." Health care professionals note the patient's aforementioned comments. However, a risk assessment is not conducted to determine the patient's state.

Over the next few days, the patient remains stable. However, due to the patient's overall declining health, health care professionals begin to consider how long the patient's stable condition may last.

Case Study Review

What potential medical errors may be present in the above case study?

Several medical errors may be present in the above case study, including the ones found below:

Infection prevention recommendations were not followed - it appears that COVID-19-related prevention recommendations/methods were not applied to the patient in the above case study.

Fall precautions were not applied to the patient - fall precautions should be applied to all patients. However, it does not appear fall precautions were applied to the patient in the above case study (e.g., the patient was not oriented to her room, the patient was not shown how to use the call light, and the patient's personal effects were kept out of the reach of the patient).

Anticoagulation therapy recommendations were not followed - the patient was initiated on Coumadin therapy. However, it appears Coumadin-related recommendations were not followed, e.g., after the baseline INR was obtained no subsequent INR levels were ordered for the patient. In other words, it appears the patient's Coumadin therapy was not effectively monitored.

A medication reconciliation was not completed - a medication reconciliation was never completed to determine if the patient was on any specific medications prior to admission, which may mean if the patient was on any specific medications prior to admission, she was not receiving them during her stay in the health care facility.

The patient was never formally identified as an individual at risk for suicide - the patient began to show signs of depression such as changes in eating patterns and difficulties sleeping. The patient also made the following comments which may be an indication of suicidal thoughts: "I want to go to sleep and never wake up," "I wish this was my last day," "I want to end it all."

Are there any other potential medical errors present in the above case study; if so what are they?

How may have the potential medical errors impacted the patient in the above case study?

It does appear the potential medical errors impacted the patient in the above case study. Examples of how each potential medical error may have impacted the patient can be found below:

Infection prevention recommendations were not followed - it appears that COVID-19-related prevention recommendations/methods were not applied to the patient in the above case study, which potentially puts the patient at risk for COVID-19 exposure/ infection.

Fall precautions were not applied to the patient - it appears fall precautions were not applied to the patient. Potentially as a result of the lack of fall precautions, the patient experienced a fall, which lead to physical injuries. Additionally, after the patient's fall the patient's overall demeanor seemed to change, e.g., the patient became increasingly anxious and agitated, which may indicate the fall led to some psychological effects, in addition to the physical injuries sustained by the patient. Furthermore, after the fall, and potentially because of the fall, it appears the patient began to lose confidence in the health care facility she was in and the health care professionals responsible for her care, evident by her obvious discontent for her surroundings and those health care professionals in her surroundings as well as her refusal of therapy and care. Moreover, the patient's overall health began to deteriorate shortly after the fall and she began making comments indicating possible suicidal thoughts, both of which may be traced back to the fall. Essentially, it appears the patient's fall may have dramatically impacted her health, overall well-being, quality of life, and may, ultimately, lead to further complications, which may cause increased morbidly and mortality potential for the patient.

Anticoagulation therapy recommendations were not followed - as previously alluded to, Coumadin therapy requires consistent INR monitoring, especially when therapy is

initiated. A baseline INR, as well as subsequent INRs, are required to determine if the patient's INR levels are within a therapeutic range. The typical INR therapeutic range for Coumadin therapy in between 2 - 3. When INR levels are below the 2 - 3 range, it often means the therapy is sub-therapeutic. When INR levels are above the 2 - 3 range, it may mean the patient is at risk for Coumadin associated adverse events such as uncontrolled bleeding and bruising.

When the patient fell she experienced uncontrolled bleeding and subsequent bruising, both of which may have, at least in part, resulted from Coumadin-related INR levels above the 2 - 3 range. In other words, some of the complications the patient experienced after her fall may been caused by her Coumadin therapy and, more specifically, a lack of effective Coumadin therapy monitoring.

A medication reconciliation was not completed - the impact of a lack of medication reconciliation for the patient may not be overtly obvious in the case study. However, the omission of a medication reconciliation could have played a role in the patient's declining health. When patients are admitted into a health care facility, medication reconciliations can be used to determine essential patient medications, i.e., medications that need to be continued while the patient is in a health care facility. Without medication reconciliations, medication discrepancies may occur and essential patient medications might be missed/discontinued, ultimately leading to health care-related complications for patients. When the patient from the case study was admitted into the health care facility, a medication reconciliation was not conducted. Therefore, there is potential that medication discrepancies may have occurred and essential medications were not continued - possibly contributing, at least in part, to the patients declining health.

The patient was never formally identified as an individual at risk for suicide - as the patient's health declined in the case study, she began to show signs of depression and make comments which potentially indicated the presence of suicidal thoughts - however, the patient was never formally identified as an individual at risk for suicide. Similar to the omission of medication reconciliation for the patient, the impact of the lack of suicide risk identification for the patient may not be immediately evident. With that said, the lack of suicide risk identification could lead to several negative health-related outcomes for the patient. An example of a possible outcome that may occur because the patient was not identified as a suicide risk is as follows: the patient was not identified as a suicide risk; the patient began to self-harm; consequently the patient was put in restraints; wounds developed as a result of the restraints; due to the patient's

weakened state and declining health, the wounds became worse and eventually infected; the patient's infection intensifies; the patient's health continues to decline.

In addition to the possible outcome highlighted above, the lack of suicide risk identification could lead to a sentinel event. A sentinel event may refer to an unanticipated event in a health care setting that results in death or serious physical or psychological injury to a patient(s), not related to the natural course of the patient's illness. Health care professionals should work to prevent sentinel events whenever possible.

Are there any other ways the potential medical errors impacted the patient in the above case study; if so what are they?

Is it possible that the potential medical errors found in the case study above could have been prevented or avoided; if so how?

It does appear the potential medical errors could have been prevented/avoided. Examples of how each potential medical error may have been prevented/avoided can be found below.

Infection prevention recommendations were not followed - the CDC's Interim Infection Prevention and Control Recommendations could have lowered the risk for potential COVID-19 exposure/transmission. Health care professionals should apply the CDC's Interim Infection Prevention and Control Recommendations, as well as internal health care organizational COVID-19 prevention policies and procedures to all patients.

Fall precautions were not applied to the patient - the patient's fall may have been prevented if fall precautions where applied to the patient.

Anticoagulation therapy recommendations were not followed - the potential complications of the patient's Coumadin therapy may have been avoided if the following Coumadin monitoring recommendation was effectively carried out: obtain daily INR determinations upon Coumadin initiation until stable in the therapeutic range; obtain subsequent INR determinations every 1 to 4 weeks.

A medication reconciliation was not completed - any potential complications that may have resulted from a lack of medication reconciliation could have been avoided if a medication reconciliation was carried out upon patient admission.

The patient was never formally identified as an individual at risk for suicide - any potential complications that may result from a lack of suicide risk identification may be avoided if the following Joint Commission recommendations are effectively carried out:

- Identify patients at risk for suicide.
- Conduct a risk assessment that identifies specific patient characteristics and environmental features that may increase or decrease the risk for suicide.
- Address the patient's immediate safety needs and most appropriate setting for treatment.
- When a patient at risk for suicide leaves the care of the hospital, provide suicide prevention information (such as a crisis hotline) to the patient and his or her family.

Are there any other ways the potential medical errors found in the case study above could have been prevented or avoided?

Conclusion

Medical errors are one of the leading causes of death in the United States. Thus, health care professionals should understand how to prevent medical errors from occurring. To help prevent medical errors from occurring, health care professionals should follow recommendations developed by organizations, such as the Joint Commission and the CDC.

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