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Informed Consent

According to the American Medical Association, informed consent is the process of communication between a patient and physician that results in the patient's authorization or agreement to undergo a specific medical intervention. Physicians have an ethical and legal duty to provide patients the information necessary to be fully informed before deciding to undergo major treatment and this informed consent must be documented in writing.

Laws and rules pertaining to informed consent vary by each U.S. state. However, all 50 states have enacted legislation requiring some level of informed consent. Failure to obtain informed consent renders any U.S. physician liable for negligence or battery and constitutes medical malpractice. Exceptions exist for medical emergencies or when mental incompetency or physical incapacity has been legally determined.
Common elements required for full disclosure by the physician (NOT a delegated representative) as summarized by the American Medical Association include:

- The diagnosis, if known
- The nature and purpose of a proposed treatment procedure
- The risks and benefits of proposed treatment or procedure
- Alternatives, regardless of cost or extent covered by insurance
- The risks and benefits of alternatives
- The risks and benefits of not receiving treatments or undergoing procedures

A properly executed informed consent, which meets the minimum federal requirements must be in the patient's chart prior to surgery. Information must be given to the patient in a language or means of communication that the patient understands. Institutions that receive federal funding are required to use interpretation and translation services for individuals with limited English proficiency. This applies to any language spoken by 5% or 1,000 of a provider's patients, whichever is less.

- Name and signature of the patient, or if appropriate, legal representation
- Name of the institution
- Name of the procedure
- Name of all practitioners performing the procedure and individual significant tasks if more than one practitioner is involved
- Risks
- Benefits
- Alternative procedures and treatments and their risks
- Date and time consent is obtained

- Statement that the procedure was explained to the patient or guardian
- Signature of the person witnessing the consent
- Name and signature of the person who explained the procedure to the patient or guardian

Specific procedures requiring informed consent vary by U.S. state. In most institutions, they are required for surgery, anesthesia, and other invasive or complex medical or radiologic procedures. Each institution must develop its own list of procedures or situations where full informed consent is needed. These lists are often based on professional and specialty group recommendations.

When determining the extent to which information must be provided to the patient, most U.S. states rely on a standard of what a "reasonable physician" would provide or what a "reasonable patient" would need to make an informed decision. Most laws require the physician to disclose all material or significant risks. Information should be tailored to the individual patient.

Institutional policies may allow or require the use of standardized or generic informed consent forms. However, these must be used in conjunction with significant education and interchange. Physicians should document the details of this interchange in the patient's record.

Best practice recommendations for obtaining informed consent include, but are not limited to, the following:

- Assess for and respect patient preferences related to personal, religious, and other cultural values and beliefs
- Provide patients with information fact sheets that may be taken home for review and discussion with family and caregivers
- In addition to personal interchanges, consider the use of other forms of education including videos, images, animation, computer-based training, etc.
- Use language in person and on printed materials that is simple, clear, and accounts for varying levels of health literacy
- Use the teach-back method for gauging comprehension of information presented to patients by asking them to repeat information in their own words as they understand it
- Use a consistent outline or template when creating Informed Consent forms for different procedures
- Tell the patient it is important for them to understand the procedure, benefits, risks, and alternatives - invite them to ask questions and respond with patience and a spirit of collaboration and respect
- Always make sure patients are made aware of their rights to decline procedures

Required Supplement to Workplace Safety: Bloodborne Pathogens

The requirements of OSHA's Bloodborne Pathogens standard can be found in Title 29 of the Code of Federal Regulations 29 CFR 1910.1030. These standards state what employers must do to protect workers who can reasonably be anticipated to come into contact with blood or other potentially infectious materials as a result of performing their job duties. A copy of the regulatory text of this standard is available through the OSHA website at www.osha.gov, or the following link: https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051

Hepatitis B

Hepatitis B can range in severity from mild illness to chronic disease, leading to cirrhosis of the liver, liver cancer, liver failure, and even death. Acute symptoms may appear anytime between 6 weeks and 6 months after exposure and include: fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, yellowing of the skin and eyes (jaundice), dark urine, and joint pain. About 30% of infected adults never develop these symptoms.

Hepatitis B is transmitted through blood, unprotected sex, use of unsterile needles, and from an infected mother to her newborn through the delivery process. It is not transmitted through food or water, casual contact, or through the air. Healthcare workers who come into contact with blood, blood products, or infectious bodily fluids are at an increased risk for exposure. The Hepatitis B virus can survive outside the body for at least 7 days. All blood spills, including those that have already dried, should be cleaned and disinfected with a mixture of bleach and water, or an appropriate EPA-registered disinfectant according to manufacturer instructions.

Hepatitis B is preventable by vaccine, which includes a series of 3 injections given over a 6-month period. The complete vaccine series is 95% effective in preventing infection and chronic consequences of the disease. Since 1982, more than 100 million people have received the Hepatitis B vaccine in the U.S. with no serious side effects having been reported. The vaccine is offered free of charge to all workers with an occupational exposure. (It is partially stated in Safety Storm 2014 but not "offered free of charge").

Hepatitis C

Like Hepatitis B, Hepatitis C affects the liver and may range in severity from mild to a serious, lifelong illness. Disease transmission and acute symptoms are similar to those of Hepatitis B, however, about 75% of infected people never develop acute symptoms of Hepatitis C. There is no vaccine for Hepatitis C; however, treatment is available for both acute and chronic disease.

HIV/AIDS

HIV is the virus that leads to Acquired Immunodeficiency Syndrome, or AIDS. HIV destroys cells of the immune system, over time, making the body unable to fight off infections and disease. There is currently no vaccine available to prevent HIV.

HIV is transmitted, most commonly, through contact with blood, semen, contaminated needles, and from mothers to newborn infants during delivery and breastfeeding. It is not transmitted by casual contact, drinking fountains, telephones, or toilets. HIV does not survive well outside the body, making the possibility of transmission from environmental surfaces remote. Although transmission of HIV from patients to healthcare workers is rare, the most common routes of transmission have been through:

- needlesticks or skin punctures from sharp items contaminated with blood or other potentially infectious materials, and

- extensive contact, splashing, or generation of droplets of blood or other potentially infectious materials into mucous membranes or broken skin

Most HIV infected persons display no symptom for 10 years or more. Some people report severe flu-like symptoms 2 to 4 weeks after exposure including: fever, fatigue, enlarged lymph nodes, sore throat, muscle and joint paint, headache, and rash. Symptoms of advanced infection include:

- rapid weight loss
- night sweats
- extreme tiredness
- diarrhea
- sores in the mouth, anus, or genitals
- pneumonia
- red, brown, or purplish blotches under the skin or inside the mouth, nose, or eyelids
- memory loss, depression, and other neurologic disorders

OSHA requires employers to provide interactive access to a trainer knowledgeable in preventing exposure to bloodborne pathogens in the workplace. To speak with a representative at your MTF or clinic, contact your Education & Training Department.

Module 1: Personal Workplace Safety

Back Safety

In 2011, back injuries to healthcare workers led to more than 20,000 days of missed work. Of the over four hundred thousand sprains, strains, and tears in 2011, 22% were the result of overexertion in lifting or lowering.

OSHA and the Department of Labor offer a few tips for safe lifting and handling:

- Use a wide, balanced stance with one foot slightly ahead of the other and your feet shoulder-width apart
- Bend your legs, NOT your back, when lifting - let your legs do the work
- Hold the load as close to your body as possible and keep your head and neck in a straight line by tucking in your chin
- Grip the object with the palms of your hands and your fingers
- Return to an erect position as soon as possible
- Use smooth movements and do NOT jerk
- Do NOT twist when turning - pick up your feet and pivot your whole body in the direction of the move
- Keep handholds between your waist and shoulders
- Move down the center of corridors to prevent collisions
- Watch out for door handles and high thresholds which can cause abrupt stops
- When lifting with others, coordinate lifts by counting down and synchronizing the lift

When lifting or transferring patients, remember to NEVER attempt to lift a patient on your own without the help of staff or appropriate equipment. Also:

- ALWAYS face the person
- Move the person towards you, NOT away from you
- Use slides and lateral transfers instead of manual lifting
- Use a smooth, coordinated push-pull motion
- Do NOT reach across the person you are moving
- Use draw sheets or incontinence pads in combination with friction-reducing devices, like slide boards, slippery sheets, plastic bags, or low-friction mattress covers
- Have team members on both sides of the patient. Count down and synchronize the lift
- Lower the person slowly by bending your legs, NOT your back
- When it is medically appropriate, use a mechanical assist device to lift people from the floor

If you have to perform a manual lift:

- Position at least two providers on each side of the person - get additional help for large patients
- Bend your knees, NOT your back - do NOT twist
- Roll the person onto their side without reaching across them
- If using hoists, lower the hoist enough to attach slings without strain
- Count down and synchronize the lift; perform a smooth lift with your legs as you stand up and do NOT bend your back

Slips, Trips & Falls

Slips, trips, and falls cause 15% of all accidental deaths nationwide, second only to motor vehicle-related fatalities. They are among the most frequent type of reported injuries and average about 25% of reported claims.

- The cause is often a brief moment of inattention
- To help avoid slip, trip, and fall injuries, perform mental exercises
- Concentrate on ways to do your job better, more safely, or more efficiently
- Take micro-breaks by standing, flexing, or stretching
- Focus on your hands and feet; check your balance and surroundings

Pay attention to common slip, trip and fall hazards such as those cited by the National Safety Council:

- Hidden steps
- Loose, irregular floors
- Smooth surfaces
- Wet spots
- Oil and grease
- Open drawers
- Damaged ladders
- Slips often occur when moving from one surface to another, for example carpet to vinyl

The shoes we wear play a big part in causing and preventing falls. Evaluate the slickness of the soles and the type of heels on your shoes. Nonskid soles and low heels are best.

OSHA offers a few guidelines for avoiding fall-related injuries.

- Keep floors clean and dry
- Provide warning signs for wet floor areas
- Coil up extension cords, lines, and hoses when NOT in use

- Keep electrical and other wires out of the way - if cords must be placed in walkways, tape them down or use a cord cover to minimize the trip hazard
- Keep aisles and passageways clear and in good repair, with NO obstruction that could create a hazard
- NEVER block exits and walkways, keep exits free from obstruction (access to exits must remain clear of obstructions at all times)
- Maintain proper lighting (replace bulbs immediately and report malfunctioning lighting)
- Clear parking lots, stairs, and walkways in snowy weather; use salt and sand as needed
- Report ice, water, or other hazards as soon as you see them - clean up spills right away

When working above floor level ALWAYS use proper ladders or step stools, NEVER use a chair or climb on furniture. Keep the feet of the ladder on stable, level ground and NEVER put it in front of a door, unless the door is locked or guarded.

NEVER stand higher than a ladder's third highest rung and ALWAYS have at least one hand and two feet in contact with it at all times. Avoid actions that can result in losing your balance. Do NOT stretch, stand on your toes, or reach beyond your normal arms' length. Use a taller ladder instead. Don't jump from ladders, loading docks, or other elevated locations (no matter HOW close to the ground you are).

Proper housekeeping in working and walking areas is still the most effective control measure in avoiding injuries due to obstacles or obstructions.

Module 2: Environmental Workplace Safety

Fire Safety

Healthcare institutions are required to ensure the safety of all staff, patients, visitors, and facility employees in the event of a fire. You are required to know:

- The location and use of fire exits, alarms, and extinguishers in your work area
- Procedures for announcing a fire or other emergency
- Where to assemble to receive instructions from emergency managers
- The fire safety officers for your facility
- Your specific responsibilities during an emergency or evacuation

Periodic drills are required and fire safety must be part of orientation for all staff (full-time, part-time, or temporary). Accrediting agencies require unit or area-specific orientation on fire prevention and response.

Your facility has specific fire safety measures. Beyond these, how should you respond to the dangers of healthcare fires?
Remember the word "RACE." It stands for:

R – rescue patients and yourself from fire's location
A – alarm – pull the fire station alarm and call your facility's fire code
C – confine – close all doors to confine the fire
E – stands for two different choices – extinguish the fire or evacuate patients and yourself

Some healthcare institutions have added the letter "R" to this acronym, making it RACER. The second "R" stands for RELOCATE patients from the fire's area.

Before extinguishing the fire, make a quick assessment of the risks by asking these questions:

- Is the fire too big? DON'T try to fight fires involving flammable solvents, cover more than 60 square feet, can't be reached from a standing position, or are behind a wall or ceiling
- Can you breathe? If smoke or fumes are so strong you can't stand in the fire's area without respiratory equipment, DON'T try to extinguish it
- Is it too hot or smoky? If smoke hides the fire or it is so hot you can't stand 10 or 15 feet away, DO NOT attempt to extinguish it
- NEVER try to extinguish a fire if you must crawl on the floor because of heat or smoke

If you can SAFELY extinguish the fire, find the appropriate fire extinguisher for the type of fire. Extinguishers will be clearly marked. Most extinguishers are classified as follows:

- Type **A** extinguishers are for fires involving ordinary combustibles like wood or paper
- Type **B** extinguishers are for fires involving flammable liquids, gases, gasoline, and grease
- Use type **C** extinguishers for fires in electrical wiring and equipment
- **ABC** extinguishers are for combination fires
- Type **D** extinguishers are used exclusively on combustible metals like magnesium
- Type **K** fire extinguishers are for fires involving vegetable oils, animal oils, or fats in cooking appliances

Computer rooms, data processing facilities, or other unique environments often have specialty extinguishers. If you work in such an environment you need to be familiar with your extinguisher. Extinguishers in your facility should be appropriate to your workspace and the potential fire risks.

Now, put out the fire! To properly use the extinguisher, remember the word **PASS**:

- **P**ull the pin
- **A**im the extinguisher at the base of the fire
- **S**queeze the trigger
- **S**weep the spray from side to side

Again, pull the pin, aim the extinguisher at the base of the fire, squeeze the trigger, and sweep the spray from side-to-side.

Electrical Safety/LOTO

Common sources of hazardous energy include electricity, mechanical motion, pressurized air, hot and cold temperatures, and radiation. Exposure to electricity accounted for 171 deaths in 2011, and many workers are exposed to the risk of electrocution.

Electrical injuries consist of four main types:

- Electrocution
- Electric shock
- Burns
- Falls caused as a result of contact with electricity

Electrocution or electric shock can come from:

- Faulty electrical equipment or wiring
  - report any damaged electrical cords, plugs, or equipment
  - report shock from any equipment, including small tingles

    - unplug faulty equipment and take it out of service immediately; move it to a location your facility has designated for inoperative equipment
    - investigate and report any unusual odors coming from electrical equipment or appliances

- Damaged receptacles and connectors – don't overload electrical circuits
    - usually, only one piece of electrical equipment should be plugged into an outlet
    - if you use an extension cord or power strip, it must be approved by the maintenance department before use, and un-fused multiple-outlet extension cords should NOT be used
    - don't use an adapter that converts 3-prong plugs to 2-prong plugs

- Unsafe work practices – NEVER use any electrical equipment when hands, floors, or equipment are wet

OSHA's Lockout/Tagout Standard

OSHA requires that employees are safeguarded during repairs, maintenance, or servicing of equipment.

Lockout/tagout is a process by which a piece of equipment is secured against accidental energization. A lockout program (or a tagout program that provides a level of protection equal to that achieved through lockout) must be used when employees service machines that are capable of being locked out. Locks used to secure an energy control device should be clearly labeled with durable tags to identify the worker assigned to the lock. The worker who installs a lock should be the one to remove it when work is completed.

NEVER attempt to use any equipment that has been locked out or tagged out; do NOT attempt to remove any lockout/tagout devices or otherwise tamper with lockout/tagout measures. OSHA requires employers to develop, document, and use procedures to control potentially hazardous energy. They are required to train each worker and ensure that they know, understand, and are able to follow the provisions of the hazardous energy control procedures.

Ionizing radiation is another occupational hazard and sources may be found in many settings, including healthcare facilities. Examples of radiation sources include X-ray equipment, accelerators, accelerator-produced materials, electron microscopes, betatrons, and some naturally occurring radioactive materials. These can pose a considerable health risk to workers. NEVER disregard radiation warning signs or labels.

Employees or employee representatives who believe an employer is out of compliance with the safety standards can file a complaint online, download the form and mail or fax it to the nearest OSHA office, or call 1-800-321-OSHA (6742).

Emergency Management

Power failures, water and fuel shortages, natural disasters: Any of these can disrupt patient care and pose risks to staff, patients, and the facility.

An "emergency management" program is an organized response plan to a potential emergency. The plan of action is called an Emergency Operations Plan or Emergency Response Plan.

The Emergency Response Plan must be tested and practiced in order to evaluate its effectiveness. Facilities must identify a leader to oversee emergency management, and involve senior leadership in planning activities, exercises and facilitation of communication during actual events.

The Joint Commission has developed sets of standardized core performance measures for medical facilities, including emergency management planning.

An effective emergency response plan must address six critical issues:

1. Communications
2. Resources and assets
3. Safety and security
4. Staff responsibilities
5. Utilities
6. Clinical support activities

Emergency Response

A medical facility's emergency response plan should address the following:

- An evacuation plan, and designation of alternative facilities that could provide treatment - recent natural disasters have highlighted the importance of an effective, known, and PRACTICED evacuation plan for patients and employees
- Pre-emergency drills of the plan
- Practice sessions with other local emergency response organizations using the Incident Command Structure
- Personnel roles and responsibilities
- Lines of authority and communication between the incident site and MEDICAL FACILITIES personnel regarding hazards and potential contamination
- Designation of a decontamination team
- A system for immediately accessing information on toxic materials
- A plan for managing emergency treatment of non-contaminated patients
- Decontamination equipment, procedures, and designation of decontamination areas
- Use, location, and quantity of personal protective equipment
- Prevention of cross-contamination

- Air monitoring to ensure that the facility is safe for occupancy following treatment of contaminated patients
- Post-emergency critique and follow-up of both drills and actual emergencies

Healthcare organizations that offer emergency services, or are designated as disaster receiving stations, must have an emergency response plan that addresses both external and internal disasters.

During all phases of an emergency response, employers have the primary responsibility for the health and safety of their employees.

Module 3: Workplace Hazards

Hazardous Materials/SDS

Each year, an estimated 650,000 different chemical products are shipped across the United States with more than 30 million workers exposed to them. OSHA requires that employers protect all employees from hazardous chemicals. Employees who stand a chance of being exposed to chemicals need to be aware of OSHA's recent revisions to its Hazard Communication Standard or HCS.

The intent of the standard remains the same: That chemical manufacturers and importers evaluate hazards posed by the chemicals they produce or import and disclose this information through labels and standardized Safety Data Sheets (abbreviated SDS). These were formerly known as Material Safety Data Sheets or MSDSs. The Hazard Communication Standard also requires employers to inform employees about chemical hazards through labeling, Safety Data Sheets, and training. Safety Data Sheets are useful in transmitting specific facts about each chemical substance and its use. They are prepared and distributed by each manufacturer of hazardous chemicals. OSHA expressly requires that these documents accompany first delivery of that material. These documents must include, in sufficient detail, the name of the chemical or chemical compound, its physical characteristics, and pertinent fire and explosion information. Chemical manufacturers and importers are also required to evaluate the hazards of the chemicals they produce or import, and prepare labels and safety data sheets to convey the hazard information to their downstream customers. Labels and Safety Data Sheets must include any specific special protection precautions, as well as use, handling, and storage procedures. Each must follow a specified 16-section format.

Additionally, some hazardous chemical information must be on labels affixed to chemical containers. These labels must include agreed-upon/harmonized signal word, pictogram, and hazard statement for each chemical substance.

- Changes in HCS went into effect on May 25, 2012
- Manufacturers, importers, distributors, and employers were required to be compliant with the new standards by June 1, 2012
- Employers must train their employees on new labeling and Safety Data Sheet formats by December 1, 2013
- Finally, employers must update any alternative workplace labeling, their written hazard communication program, and provide additional training for newly identified physical or health hazards NO later than June 1, 2015

OSHA insures that employees have the right to be informed of potential exposure to hazardous chemicals in the workplace. This information must include a written plan. Employees have the right to access their institution's list of chemicals and Safety Data Sheets. You are also allowed to request a personal copy of an SDS to be provided within 15 days.

Employees must be trained on the hazards of chemicals they may be exposed to at work. Employees must also be informed of protective measures needed and be provided appropriate personal protective equipment or PPE. Finally, employees may register a complaint on these issues without fear of reprisal or retaliation. Individual work areas should maintain an SDS for every chemical used or stored in the area, with easy access for each employee. SDS information must NOT be kept in a locked filing cabinet or behind a locked office door. One employee should be responsible for checking, obtaining, and maintaining Safety Data Sheets. Know where the hazard information is located in your area and how to use it. Finally, you can consult this website for help: http://www.osha.gov/dsg/hazcom/index.html.

Bloodborne Pathogens & Bloodborne Pathogens Standard

Bloodborne pathogens are infectious organisms (such as viruses) which are present in blood, blood products, and other potentially infectious materials, defined as human body fluids, including: semen, vaginal secretions, amniotic fluid, saliva, and any body fluid visibly contaminated with blood. They can cause disease in people.

Direct transmission of bloodborne pathogens happens when infectious material comes into DIRECT contact with open wounds, skin rashes, or the mucous membranes, or enters the body through an injury with contaminated objects such as needles. Indirect transmission occurs when you touch a contaminated surface and then transfer the infectious material to your eyes, mouth, or an open sore.

These pathogens include, but are NOT limited to, the hepatitis B virus, hepatitis C virus, and human immunodeficiency virus, the agent that causes AIDS.

Safety Standards

OSHA's Bloodborne Pathogens Standard provides engineering controls and work practices to protect workers.

OSHA requires employers to:

- Establish a written exposure control plan and update it annually
- Identify and use devices that isolate or remove the bloodborne pathogens hazard from the workplace, such as sharps disposal containers
- Identify and ensure the use of practices that reduce exposure by changing the way a task is performed, such as appropriate practices for handling and disposing of sharps
- Make hepatitis B vaccinations available to all workers with occupational exposure, free of charge; it must be offered after the worker has received the

required bloodborne pathogens training and within 10 days of initial assignment to a job with occupational exposure

- Provide post-exposure evaluations and follow-up with any eligible worker who experiences an exposure incident; the evaluation and follow-up must be free of charge to the worker and must include documentation of the circumstances under which the exposure incident occurred
- In the cases of hepatitis B and HIV suspected exposure, counseling and post-exposure prophylaxis must be offered and reported illnesses evaluated; all diagnoses must remain confidential
- Use labels and signs on everything that contains contaminated, regulated waste; this includes contaminated equipment and containers of contaminated laundry (facilities may use red bags or red containers instead of labels)
- Provide information and training to workers that addresses all elements of the standard - workers must have the opportunity to ask the trainer questions; training must be presented at an educational level and in a language that workers understand
- Maintain worker medical and training records; the employer must maintain a sharps injury log, unless it is exempt

Standard precautions dictate that all blood and body fluids be treated as infectious. This is also true for (1) unfixed human tissues or organs, (2) HIV-containing cells or tissue, (3) HIV- or hepatitis B-containing culture medium or other solution, (4) or blood, organs, or tissues from infected experimental animals.

Follow these safeguards to protect against infection:

- Follow proper hand hygiene, especially before eating, drinking, applying makeup, or handling contact lenses; don't do any of these things if you think you've been exposed to bloodborne pathogens
- Cover cuts and sores with bandages that seal the wound
- NEVER recap, bend, break, or shear a used needle and NEVER dispose of sharps anywhere but in an approved sharps container; don't force sharps into the containers

Personal protective equipment should be used every time there is a potential for contact with blood or body fluids and should include, at a minimum, gloves and protective gowns.

Masks or face shields must be worn when the potential for contact with blood or body fluids is present.

Any torn, punctured, or damaged PPE should be replaced immediately. When removing contaminated PPE, avoid touching the outside of the PPE with bare skin and be sure to dispose of them in an approved container. Use correct hand hygiene immediately after removing them. PPE should be cleaned, repaired, and replaced as needed at NO cost to the worker. Ask your supervisor for your facility's exposure control plan, the location of all PPE, and your facility's spill clean-up procedures.

If you suspect you have been exposed, follow these steps:

- If intact skin has had contact with blood or body fluids, wash with non-abrasive antibacterial soap and water
- Immediately flush mucous membranes with water
- Remove contact lenses and rinse with saline or water after any suspected contact with eyes
- If it is a needle stick or makes contact with your non-intact skin, wash thoroughly with antimicrobial soap and water
- Report ANY exposure IMMEDIATELY to a supervisor

Latex Allergies

In 2011 The National Institute for Occupational Safety and Health estimated that 8-12 percent of healthcare workers are latex sensitive, one of the most at-risk populations. OSHA requires barrier protection when "hands contact infectious materials or hazardous chemicals." This has led to an increase in exposure to latex, as well as increased instances of allergic reactions.

Many workers other than healthcare providers, such as housekeepers and laundry workers, are also exposed to latex products. Latex is used in a variety of products found in healthcare facilities, including medication vial tops, anesthesia bags, catheters and intravenous supplies. Surprisingly, latex paint does NOT include natural latex, however some waterproof sealants DO.

ALL personnel in a healthcare facility are at risk of developing a sensitivity to latex.

People with multiple allergies, and those with certain food allergies- such as bananas, kiwi, avocados, and chestnuts - are at increased risk for developing latex allergy. Life-threatening reactions have been noted in patients who have undergone numerous surgical procedures.

Anyone who develops symptoms after latex exposure should be checked for latex allergy by a physician. Further exposure could cause a progressively serious allergic reaction.

Diagnosis for latex allergy is made by using a medical history, physical examination, and lab tests.

Latex allergy symptoms can include:

- Skin rash
- Itching
- Hives
- Swollen red skin
- Tears
- Itching or burning eyes
- Swollen lips and tongue, with wheezing and difficulty in breathing
- Shortness of breath

- Dizziness
- Fainting
- Abdominal pain
- Nausea
- Diarrhea
- In rare cases, allergic reaction to latex can be fatal.

Exposure

The two major routes of latex allergy occupational exposure are dermal contact and inhalation. Inhalational exposure happens when you breathe in latex particles, such as from glove powder. Dermal contact is when your skin actually touches the latex.

Take the following steps to reduce or avoid latex exposure in the workplace:

- Use nonlatex gloves for activities that are not likely to involve contact with infectious materials (food preparation, routine housekeeping, etc.)
- If you choose latex gloves, use powder-free gloves
- Hypoallergenic latex gloves don't reduce the risk of latex allergy, but they may reduce reactions to additives in the latex
- Use appropriate work practices to reduce the chance of reactions to latex
- Don't use oil-based hand creams or lotions – they can cause glove deterioration
- After removing latex gloves, wash your hands with a mild soap and dry thoroughly
- Frequently clean areas and equipment contaminated with latex-containing dust
- Learn to recognize the symptoms of latex allergy

If you develop symptoms of latex allergy, avoid direct contact with latex gloves and other latex-containing products until you can see a physician.

If you are allergic to latex, avoid contact with latex gloves and products, and avoid areas where you might inhale powder from latex gloves. Tell your employer and ALL health care providers that you are allergic. Wear a medical alert bracelet. AHRQ (Agency for Healthcare Research and Quality) guidelines say alternatives to natural rubber latex gloves must be available for patients, carers, and healthcare workers who have a documented sensitivity to natural rubber latex.

Module 4: Organizational Workplace Safety

Workplace Violence

The workplace should be a safe place, free of fear. Therefore, it is imperative that we understand how to prevent, recognize, and handle workplace violence, sexual harassment, and impaired healthcare workers.

Healthcare facilities are required to create and maintain a written plan to provide for the security of patients, staff, and visitors. It must include ongoing risk assessments, prevention strategies, and a response plan enacted when an incident occurs, but everybody is responsible for keeping the workplace safe. Be proactive in preventing workplace violence.

If a weapon is ever presented, get to safety and alert the proper authorities. If a situation seems strange, unsafe, or threatening, LEAVE. Prevent others from entering the area and alert security or the proper authorities. If you find yourself in a potentially violent situation, leave the scene and quickly call security. NEVER intentionally put yourself in a potentially harmful situation. Be alert to your surroundings at all times. Know where exits are in case you need to escape.

Wearing expensive or flashy jewelry, showing large amounts of cash, and traveling alone can all make you a target for violence. Carry only minimal amounts of money and required identification in the workplace.

If you see any situation as threatening, contact the proper authorities. Even if there is NO immediate danger, when you are worried about a situation, tell someone. Don't be afraid to speak out. Your protection and the protection of those around you is a priority. If you've experienced a potentially violent incident, notify supervisors about it. Report ALL incidents in writing. Report any concerns about safety or security

Your facility has a plan for handling violence. Talk to your supervisor or Human Resources Department about your facility's policies.

Recognizing the Impaired Healthcare Worker

If someone comes to work but CANNOT perform their job because of alcohol or drug use, they are putting patients, you, and themselves at risk.

Making a mistake does NOT mean a coworker is impaired, but a persistent pattern of mistakes or behavior or personality changes should raise concerns.
Some behavioral warning signs related to substance abuse include (1) excessive absenteeism or an excessive number of sick days, (2) slurred or nonsensical speech, (3) wild mood swings or

frequent confusion, (4) frequent disappearances from work areas (for example: long restroom breaks), (5) seeming unusually withdrawn, (6) being unreliable, (7) and worsening handwriting or charting.

Physical warning signs related to substance abuse include

- Bloodshot eyes
- Constricted or dilated pupils
- Shivering when it isn't cold
- Tremors or shaking
- Alcohol smell on breath
- Their clothing smells of burning leaves
- Lack of coordination while walking
- Inappropriate drowsiness
- An unexplained change in someone's dress or hygiene
- Wearing long sleeves when inappropriate
- Taking longer than usual to perform an ordinary task
- Varied work performance (great one day, many mistakes the next)

If a coworker starts (1) spending an excessive amount of time near drug supplies during shifts, (2) writing or requesting prescriptions for large doses of narcotics, (3) insisting on administering narcotics or other drugs to patients themselves, (4) a sudden heavy rate of drug waste during shifts, (5) or sloppy or inappropriate record-keeping of drug shortages, it could be a sign of a very serious problem. Remember, the law requires that theft of any controlled substance from a healthcare facility be reported to federal authorities immediately.

If you feel that a worker is unable to perform their duty FOR ANY REASON, it is your responsibility to notify the proper authorities following your facilities rules. You have a legal, professional, and ethical responsibility to protect patients and others. Know your facility's rules and procedures. They often require that you discuss any concerns with a supervisor if you think a coworker is working while impaired. It is essential (for the safety of patients, coworkers, and yourself) to speak up if you have any concerns.

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Advance Directives

Advance directives are written instructions, such as a living will or durable power of attorney for healthcare, recognized under the law, relating to the provision of healthcare when or if an individual is incapacitated. They are used by physicians, healthcare professionals, and family members to ensure a person's preferences are honored. The patient may change or revoke his or her advance directive at any time.

A *living will* instructs medical providers about the patient's wishes with regard to medical treatment at the end of life in situations of terminal illness or permanent unconsciousness.

A *durable power of attorney for healthcare* or *medical durable power of attorney* is a document in which the patient names someone else, called a proxy, advocate, or surrogate, to make medical care decisions for the patient when and if he or she is incapacitated. They are to be activated in any situation in which the patient is unable to make decisions, whether terminal or not.

The Patient Self-Determination Act (PSDA), which was passed by the U.S. Congress in 1990, requires most types of healthcare institutions to:

1. Provide patients upon admission with written notice of their decision-making rights and policies regarding advance healthcare directives in the state and in the institution to which they have been admitted. These rights must include:
    - The right to facilitate their own healthcare decisions
    - The right to accept or refuse medical treatment
    - The right to make an advance healthcare directive
2. Ask patients if they have an advance directive and document that fact in the patient's medical record.
3. Educate staff and the community about advance directives.
4. Admit and treat patients without discrimination based on whether or not the patient has an advance directive.

The PSDA does NOT require that a patient have an advance directive, nor can a facility refuse to treat a patient who does not have one.

All 50 states and the District of Columbia have enacted legislation to comply with the PSDA, however, each state is responsible for determining laws related to advance directives.

The vast majority of U.S. states require two witnesses when signing an advance directive and stipulate that these witnesses NOT be a relative, heir, or a provider of the patient's healthcare. Some states require signatures to be notarized for medical powers of attorney. The use of specific forms is another requirement that varies by state.

By law, emergency responders (911 responders) must exercise all life-support measures possible unless a legally valid, state-recognized Do-Not-Resuscitate (DNR) order has been presented to the responders. Not all states have DNR statutes and most only address specific situations of cardiac or respiratory death.

Healthcare providers are encouraged to initiate dialogue about advance care planning in a patient-centered manner and include members of the patient's family. Cultural values including religious, spiritual, and moral beliefs, and other personal preferences, should be included in these discussions. Holding to the ethical principle of autonomy, which is the right of patients to make decisions and be an active participant in his or her own care, healthcare providers should be diligent in their efforts to supply patients with unbiased information, including benefits and alternatives to types of care and treatment often needed at the end of life. They should assess patient understanding of options, when and under what types of situations advance directives are to be activated, and clarify misunderstandings where they exist.

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Infection Control: Standard Precautions

Hand Hygiene, PPE, Care of the Environment, Patient Placement and Care

Standard Precautions are the minimum infection prevention practices that apply to all patient care, regardless of patient infection status, in any setting where healthcare is delivered. Standard Precautions include: 1) hand hygiene, 2) use of personal protective equipment, 3) safe injection practices, 4) safe handling of potentially contaminated equipment or surfaces in the patient environment, and 5) respiratory hygiene and cough etiquette. Each facility and setting determines specific PPE needs based on policies, procedures or protocols that define risk assessment for each patient situation. Facilities must assure that sufficient and appropriate PPE is available. All employees should be educated on Standard Precautions and how to utilize their facility's risk assessment tools to determine the proper selection and use of PPE for each patient contact.

Hand Hygiene

Good hand hygiene is critical to reduce the spread of infections. Alcohol-based hand rubs are preferred except when hands are visibly soiled or after caring for patients with known or suspected infectious diarrhea - for example, Clostridium difficile or norovirus - in which case soap and water should be used.

Perform hand hygiene:

- Before touching a patient, even if gloves will be worn
- Before exiting the patient's care area
- After contact with blood, body fluids or excretions, or wound dressings
- Prior to performing an aseptic task
- If hands will be moving from a contaminated body site to a clean body site during patient care
- After glove removal

In addition, do not wear artificial fingernails or extenders.

Personal Protective Equipment (PPE)

PPE protects from exposure to, or contact with, infectious agents. Examples include gloves, gowns, facemasks, respirators, goggles, and face shields. The selection of PPE is based on the kind of patient interaction and potential for exposure to blood, body fluids, or infectious agents. . ASSESS THE RISK of exposure to body substances or contaminated surfaces BEFORE any health-care activity. Make this a routine! Select PPE based on this assessment of risk.

Use gloves in situations involving possible contact with blood or body fluids, mucous membranes, non-intact skin or potentially infectious material.

Do not wear the same pair of gloves or gown for the care of more than one patient.

Do not wash gloves for the purpose of reuse.

Perform hand hygiene immediately after removing gloves.

Use a gown to protect skin and clothing during procedures or activities where contact with blood or body fluids is anticipated.

Wear mouth, nose, and eye protection during procedures that are likely to generate splashes or sprays of blood or other body fluids.

Facemasks are recommended when placing a catheter or injecting materials into epidural or subdural spaces, as during epidural anesthesia. Failure to wear facemasks during these procedures has resulted in patients developing bacterial meningitis.

Remove and discard PPE before leaving the patient's room or area.

Hand hygiene is always the final step after removing and disposing of PPE.

Each facility and setting should determine specific needs for PPE and assure that sufficient and appropriate PPE is available. All employees should be educated regarding proper selection and use of PPE.

Environmental Cleaning

Establish policies and procedures for routine cleaning and disinfection of surfaces.

Focus on surfaces near the patient and those that are frequently touched.

Select EPA-registered disinfectants or detergents/disinfectants labelled for use in healthcare.

Follow manufacturer's recommendations for use of cleaners and EPA-registered disinfectants.

Facilities should develop and implement systems for early detection and management of potentially infectious patients at initial points of entry to the facility. To the extent possible, this includes prompt placement of such patients into a single-patient room. When arranging for patient transfer, facilities should inform the transporting agency and the accepting facility of the suspected infection type.

Elements of Respiratory Hygiene and Cough Etiquette

Respiratory Hygiene/Cough Etiquette

Respiratory Hygiene/Cough Etiquette Standard Practices primarily target patients with undiagnosed transmissible respiratory infections and apply to any person with cough, congestion, rhinorrhea, or increased production of respiratory secretions.

Post signs at entrances telling patients with symptoms of respiratory infection to cover their mouth and nose when coughing or sneezing, use and dispose of tissues, and wash their hands frequently.

Provide tissues and no-touch receptacles for disposal of tissues.

Provide resources for hygiene in or near waiting areas.

Offer masks to coughing patients and other symptomatic persons upon entry to the facility.

Encourage persons with symptoms of respiratory infections to sit as far away from others as possible.

Transmission-based Precautions

There are three categories of transmission-based precautions used when standard precautions may not be enough to stop transmission - *contact precautions, droplet precautions, and airborne precautions*.

Contact precautions address the risk of both direct contact - physical transfer of microorganisms from an infected person to an uninfected person and indirect contact - when an uninfected person comes into contact with a contaminated object and transfers the infectious organisms to himself.

Direct contact would occur, for example, if a doctor whose hand had broken skin touched an infected wound with that bare hand. Indirect contact would occur if a patient touched a doorknob that had influenza viruses on it and then touched his eyes.

Droplets (mist or sneeze) are very fine drops of liquid generated primarily during coughing, sneezing, and talking or during certain procedures. Airborne transmission results from either

droplets deposited on surfaces, from dust particles containing the infectious agent, or from inhaling the droplets.

Use these precautions when standard precautions may not be enough to stop transmission.

- Wear gloves and gowns when in contact with the patient or surfaces in the patient's room
- Patients being transported should wear gloves, a disposable gown, and a regular surgical mask
- Wear masks with face shields when within 3 to 6 feet of a patient who is sneezing or coughing
- Special air handling and ventilation may also be required.
- Wear an N95 respirator mask when entering the patient's room

Personnel in areas where patients will be transferred should be notified of the patient's transmission-based precautions before transfer occurs.

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Patient Rights

Patient Bill of Rights

The Patient's Bill of Rights was adopted by the U.S. Advisory Commission on Consumer Protection and Quality in the Health Care Industry in 1998. The basic components of the bill were:

- Information Disclosure: the right to accurate, easy-to-understand healthcare information from facilities, professionals, and health plans. Patients who don't speak English, or have disabilities that make it difficult to understand, must be provided help so they can make informed healthcare decisions
- Access to Emergency Services: patients with severe pain, an injury, or sudden illness who feel their health is in serious danger have the right to be screened and stabilized using emergency service whenever and wherever required, without the need for preauthorization and without financial penalty
- Participation in Treatment Decisions: Patients have a right to make treatment and care decisions based on available options and to take part in decisions about their care. Those who cannot make their own decisions may select a parent, guardian, family member, or other person to make them. In other words, patients have the right to have an advance directive – a living will, durable power of attorney, or healthcare proxy – concerning treatment that must be honored to the extent permitted by law and hospital policy
- Respect and Non-discrimination: patients have a right to considerate, respectful care from all healthcare personnel; they have a right to not be discriminated against in the delivery of healthcare services
- Confidentiality of Health Information: patients have the right to privacy when talking about healthcare information with healthcare providers; they have the right to read their medical record and to ask that it be changed if it is NOT accurate; they have the right to have the information explained or interpreted as necessary, except when restricted by law
- Research Studies: Patients have the right to consent to or decline to participate in research studies or human experimentation affecting care and treatment or requiring direct patient involvement, and to have those studies fully explained prior to consent
- Complaints and Appeals: Upon admission, patients are informed about the internal complaint and grievance resolution process and have the right to be informed of available resources to resolve conflicts, grievances, or disputes; patients have the right to freely voice complaints and recommend change without

being subject to coercion, discrimination, reprisal, or unreasonable interruption of care, treatment, and services

- Patients have the right to choose who may visit them in the hospital. Institutions are prohibited from denying visitation privileges on the basis of race, color, national origin, religion, gender, sexual orientation, gender identity, or disability; hospitals must create written rules regarding these rights, enforce them, and make these policies known to all of their patients

Other patient rights include:

- The right to respect for cultural and personal values, beliefs, and preferences
- The right to pain management
- The right to reasonable accommodation of a patient's religious or other spiritual services or practices
- The right to receive care free of discrimination based on age, race, ethnicity, religion, culture, language, physical or mental disability, socioeconomic status, sex, sexual orientation, and gender identity or expression

The Affordable Care Act expanded rights related to healthcare and insurance. People may not be denied insurance because of pre-existing conditions and have the right not to have their health coverage limited either in time or dollar amount or withdrawn arbitrarily. They have the right to choose their appropriate primary care physician. They have the right to appeal to their healthcare provider if denied coverage and to have insurers justify rate hikes and be accountable for spending. They have the right to access emergency services regardless of insurer.

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Patient Safety: Adverse Medical Events

Causes of Adverse Medical Events and Medical Errors

One in seven Medicare hospital patients experiences a medical error. Errors can involve medicines, surgery, diagnosis, equipment, or lab reports. Even routine tasks, such as a hospital patient on a restricted diet receiving the wrong meal, can result in medical errors.

Medical errors are mistakes, close calls, and near misses – they can be active errors or latent errors that COULD have had a negative impact on a patient, whether they actually did or not.

An "adverse event" is when a patient is harmed as a result of medical care, such as infection associated with use of a catheter. Adverse events are medical errors that could and should have been avoided. The National Quality Forum defines these errors, also called serious reportable events and "never events" and lists 29 adverse events as reportable errors. These events may result in patient death or serious disability. They are grouped into categories: surgical, product or device, patient protection, care management, environmental, radiologic, and criminal.

Sentinel Events are defined as "an unexpected occurrence involving death or serious physiological or psychological injury, or the risk thereof." The Joint Commission has recommended that hospitals report Sentinel Events since 1995 and mandates performance of a root cause analysis after a Sentinel Event.

The Centers for Medicare and Medicaid Services (CMS) announced in August 2007 that Medicare would no longer pay for additional costs associated with many preventable errors, including those considered *Never Events*.

What Are the Causes of Medical Errors?

A primary cause is poor communication or inadequate information flow. This can occur: between the patient and the provider, between levels, from one facility to another, between workers of different shifts, between different departments or disciplines, or between different providers.

Human factors, such as not following procedures and protocols properly, often lead to errors. For example, failure to follow hand hygiene policies is known to lead to healthcare-acquired infections. Other human factors are poor labeling or inadequate documentation of specimens and impaired or poor handwriting. Medication errors are the most common healthcare error. National Patient Safety Goal NPSG.03.06.01 requires that facilities maintain and communicate accurate patient medication information.

Failure to educate patients and to ensure understanding causes errors. Patients also contribute to medical errors when they fail to comply with a treatment plan or medications, fail to admit to taking illicit drugs, fail to admit to certain lifestyle or social habits, or fail to completely disclose all medication they are taking.

Improper patient identification, incomplete patient assessment, failure to obtain consent, and inadequate patient education all cause medical errors.

A patient's suicide while in a staffed, round-the-clock-care setting is a frequently reported Sentinel Event. Screening individuals who may be at risk for suicide before or following discharge from a healthcare facility is an important step in patient care required by accrediting agencies.

Organizational contributors to medical errors include poor orientation or training.

Errors often occur when healthcare workers are asked to care for too many patients or when processes are cumbersome and require repeated steps. Poorly designed laboratory procedures - such as crossmatching multiple samples at the same time - have contributed to errors.

Equipment and devices such as infusion pumps or monitors can fail, leading to significant patient harm. Also, inadequate instruction and poorly designed equipment may lead to injuries.

Errors are often traced to poorly communicated, non-existent, or clinically inadequate policies and procedures.

Any employee or other individual concerned about the safety or quality of care provided in the organization, should follow facility procedures for reporting those concerns. They may also report these concerns without disciplinary, retaliatory, or punitive action by the organization. For reporting information see: www.fda.gov.

Reducing Adverse Medical Events and Medical Errors & How Can We Avoid Medical Errors?

Improve the accuracy of patient identification. Use at least two patient identifiers at every patient interaction. Acceptable identifiers are an assigned identification number, a telephone number, birthdate or other person-specific identifier. The patient's room number is NOT an acceptable identifier.

Improve the safety of medication use by proper labeling, recording accurate patient medication information, and standardized practices.

Eliminate healthcare-associated infections. Implement infection prevention and control strategies tailored to the facility's population, based on the facility's risk assessments. Monitor compliance with the CDC's and the World Health Organization's hand hygiene guidelines. Foster a culture of hand hygiene awareness.

Conduct risk assessments on patients to identify any risk for suicide.

Eliminate wrong-patient, wrong-site surgery errors. Implement a Universal Protocol for surgical and nonsurgical invasive procedures. Improve communication between members of the surgical team and, to the extent possible, between the staff and the patient and patient family members.

Eliminate transfusion errors.

Educate patients with face-to-face interactions and ensure understanding.

According to the Agency for Healthcare Research and Quality, hospitals are reducing medical errors by changing organizational culture, involving key leaders, educating providers, and establishing patient safety committees. Effective actions have been to eliminate blame and shame and to have key leaders make regular visits to discuss and survey patient safety - this results in problems being corrected quickly.

Using root-cause analysis to determine the causes of adverse events and provide corrective action, establishing Patient Safety Committees, and using evidence-based practice standards to provide consistent practices, all improve patient outcomes. Using technology to catch potential medical errors and suggest solutions has been shown to improve patient outcomes. For example - an effective use of technology is computerized physician order entry.

Handoff Communication

Miscommunication between healthcare workers regarding condition and treatment can endanger patients. The Joint Commission has linked breakdowns in handoff communication to nearly 70% of adverse events. Handoff communication, or handoff-of-care communication, is a real-time, interactive process for passing patient information from one caregiver or team to another, maintaining continuity and safety of the patient's care. Healthcare organizations require standardized processes for handoff communication between shifts and units and there must be an opportunity for questions. This process - which must be verbal - dictates the time and elements to be communicated.

Here are three strategies to ensure handoffs are effective--use clear language, avoid confusing terms, and don't use jargon that could be misinterpreted. Other effective techniques to be used in a handoff are:

- Limit interruptions during the handoff
- Focus on the information to be exchanged and avoid irrelevant details
- Allow adequate time for a thorough information exchange
- Use read-back or check-back techniques to make sure there is a common understanding
- Encourage questions between caregivers

Items to be included in handoff communication vary by setting and discipline. They may include the patient's medical status, resuscitation status, relevant lab values, allergies, any current problems, and a to-do list for the accepting caretaker.

A common, standardized communication tool used by many organizations is SBAR, which stands for situation, background, assessment, recommendation. Another technique is DATA, which stands for demographics, assessment, treatment, action plan. Whatever system your facility uses must be used consistently.

A note on effectively communicating information related to a patient's risk of suicide in the medical unit. According to The Joint Commission, suicide is one of the top five most frequently voluntarily reported events. National Patient Safety Goal 15.01.01 requires behavioral healthcare organizations, psychiatric hospitals, and general hospitals treating individuals for emotional or behavioral disorders to identify individuals at risk for suicide.

When communicating a patient's condition, the assessment of suicide risk should be included. Interventions should be based upon exhibited behaviors, mental status, or conditions that could indicate risk, including acute depression, anxiety, agitation or delirium, medical problems that may impair judgement, chronic pain, illness, or terminal cancer.

Your institution should have a system of screening protocols and procedures in place to address suicide risk. After screening, patient condition should be communicated rapidly to mental health professionals and all affected personnel. The World Health Organization urges caregivers to remember that suicide prevention and intervention should include family, friends, and colleagues whenever possible. Staff must be educated about risk factors for suicide and be able to take substantive, proactive action, for example, placing a patient under observation.

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Patient Safety (Clinical)

Injection Safety

Recommendations for safe injection practices are:

1) Use aseptic technique when preparing and administering medications
2) Cleanse the access diaphragms of medication vials with 70% alcohol before inserting a device into the vial
3) Never administer medications from the same syringe to multiple patients, even if the needle is changed or the injection is administered through an intervening length of intravenous tubing
4) Do not reuse a syringe to enter a medication vial or solution
5) Do not administer medications from single-dose or single-use vials, ampoules, or bags or bottles of intravenous solution to more than one patient
6) Do not use fluid infusion or administration sets for more than one patient
7) Dedicate multidose vials to a single patient whenever possible; 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
8) Dispose of used syringes and needles at the point of use in a sharps container
9) Adhere to federal and state requirements for protection from exposure to bloodborne pathogens
10) Wear a surgical mask when placing a catheter or injecting material into the spinal canal or subdural space

Influenza/ Tuberculosis

Influenza

The flu is a contagious respiratory illness caused by the influenza virus and spread mainly by the droplets made when people cough, sneeze, or talk. Consider all respiratory secretions and body fluids, including diarrheal stools, of patients with influenza infectious. Flu symptoms are fever, chills, cough, sore throat, runny or stuffy nose, body aches, headache, dizziness, fatigue, and sometimes vomiting and diarrhea. You may be able infect others from 1 day before your symptoms appear to 7 days after symptoms start. People 65 and older, young children, pregnant women, people with chronic medical conditions and people who live in facilities like nursing homes are at greater risk for serious complications if they get the flu.

Vaccination is the best way to prevent infection. It takes about two weeks after vaccination for antibodies to develop so it is better to get vaccinated early in the fall – before, or early in, the flu season.

Symptoms that need urgent medical attention are:

- High or prolonged fever
- Trouble breathing or shortness of breath
- Pain or pressure in the chest
- Confusion
- Fainting or near fainting
- Severe or persistent vomiting
- Flu-like symptoms that improve but then return with fever and worsened cough

The CDC recommends that healthcare personnel:

- Perform hand hygiene frequently
- Follow Standard Precautions - use gloves for contact with potentially infectious material and hand hygiene immediately after glove removal; wear gowns along with eye protection for any activity that might generate splashes of infectious material
- Use droplet precautions - wear a face mask when entering the patient's room, remove and dispose of it when leaving, and perform hand hygiene
- When transporting a patient under droplet precautions
- Have the patient wear a facemask
- Communicate the patient's disease status before transferring to other departments or to other facilities

Patients with suspected or confirmed influenza should be in a private room or area, whenever possible. They should wear a facemask and be separated from others by at the least 6 feet.

Environmental infection control is essential – use standard cleaning and disinfection procedures on frequently touched surfaces in your facility,

Healthcare personnel who develop a fever and respiratory symptoms should not report to work, or if at work, immediately put on a facemask and notify their supervisor and infection control or occupational health office. They should stay home for at least 24 hours after they have no fever without the use of fever-reducing medicines. Usually, decisions about work restrictions and assignments should be guided by clinical signs and symptoms, rather than by laboratory testing for influenza. If cough and sneezing are still present, personnel should wear a facemask during patient care activities. Those caring for immunocompromised patients should be excluded from working with them for 7 days from symptom onset or until resolution of symptoms, whichever is longer. Practice frequent hand hygiene, respiratory hygiene, and cough etiquette after returning to work.

Facilities should accommodate employees at higher risk for complications by allowing them to avoid possible high-risk exposure. Early treatment with antiviral medications can prevent hospitalizations and death in these people.

Tuberculosis

According to the World Health Organization, one-third of the world's population is infected with the tuberculosis (TB) bacteria. 1 in 10 of them will develop active TB in their lifetime.

Not everyone infected with TB becomes sick. Two TB-related conditions exist: TB disease and latent TB infection (people who will test positive but have no symptoms.) More than 11 million people in the United State have latent TB infection.

Disparities in TB persist among members of racial and ethnic minority populations. In 2010, 84% of all reported cases in the US occurred in racial and ethnic minorities.

People at high risk for developing TB disease fall into two categories: those with weakened immune systems and the recently infected. Also at high risk are recent immigrants from countries with high rates of TB, children younger than 5 who have a positive TB test, homeless people, injection drug users, and the HIV positive - as well as anyone who works or resides with a high-risk population.

Military personnel and others who have had long-term deployments to countries where TB is endemic may be at increased risk. Recent deployment history should be part of the medical history of any active or recently discharged veteran.

TB is spread through the air from one person to another. The bacteria, Mycobacterium tuberculosis, enters the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings.

Symptoms of TB include:

- A bad cough that lasts 3 weeks or longer
- Pain in the chest
- Coughing up blood or sputum
- Weakness or fatigue
- Weight loss
- No appetite
- Chills
- Fever
- Sweating at night

Minimize areas where exposure could occur by:

- Implementing effective work practices
- Managing patients with suspected or confirmed TB disease
- Ensuring proper cleaning and sterilization or disinfection of potentially contaminated equipment
- Training and educating regarding TB
- Screening and evaluating healthcare workers who might be exposed to, or at risk for, TB

Environmental controls reduce the concentration of airborne bacteria by using ventilation, controlling airflow, and cleaning the air by using filtration or ultraviolet germicidal irradiation.

Respiratory protective equipment should be used in situations that pose a high risk for exposure. Fit testing for respiratory equipment, such as the N-95 mask, is mandatory and must adhere to OSHA guidelines for use and testing.

OSHA requires that precaution signs be posted at the entrance to infected areas. They must remain posted and respirators must be used when entering the room until it is ventilated long enough for removal efficiency of 99.9%, using the CDC's recommendations. When patients with suspected or confirmed TB must be transported, they should wear a surgical mask and observe respiratory hygiene

Screening for TB is required for healthcare personnel upon employment. OSHA recommends retesting every three months for high-risk facilities, every six months for workers in intermediate facilities and yearly for low risk personnel.

If you believe you have been exposed to tuberculosis, you should contact your doctor or local health department for a TB test. If you believe you were exposed while working in your facility,

notify your supervisor and report to occupational health. Tell the healthcare provider when and where you believe you were exposed to TB.

Completed drug therapy is essential - it may last for 6-9 months and include several drugs.

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Ethical Aspects of Care

Ethics

Ethics are a framework for decision-making, and go beyond laws and rules. They establish the nature of duties that people owe themselves and one another. Each person is responsible for the consequences of their actions or inactions. "I was following orders" is never an excuse for unethical conduct. Equally, failing to speak out when we see unethical behavior is a violation of ethical duty.

Ethical practice follows four fundamental principles. First, institutions and caretakers must protect a patient's right to maintain control over their own care. This is called autonomy. To ensure this, patients must be well informed and receive truthful information about diagnosis, prognosis, or therapy. Patients must also be assured of the privacy of their information. Second, patients must be treated with kindness and with their best interest at heart by care providers who actively pursue best practice and constantly work to improve their skills. Ethicists refer to this as beneficence. The third is widely known – "do no harm" This is known as *nonmaleficence*. Finally, making sound decisions based on clear, evidence-based criteria.. This is the principle of justice.

To be ethical, organizations must consistently call for and follow policies of ethical behavior during care, treatment, services, and in business. They must prevent conflicts of interest and make decisions based on identified needs of patients. They must make provisions for ongoing care if services are denied a patient.

An individual has several inherent rights, regardless of the facility where they are a patient. Patients must be made aware of their rights and have those rights protected. Patients must be actively involved in the decisions made regarding their care, treatment, facility services, and care at the end of their lives. Patients must grant informed consent regarding expected versus unexpected outcomes, risks, and alternative treatments.

Patient rights

- An institution or hospital must respect the rights of patients to choose who visit them
- If hospitals want to use patient information/records for research or training, they must obtain the patient's consent
- If a patient refuses care, this choice must be respected (according to law or regulation)
- A patient's pain must be managed correctly
- All institutions must protect the rights of research subjects during studies and clinical trials within their organizations

- Organizations and caregivers must always respect a patient's confidentiality, privacy, security, access to protective and advocacy services, and freedom from abuse, neglect, and exploitation

Religion/Spirituality

As healthcare workers, you have an ethical responsibility to support patient spirituality if and when a patient considers it important. Screen patients' religious and spiritual beliefs, and when requested, implement pastoral or chaplain care. The lack of appropriate spiritual referrals can constitute a form of patient neglect.

Some questions to use as a screening tool include:

- How important are your spiritual or religious beliefs to you?
- Do your beliefs influence how you care for yourself?

The beliefs of patients and their family members may include rituals, music, prayer or sacred narratives unfamiliar to you. It is your duty to respect and accommodate patients' religious and spiritual beliefs and practices. Implicit in that statement is that the requested practice does not cause harm and is not excluded by law and regulation.

End of Life - Compassionate Care

The goal of end-of-life care is to comfort. Patients and their families have special needs at this time - understand and respect them. When a patient is near the end-of-life, there are four primary needs to meet. Those four needs are physical comfort, mental and emotional comfort, spiritual comfort, and practical comfort.

Physical, Mental, and Emotional Comfort

It is important that we make sure dying patients are as comfortable as possible. There are several ways we can do this.

Stay ahead of pain. Whenever possible try to prevent pain instead of waiting to relieve it. Be alert to indications of pain – for example, changes in facial expression, agitation and restlessness. Administer medication in a timely manner. If necessary, reassure patients or their families that the focus of pain treatment is to relieve suffering and that they do not need to be concerned about drug dependency or addiction at this time. Encourage patients and their families to speak up if pain is NOT being controlled – it may be possible to increase or change the medication being used.

We should also look out for any dryness, irritation or rash that may form on the skin. These can be very uncomfortable and when present we should apply lotion to the irritated area. Anything

that would be uncomfortable to you would more than likely be uncomfortable to the patient –be sure these are attended to.

Shortness of breath is common at the end of life. Raising the bed or using a fan may help or the doctor may prescribe oxygen. Dryness of the lips, mouth, and eyes is very common at the end of life – oral swabs can help relieve mouth and lip dryness. Use a damp cloth to soothe dry eyes.

Alcohol-free lotion can soothe as well as help protect the skin and prevent future discomfort. The increased immobility at the end of life can lead to painful pressure ulcers. It is important to turn or reposition a patient every couple of hours to prevent this. Foam pads are useful on bony areas such as heels, ankles, and elbows. Take extra care to make sure skin is kept clean.

Most people are not familiar with what to expect of the end-of-life process. You can help them understand and ease their fears about what they see. Explain to families that it is common for patients at the end of life to be angry or irritable; that lack of energy and tiredness is to be expected and the patient will often need a great deal of rest and quiet. Reassure families that the noisy breathing of people near death is usually not upsetting to the patient. Sometimes a person at the end of life makes a conscious decision to stop eating – you may need to help the family understand and respect this decision.

Help patients and families understand what CAN be done to help the patient. If the patient is experiencing nausea, constipation, vomiting or loss of appetite, remind them to tell their doctor. These symptoms can often be relieved. Patients who want to eat but have lost their appetite should be offered food in frequent, small amounts, but patients should NOT be forced to eat. When possible, support a patient's request to have favorite foods or meals brought from home. Arrange to have comfort food available at the patient's request when the patient has an appetite and desires to eat. A nutritional consult is a good means to support this process. Dying patients may not be able to say they are too warm or too cold. It is important to watch for signs, such as shivering or pushing blankets away. You or the family can then offer extra blankets or a fan.

Spiritual and Practical Comfort

Understandably, depression and anxiety are common at the end-of-life. Counselling or medication may help. If requested, a visit from a pastor, rabbi, priest, minister, chaplain, or other spiritual leader can comfort patients and their families. Respect all spiritual needs during this time.

Adjust the physical environment to the patient's wishes as much as possible. If you can find out how a patient reduced stress before, perhaps some of these elements can be introduced, helping to set a comforting mood. Music and soft lighting may help with relaxation and lessen pain.

One of our jobs as healthcare professionals is to make this time as easy as it can be. It is important to reassure family that their grief is probably not upsetting to the patient and that their presence is comforting. Remind families to talk to the patient, not about them. You should

identify yourself when you enter the patient's room and encourage family and other visitors to, as well.

Practical comfort also comes from understanding that family and friends are often dealing with grief and much more as well. They may be burdened by additional chores and duties as they try to take care of the patient's home or business responsibilities and there may be things you or your facility could do to help. For example, it may be possible to provide a private room where the family can rest during a bedside vigil. Asking about their health and well-being and being sympathetic, understanding, and supportive can make a huge difference to loved ones and family at this incredibly difficult time.

The situation may call for the family to make a decision about organ donation. Healthcare providers have an obligation to support the family's donation decision in a non-judgmental manner, regardless of our own personal donation beliefs. Your facility has a specific person – a procurement representative, an organizational representative of a tissue or eye bank, or a designated requestor - who will notify the family about donation options.

A designated requestor is someone who has completed a course offered or approved by the organ procurement organization. When providing organ donation options this person will separate informing the family of death from the discussion of organ donation, provide them a place to grieve and time to accept the news; and allow them time with the body of their loved one.

The designated requester has been trained to establish a non-judgmental, respectful, and sensitive atmosphere that respects both donation and non-donation decisions and to provide as much education, counseling, and support as needed, in a way suited to the particular family's needs. They will give families as much time as requested to make their decision without pressure and let them know that their wishes are respected and honored.

Healthcare facilities are responsible for recognizing and evaluating potential organ donors and establishing and maintaining a relationship with organ procurement organization's representatives. If a patient is identified as meeting the criteria for organ donation by the organ procurement organization, healthcare facilities have a duty to provide options and education in a respectful and sensitive manner. Regulations and policies exist to ensure that potential donors and their families are treated respectfully and ethically.

Your responsibility is to provide potential donors or their families with support, compassion, and respect for the decision they make.

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Identifying and Reporting Abuse

Mandatory Reportable Incidents

If you have a patient that is suffering - or that you suspect has suffered - abuse, neglect, or violence, you are responsible for ensuring their safety. You must accurately assess, document and report these offenses or suspicions to the proper authorities. In most states, anyone who reports a suspected case of abuse in good faith is immune from criminal and civil liability, but failing to do so could result in criminal liability.

According to the 2010 National Child Abuse statistics, there are 3.3 million reports of child abuse made each year in the US, involving nearly 6 million children. Every day five children die as a result of abuse.

Mandatory Reportable Incidents

It is your responsibility to know all of the mandatory reportable events your state department of health requires. Also, be aware that most states do not exempt military medical facilities from complying with state public health reporting requirements.

Stabbings or gunshot wounds, whether accidental or intentional, are incidents that must be reported. Several diseases or diagnoses must also be reported, such as STD's, tuberculosis, HIV, and AIDS. Pediatric, geriatric, and intimate partner abuse or neglect must be reported in most states.

If you suspect a patient is being abused or neglected, talk to the patient in private, away from any suspected abuser. Assure the victim that they are safe. Even if plausible excuses for the injuries are given, ask if anyone was involved in causing them. The important thing is to follow your facility's procedures if you are concerned and document your findings.

Recognizing Abuse

A patient with unexplained bruises, welts, scars, broken bones, sprains, or dislocations may be a victim of abuse. Signs of abuse may include broken eyeglasses or frames, signs of being restrained, or unexplained burns, especially on the palms, feet, abdomen, or buttocks. Another possible red flag is a caregiver who refuses to let you to see the suspected victim alone.

Abuse can also be emotional, verbal, or sexual. Warning signs for these types of abuse may be more subtle.

Threatening, belittling, and controlling caregivers can be signs of emotional abuse. A patient suffering from emotional abuse may display rocking, head banging, and sucking, or may mumble to themselves. Eating disorders and substantially lower than normal height and weight for age can also be indications of emotional abuse. Also extreme developmental delays of speech and motor skills, MAY be signs of emotional abuse.

Verbal abuse can involve yelling, profanity, and insults. Public humiliation, trivializing, name-calling, manipulations, and mind games are commonly seen abusive behaviors.

Sexual abuse can be much more embarrassing for the victim to talk about. As a healthcare professional it is your job to assure the victim that they are safe and that there is no reason to be embarrassed. Torn, stained, or bloody underclothing may be signs that sexual abuse has occurred. Other signs are difficulty walking or sitting, a sore throat and yeast or urinary infection, a venereal disease or genital infections, bruising or bleeding around breasts, genitals, or anus, and pregnancy in a minor or dependent person.

Neglect

Common signs of neglect include poor hygiene, bedsores, or untreated diaper rash. If a patient has unsuitable clothing for the weather, an untreated injury or illness, or lack of proper immunizations, there is a chance they may suffer from neglect. Excessive sunburn, insect bites, or frostbite could indicate a prolonged exposure to the elements. Anyone who suffers unusual weight loss, malnutrition, or dehydration, could be suffering from neglect. Other signs are unsafe living conditions, as well as begging for food or leftovers and abandonment in a public place area.

Neglect may be a sign that someone is being abused or that they cannot properly care for themselves. In either case these situations need to be reported to the proper authorities so they can get appropriate help. Know and follow your facility's procedures and your state requirements for reporting abuse.

Domestic Violence

Between 600,000 and 6 million women - and between 100,000 and 6 million men - are victims of domestic violence each year. Domestic violence includes incidents between married couples, family members, roommates, or dating couples. Domestic violence can involve neglect or physical, sexual, or verbal abuse.

Some signs of domestic abuse are:

- Intimidation
- Accusations
- Threats-including threatening suicide or to take children away
- Isolation of the victim from family, friends, or professional peers is common in domestic abuse

As a healthcare worker, you have an ethical and legal responsibility to report suspected cases of abuse. If you think ANYONE could be in immediate danger, contact local law enforcement as soon as possible. NOTE: It is important to remember that these actions should not be done independently, but after discussion with other members of the healthcare team. Every hospital has specific policies and procedures that address these issues and a well-conceived process to report them to the proper authorities.

Here are some resources:

- Your local child protective services
- 1-800-4-A-CHILD, the Childhelp National Child Abuse Hotline, is available 24 hours per day
- The Childhelp website, www.childhelp.org
- The National Center on Elder Abuse website provides reporting information for each state http://www.ncea.aoa.gov/NCEAroot/Main_Site/Find_Help/State_Resources.aspx
- The National Domestic Violence Hotline at: 1-800-799-SAFE
- The National Coalition Against Domestic Violence at: http://www.ncadv.org/

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Assessment/Management of Pain

Pain Assessment Techniques

In the 1990s, inadequate and under- treatment of pain was recognized as a growing health and social issue.

Pain management standards were developed by The Joint Commission in collaboration with the University of Wisconsin – Madison Medical School. They were developed by pain experts with involvement from health care professionals and professional groups and associations.

Patients have a right to appropriate pain assessment and pain management. They should be screened for pain during their initial assessments and - when clinically required - during ongoing, periodic re-assessments. The organization may assess and treat the pain, assess and refer the patient for treatment, or refer the patient for further assessment. Methods used to assess pain should be consistent with the patient's age, condition, and ability to understand and must be based on written criteria.

Patient Rights and Organizational Requirements

Organizations must recognize a patient's rights to appropriate pain assessment and pain management, require patient screening for pain during their initial assessments and - when clinically required - during ongoing, periodic re-assessments.

Consider personal, cultural, spiritual, and ethical beliefs and explain to patients and families that pain management is an important part of their care, is critical in supporting positive outcomes, and that unrelieved pain can be harmful and interfere with recovery.

Sometimes patients are unable to verbalize their pain. When self-reporting isn't possible, caregivers or family members may assist in identifying the presence of pain. Facial grimacing, rubbing of body parts, agitation, irritability, confusion, combativeness, and moaning are signs of pain.

Family should be involved in identifying signs of pain in children, when appropriate. Changes in facial expression, high-pitched, harsh cries, sleeping and withdrawn behavior, irritability, agitation, or restlessness can indicate pain in pediatric patients.

Pain Management Responsibilities

If you suspect a patient is in pain, implement an analgesic trial based on the estimated intensity of pain and the patient's pathology and analgesic history. If behaviors improve, assume pain was the cause and continue the analgesic with appropriate nonpharmacologic interventions. If the behavior continues, you might consider more aggressive analgesic interventions and other causes of the behaviors should be explored.

Use palliative measures BEFORE procedures known to cause pain, such as surgery and wound care. Pain is easier to prevent than it is to relieve, so stay ahead of pain by administering medication on time.

Encourage patients and their families to talk to their doctors if pain is NOT relieved.

Physicians are not required to prescribe pain medication or opioids; the standards require pain to be assessed, managed, and if necessary, treated.

There are many ways other than opioids to manage and treat pain, including non-steroidal anti-inflammatory drugs (NSAIDs), physical therapy, alternative treatment such as relaxation techniques, or referral to a specialist. Intravenous Patient-Controlled Analgesia (IVPCA) should be utilized whenever appropriate.

A team approach to pain management, involving the healthcare team, the patient and family, is the most effective method for managing pain. The team approach involves:

- Understanding the importance of the pain management standards
- Utilizing a multidisciplinary methodology
- Identifying opportunities for improvement
- Educating providers and staff on the comprehensive nature and involvement required
- Assessing provider and staff knowledge and validating competency
- Continually striving for improvement throughout your organization

In a 2012 Sentinel Event Alert regarding safe use of opioids, The Joint Commission recommended the following regarding their clinical use:

- Understand characteristics of patients at higher risk of oversedation or respiratory disease as a result of opiate exposure, including sleep disorders, obesity or age, etc.
- Employ evidence-based evaluation/assessment of patients to avoid accidental overdose
- Institutions should evaluate their processes, training, and use of medication-related technologies to ensure opioid overdose prevention is a goal
- Standardize all tools for screening patients across departments, for example, the Pasero Opioid-Induced Sedation Scale

The focus should be on patient safety, provider competency, medication safety, patient education, and patient-centered care. It is up to you to know your facility's pain management standards.

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Patient Safety (Clinical)

Kinds and Causes of Adverse Medical Events and Medical Errors

Medical errors are mistakes, close calls, near misses, active errors, and latent errors that COULD have had a negative impact on a patient, whether they actually did or not.

- Active errors are realized almost immediately and occur at the level of the individual
- Latent errors may NOT be realized for months or even years and often lead to residual active errors

These types of errors are usually a result of a faulty system design, installation or maintenance of equipment, or an ineffective organizational infrastructure. A near miss is a narrowly avoided medical error that could have resulted in harm, but did NOT.

An "adverse event" is when a patient is harmed as a result of medical care, such as infection associated with use of a catheter. Adverse events are medical errors that healthcare facilities could and should have avoided. The National Quality Forum defines these errors - also called serious reportable events and "never events" - and lists 29 adverse events as reportable errors. They are grouped into the categories: surgical, product or device, patient protection, care management, environmental, radiologic, and criminal. These events may result in patient death or serious disability.

A Sentinel Event is an unexpected occurrence or variation involving death or serious physical or psychological injury, or the risk thereof. Serious injury includes loss of limb or body function. The term "sentinel" is used because it signifies the need for immediate investigation and action.

Sentinel Events commonly result from errors of commission or omission. An error of commission occurs as a result of an action taken, for example, when the wrong drug is administered. An error of omission occurs when an action is NOT taken, for example, a delay in treatment that results in a patient's death.

A Patient Safety Incident is an event or circumstance which could have resulted or did result in unnecessary harm to a patient. Patient Safety Incidents include events that harm the patient, events that reach the patient but don't cause harm, events that don't reach the patient (close call), and hazardous circumstances.

Accredited organizations are required to identify and respond to all sentinel events. A thorough investigation (or root cause analysis), improvements to reduce risk, and monitoring the effectiveness of the improvements are all required as a part of the sentinel event action plan.

What are the causes of medical errors? Frequently, it is poor communication or inadequate information flow.

Human factors, such as not following policies and guidelines properly, often lead to errors. For example, failure to follow hand hygiene policies leads to healthcare-acquired infections. Poor labeling of specimens or inadequate documentation, impaired healthcare workers and poor handwriting contribute to medical errors.

Failure to educate patients causes errors. Patients contribute to medical errors when they fail to comply with a treatment plan or medications, fail to admit to taking illicit drugs, fail to admit to certain lifestyle or social habits, or fail to completely disclose all medication they are taking.

Improper patient identification, incomplete patient assessment, failure to obtain consent, and inadequate patient education are all causes of medical error.

A patient's suicide in a staffed, round-the-clock-care setting is a sentinel event. Screening individuals who may be at risk for suicide before or following discharge from a healthcare facility is an important step in patient care required by accrediting agencies.

Equipment and devices such as infusion pumps or monitors can fail, leading to significant patient harm. Also, inadequate instruction for equipment use and poorly designed equipment may lead to injuries.

Another potential contributor to error is multiple alarms. From 2009 to 2012, there were 80 alarm-related event deaths reported.

The Joint Commission has created a new national patient safety goal concerning Medical Device Alarm Safety. Phase 1, which began January 1, 2014, required hospitals to establish alarms as an organization priority.

Organizational contributors to medical error can include deficiencies in orientation or training.

Errors often occur when healthcare workers are asked to care for too many patients or when processes are cumbersome and require repeated steps.

Wrong-site, Wrong-procedure, Wrong-person Surgery Errors

The Universal Protocol for surgical and nonsurgical invasive procedures was developed to prevent surgical errors by improving communication among members of the surgical team and between the staff and the patient and family.

Key elements are:

- Preoperative verification agreed upon by all members of the procedure team which includes correct procedure, correct patient, and correct site
- Unambiguous and consistent marking of the operative site by a licensed independent practitioner before the procedure begins
- Initiating a time out by a designated member of the procedure team and involving all members of the team immediately before starting each invasive procedure or making the incision

Moreover, organizations should empower all surgery staff members to stop a procedure before patient safety is compromised. These steps should be observed consistently .

Medication Errors

Medication errors are the most common type of medical error. They are usually complex and are rarely the result of one person's actions. Medication systems rely on the involvement of several people and every time a document or medication changes hands, the risk of an error is present. The 3 most frequently reported types of medication errors are:

- Omission errors (failure to administer an ordered medication dose)
- Improper dose or quantity errors (any medication dose, strength or quantity that differs from the prescribed)
- Unauthorized drug errors (the medication dispensed and/or administered was not authorized by the prescriber); this category includes dispensing or administering the wrong drug

Strategies for Reducing and Reporting Adverse Medical Events and Medical Errors

Some specific factors are known to reduce medical errors:

- Minimize or eliminate distractions and interruptions when checking transcribed or computerized orders or when preparing medications before administration - take active steps to do this
- Actively focus on the task at hand and avoid being rushed
- Offer to help coworkers when they are involved in time-sensitive situations where distractions or short cuts could lead to errors
- Always use at least two patient identifiers when labeling, delivering, and maintaining specimen integrity, preparing and administering blood products and medications, and when performing procedures
- Healthcare organizations should set policies limiting telephone and verbal orders to only when absolutely necessary

- A read-back of orders should always be used to confirm orders to the prescriber; the practitioner must always include a return verbal acknowledgment of the accuracy of the order
- Practitioners with prescribing authority should double-sign and double-check high alert medications – especially those with narrow ranges of values for therapeutic effect
- Effective hand washing reduces the incidence of healthcare-associated infections (HAIs) - use alcohol-based hand rubs, eliminate artificial nails, keep nails less than one quarter of an inch in length, and change gloves between patients; follow CDC hand hygiene guidelines
- Patient falls are among the most common occurrences reported in hospitals and are a leading cause of death in people ages 65 or older; fall risk may increase due to altered mental status, recent environmental changes, and loss of strength and balance and accrediting agencies require that healthcare institutions accurately assess the potential of patient falls (based on patient population and setting) and address those risks in a formal policy, which is monitored on a regular basis

When patients are determined to be at risk of fall, fall prevention strategies and protections must be implemented. Risk factors for falls are associated with developmental age of the patient or the patient's ability to move about, with or without the use of assistive devices. Facilities should determine which pediatric patients are at a higher risk for non-developmental falls and then complete an assessment for these patients. Also, in pediatric care areas, the facility should involve the patient's family when appropriate to minimize the risk of falls to the patient.

- Healthcare personnel have a duty to report to work rested and prepared – fatigue is known to increase the risk of medical errors
- Any suspicions of chemical impairment among personnel must be reported
- Do NOT report to work when ill, especially when running a fever; you risk transmitting your infection to patients and co-workers, and illness is known to cause fatigue and impairment of decision-making ability
- Healthcare personnel who "float" from one department to another may not have all the knowledge necessary for all situations – be aware of how these floaters can increase the risk of error; accrediting agencies such as Healthcare Facilities Accreditation Program require that all personnel be competent to perform the duties assigned
- Personnel should be able to recognize and respond to changes in a patient's condition - they must be able to request additional assistance directly from specially trained individuals when the patient's condition appears to be worsening
- Personnel should have adequate training and experience with medical equipment - this is an element of competency
- Use effective hand-off communication procedures in all instances when patient care is transferred from one person to another, from one unit to another, or one institution to another
- All personnel have an ethical and legal responsibility to speak up when conditions are inadequate to provide safe patient care

- Healthcare leaders have a duty to promote a culture of patient safety and should take immediate and effective action to stop inappropriate personnel behaviors, including physician behaviors that are known to increase the risk of medical errors; they should also support an environment where the focus of medical error reports is on finding a solution to reduce future risk and not on blame
- Implement evidence-based practices to prevent indwelling catheter-associated urinary tract infections, hospital-acquired multi-drug resistant organisms, central venous catheter (CVC) bloodstream infections, and surgical-site infections
- A patient's medication information (in other words what the patient was, is, and will be taking) should be communicated and maintained accurately and effectively; this communication applies to short- and long-term settings and should be updated and managed for patients and their family upon discharge

Medical errors and near misses must be reported as soon as they are discovered. Know your facility's policy and procedures for reporting medical errors – you must follow them in the rapid reporting of such events. However, any employee, physician, or other individual who provides care, treatment, or services, or anyone who has concerns about the continuing safety or quality of care provided in the organization, may report these concerns to the Centers for Medicare and Medicaid Services. Facilities are required to inform all Medicare beneficiaries by written notice, at the time of admission, of their right to file a written complaint about the quality of care they are receiving to the local Quality Improvement Organization (QIO) and to provide contact information. The Joint Commission also requires that individuals may report quality concerns without fear of disciplinary, retaliatory, or punitive action by the organization. If so desired, the complainant may remain anonymous as The Joint Commission investigates the issue.

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Restraint and Seclusion

Restraint and Seclusion

Restraint is any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely. All patients have the right to be free from restraints that are NOT medically necessary or used for purposes other than patient benefit or safety. However, in specific instances and for specific patients who are acting, or threatening to act, in a harmful, violent way toward themselves or others, the use of restraints may be initiated in compliance with strict standards.

Restraint should NEVER be used for:

- Treatment
- Punishment
- Behavior modification
- Staff convenience
- PRN (pro re nata or left to caregiver or patient's prerogative)

A mechanism that does not restrict a patient's movement or mobility, but may be effective in maintaining patient safety and well-being, should be attempted prior to the initiation of a restraint.

Examples of preventive and alternative strategies could include:

- Provision of companionship and/or supervision of the patient
- Placing the patient by the nurse's station
- Providing soothing distractions such as television, music, walking, conversation, quiet environment, massage, or reading to the patient
- Changes or elimination of troublesome treatments/medications when indicated and ordered by a physician

Documentation for a patient in a restrictive device should include, but is NOT limited to:

- Clinical justification for the use of restraints (the actual behavior)
- Date and time of placement of restraint
- Type of restraint and the extremity or body part restrained
- Alternatives attempted prior to application of restraint
- Patient's clinical condition, circulation, skin integrity, attention to hydration, and elimination

- Discussion with patient and/or family regarding need for restraint
- Assessment and reassessment data
- Criteria used for continuation and discontinuation of device
- Time of removal

Staff applying restraint MUST be trained and demonstrate competency with the physical application and use of restraint, implementation of seclusion, monitoring, assessment, and providing care for a patient in restraint or seclusion. Restraints should be applied and removed in accordance with the following:

- Restraints should only be applied by staff who have completed specific restraint and seclusion training
- The type of restraint used should match the type of restraint ordered
- Restraint orders must be for a specific and limited time, justified by clinical necessity, and with a specific therapeutic goal listed
- Restraints should be applied with safe and appropriate technique
- Restraints should be removed only by authorized, trained staff
- As soon as the patient no longer displays behaviors that would put them at risk to harm themselves or others
- As soon as the patient no longer exhibits behavior that disrupts medical interventions
- Devices are to be applied and removed in accordance with manufacturer's instructions and for their intended purposes
- Restraints should be secured to the bedsprings or frame if being used while the patient is in bed - they should never be tied to the mattress or side rails; knots should be tied so that they may be released quickly in the event of an emergency

The use of restraints is guided and directed by the Centers for Medicare and Medicaid Services as well as accrediting agencies. All organizations must be familiar with these laws and standards should the need arise to use restraints.

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Recognizing and Responding to a Patient's Worsening Condition

Rapid Response Teams

Rapid response teams are used to intervene in the care of patients with unexpected clinical deterioration. The Institute for Health-care Improvement encouraged American hospitals to implement rapid response teams. Rapid response teams mostly deal with patients where respiratory, neurologic, or cardiac deterioration develops without previous warning signs. Members of a rapid response team are specially trained individuals whose clinical skills allow for rapid assessment and intervention in medical emergencies.

Rapid response teams consist of ICU personnel, who can be summoned to assess and treat any patient outside the ICU who shows signs of deterioration and who may be at risk for cardiac arrest or death. Team makeup varies but often includes one or more ICU nurses, a respiratory therapist, and a physician who can be called upon when needed.

Rapid response teams when used correctly can make a dramatic difference in patient welfare. According to recent studies, Rapid response teams have reduced non-ICU cardiac arrests by 50%. They have also reduced postoperative emergency ICU transfers by 58% and postoperative emergency deaths by 37%. Cardiac arrest prior to ICU transfer has also decreased from 30% to 4%.

Rapid response teams can be requested by anyone (staff, patient, or family member) should they be needed. Although medical facilities are not required to have rapid response teams, they are required to have a process for recognizing and responding as soon as a patient's condition appears to be worsening. A written criterion that describes early warning signs of a change or deterioration in a patient's condition MUST be established.

Each organization should determine which criteria will be used to call a rapid response team. Some more common criteria are a change in respiratory rate, labored breathing, change in oxygenation, change in heart rate, or a sudden change in blood pressure. Again, anyone that sees these changes or feels that something is wrong may contact the rapid response team.

After the decision to call on a rapid response team, good communication is imperative. Be specific about the patient's worsening condition. Be prepared to provide information such as what changes prompted the request, the patient's current vital signs, actions that have already been taken, any allergies, and a list of the medications the patient is on.

Once the rapid response team has made their assessment, they should relay the information and recommendation to the staff and patient's physician. If transfer to a higher level of care needs to take place, the rapid response team should assist.

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Preventing Healthcare-associated Infections: (MDROs)

Magnitude of the Problem OF MDROS

According to the CDC antimicrobial-resistant infections are associated with 23,000 deaths in the US each year. Their prevention and control is a national priority, so much so that the White House issued an executive order in 2014 directing Federal departments and agencies to take action to combat the rise of antibiotic resistance. The order establishes of a Federal Task force, a National Action Plan, and an Advisory Council on combating antibiotic resistant bacteria.

Antibiotic resistance is a threat to every healthcare facility and a concern for every practitioner. The CDC report, ANTIBIOTIC RESISTANCE THREATS IN THE UNITED STATES, 2013, lists 15 organisms as "serious" or "concerning" threats due to antimicrobial resistance–and three organisms, Clostridium difficile, Carbapenem-resistant Enterobacteriaceae and drug-resistant Neisseria gonorrhoeae, as "urgent threats" due to high rates of infection and number of deaths resulting each year from these organisms . Gram-negative bacterial infections, such as Enterobacteriaceae, Pseudomonas aeruginosa, and Acinetobacter are especially concerning, as these organisms are almost, **or entirely,** untreatable because they are resistant to most or all currently available antimicrobial agents.

In general, organisms are considered multidrug-resistant when they are resistant to one or more classes of antimicrobial agents. Transmission and lifespan of resistant strains is determined by the prevalence of vulnerable patients, use of antibiotics beyond their evidence-based necessity, larger numbers of colonized or infected patients, and implementation and adherence to control efforts. Patients with underlying medical conditions, severe disease, recent surgery, or indwelling medical devices are especially vulnerable to infection by MDROs.

Prevention and Control of MDROs

The CDC is focusing on four core actions to prevent antibiotic resistance:

The first is prevent infections! In healthcare facilities, proper hygiene is key to preventing the spread of infection. Clean shared items and surfaces and thoroughly disinfect rooms of infected patients. Environmental services is essential in preventing infection.

Clean hands with soap and water or hand rubs before and after any patient contact, and after removing gloves. Around organisms not killed by alcohol hand rubs, such as C. difficile, wear gloves, and then wash your hands with soap and water after removing them. Always use standard contact precautions. Alert the receiving facility when a patient with an MDRO transfers. When

possible, dedicate rooms, staff, and equipment to patients with an MDRO. Remove temporary medical devices such as catheters and ventilators from patients as soon as possible. And take advantage of available immunizations – preventing infection in the first place breaks the chain of transmission!

The second core action is tracking. Tracking can aid practitioners in choosing appropriate presumptive therapies, based on surveillance data in specific regions while waiting on culture results. The National Strategy goal for reporting and tracking emphasizes the need to inform healthcare staff on how to use antibiogram data to optimize therapy and outcomes. Reporting requirements will increase, but so will the ready availability of critical data for practitioners.

Third is improving antibiotic prescribing and stewardship. Every inappropriately applied use of an antibiotic threatens the safety of everyone. Appropriate prescribing is perhaps the single most important action to slow down the development of resistant organisms.
Interventions to improve antibiotic prescribing fall into 3 categories:

> Broad interventions – "time out" after 48 hours to reassess continued need and choice of antibiotic based on clinical data and diagnostic evidence, prior authorization policies that require expert review of antibiotic choice and use before administering, and quality control auditing and feedback.
>
> Pharmacy-driven interventions- consultation for therapy and dose adjustments, alerts for overlapping therapies, automatic stop orders for time-sensitive antibiotic prescriptions, and monitoring for antibiotic related drug-drug interactions.
>
> Infection and syndrome specific interventions – protocols for diagnosis and treatment based on culture results, optimized dose and duration based on current guidelines, and to prevent unnecessary antibiotic prescriptions.

The fourth core action is developing new drugs and diagnostic tests. Anticipated outcomes include: point of care testing to distinguish between bacterial and viral infections in 20 minutes or less, and incentives for practitioners to use the tests, tests that determine the resistance profiles of the organisms of highest concern in 30 minutes or less, expanding the use of probiotics and alternative therapies, and tailoring best practice guidelines on research and development. MDROs are here to stay – but new antibiotics and improved testing can slow the progress of antimicrobial resistance.

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Preventing Patient Infections: CAUTI, CLABSIs, SSIs

CAUTI

According to the Centers for Disease Control and Prevention, catheter-associated urinary tract infections- called CAUTIs - are to blame for more than 30% of infections reported by acute care hospitals. Complications resulting from CAUTIs can be as severe as cystitis, gram-negative bacteremia, epididymitis, or prostatitis. CAUTIs have even been blamed for hospital-associated endocarditis, septic arthritis, and meningitis. According to the same research, 13,000 deaths per year are associated with these infections. The excess cost of CAUTIs has been estimated at between $1,200 and $2,700 per case, costing the health care system more than $400 million annually.

These infections are almost universally associated with the presence of instrumentation in the patient's urinary tract, most commonly as indwelling catheters - drainage tubes inserted into the bladder, usually through the urethra. Infections that occur are attributed to the presence of a catheter if the patient has a catheter in place within 48 hours of when the infection is detected, no matter how recently the catheter was inserted.

These infections are so prevalent and their outcomes so alarming that several institutions have spotlighted the need for evidence-based surveillance and prevention. For example, The Joint Commission created National Patient Safety Goal 07.06.01. It requires that "Institutions implement evidence-based practices to prevent indwelling catheter associated urinary tract infections." The CDC includes CAUTI as its most dangerous but preventable healthcare-associated infection or HAI. The HAI-Allied Task Force, a national stakeholder group, calls the incidence of CAUTI one of the most dangerous hospital-acquired infections. The American Association of Critical Care Nurses has issued a series of guidelines to help prevent CAUTIs.

They include:

- Development of written guidelines for catheterization, including specific criteria for the use of indwelling devices and steps to ensure that they are not misused or overused and are removed promptly upon expiration of indications
- Design a training program for insertion and manipulation of indwelling catheters
- Review of a patient's need for indwelling catheters daily
- Implement an infection surveillance program
- Develop action plans to address needed improvements
- Adhere to aseptic technique protocols
- Document insertion and removal date and indication

A standardized protocol regarding aseptic technique is key to prevention.

Magnitude of Problem of CLABSIs

According to the CDC, about 41,000 central line-associated bloodstream infections occur in U.S. hospitals each year. These are usually serious infections. Strategies to prevent these infections include the Institute for Healthcare Improvement Central Line Bundle. The CDC, the Institute for Healthcare Improvement, and the Society for Healthcare Epidemiology of America are 3 sources of information on preventing healthcare associated infections.

The CDC defines a central line-associated blood stream infection, for the purposes of reporting, as a laboratory-confirmed bloodstream infection where a central line or umbilical catheter was in place for more than 2 calendar days on the date of event, with the day of device placement being Day 1, and a central line or umbilical catheter was in place on the date of event or the day before.

Some of the risk factors are:

1. Prolonged hospitalization before catheterization
2. Prolonged duration of catheterization
3. Heavy microbial colonization at the insertion site
4. Heavy microbial colonization of the catheter hub
5. Internal jugular catheterization
6. Neutropenia
7. Prematurity
8. Total parenteral nutrition and
9. Substandard care of the catheter

CDC recommendations for placement and care of CVCs, including peripherally inserted central catheters, hemodialysis, and pulmonary artery catheters, are:

- Use a CVC with the minimum number of ports or lumens essential for the patient's management
- Use totally implantable access devices for patients requiring long-term, intermittent vascular access
- For patients requiring frequent access, a PICC or tunneled CVC is preferred
- Use a cuffed CVC for dialysis if you anticipate prolonged access
- Use a fistula or graft instead of a CVC for permanent dialysis access
- Do not use dialysis catheters for drawing blood except under emergency circumstances

Placement and Care of CVCs

Selection of catheter insertion site:

- Weigh the risk and benefits of placing a device at a recommended site to reduce infectious complications against the risk for mechanical complications - differences between adult and pediatric patients should be a factor in this decision-making process
- Use a subclavian site (rather than a jugular or a femoral site) in adult patients to minimize risk for non-tunneled CVC placement
- Place dialysis and pheresis catheters in a jugular or femoral vein rather than a subclavian vein to avoid venous stenosis if catheter access is needed

Maximal sterile barrier precautions during catheter insertion:

- Use aseptic technique including the use of a mask, a cap, sterile gown, sterile gloves, and a large sterile sheet for insertion of CVCs
- Use a sterile sleeve to protect pulmonary artery catheters during insertion

Replacement of catheter:

- Do NOT routinely replace CVCs, PICCs (peripherally inserted central catheters), dialysis catheters, or pulmonary artery catheters to prevent catheter-related infections
- Do NOT remove CVCs or PICCs on the basis of fever alone

Catheter and catheter-site care:

- Designate one port exclusively for hyperalimentation if a multilumen catheter is used to administer parenteral nutrition
- Do NOT routinely use antibiotic lock solutions to prevent catheter-related bloodstream infections; only use in special and pre-identified circumstances

Catheter-site dressing regimens:

- Replace the catheter dressing when it becomes damp, loosened, soiled, or when inspection of the site is necessary
- Replace dressings used on short-term CVC sites every 2 days for gauze dressings and at least every 7 days for transparent dressings, except in those pediatric patients in which the risk for dislodging the catheter outweighs the benefit of changing the dressing
- Replace dressings used on tunneled or implanted CVC sites NO more than once per week, until the insertion site has healed
- Do not use chlorhexidine sponge dressings in neonates less than 7 days of age or gestational age less than 26 weeks
- Ensure catheter-site care is compatible with catheter material

Implement the Institute for Healthcare Improvement's (IHIs) Central Line Bundle. Its key elements are:

- Hand hygiene
- Maximal barrier precautions upon insertion

- Chlorhexidine skin antisepsis
- Optimal catheter site selection, with avoidance of the femoral vein for central venous access in adult patients
- Daily review of line necessity with prompt removal of unnecessary lines

SSIs

There are approximately 27 million surgical procedures performed in the U.S. each year. Surgical site infections, or SSIs, are the most common cause of all healthcare acquired infections, accounting for 38% of all such infections. When surgical patients with acquired infections die, 77% of the deaths are related to the infection. SSIs increase a patient's hospital stay by approximately 10 days.

Certain patient and operation characteristics can influence the risk of SSIs. Patient characteristics include:

- Age
- Nutritional status
- Presence of diabetes
- Smoking
- Obesity
- Infections at a remote body site
- Colonization with microorganisms
- Altered immune response
- Length of preoperative stay

Operation characteristics are:

- Duration of surgical scrub
- Skin antisepsis
- Preoperative shaving
- Preoperative skin prep
- Duration of operation
- Antimicrobial prophylaxis
- Operating room ventilation
- Inadequate sterilization of instruments
- Foreign material in the surgical site
- Surgical drains
- Surgical technique
- Poor hemostasis
- Failure to obliterate dead space
- Tissue trauma

An SSI prevention measure can be defined as an action or set of actions intentionally taken to reduce the risk of an SSI. The following are some of the CDC recommendations.

Preparation of the patient:

- When possible, identify and treat all infections remote to the surgical site before elective operations
- Do NOT remove hair preoperatively unless it will interfere with the operation
- When hair removal is necessary, use a method that is cited in scientific literature or endorsed by professional organizations
- Control blood glucose levels in all diabetic patients - avoid hyperglycemia perioperatively
- Encourage tobacco cessation - at a minimum, abstain for at least 30 days prior to an elective operation
- Do NOT withhold necessary blood products as a means to prevent SSI
- Require patients to bathe or shower with an antiseptic skin agent the night before
- Thoroughly wash around the incision site to remove gross contamination before antiseptic skin preparation
- Apply skin prep in concentric circles moving toward the periphery in a large enough area to extend the incision or create new incisions or drain sites
- Keep the preoperative hospital stay as short as possible

Hand and forearm antisepsis for surgical team:

- Keep nails short and do not wear artificial nails
- Perform the preoperative scrub for at least 2 to 5 minutes with an appropriate antiseptic - scrub hands, forearms, and elbows
- After the surgical scrub, keep hands up and away from the body so water runs from the tips of the fingers toward the elbows
- Dry your hands with a sterile towel and don sterile gown and gloves
- Clean underneath each fingernail prior to the first surgical scrub each day

Management of infected or colonized surgical personnel:

- Encourage personnel who have signs of transmissible infectious illness to report their conditions promptly
- Surgical personnel who have draining skin lesions should be restricted from duty until they receive adequate therapy and the infection is resolved

Antimicrobial prophylaxis – The Joint Commission requires healthcare professionals to administer antimicrobial agents for prophylaxis for a particular procedure or disease according to methods cited in scientific literature or endorsed by professional organizations. When cleaning and disinfecting environmental surfaces use an Environmental Protection Agency-approved hospital disinfectant. Clean the areas before the next operation when visible soiling or contamination with blood or other body fluids occurs.

Sterilization of surgical instruments:

- Sterilize all surgical instruments according to published guidelines
- Perform flash sterilization only for patient care items that will be used immediately
- Do NOT flash sterilize for reasons of convenience or to save time

Surgical attire and drapes:

- Wear a surgical mask that fully covers the mouth and nose when an operation is about to begin, is underway, or if sterile instruments are exposed - wear throughout the operation
- Wear a cap or hood to cover hair on the head and face
- Use surgical gowns and drapes that are effective barriers when wet
- Change scrub suits that are visibly soiled or contaminated by blood or other potentially infectious material

Asepsis and surgical technique:

- Adhere to the principles of asepsis
- Assemble sterile equipment and solutions immediately prior to use
- Handle tissue gently
- Leave the incision site open to heal if the site is heavily contaminated
- If drainage is necessary, use a closed suction drain at a distant site from operative incision, and remove it as soon as possible

Postoperative incision care:

- Protect with sterile dressing for 24 to 48 hours postoperatively an incision that has been closed primarily
- Wash hands before and after dressing changes and after any contact with the surgical site
- Use sterile technique for all incision dressing changes
- Educate the family on incision-site care and symptoms of SSI
- Use proper insertion and catheter-care protocols
- Diagnose and treat infections effectively