

RAPID REGULATORY COMPLIANCE: CLINICAL: PART II



Lesson 1: Introduction, Environmental Safety, and Self-Protection

Welcome to Rapid Regulatory Compliance: Clinical: Part II.

This course will rapidly review and update your knowledge of the following topics:

- Environmental safety and self-protection
- Emergency preparedness
- Infection control

For additional information on the topics discussed in this course, please refer to the course titles shown here.

As your partner, HealthStream strives to provide its customers with excellence in regulatory learning solutions. As new guidelines are continually issued by regulatory agencies, we work to update courses, as needed, in a timely manner. Since responsibility for complying with new guidelines remains with your organization, HealthStream encourages you to routinely check all relevant regulatory agencies directly for the latest updates for clinical/organizational guidelines.

If you have concerns about any aspect of the safety or quality of patient care in your organization, be aware that you may report these concerns directly to your organization's accrediting agency.

Courses discussing topics in detail:

- General Safety
- Fire Safety
- Electrical Safety
- Radiation and MRI Safety
- Ergonomics
- Back Safety
- Lifting and Handling Patients
- Preventing Slips, Trips, and Falls in the Workplace
- Latex Allergy
- Hazard Communication
- Workplace Violence
- Emergency Preparedness
- Infection Control
- Healthcare-Associated Infection
- Hand Hygiene
- Standard Precautions: Bloodborne Pathogens and Other Potentially Infectious Materials
- Transmission-Based Precautions: Airborne
- Transmission-Based Precautions: Contact and Droplet
- Personal Protective Equipment





AFTER COMPLETING THIS REVIEW, YOU SHOULD BE ABLE TO:

- Identify best practices to control the spread of infection in the healthcare environment
- Cite key components of the Bloodborne Pathogens Standard
- Cite best practices to ensure environmental safety for patients and staff in a healthcare environment
- Identify components of an Emergency Operations Plan
- Recognize general safety best practices related to fire safety and radiation and MRI safety
- Identify best practices related to ergonomics, back safety, and lifting and handling patients
- Cite best practices for prevention of antibiotic resistance



This lesson provides the course rationale, goals, and outline. This lesson also will discuss aspects of safety, including personal and facility concerns and best practices. It will conclude with a review of emergency preparedness.

LESSON 2

will discuss infection control. This lesson will provide information on best practices to control the spread of infection in the healthcare environment.

Lesson 1: Introduction, Environmental Safety, and Self-Protection

- General safety
- Fire safety
- Electrical safety
- Radiation safety
- MRI safety
- Ergonomics
- Back safety
- Lifting and handling patients
- Slips, trips, and falls
- Latex allergy
- Hazard communication
- Security and workplace violence
- Incidents and adverse events
- Emergency preparedness

Lesson 2: Infection Control

- Healthcare associated infection
- Hand hygiene
- Environmental hygiene
- Antibiotic use
- Bloodborne pathogens
- Airborne Precautions
- Contact Precautions
- Droplet Precautions
- Personal protective equipment
- Personal responsibility

Healthcare facilities have many potential hazards.

The Occupational Safety and Health Administration (OSHA) separates these hazards into general categories:

- Biological hazards
- Chemical and dust hazards
- Work organization hazards
- Physical hazards
- Ergonomic hazards
- Safety hazards

As shown in the table on the next screen, take appropriate measures to:

- Eliminate as many of these hazards as possible
- Exercise safety measures for the hazards that cannot be eliminated

Note: Many of the hazards mentioned in the table are addressed in greater detail later in the lesson or the course.



General Safety: Hazards and Safeguards

HAZARD CATEGORY	DEFINITION	EXAMPLES	SAFEGUARDS
Biological hazards	Infectious agents	Anthrax, Ebola, HIV, VRE, MRSA, HBV, HCV, TB	Use Standard Precautions and recommended PPE ; practice proper hand hygiene, etc.
Chemical and dust hazards	Toxic or irritating materials	Detergents, solvents, disinfectants, sterilizing agents, waste anesthetic gases, hazardous drugs, mercury	File an SDS for each hazardous chemical used; wear proper PPE; practice good hygiene.
Work organization hazards	Factors that create or increase emotional stress or strain	Working with terminally ill patients, patient deaths, overwork, understaffing, tight schedules, equipment malfunctions	Encourage participation in staff meetings, debriefings, discussions, relaxation exercises, meditation.
Physical hazards	Agents with the ability to cause physical harm	Radiation, high exposure to sunlight/UV rays, extreme temperatures, constant loud noise	Avoid radiation exposure; limit UV exposure; reduce volume on audio devices.
Ergonomic hazards	Factors that cause or increase the risk of accident, injury, strain, or discomfort	Frequent lifting, poor posture, vibration, improperly adjusted workstations or chairs, and frequent repetitive movements	Avoid manual lifting; use lifting devices when possible; exercise regularly.
Safety hazards	Unsafe conditions that can cause illness, injury, or even death	Spills, tripping hazards, moving machinery, electrical hazards, confined spaces	Use all equipment properly; use PPE; report deaths, serious injuries, or illnesses involving medical equipment.

PREVENTION IS THE BEST DEFENSE AGAINST FIRE.

*To help prevent fires related to the common cause of **smoking**:*

- Follow your facility's smoking policy.
- Smoke only in designated areas.
- Instruct visitors and authorized patients to smoke only in designated areas.

*To help prevent fires related to the common cause of **electrical malfunction**:*

- Remove damaged or faulty equipment from service.
- Submit malfunctioning equipment for repair.
- Inspect all equipment prior to use.

*To help prevent fires related to the common cause of **equipment misuse**:*

- Do not use any piece of equipment that you have not been trained to use.



Fires and Alcohol-Based Hand Rubs



Precautions must be taken to prevent alcohol rubs from becoming a source of fuel in a healthcare setting.

Alcohol dispensers should not be located above, near, or on:

- Heat or ignition sources
- Electrical outlets
- Light switches

Finally, when using an alcohol rub, be certain to rub your hands until they are dry. This is especially important in areas where there are high levels of oxygen, for example where anyone is receiving oxygen supplementation or mechanical ventilation.

Fire Safety: Safeguards in the Event of Fire

Even with the best efforts at prevention, fires sometimes occur.

Therefore, your facility should have fire safety features.

These features include:

- Fire alarm systems
- Fire extinguishers
- Automatic sprinklers in buildings taller than 75 feet
- Emergency exit routes and doors
- Smoke and fire doors and partitions
- A fire plan

Be familiar with the location, use, and operation of each of these features.

Healthcare facilities are required to have a fire watch or building evacuation if their sprinkler system is out of service for more than ten hours.



When you hear the fire alarm in your facility, you may not know if it is a drill or a true fire. Treat the alarm as if it were a true emergency.

Respond using the RACE protocol.

R: Remove or rescue

Rescue or remove all individuals from the immediate area of the fire.

A: Alarm or alert

- Call out for help.
- Activate a manual pull station.
- Phone the fire department.

C: Confine or contain

Contain the fire by closing the door to the room where the fire started.

E: Extinguish or evacuate

If the fire is small, attempt to extinguish with a portable extinguisher using the **PASS** protocol:

- **P:** Pull the pin.
- **A:** Aim the nozzle.
- **S:** Squeeze the trigger.
- **S:** Sweep back and forth across the base of the fire.

Otherwise, prepare to evacuate individuals to a place of safety.

Electrical Safety: Risks and Prevention

Most equipment in the healthcare setting is electric. If medical equipment is not in good, working order, there is a risk of injury, including electric shock.

Electric shock happens when electricity flows through the body causing:

- Burns
- Muscle spasms
- **Ventricular fibrillation**
- Respiratory arrest
- Death

To help prevent electrical accidents, remove and report electrical hazards.

Remove electrical equipment from service if it:

- Malfunctions
- Shows signs of damage
- Shows signs of unusual heating
- Produces a burning smell during operation
- Causes shock to any individual

Report the hazard according to your organization's protocol.



Electrical Safety: Preventing Accidents



Use electrical equipment properly

- Learn how to operate equipment properly before using it.
- Do not use damaged equipment.
- Do not use equipment on which liquid has been spilled.
- Do not operate electrical equipment with wet hands or when standing in water.
- Do not stack anything on or behind electrical equipment.
- Turn equipment off before plugging in or unplugging.

Maintain, test, and inspect

- All medical equipment should be inspected and tested on a regular schedule according to facility policy and procedures.

Other best practices for preventing electrical accidents in your facility are:

- Use power cords and outlets properly.
- Use circuits safely.
- Protect patients from electrical shock.

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly.**
- **Use circuits safely.**
- **Protect patients from electrical shock.**

Use cords and outlets properly:

- Do not use outlets or cords with exposed wiring.
- Report damaged outlets or cords.
- A hot outlet can be an indication of unsafe wiring. Unplug cords from the outlet. Report the hazard.
- Do not bend, stretch, or kink power cords excessively.
- Do not jerk cords from outlets. Pull on the plug.
- Do not staple, tack, or nail power cords to walls or floors. Use tape, if necessary.
- Do not rest equipment on power cords.
- Use only power cords with three-prong plugs. Never use adapters, two-prong plugs, or broken three-prong plugs.

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly.**
- **Use circuits safely.**
- **Protect patients from electrical shock.**

USE CIRCUITS SAFELY :

- Do not overload circuits.
- Label each circuit breaker clearly.
- Breaker boxes should be accessible at all times.

Other best practices for preventing electrical accidents in your facility are:

- **Use power cords and outlets properly.**
- **Use circuits safely.**
- **Protect patients from electrical shock.**

PROTECT PATIENTS FROM ELECTRICAL SHOCK

- Place electrical equipment at a distance from patients.
- Maintain patient areas, keeping floors dry at all times.
- Do not touch patients and electrical equipment at the same time.



Exposure to radiation can increase the risk of cancer.

Therefore, it is important to protect against exposure. The three key factors for limiting exposure are:

- Time: Minimize the amount of **time** that you are exposed.
- Distance: Maximize your **distance** from the radiation source.
- Shielding: Use appropriate **shielding** to absorb the energy of radioactive particles.

The goal is to keep your radiation exposure **As Low As Reasonably Achievable** (ALARA).

An MRI system is not an inherent biological hazard.

However, hazards can arise when certain items enter the MRI system:

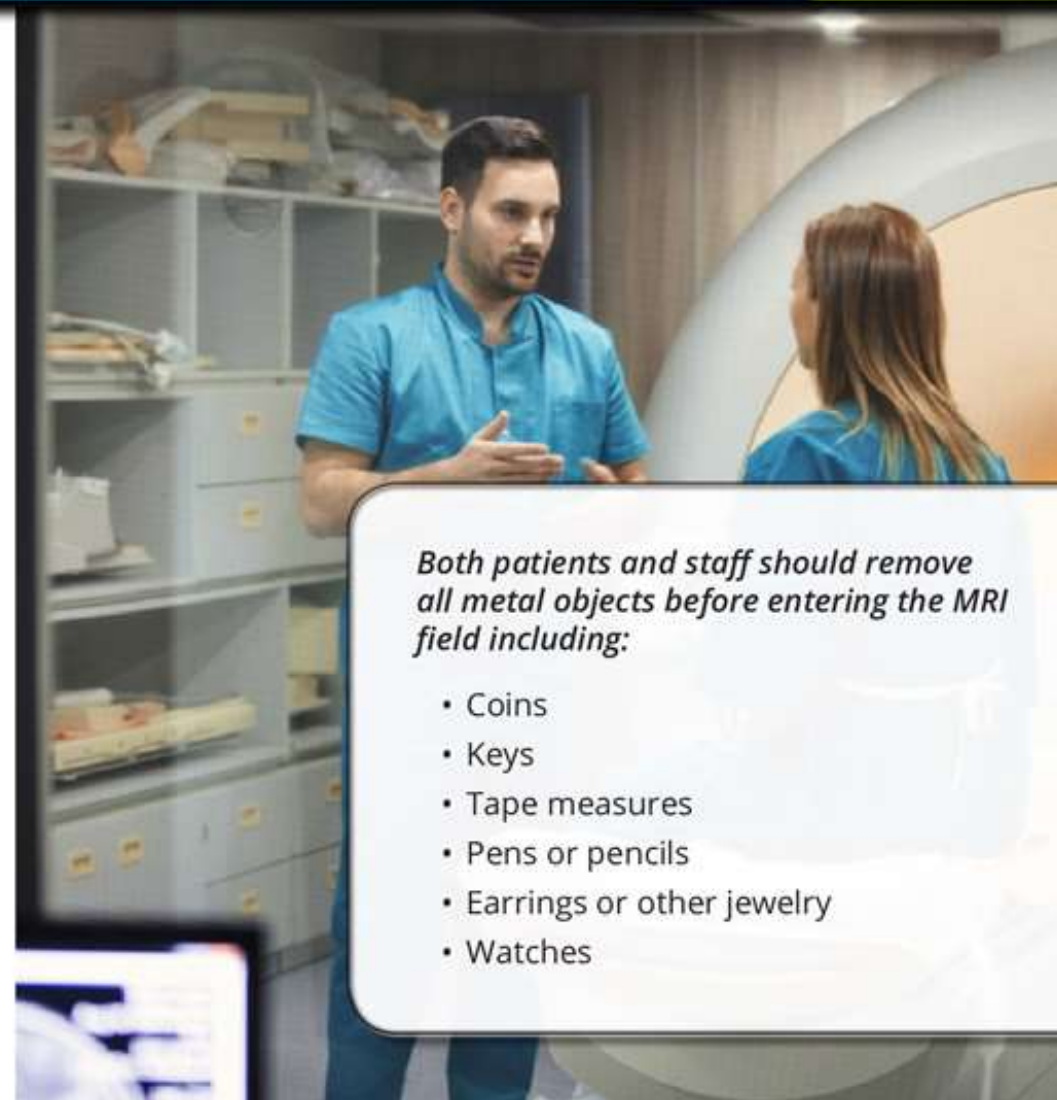
- **Ferromagnetic** objects are attracted to the magnet at the center of the MRI system. They can become dangerous **projectiles** (the "projectile effect").
- Electronic devices, including implanted devices, that enter the magnetic field of the MRI system *can malfunction* due to interference.
- Metal implants or wires can conduct electrical currents resulting in burns.



MRI safety is largely a matter of ensuring that potentially hazardous items stay outside the MRI field.

Therefore:

- Control access to the magnetic field.
- Post signs outside the magnetic field, warning of the projectile effect and the danger of metallic implants.
- Remove metallic objects from clothing and pockets before entering the magnetic field. Thoroughly screen patients prior to MRI. Ensure that patients do not have MRI-unsafe implants or embedded objects. Only those labeled as MR-conditional may be safely scanned, and only under the specific conditions of safe use. Contact the manufacturer if in doubt.
- Properly position patients for MRI so that **electrically conductive loops** are not formed. This will prevent burns.
- Use equipment approved for MRI.
- Restrict access to the MRI suite.



Both patients and staff should remove all metal objects before entering the MRI field including:

- Coins
- Keys
- Tape measures
- Pens or pencils
- Earrings or other jewelry
- Watches

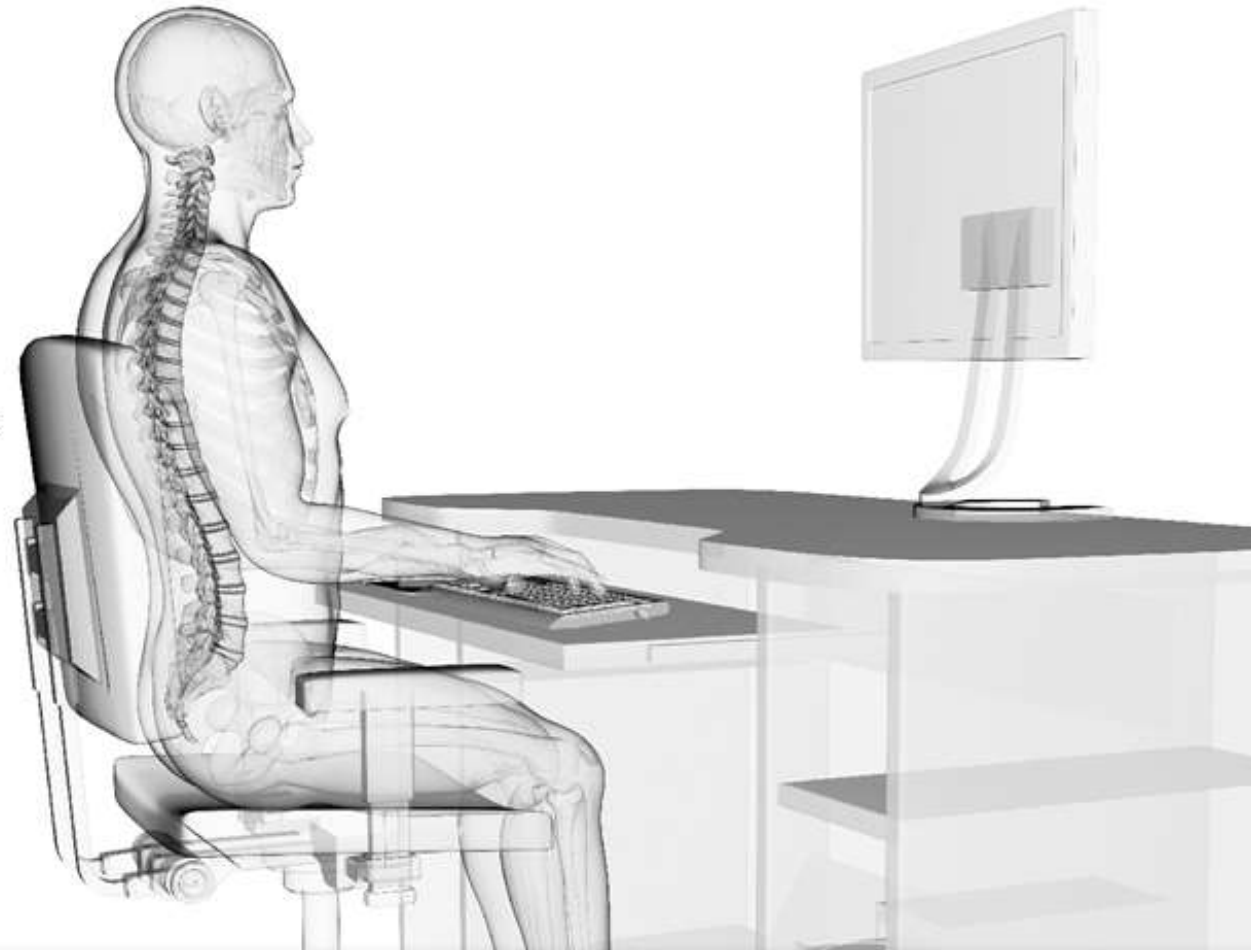
The term “ergonomics” comes from two Greek words:

- *Ergon*, meaning work
- *Nomos*, meaning natural laws

Ergonomics means designing work equipment and tasks to fit the “natural laws” of the human body. Good ergonomic practices can lead to fewer work-related injuries.

Ergonomic best practices are:

- Avoid fixed or awkward postures.
- Avoid lifting without using proper devices or equipment.
- Avoid highly repetitive tasks.
- Avoid forceful exertions.
- Provide support for your limbs.
- Use proper posture and body mechanics when sitting, standing, or lifting.
- Keep tools close to you, to avoid reaching, twisting, and bending.
- Use supportive equipment and ergonomic tools (e.g., wrist supports for keyboards).
- Respond promptly to aches and pains to prevent slight injuries from becoming severe or debilitating.



Healthcare is a high-risk setting for back pain and injury.

Healthcare workers who lift and move patients are at especially high risk for injury.

Injury may be prevented through:

- Proper care and operation of the spine
- Proper posture
- Regular exercise
- Use of lifting devices

On the following screens, let's take a closer look at each of the above.

Work-related injuries lead to:

- Decreased quality of life
- Lost workdays
- Monetary expenses



Back Safety: Proper Care and Operation of the Spine

Take proper care of the spine while:

Standing

- Wear good supportive shoes.
- Stand up straight.
- Keep the knees flexed.
- Use a footrest and alternate feet periodically.

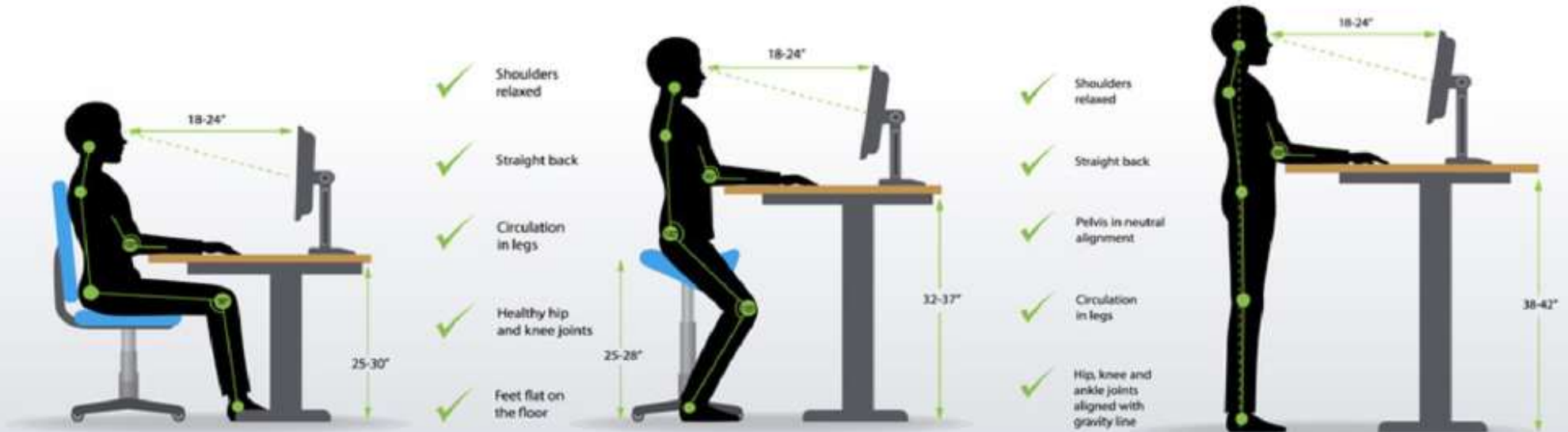
Sitting

- Form 90-degree angles at the knees and the hips.
- When the hands are on a desk or keyboard, also form 90-degree angles at the elbows.
- Keep the wrists straight.

Lifting a static load vertically

- Bend at the hips and knees.
- Maintain good posture while keeping the head up.
- Hold the load close to the body.
- Lift with the muscles of the legs.

HEIGHT-ADJUSTABLE TABLE POSTURE



Back Safety: Proper Posture



The spine has three natural curves:

- Inward at the neck
- Outward at the ribcage
- Inward at the low back

To stand with proper posture, imagine a cord dropped through the center of your head to your feet.

If the spine is properly aligned, the cord should pass through the center of the body, in the right-to-left plane.

In the front-to-back plane of the body, the cord should pass through:

- The ear
- The front of the shoulder
- The center of the hip
- The area behind the kneecap
- The ankle

To practice good posture, imagine the cord attached to the crown of your head. As the cord pulls up:

- It holds the head high.
- It pulls the three natural curves of the spine into alignment.

Back Safety: Regular Exercise

Regular exercise can help prevent back injury by strengthening muscles used for lifting and increasing flexibility.

Exercise should include:

- **Aerobic exercise** at least three times a week.
- **Stretching** every day
- **Strengthening exercise** four to five days a week.

Consult your physical therapist or physician to find appropriate exercises for your back.



Lifting and Transferring Patients

Healthcare staff who lift and transfer patients are repeatedly exposed to the three major risk factors for injury during physical tasks:

- **Awkward Posture** – Manual patient handling often involves awkward postures, for example, bending, reaching, and leaning forward while moving and caring for patients.
- **Force** – This refers to how hard the muscles have to work. A lot of force is required to lift patients, who typically weigh 100 pounds or more.
- **Repetition** – This risk factor refers to performing the same motion or series of motions over and over again. Nurses and aides might perform dozens of lifts and transfers in a single shift and thousands over a career.



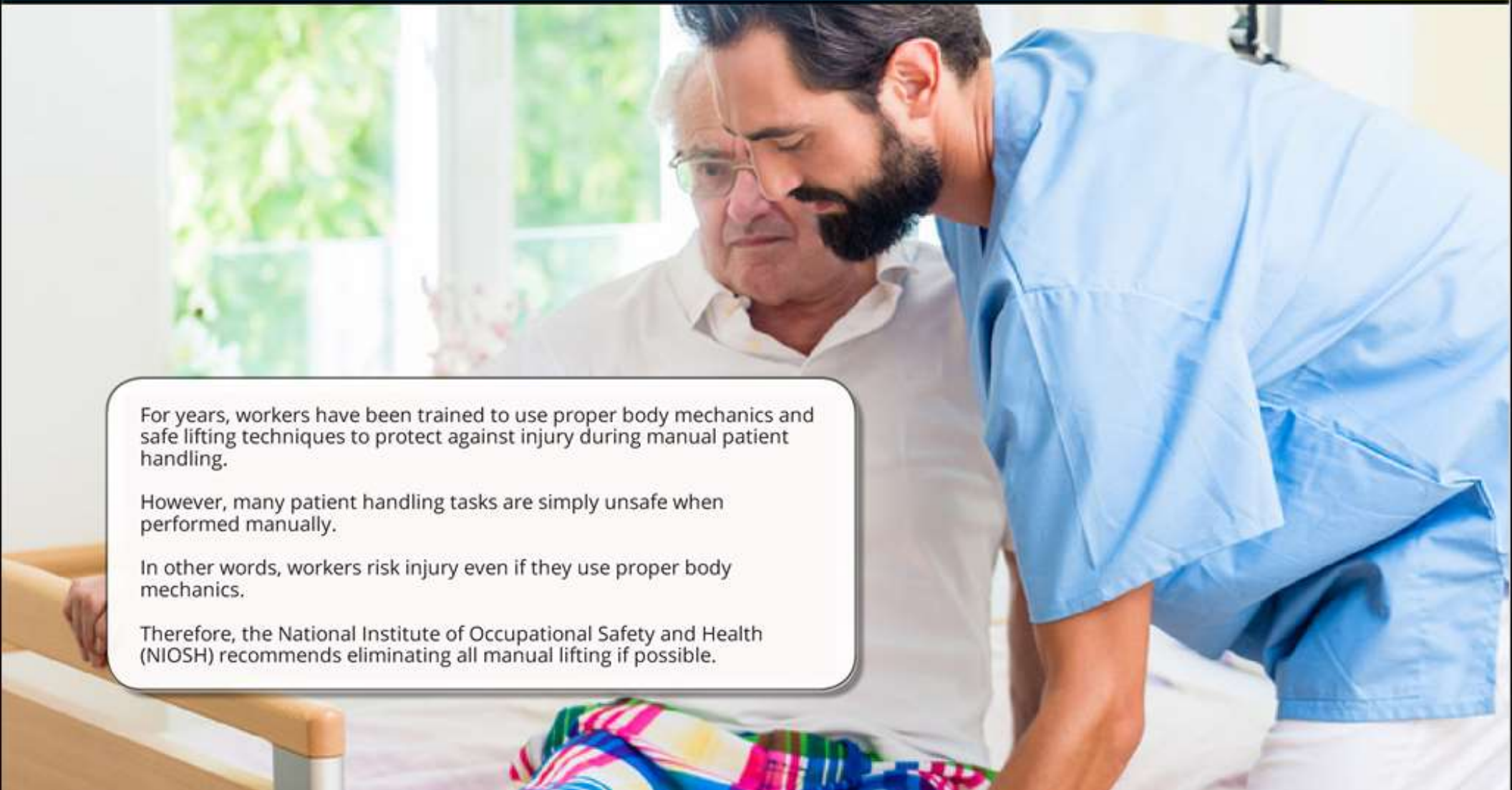
Lifting and Transferring Patients

For years, workers have been trained to use proper body mechanics and safe lifting techniques to protect against injury during manual patient handling.

However, many patient handling tasks are simply unsafe when performed manually.

In other words, workers risk injury even if they use proper body mechanics.

Therefore, the National Institute of Occupational Safety and Health (NIOSH) recommends eliminating all manual lifting if possible.



Lifting and Transferring Patients

Key Assessment Criteria

- Ability of the patient to provide assistance
- Ability of the patient to bear weight
- Upper extremity strength of the patient
- Ability of the patient to cooperate and follow instructions
- Patient height and weight
- Special circumstances likely to affect transfer or repositioning tasks
- Specific physician orders or physical therapy recommendations that relate to transferring or repositioning the patient

To minimize or eliminate manual lifting, use devices to help with patient lifts and transfers.

Available devices include:

- Motorized lifts
- Non-motorized transfer devices such as gait belts, transfer boards, etc.

Before any lift or transfer, the patient should be assessed to determine how to do the transfer safely.

Patient factors (such as the patient's ability to bear weight) and environmental factors should be looked at. Staff can then decide on:

- The best method for the transfer
- What equipment or devices will be needed
- How many staff members will be needed



Slips, trips, and falls in the workplace cause injuries and deaths every year.

To help prevent slips:

- Keep floors clean and dry.
- Increase the friction of floors with abrasive coatings, non-skid strips, or rubber mats.
- Secure rugs with skid-resistant backing.
- Choose slip-resistant shoes with:
 - Soft rubber soles
 - A large amount of surface area in contact with the floor (i.e., no high heels)
 - Patterned soles that increase friction
- Post safety signs around slip hazards (icy sidewalks, wet floors, etc.).

Slips, Trips, and Falls: Preventing Trips



To help prevent trips:

- Keep floors clear and uncluttered.
- Repair uneven flooring or post safety signs.
- Use proper lighting (not too bright and not too dim).

Most falls in the workplace are foot-level falls. In a foot-level fall, a person slips or trips on a walking or standing surface. This results in a short fall.

Slips, Trips, and Falls: Preventing Falls

Falls-to-below carry a higher risk of injury. These include falls on stairs and ladders. Take extra precautions during use.

Staircases:

- Should be kept clean and well lit.
- Should have sturdy handrails on both sides. Use them.
- Take one step at a time.
- Maintain your center of balance when stepping.

Ladders:

- Use a ladder of the height you need.
- Lock the spreader into position before climbing the ladder.
- Climb straight up and do not lean to either side.
- Hold onto the side rails with both hands while climbing up or down.



When conditions are hazardous (icy sidewalks, wet floors), avoid slipping and falling by walking like a duck:

- Keep your feet flat and slightly spread apart.
- Point your toes slightly outward.
- Take slow, short steps.
- Keep your center of balance under you.
- Make wide turns at corners.
- Keep your arms at your sides.
 - This gives additional balance.
 - It keeps your arms available for support if you fall.



Latex Allergy: Screening and Diagnosis

Latex allergy results from hypersensitivity to specific proteins or chemicals in the latex product.

Latex allergy is becoming more and more common. Most reactions to latex are mild, but some can be life threatening.

Screening questions provide good tools for identifying patients at risk for latex allergy. This can help prevent future problems.

Review the questions in the table to the right.

If a patient answers “yes” to one or more of these questions, the patient may be at risk for latex allergy.

A careful and thorough medical history and physical exam should be performed.

For a more definitive diagnosis of latex allergy, tests that measure blood levels of anti-latex antibodies may be ordered.

Latex Allergy Screening Questions

Surgery

Have you ever had an unexplained problem during surgery?

Balloons

Have you ever experienced swelling or wheezing when blowing up balloons?

Food Allergies

Are you allergic to any foods, especially bananas, avocados, or kiwis?

Medical Exam/Condoms

Have you ever developed a rash or discomfort after having a medical exam or using a condom?

Allergy/Skin Problems

Do you have a history of allergy or skin problems?

Anyone who is allergic to latex should avoid latex products.

To help protect a patient from exposure to latex in the healthcare setting:

- Clearly indicate "latex allergy" in the medical record.
- Do not use any latex products, including latex cleaning gloves, in the patient's room.
- Before entering the patient's room, remove latex gloves. Wash hands thoroughly with soap and water.

Healthcare facilities should maintain a latex-free cart or tray for patients with latex allergy or sensitivity, if feasible.

Healthcare workers are at elevated risk for latex allergy. If you are allergic to latex:

- Avoid all contact with latex.
- Wear a medical alert bracelet or necklace.
- Inform your employer.
- Encourage your facility to provide as many latex-free products as possible.
- Use silk or plastic tape instead of adhesive tape.
- Use non-latex gloves only.



Under its Hazard Communication Standard, OSHA requires all employers to develop written hazard communication programs.

To protect workers from exposure to hazardous chemicals, the following groups of people have hazard communication duties:

- Manufacturers
- Employers
- Employees

Note: GHS is the Globally Harmonized System of Classification and Labeling of Chemicals adopted by the United Nations. OSHA's Hazard Communication Standard is aligned with the GHS.

MANUFACTURERS

Manufacturers of hazardous chemicals must:

- Research, create, and distribute a Safety Data Sheet (SDS), which lists the specific hazards of the chemical.
- Label all containers of hazardous materials.

OSHA's Hazard Communication Standard specifies the information that has to be on the safety data sheet but does not require any specific format. OSHA has, however, developed and recommended a 16-section format that includes the information shown here.

Identification	Physical and chemical properties
Hazard(s) identification	Stability and reactivity
Composition	Toxicology information
First-aid measures	Ecological information
Fire-fighting measures	Disposal considerations
Accidental release measures	Transport information
Handling and storage	Regulatory information
Personal protection	Other information

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EMPLOYERS

Employers whose employees work with hazardous chemicals must:

- **Maintain a file of SDSs for all hazardous chemicals used by workers.**
- **Inspect incoming chemicals to verify proper labeling. If a chemical is transferred to an unlabeled container at the facility, the new container must be labeled appropriately.**
- **Train employees in the use of hazardous chemicals.**

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EMPLOYEES

Employees who work with hazardous chemicals must:

- Know which hazardous chemicals are used in their work area.
- Know where SDSs are located on their unit.
- Know how to read an SDS.
- Read all relevant SDSs before starting a job that may require the use of a hazardous chemical.
- Read product labels carefully. Follow all instructions. Heed all warnings.
- Attend all required hazardous chemical training sessions.

	<ul style="list-style-type: none"> • Oxidizers 		<ul style="list-style-type: none"> • Flammables • Self Reactives • Pyrophorics • Self-Heating • Emits Flammable Gas • Organic Peroxides 		<ul style="list-style-type: none"> • Explosives • Self Reactives • Organic Peroxides
	<ul style="list-style-type: none"> • Acute toxicity (severe) 		<ul style="list-style-type: none"> • Corrosives 		<ul style="list-style-type: none"> • Gases Under Pressure
	<ul style="list-style-type: none"> • Carcinogens • Respiratory Sensitizers • Reproductive Toxicity • Target Organ Toxicity • Mutagens • Aspiration Toxicity 		<ul style="list-style-type: none"> • Environmental Toxicity 		<ul style="list-style-type: none"> • Irritant • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract • Hazardous to Ozone Layer

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Workplace violence is any violence committed in a work setting.

To help keep your workplace safe from violence:

- **Recognize** aggressive behavior and warning signs of potential violence.
- **Respond** appropriately to the level of aggressive behavior (see graphic).
- **Report** all unsafe situations immediately.

AGGRESSIVE BEHAVIOR	RESPONSE
Tension	Remain calm. Listen. Acknowledge the person's frustration. Try to resolve the problem.
Disruptiveness	Set clear limits. Remain calm and choose your words carefully, to avoid aggravating the situation. Call security privately if the disruptive behavior continues.
Loss of Control	Remove yourself from danger and get help. Do NOT try to restrain the person yourself.



Special Notes

Organization Notes

Utilize your Emergency Response Guide to identify the appropriate procedures in events.

- **Recognize** aggressive behavior and warning signs of potential violence.
- **Respond** appropriately to the level of aggressive behavior (see graphic).
- **Report** all unsafe situations immediately.

Disruptiveness

Set clear limits. Remain calm and choose your words carefully, to avoid aggravating the situation. Call security privately if the disruptive behavior continues.

Loss of Control

Remove yourself from danger and get help. Do NOT try to restrain the person yourself.

This lesson has focused on guidelines and best practices for ensuring staff and patient safety.

However, mistakes and problems can happen. A breach in safety is referred to as an **incident**.

Common examples of incidents have been mentioned in this lesson:

- Equipment malfunction
- Exposure to radiation
- MRI injury
- Latex allergic reaction
- Back injury
- Slip, trip, or fall
- Exposure to hazardous chemicals
- Workplace violence

All incidents should be reported immediately.

Check with your supervisor if you are not familiar with facility procedures for reporting incidents.



Incidents, Critical Incidents, and Adverse Events



Adverse event is a term used to describe *an undesirable clinical outcome*. The Centers for Medicare and Medicaid Services (CMS) and other leading organizations consider adverse events to be indicators of the level of quality care provided. They are undesirable occurrences in which patient safety *has been or might be* affected.

Examples include:

- Individual and family concerns or complaints
- Medication errors
- Delays in care
- Missed care
- Inadequate monitoring
- Substandard care
- Missed orders

All adverse events should be reported immediately.

In an actual disaster situation, facilities must be prepared to respond to and manage activities related to care, treatment, and services.

These activities, guided by the emergency operations plan, must be pre-established, practiced, and critiqued to constantly upgrade each facility's level of preparedness.

Some of these disaster-situation activities include:

- Scheduling, modifying, or discontinuing some services
- Controlling information regarding individuals
- Making referrals
- Transporting individuals
- Establishing alternate care sites

It is important that you and your coworkers know how to respond in the event of a disaster.





Special Notes

Organization Notes

Identify the location communication and supplies needed in the event of an emergency evacuation. Use your Emergency Response Manual in your facility for direction on location.

Some of these disaster-situation activities include:

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- Controlling information regarding individuals
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- Transporting individuals
- Establishing alternate care sites

It is important that you and your coworkers know how to respond in the event of a disaster.



Emergency Preparedness: Types of Disaster Events



Healthcare organizations must be prepared to respond to a variety of disaster events, both natural and man-made.

A disaster is an event that crosses jurisdictional boundaries, exceeding the independent response capacity of any one organization and/or government.

These disasters and threats include:

- Natural disasters
- Technological disasters
- Industrial disasters
- Major transportation accidents
- Terrorism
- Nuclear, biological, chemical, and radiological events

To prepare, each facility must:

- Identify events that could occur internally or in the area
- Determine the probability that each event will occur
- Develop strategies for dealing with each event

Facilities document their strategies for dealing with disaster in an Emergency Operations Plan (EOP).

A good EOP should address each phase of disaster management:

- Mitigation
- Preparedness
- Response
- Recovery

It also should include plans for:

- Communication
- A chain-of-command, with external links to local emergency response units
- Resources and assets
- Safety and security
- Staff responsibilities
- Utilities
- Clinical activities

If you are unsure about your role in the EOP, ask your supervisor.



Beyond Emergency Operations Plans



A written plan alone is not enough to ensure an effective response.

Staff must be:

- Educated on the procedures in the plan
- Trained and drilled to respond to disaster according to the plan

Make sure that YOU are ready to respond to disaster:

- Know the disaster events that pose a risk for your facility.
- Participate in all emergency response training and drills.

Planning and training are essential. Accrediting organizations require hospitals to consider input from all levels of staff in order to more accurately identify deficiencies and improve staff coordination and compliance.

The United States is at significant risk of terrorist attack. Healthcare entities must be prepared to deal with the unique challenges associated with terrorism, including potentially large numbers of injuries and widespread psychological trauma.

Plans for sheltering in place during terrorist events must be included in your facility's emergency preparedness plan.

The U.S. Department of Homeland Security promotes a national campaign: "If you see something, say something." The campaign encourages staff of all healthcare facilities and others to report any suspicious events or discoveries to authorities immediately.



Lesson 2: Infection Control: Healthcare-Associated Infection: Impact

Healthcare-associated infection (HAI) is an infection that develops after contact with the healthcare system. An HAI:

- Is not present or incubating at the time healthcare services begin
- Presents symptomatically 48 hours or more after admission or provision of care

Infections that develop before an individual enters a healthcare facility are **community-acquired infections**. Evidence of these infections should be documented in the medical record at the time of admission.

HAI can be very costly in terms of:

- Patient life and health
- Healthcare dollars





Special Notes

Organization Notes

Who is your Infection Preventionist?

Each facility has an infection prevention expert who helps staff minimize risk for infections.

admission or provision of care

Infections that develop before an individual enters a healthcare facility are **community-acquired infections**. Evidence of these infections should be documented in the medical record at the time of admission.

HAI can be very costly in terms of:

- Patient life and health
- Healthcare dollars



HAI may be caused by bacteria, viruses, fungi, or parasites.

These infectious organisms may come from:

- Environmental sources (dust, etc.)
- Patients
- Staff members
- Hospital visitors

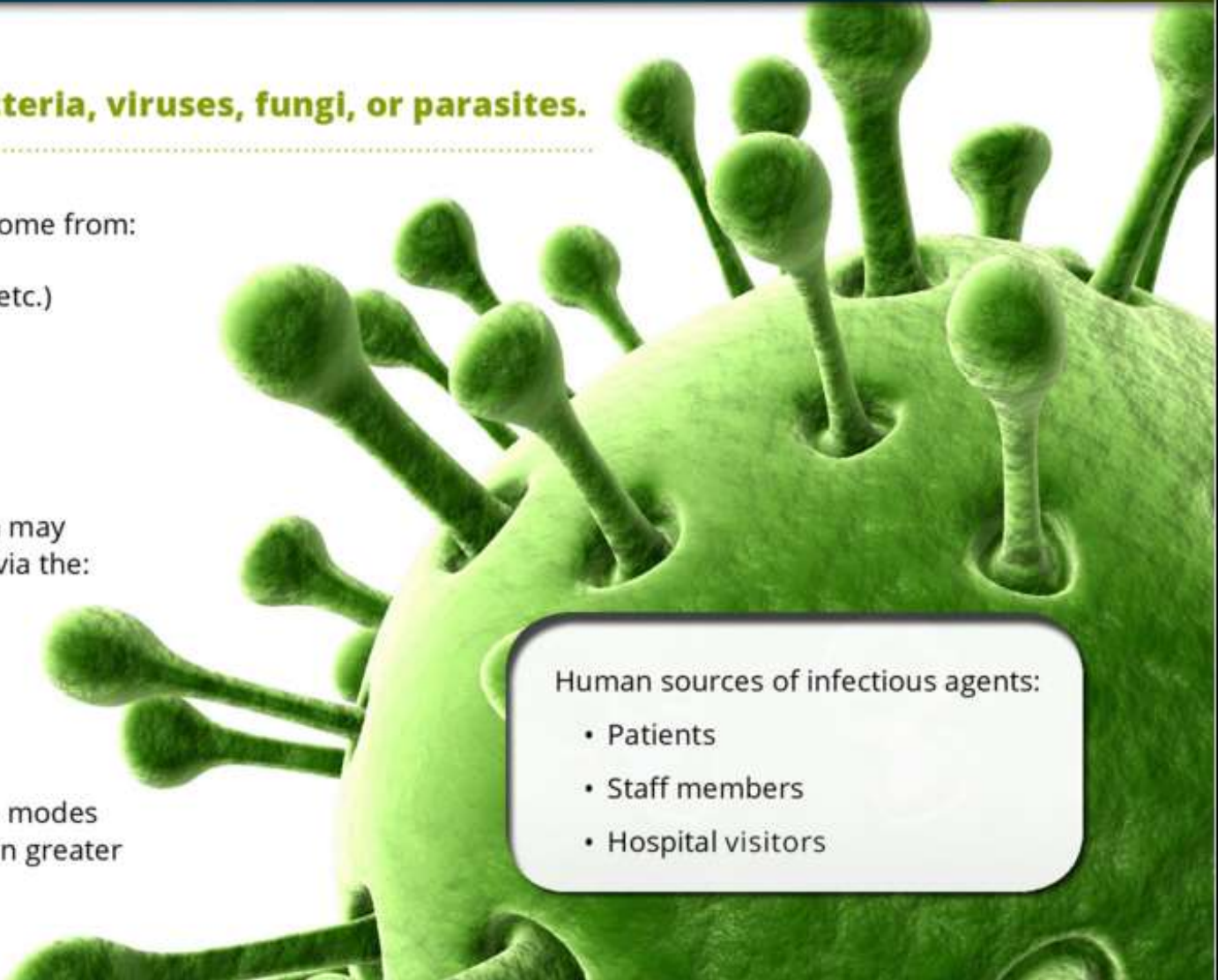
Depending on the agent, infection may be transmitted person-to-person via the:

- Contact route
- Droplet route
- Airborne route

Infection control for each of these modes of transmission will be discussed in greater detail later in the lesson.

Human sources of infectious agents:

- Patients
- Staff members
- Hospital visitors



HAI: Prevention



Preventing HAI is an important focus of the Centers for Disease Control and Prevention (CDC) and healthcare accrediting organizations.

The U.S. Department of Health and Human Services (HHS) has identified the reduction of HAI as an **Agency Priority Goal**.

HHS is committed to reducing the national rate of HAI by demonstrating significant, quantitative, and measurable reductions in:

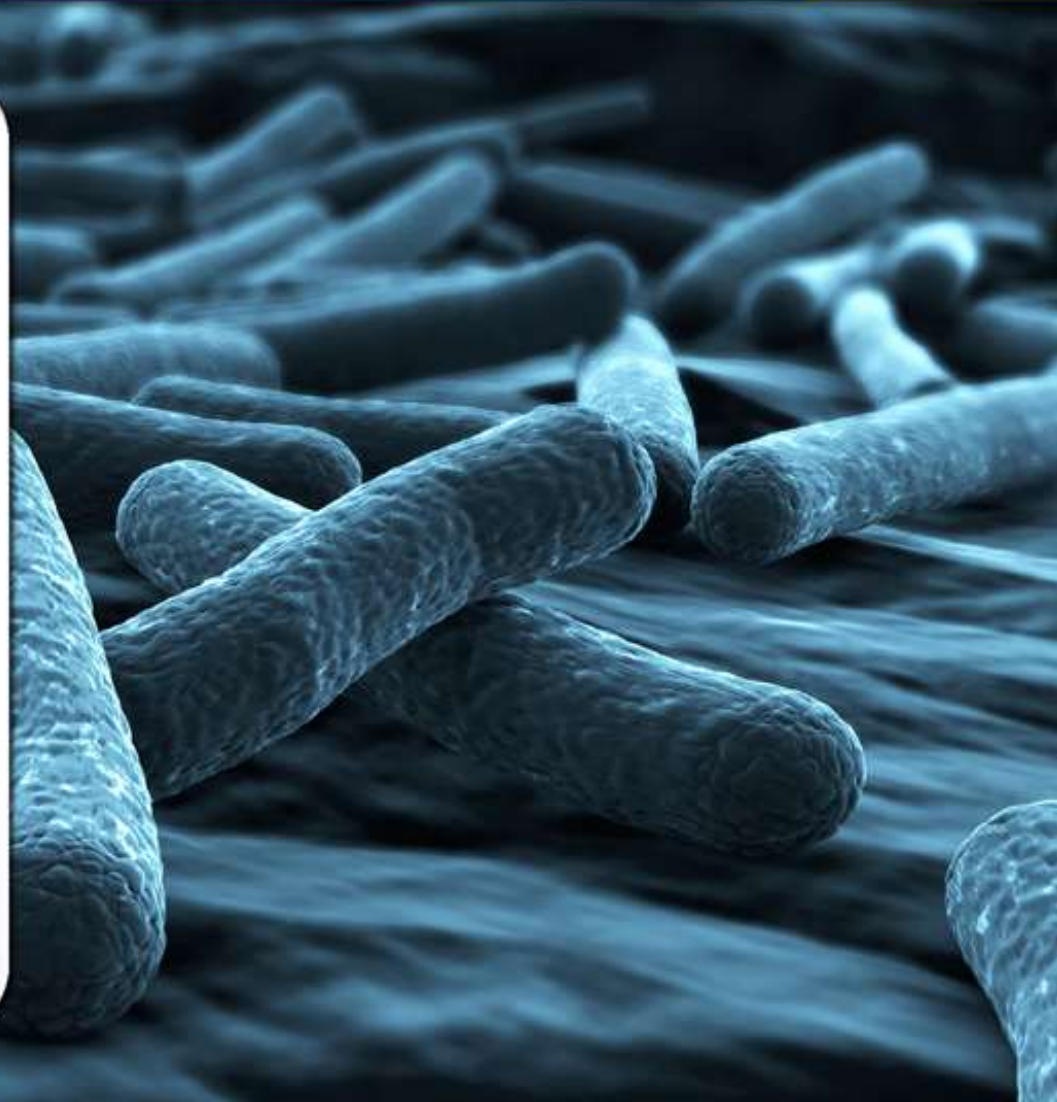
- CAUTI (catheter-associated urinary tract infection)
- CLABSI (central line-associated bloodstream infection)
- CDI (Clostridioides difficile infection)
- MRSA (methicillin-resistant Staphylococcus aureus)
- SSI (surgical site infections)

Regulatory organizations require accredited hospitals to implement evidence-based practices to prevent HAI.

Best practices for preventing HAI are related to:

- Hand hygiene
- Environmental hygiene
- Invasive procedures
- Antibiotic use
- Bloodborne pathogens
- Airborne Precautions
- Contact Precautions
- Droplet Precautions
- Personal protective equipment (PPE)
- Personal responsibility

Let's take a closer look at each.





Special Notes

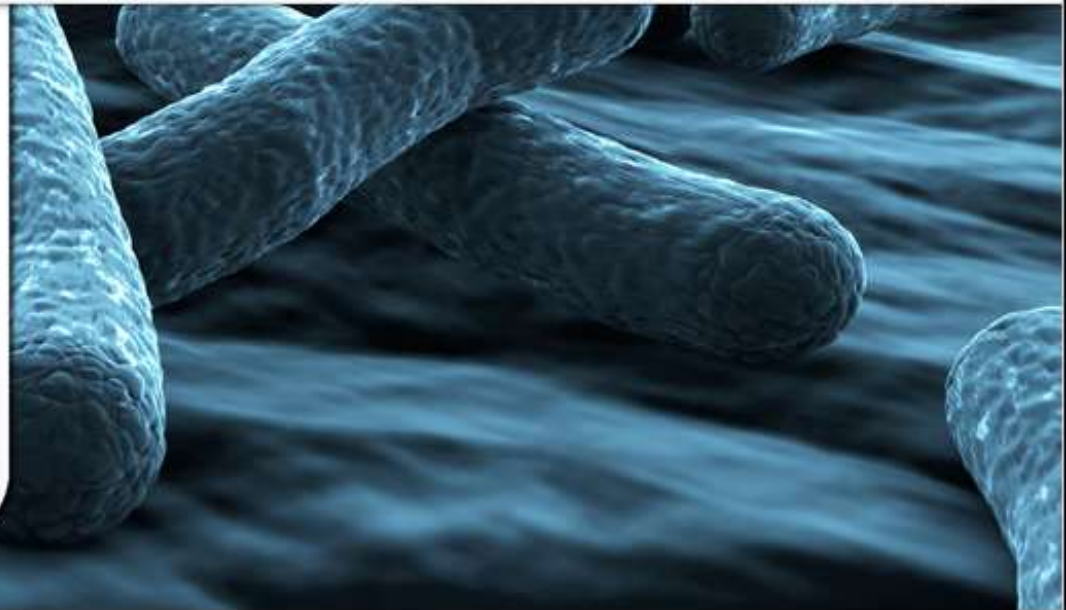
Organization Notes

In addition to these isolation precautions Aspirus uses, **Enteric Contact Precautions**.

Take note that Covid-19 is a vaccine preventable disease. As a healthcare worker you can impact infection control in your facility.

- Bloodborne pathogens
- Airborne Precautions
- Contact Precautions
- Droplet Precautions
- Personal protective equipment (PPE)
- Personal responsibility

Let's take a closer look at each.



The single most important factor for preventing the spread of infection is proper hand hygiene.

Hands should be washed or decontaminated **before** and **after** each direct patient contact. Hand hygiene also should occur after gloves are removed.

Current guidelines from the CDC recommend the use of:

- Soap and water for washing visibly soiled hands
- Alcohol-based hand rubs for routine decontamination of hands between patient contacts

Follow CDC or World Health Organization (WHO) guidelines for hand hygiene.





Special Notes

Organization Notes

Use soap and water to perform hand hygiene for Enteric Contact Isolation Precautions.

Whenever crossing the threshold of a doorway where patient care is occurring, hand hygiene must be performed on both entry and exit.

occur after gloves are removed.

Current guidelines from the CDC recommend the use of:

- Soap and water for washing visibly soiled hands
- Alcohol-based hand rubs for routine decontamination of hands between patient contacts

Follow CDC or World Health Organization (WHO) guidelines for hand hygiene.



*Do you know how to appropriately use **soap and water** or an **alcohol rub** for hand hygiene?*

Soap and water

When using soap and water to wash hands:

1. Wet hands with warm water. Use warm, but not hot, water. Hot water can contribute to skin irritation. Wetting the hands before applying soap reduces the likelihood of skin irritation.
2. Apply soap. Use enough soap to give a good lather.
3. Rub hands together vigorously for at least 15-20 seconds. You can use the "ABC" song and "Happy Birthday" to estimate 20 seconds.
4. Lather all surfaces of the hands and fingers. Do this away from the running water so that you do not wash the lather away. Remember to scrub between your fingers and under your nails.
5. Rinse hands with water. Keep arms angled downward in the sink, so that water from your hands goes down the sink, not down your elbows.
6. Dry with a disposable towel.
7. Use the towel to turn off the faucet.
8. Dispose of the towel in an appropriate bin.

Time spent washing is important, but it is *most* important to focus on your **technique**.

*Do you know how to appropriately use **soap and water** or an **alcohol rub** for hand hygiene?*

Alcohol rub

When using an alcohol rub:

1. Apply the rub to the palm of one hand. Use the volume of product recommended by the manufacturer and enough to wet all surfaces of the hands.
2. Rub over all surfaces of the hands and fingers.
3. Rub hands together until they are dry*.

Do not wash hands after using an alcohol rub. This step is not necessary, nor is it recommended.

*Note: Rubbing the hands together until they are dry ensures that the flammable alcohol in the product has evaporated and is no longer a fire hazard.

Environmental hygiene can also help prevent HAI.

Best practices for environmental hygiene are:

- Maintain a visibly clean environment (no visible dust or soiling).
- Clean and disinfect high-touch surfaces frequently for individuals with MDROs or on isolation in an inpatient setting. Vancomycin-resistant enterococci (VRE) can live on hard surfaces for up to seven days!
- Use dedicated non-critical equipment for individuals on isolation.
- Clean, disinfect, or sterilize medical equipment after each use.
- Safely dispose of clinical waste.
- Handle and launder used and infected linens safely and effectively.
- Follow appropriate guidelines for kitchen and food hygiene.
- Report pests to environmental services immediately.





Special Notes

Organization Notes

Label Requirements

- Infectious Liquid - red bag with biohazard label
- Sharps containers - biohazard label
- Blood specimens - biohazard label on storage bag/containers
- Refrigerators, coolers where blood or other potentially infectious material (OPIM) is stored or transported - biohazard label

Setting. vancomycin-resistant enterococci (VRE) can live on hard surfaces for up to seven days!

- Use dedicated non-critical equipment for individuals on isolation.
- Clean, disinfect, or sterilize medical equipment after each use.
- Safely dispose of clinical waste.
- Handle and launder used and infected linens safely and effectively.
- Follow appropriate guidelines for kitchen and food hygiene.
- Report pests to environmental services immediately.



Invasive Procedures



Many HAI are related to invasive procedures, especially:

- Catheterization
- IV line placement

Best practices:

- High-risk procedures such as catheterization should be performed only when necessary by trained staff.
- Follow Healthcare Infection Control Practices Advisory Committee (HICPAC) guidelines for the prevention of infections.
- Catheter dwell time should be monitored, and catheters removed as soon as possible.
- Use sterile products only. Do not use products with damaged packaging or that are beyond their expiration date.
- Practice aseptic technique during preparation, insertion, and care.
- Secure catheters to prevent irritation, tension, and migration.



Special Notes

Organization Notes

Here are some additional Best Practices:

- Identify containers or bags that have contaminated items in them
- Use the standard BIOHAZARD label
- Use tongs or forceps to pick up contaminated or broken glass or sharps



performed only when necessary by trained staff.

- Follow Healthcare Infection Control Practices Advisory Committee (HICPAC) guidelines for the prevention of infections.
- Catheter dwell time should be monitored, and catheters removed as soon as possible.
- Use sterile products only. Do not use products with damaged packaging or that are beyond their expiration date.
- Practice aseptic technique during preparation, insertion, and care.
- Secure catheters to prevent irritation, tension, and migration.

Antibiotic Use: Antibiotic Resistance

Bacteria and other pathogens are very adaptable. They have the ability to change genetically to resist the effects of the medications used to treat them. Antibiotic resistance is a significant global health problem.

The more antibiotics are used, the more common resistant strains of bacteria become.

Clinically important examples are:

- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant enterococci (VRE)
- Drug-resistant *Streptococcus pneumoniae* (DRSP)
- Multidrug-resistant *Mycobacterium tuberculosis* (MDR-TB)
- Carbapenem-resistant Enterobacteriaceae (CRE)



When an infection is resistant to the antibiotic of choice, other antibiotics must be used instead. These second-choice drugs are typically:

- Less effective against the bacteria
- More toxic to the patient
- More expensive

Patients with resistant infections tend to have:

- Lengthier illness
- Higher medical bills
- Greater risk of death

Antibiotic-resistant strains contribute significantly to HAI.

Antibiotic-resistant infections cost at least twice as much as antibiotic-susceptible infections to treat.

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- Preventing infection
- Diagnosing and treating infection effectively
- Using antibiotics prudently
- Preventing infection transmission

PREVENTING INFECTION

One of the best techniques we have to prevent infection is vaccination.

Assess individuals' vaccination status to make sure they are current.

Verify and ensure healthcare worker vaccination.

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- **Preventing infection**
- Diagnosing and treating infection effectively
- Using antibiotics prudently
- Preventing infection transmission

DIAGNOSING AND TREATING INFECTION EFFECTIVELY

- Ensure appropriate diagnostic testing (e.g., obtaining cultures) for specific infections before antibiotics are given. Start drugs promptly. Effective diagnosis means identifying the cause of infection so that the right treatment may be given.
- Effective treatment includes using **specific** antibiotics when antibiotics are necessary. A specific antibiotic targets the identified infectious agent.
- Use of broad-spectrum antibiotics or multiple antibiotics should be avoided.

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- Preventing infection
- **Diagnosing and treating infection effectively**
- Using antibiotics prudently
- Preventing infection transmission

USING ANTIBIOTICS PRUDENTLY

- **Make sure indication, dose, and expected duration are specified in the individual's record.**
- **Reassess within 48 hours and adjust treatment if necessary or stop it if indicated.**

An important part of using antibiotics prudently is NOT giving in to individual demands for antibiotics for viral illnesses (colds, flu, etc.). Educate patients accordingly.

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- Preventing infection
- Diagnosing and treating infection effectively
- **Using antibiotics prudently**
- Preventing infection transmission

PREVENTING INFECTION TRANSMISSION

- Remember, the single best method for preventing spread of infection is proper hand hygiene.
- Appropriate isolation precautions should also be used to prevent spread of infection in the healthcare setting.
- Educate and monitor individuals on infection prevention strategies.

Healthcare professionals must take an active role in preventing the spread of antibiotic resistance.

Strategies include:

- Preventing infection
- Diagnosing and treating infection effectively
- Using antibiotics prudently
- **Preventing infection transmission**

Bloodborne diseases are spread from person to person as a result of unprotected exposure to:

- Infected blood
- Other body fluids
- Secretions and excretions (except sweat)
- Non-intact skin
- Mucous membranes

Important bloodborne diseases include:

- HIV infection/AIDS
- Hepatitis B
- Hepatitis C

Other potentially infectious materials (OPIM) include:

- Saliva (during dental procedures)
- Semen
- Vaginal secretions
- Pleural fluid
- Cerebrospinal fluid
- Amniotic fluid
- Peritoneal fluid
- Pericardial fluid
- Any fluid that is contaminated with blood
- Any fluid that is not easily identifiable



Special Notes

Organization Notes

In many cases, individuals infected with Hepatitis B, Hepatitis C, or HIV have few or no symptoms and may pass the disease on to others without even knowing it. As healthcare workers, we are at greatest risk for contracting Hepatitis B in the event of exposure.

Hepatitis B vaccine – free of charge

- Immunity lasts a lifetime
- No recommendations for a routine booster
- If high risk exposure to patient with HBV, booster may be recommended
 - Not recommended if health care worker has documented immunity to HBV

- Mucous membranes

Important bloodborne diseases include:

- HIV infection/AIDS
- Hepatitis B
- Hepatitis C

- Pleural fluid
- Cerebrospinal fluid
- Amniotic fluid
- Peritoneal fluid
- Pericardial fluid
- Any fluid that is contaminated with blood
- Any fluid that is not easily identifiable

Bloodborne Pathogens: Bloodborne Pathogens Standard



The Bloodborne Pathogens Standard (BPS) helps protect workers from exposure to HIV and other bloodborne pathogens.

The Bloodborne Pathogens Standard:

- Covers any worker who might come in contact with blood or other potentially infectious materials (OPIM) as part of his or her job
- Requires employers to take certain steps to help protect these workers

One of the key parts of the Bloodborne Pathogens Standard is to require the use of Standard Precautions.



Special Notes

Organization Notes

Remember WIN

- **WASH** the exposed area immediately with soap and water
- **IDENTIFY** the source of the exposure
- **NOTIFY** your supervisor immediately

Quick action could reduce your chances of contracting a disease.

- Covers any worker who might come in contact with blood or other potentially infectious materials (OPIM) as part of his or her job
- Requires employers to take certain steps to help protect these workers

One of the key parts of the Bloodborne Pathogens Standard is to require the use of Standard Precautions.

Bloodborne Pathogens: Standard Precautions

Standard Precautions should be used in the care of **all** patients, regardless of their diagnosis.

These precautions apply to patient:

- Blood
- Body fluids
- Secretions and excretions (except sweat)
- Non-intact skin
- Mucous membranes

The major provisions of Standard Precautions are summarized in table form on the next screen.

Note: In the table, the term "body fluids" is used to indicate all patient fluids to which Standard Precautions apply (i.e., blood, body fluids, secretions, excretions).



Bloodborne Pathogens: Standard Precautions

Standard Precautions are to be used in the care of *all* patients—
whether or not you think or know the patient has a bloodborne disease.

Handwashing

Wash or decontaminate hands:

- Before and after each work shift
- Before and after physical contact with each patient
- Before donning sterile gloves when inserting a central intravascular catheter
- Before inserting indwelling urinary catheters, peripheral vascular catheters, or other invasive devices that do not require a surgical procedure
- When moving from a contaminated-body site to a clean-body site during patient care
- After handling contaminated items such as bedpans, dressings, or urinary drainage bags
- After removing gloves
- After using the toilet, blowing the nose, covering a sneeze, etc.
- Whenever hands become visibly dirty
- Before eating, drinking, or handling food

Gloves

- Wear gloves when touching blood, other body fluids, or contaminated items.
- Put on clean gloves before touching mucous membranes or non-intact skin.
- Change gloves between “dirty” and “clean” tasks on the same patient.
- Remove gloves promptly after use (before going to another patient). Perform hand hygiene immediately.

Mask, Eye Protection, Face Shield, Gown

- Use personal protective equipment (PPE) as necessary to protect against splashes or sprays of blood or other body fluids.
- Use masks for catheter insertion or injection into spinal or epidural spaces.

Respiratory Hygiene/ Cough Etiquette

- Cover your mouth and nose with a tissue when coughing or sneezing.
- Use the nearest waste receptacle to dispose of the tissue after use.
- Perform hand hygiene.
- Offer masks to persons who are coughing.
- Use Airborne and Droplet Precautions appropriately.



Special Notes

Organization Notes

Perform hand hygiene:

- Upon crossing the threshold when entering or exiting patient room
- Before donning clean or sterile gloves
- After handling objects in the immediate vicinity of a patient

- Whenever hands become visibly dirty
- Before eating, drinking, or handling food

Gloves

- Wear gloves when touching blood, other body fluids, or contaminated items.
- Put on clean gloves before touching mucous membranes or non-intact skin.
- Change gloves between "dirty" and "clean" tasks on the same patient.
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- Offer masks to persons who are coughing.
- Use Airborne and Droplet Precautions appropriately.

Bloodborne Pathogens: Standard Precautions

Standard Precautions are to be used in the care of *all* patients—
whether or not you think or know the patient has a bloodborne disease.

Patient-Care Equipment and Linens

- Equipment and linens soiled with blood or other body fluids should be handled in a way that avoids cross-contamination.
- Clean and reprocess reusable equipment appropriately before use on another patient.
- Discard single-use items appropriately.

Environmental Control

- Environmental surfaces should be cleaned and disinfected on a routine basis.

Safe Injection Practices

- Use sharps (needles, scalpels, etc.) safely. Do not re-cap needles.
- Properly dispose of sharps immediately.
- Never administer medications from the same syringe to more than one patient, even if the needle is changed.
- Do not enter a vial with a used syringe or needle.
- Single-use vials should never be used for more than one patient.
- Multi-use vials should be assigned to a single patient whenever possible.
- Bags or bottles of intravenous solution should not be used as a common source of supply for more than one patient.
- Maintain sterility during the preparation and administration of injected medications.

Patient Placement

- Identify infections and contain the infection.
- Patients who contaminate the environment should be placed in private rooms.



Special Notes

Organization Notes

Exposure Control Plans outline methods to prevent or minimize occupational exposure to infectious materials. Business units and some departments have separate exposure plans. Identify Exposure Control Plan(s) for your location(s). **Each employee is responsible for knowing the information in the respective plans. See PolicyStat or other policy portal to find your plan.**

- Standard and Transmission Precautions
- Engineering controls
- Work practice controls
- Hepatitis B vaccination
- Post-exposure management
- Training

Safe Injection Practices

- Use sharps (needles, scalpels, etc.) safely. Do not re-cap needles.
- Properly dispose of sharps immediately.
- Never administer medications from the same syringe to more than one patient, even if the needle is changed.
- Do not enter a vial with a used syringe or needle.
- Single-use vials should never be used for more than one patient.
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- Maintain sterility during the preparation and administration of injected medications.

Patient Placement

- Identify infections and contain the infection.
- Patients who contaminate the environment should be placed in private rooms.

Bloodborne Pathogens: Needlestick Prevention

According to the CDC, unsafe injection practices put individuals and healthcare providers at risk of infectious and non-infectious adverse events. In addition, they have been associated with a wide variety of procedures and settings. This harm is preventable.

Safe injection practices and sharps management include:

- Use aseptic technique to avoid contamination of sterile injection equipment: Clean the vial stopper *and the injection site* and let it dry before injecting a sterile needle.
- Do not administer medications from a syringe to multiple patients, even if the needle or cannula on the syringe is changed.
- Never use a single-use item on another patient.
- Single-use vials should never be used for more than one patient.
- Multi-use vials should be assigned to a single patient whenever possible.
- Bags or bottles of intravenous solution should not be used as a common source of supply for more than one patient.





Special Notes

Organization Notes

Staff are accountable for ensuring sharp devices are in good working order and using them appropriately.

Do not remove the needle from used tube holder after phlebotomy.

If a multi-use vial cannot be assigned to a single patient, then it can only be accessed in a designated medication station outside of the patient room.

NEVER use a single use item on multiple patients.

and let it dry before injecting a sterile needle.

- Do not administer medications from a syringe to multiple patients, even if the needle or cannula on the syringe is changed.
- Never use a single-use item on another patient.
- Single-use vials should never be used for more than one patient.
- Multi-use vials should be assigned to a single patient whenever possible.
- Bags or bottles of intravenous solution should not be used as a common source of supply for more than one patient.



Bloodborne Pathogens: Safe Injection Practices and Sharps Management



The Bloodborne Pathogens Standard has rules to protect against sharps injury:

- Facilities must adopt the use of safer needle devices.
- Contaminated needles and other contaminated sharps should not be bent or recapped.
- Shearing or breaking of contaminated needles is prohibited.
- Contaminated sharps should be placed in appropriate containers immediately after use. These containers must be puncture-resistant, appropriately labeled or color-coded, and leak-proof on the sides and bottom.
- Account for sharps before you clean up, to avoid sharps that may be hidden under drapes and gauzes.



Special Notes

Organization Notes

Replace sharps container when 2/3 full.



- Shearing or breaking of contaminated needles is prohibited.
- Contaminated sharps should be placed in appropriate containers immediately after use. These containers must be puncture-resistant, appropriately labeled or color-coded, and leak-proof on the sides and bottom.
- Account for sharps before you clean up, to avoid sharps that may be hidden under drapes and gauzes.

Airborne diseases are transmitted from person to person via infectious droplet nuclei.

These tiny particles:

- Are produced when an infected person sneezes, coughs, or talks
- Can remain suspended in the air for long periods of time
- Can travel long distances on air currents

Patients with diagnosed airborne disease require isolation.

Patients who appear to have an airborne disease also should be isolated until a certain diagnosis can be made.





Special Notes

Organization Notes

Assessment/screening and early intervention with PPE can help prevent transmission of infection.

coughs, or talks

- Can remain suspended in the air for long periods of time
- Can travel long distances on air currents

Patients with diagnosed airborne disease require isolation.

Patients who appear to have an airborne disease also should be isolated until a certain diagnosis can be made.



Airborne Precautions: Diseases

Important airborne (or potentially airborne) diseases include:

- Chickenpox and shingles
- Measles
- Tuberculosis (TB)
- SARS-CoV-2 (COVID-19)
- Smallpox

The CDC recommends any hospital staff, visitors, and anyone in the hospital during the COVID-19 global pandemic to wear a surgical mask and not an N95. This is to protect others from you if you are an asymptomatic carrier.



Airborne Precautions: Summary Table

Airborne Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected airborne-transmitted disease.

Patient Placement

The patient is isolated in a private room with a special air-handling and ventilation system called an airborne infection isolation room (AIIR). If a private room is not available, patients are **cohorted**. The door to the isolation room will be kept closed.

Respiratory Protection

Healthcare staff must wear personal respirators whenever they enter an airborne isolation room. N95 respirators are most commonly used. Staff must be fit-tested (properly fitted) to prevent air leaks and inhalation of the tiny airborne particles when performing direct patient care.

Patient Transport

Patient transport should be limited as much as possible. During necessary transport, the patient should wear a surgical mask.

* Clinical staff should keep current with the scientific literature about disease transmission and changing public health recommendations. You should be familiar with the policies at your hospital.



Special Notes

Organization Notes

Airborne Isolation Rooms are known as negative pressure rooms.

Clinics or areas without negative pressure will wear appropriate PPE and keep the room closed down for specified time. Refer to facility policy.

Employees who cannot be fit for an N95 may be trained to use a PAPR/CAPR.

Respiratory Protection

isolation room. N95 respirators are most commonly used. Staff must be fit-tested (properly fitted) to prevent air leaks and inhalation of the tiny airborne particles when performing direct patient care.

Patient Transport

Patient transport should be limited as much as possible. During necessary transport, the patient should wear a surgical mask.

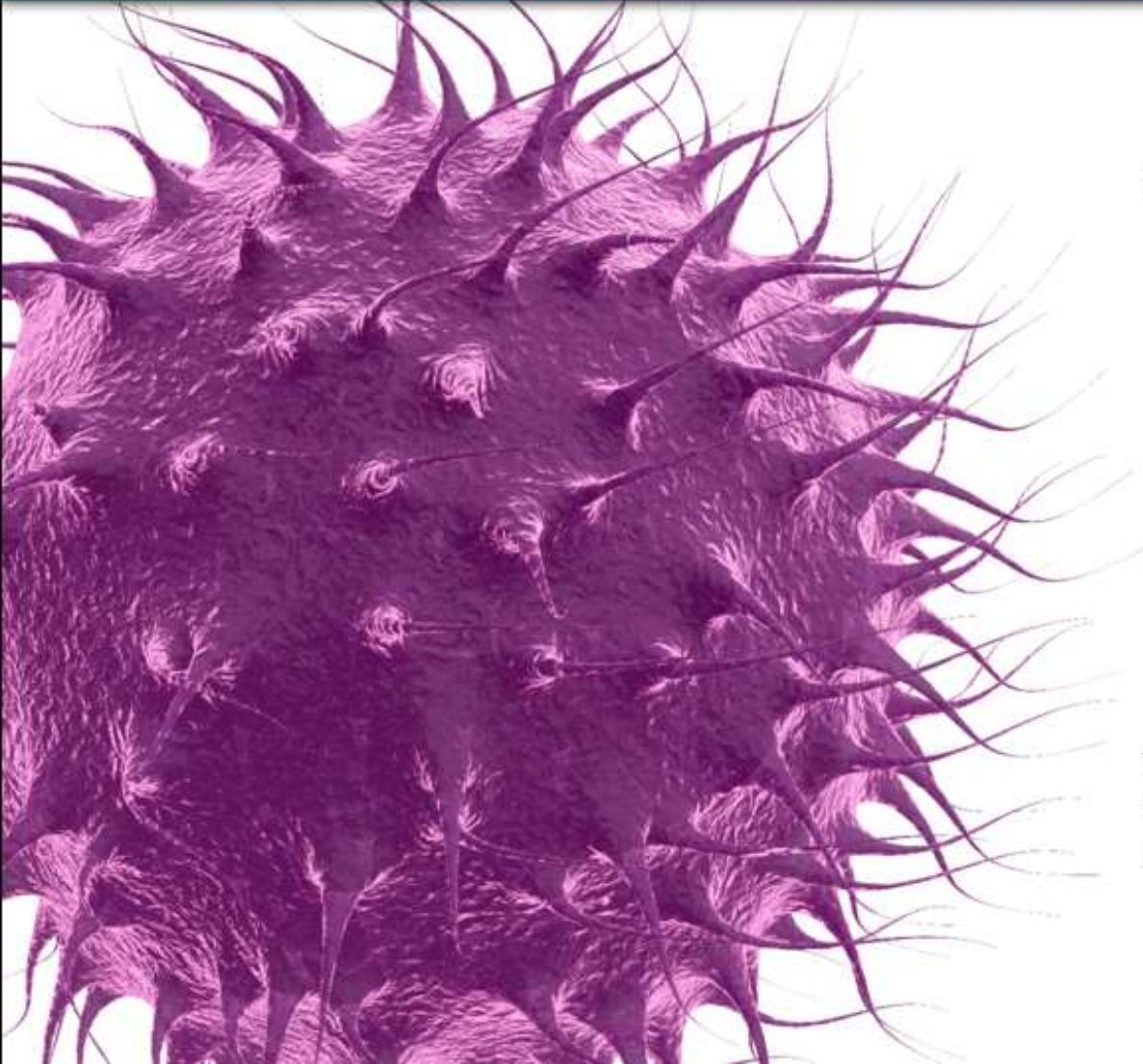
* Clinical staff should keep current with the scientific literature about disease transmission and changing public health recommendations. You should be familiar with the policies at your hospital.

Contact transmission of disease occurs via direct or indirect person-to-person contact.

This form of transmission is the most important and common cause of HAI.



Contact Precautions: Diseases



Examples of contact diseases are:

- MRSA
- Hepatitis A
- Respiratory syncytial virus
- **Impetigo**
- **Conjunctivitis**
- Viral hemorrhagic infections
- Many others

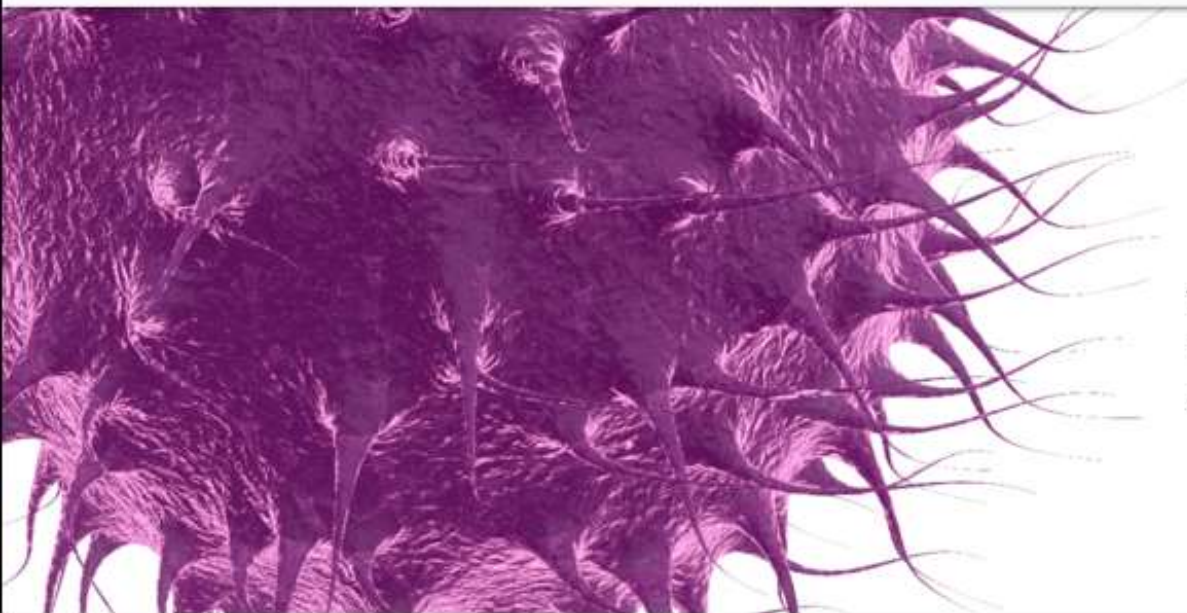
To prevent contact transmission of diseases in the healthcare setting, Contact Precautions are used, as shown in the table on the next screen.



Special Notes

Organization Notes

Shingles, when non-disseminated (does not cross more than one dermatome) is contact precautions only. If Shingles is disseminated (over more than one dermatome) then implement contact and airborne precautions.



- **Conjunctivitis**
- Viral hemorrhagic infections
- Many others

To prevent contact transmission of diseases in the healthcare setting, Contact Precautions are used, as shown in the table on the next screen.

Contact Precautions: Summary Table

Contact Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected contact-transmitted disease.

Patient Placement	Patients on Contact Precautions are isolated in private rooms or cohorted.
PPE	Healthcare staff must don a gown and gloves when entering the room of a patient on Contact Precautions.
Hand Antisepsis	Hands should be decontaminated immediately after removing gloves.
Patient Transport	Patient transport should be limited as much as possible.
Patient Care Equipment	Non-critical equipment should be dedicated to a single patient or cohort on Contact Precautions. If this is not possible, equipment should be cleaned and disinfected between patients.

Droplet transmission happens via large respiratory droplets.

These droplets:

- Are generated during coughing, sneezing, talking, etc.
- Travel a short distance through the air (up to three feet)

Droplets may land on the mucous membranes of a nearby person's eyes, nose, or mouth. Droplets may also contaminate surfaces.

Disease transmission then may occur.



Droplet Precautions: Diseases

Examples of droplet diseases are:

- Mumps
- Rubella
- Influenza
- Many others

To prevent the transmission of droplet diseases in the healthcare setting, Droplet Precautions are used, as shown in the table on the next screen.

Droplet Precautions: Recommendations

Droplet Precautions are to be used, along with Standard Precautions, in the care of all patients with a diagnosed or suspected droplet-transmitted disease.

Patient Placement	Patients on Droplet Precautions should be isolated in private rooms or cohorted. If a private room is not available and cohorting is not possible, patients should be placed at least three feet away from the nearest other patient or visitor.
PPE	Healthcare staff should don gloves and a mask when entering the room of a patient on Droplet Precautions. A gown and eye protection also may be needed.
Hand Antisepsis	Hands should be decontaminated immediately after removing gloves.
Patient Transport	Patient transport should be limited as much as possible.

OSHA regulations require employers to provide employees with appropriate PPE and to ensure that PPE is disposed of properly.

Personal protective equipment (PPE) is an important component of infection control.

PPE helps to prevent the spread of microorganisms both:

- From patient to healthcare worker
- From healthcare worker to patient

Review the screens describing Standard Precautions, Airborne Precautions, Contact Precautions, and Droplet Precautions for appropriate use of key items of PPE.

Make sure you know how to properly put on and take off PPE. The CDC provides a guide for all healthcare workers on the use of PPE. To access the CDC guide, visit the CDC website.



Personal Responsibility



As a healthcare worker, you have personal responsibilities for infection control in your facility. You are responsible for:

- Maintaining immunity to vaccine-preventable diseases such as:
 - Hepatitis B
 - Measles
 - Varicella (chickenpox)
 - Rubella
 - Mumps
 - Influenza
- Reporting all unprotected exposures, such as accidental needlesticks
- Participating in education related to infection control
- Being aware of the possibilities for transmission of infection
- Following the CDC/HICPAC recommendations for infection control
- Staying home from work when sick