



Infection Prevention

This course is part of a series of regulatory requirements for New Caregiver Orientation

- ≡ Introduction
- ≡ Standard Precautions
- ≡ Hand Hygiene
- ≡ Personal Protective Equipment (PPE)
- ≡ Transmission-Based Precautions (Isolation)
- ≡ Multi-Drug Resistant Organisms
- ≡ Tuberculosis (TB)
- ≡ Respiratory Hygiene/Cough Etiquette for Patients and Caregivers
- ≡ Cleaning and Disinfection
- ≡ Bloodborne Pathogens

☰ Sharps Safety

☰ Injection Safety

☰ Biohazardous Waste and Spills

☰ Important Caregiver Health Considerations

Introduction

Welcome!

Infection Prevention is critical for the safety of both our patients and caregivers. This module will provide you with the information you need to prevent the spread of infection.



Some lessons have optional audio narration available. Click on the play button in the tan colored banner, then scroll down to follow along.



01:01

Upon completion of this course, learners will be able to:

- Know when to use hand hygiene
- Don and doff Personal Protective Equipment (PPE) correctly
- Incorporate Infection Prevention practices to reduce the spread of infection
- Know how to look for the different isolation precautions
- Know when to use Standard Precautions
- Perform respiratory hygiene/cough etiquette
- Understand how to prevent bloodborne pathogen exposure
- Recognize how to appropriately handle, clean, and disinfect medical equipment, instruments, and devices
- Prevent and control the spread of Multi-Drug Resistant Organisms (MDROs)
- Handle sharps safely

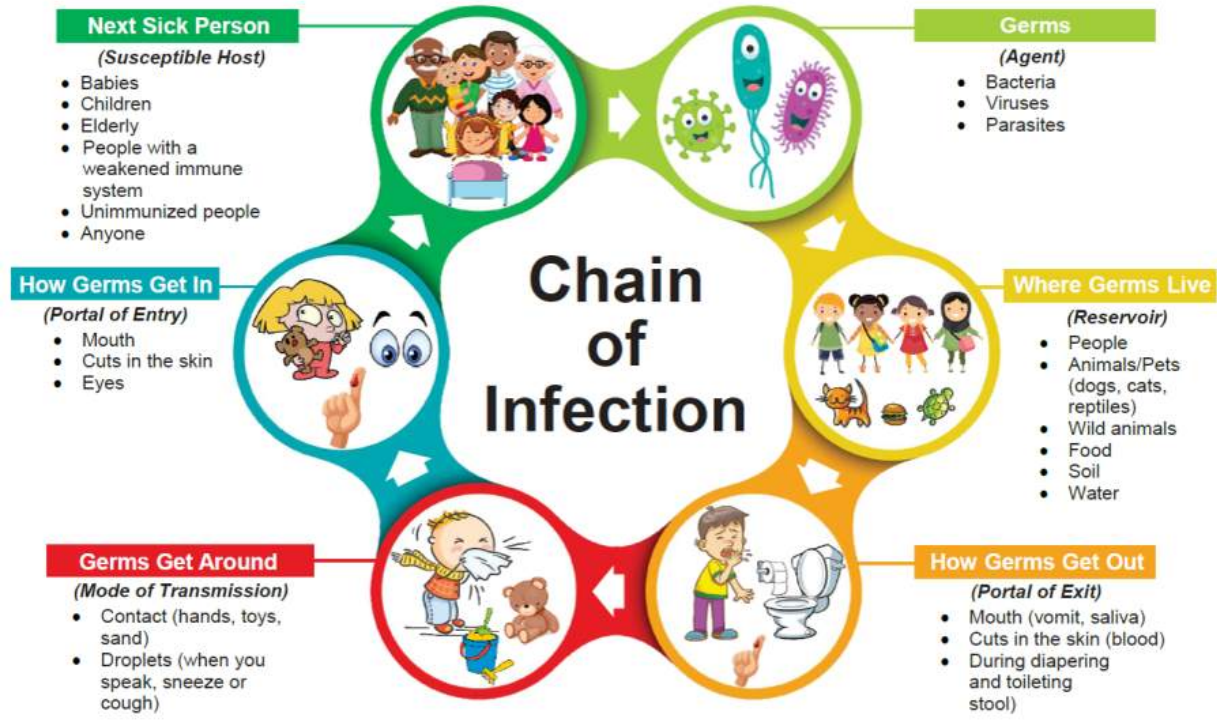
- Know the steps to take to properly dispose of biohazardous waste

CONTINUE

Introduction to Infection Prevention

Healthcare facilities are a great place to spread infection. Hospital-acquired infections are common and can be deadly. Infection Prevention practices are an important way to break the chain of infection and prevent hospital-acquired infections.

▶ ●
00:44



Break the Chain of Infection

There are many different germs and infections inside and outside of the healthcare setting. Despite the variety of viruses and bacteria, germs spread from person to person through a common series of events.

Therefore, to prevent germs from infecting more people, we must break the chain of infection.

Click the cards below to learn how to break the chain of infection.

Germs (Agent)

- Diagnosis and treatment
- Antimicrobial stewardship

Where Germs Live

- Cleaning, disinfection, sterilization
- Infection prevention policies
- Pest control

How Germs Get Out

- Hand hygiene
- Personal protective equipment
- Control of aerosols and splatter
- Respiratory etiquette

How Germs Get Around

- Hand hygiene
- Personal protective equipment
- Food safety
- Cleaning, disinfection, sterilization

How Germs Get In


- Hand hygiene
- Personal protective equipment

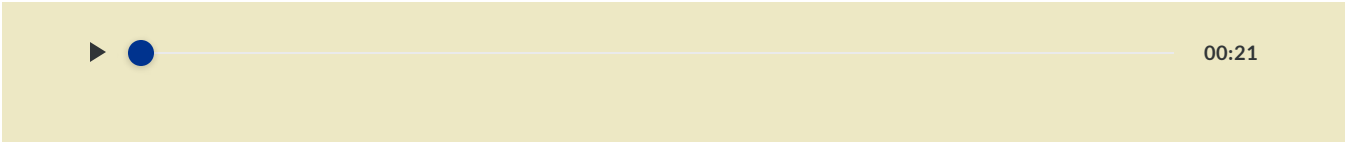


- Personal hygiene
- First aid

Next Sick Person

- Immunizations
- Treatment of underlying disease
- Health insurance
- Patient education

 Complete the content above before moving on.



Providence has Infection Preventionists for every location! Be sure to ask your supervisor how to contact the Infection Preventionist assigned to your location.

An Infection Preventionist is responsible for preventing and controlling the spread of infections.

Keeping our patients and caregivers safe is their number one priority.

Infection Prevention *and You*

Who are infection preventionists?



Infection preventionists use their detective skills to find the bad germs and make sure everyone is doing the right things to keep you safe.



Catheters or other devices will be placed in your body after your skin receives proper cleaning.



Your healthcare workers will wear gloves, gowns, and masks at the right times.

If you are in isolation, you and your visitors may need to do this too.



Healthcare workers will clean their hands before and after they care for you.



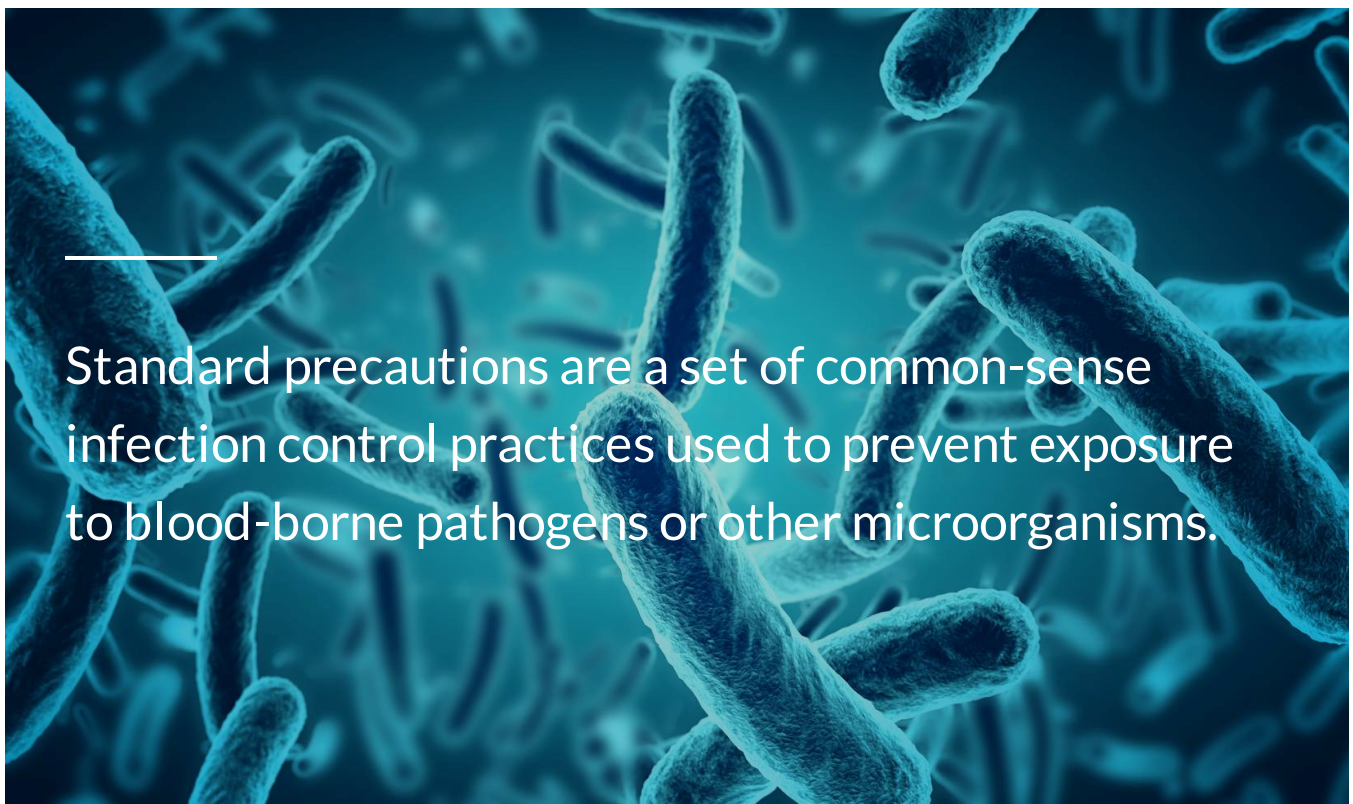
Your room and any equipment that is used on you will be clean.

Standard Precautions




01:08

Optional audio narration



Standard precautions are a set of common-sense infection control practices used to prevent exposure to blood-borne pathogens or other microorganisms.

 Standard precautions should be used by all caregivers at all times.

This applies to both clinical and non-clinical caregivers and every patient (regardless of diagnosis) as well as any supplies, equipment, or materials that might have blood or other potentially infectious materials.

Even patients who look and feel healthy can carry germs in their blood or body fluids that can transmit illness to another person without Standard Precautions.

Standard Precautions Include:

- Hand hygiene
- Personal protective equipment (PPE)
- Appropriate patient placement (Isolation precautions)
- Respiratory hygiene / cough etiquette
- Appropriate handling, cleaning, and disinfection of medical equipment, instruments and devices
- Appropriate handling of linens
- Safe injection practices (Clinical Caregivers Only – will be shared during clinical orientation)
- Sharps safety
- Proper disposal of biohazardous waste

CONTINUE

Hand Hygiene



01:16

Optional audio narration

Compliance with the proper hand hygiene is an expectation of all caregivers.

Access to hand hygiene products is provided in all work units.

Hand hygiene will be performed before or after the following activities:

Indication	Product Selection
After personal restroom use	Soap and water
Before/after eating or drinking	Soap and water

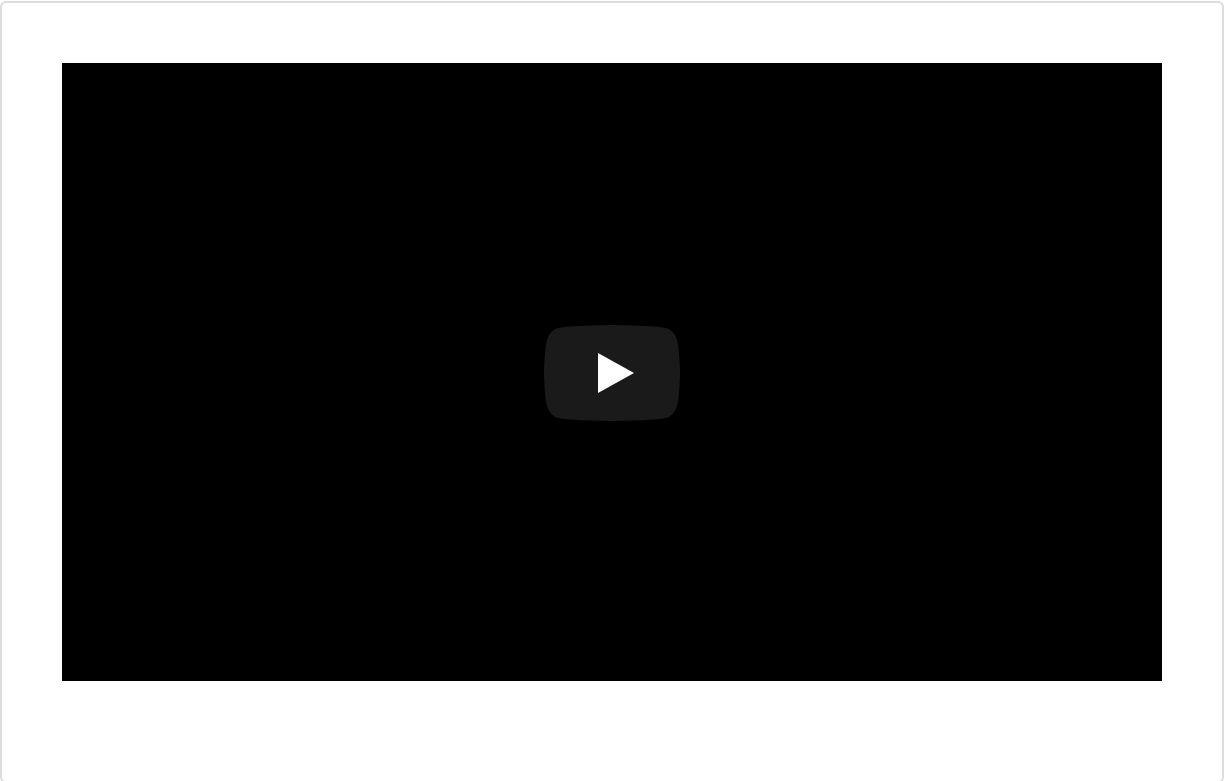
Indication	Product Selection
Upon entering patient room, before patient contact	Alcohol Based Hand Sanitizer (ABHS) or soap and water
Upon exiting patient room, after patient contact	ABHS or soap and water
After contact with patient surroundings (e.g. IV Pumps, suction containers)	ABHS or soap and water
After direct contact with blood or body substances such as feces or vomitus with or without gloves	Soap and water
Before handling an invasive device for patient care, regardless of glove use (indwelling urinary catheters, tubes, drains, central lines, etc.)	ABHS or soap and water
Before putting on Personal Protective Equipment (PPE)	ABHS or soap and water
After removing PPE	ABHS or soap and water
Before putting on and after removing gloves	ABHS or soap and water
If moving between contaminated body sites to another body site during care of the same patient	ABHS or soap and water

Indication	Product Selection
Whenever hand hygiene is indicated while caring for a patient in Special Contact/Contact Enteric precautions because ABHS is not effective against the germs that cause these illnesses	Soap and water

CONTINUE

Hand washing with soap and water

Watch the video below from the Centers for Disease Control and Prevention about how to wash your hands with soap and water.





01:40

Optional audio narration



If possible, use the same towel to open the door if needed.

Alcohol Based Hand Rubs

1

When decontaminating hands with an alcohol-based hand rub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry

2

It should take 15-25 seconds for hands to dry, if an adequate volume of alcohol-based hand rub is used

3

Adhere to the manufacturer's instructions for use



Alcohol needs contact time and air drying to be effective to kill germs.

Never towel dry.

CONTINUE

Fingernails

Nail grooming is essential for good hand hygiene. Fingernails should not extend beyond the fingertips. Chipped nail polish promotes the growth of micro-organisms on fingers; therefore, **nail polish should be in good condition with no chipping.**

Artificial nails including anything applied to your nail that is not nail polish (i.e., acrylics, gels, shellacs, powder dip, nail jewelry, additions, etc.) have been proven to harbor micro-organisms and cannot be worn by caregivers who have direct contact with patients or with patient's clean supplies and medication.

This includes and is not limited to:

- Exams, procedures, treatments, nursing care, surgery, or emergencies
- Preparing or dispensing medication or blood products for patient use
- Preparing equipment or supplies for patient use (e.g. Central Stores); food, beverages, and serving food
- Operating Room Staff (OR) and Sterile Processing Department (SPD) staff



The use of gloves does not affect the restriction on long or artificial nails.

CONTINUE



01:19

Optional audio narration

Hand Sanitizing Products and Hand Lotions

Only institutionally provided and approved hand sanitizers, hand lotions and creams are used by caregivers in the clinical setting.

Approved hand sanitizers, hand lotions and creams have been evaluated for interactions with hand care products and gloves.

Healthcare workers with hand/skin irritation should discuss their concerns with their supervisor and Caregiver Health Services to develop a plan for resolving the irritation.

CONTINUE

Compliance



Compliance with hand hygiene is monitored routinely in all patient care areas by one of the following methods: independent direct observations, self-direct observations, peer and / or patient observation.

Barriers to performing job duties which require hand hygiene will be evaluated on a case by case basis in conjunction with local infection prevention, Caregiver Health and HR.

Any caregiver who wears a brace, cast, splint, or other device which covers part or all of the hand or wrist should be evaluated to determine if alternative options are available.

Any breaks in skin integrity (cuts and abrasions) on the hands and wrist should be covered with a clean water-resistant bandage and the bandage should remain clean, dry, and intact.

CONTINUE

Personal Protective Equipment (PPE)



03:57

Optional audio narration

Use whatever PPE is necessary to prevent contact with patients' blood, body fluids, mucus membranes, secretions, excretions and non-intact skin. Non-intact skin includes rashes, skin sores and open wounds even if no drainage is present. Your employer is responsible for providing PPE, and you are responsible for wearing it correctly.

There are various types of PPE and many factors influencing PPE selection.

Click on the plus signs (+) below to learn more about each type of PPE and when to use.

Gloves

Gloves are a protective barrier for hands.

Use when touching blood, body fluids, secretions, excretions, contaminated items; for touching mucus membranes and nonintact skin.

Change gloves:

- During use if torn and when heavily soiled (even during use on the same patient)
- After use on each patient (never use the same gloves for more than one patient)

Exam and surgical gloves are never reused or washed.

Gloves are removed when the need for protection no longer exists and hand hygiene should be practiced immediately after removal of gloves.

If worn with a gown, the gloves should extend over the cuff of the gown to make sure no skin is left uncovered.

Limit opportunities for “touch contamination” - protect yourself, others, and the environment:

- Don't touch your face or adjust PPE with contaminated gloves
- Don't touch environmental surfaces except as necessary during patient care
- Do not wear gloves when walking in hallways or outside of patient care areas

Gowns/Aprons —

Gowns and/or aprons are a protective barrier for skin and clothing.

Use whenever there is the possibility that your clothing or skin might come in contact with patients' blood or body fluids or non-intact skin.

Fluid resistance matters – choose the right gown for the task.

Gowns should never be reused and should be discarded at point of use (non-disposable gowns should be placed in a soiled linen hamper for laundering).

Face Protection —

Choose the right type based on anticipated exposure.

Use during patient care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.

Masks – protect nose and mouth from splash and inhalation of droplets

- Should fully cover nose and mouth and prevent fluid penetration

- Always use for patients in Droplet Precautions or with any patient who is coughing or sneezing.
- Under most situations, masks are only used once and discarded. Talk to your supervisor about what situations might cause extended use or re-use.

Goggles – protect eyes

- Should fit snugly over and around eyes
- Personal glasses are not a substitute for goggles
- Antifog feature improves clarity

Face shields- protect face, nose, mouth, and eyes

- Should cover forehead, extend below chin and wrap around side of face

Respirators

The purpose of respiratory protection is to protect from inhalation of infectious aerosols (e.g., Mycobacterium tuberculosis).

PPE types for respiratory protection:

- Particulate respirators (N95)
- Half- or full-face elastomeric respirators
- Powered air purifying respirators (PAPRs/ CAPRs)

All respirators require medical clearance and training and some require fit-testing before use. Do not use a respirator unless you have been trained on that specific respirator type by designated staff within PSJH. Respirators should be donned and removed outside of the patient room.



Complete the content above before moving on.



00:23

Optional audio narration

Key Points to Remember:

Don before contact with the patient, generally before entering the room

Remove and discard carefully either at the doorway or immediately outside patient room

Perform hand hygiene immediately after removal

Only staff who have been medically screened and trained/fit tested may put on a respirator.
This is for your own safety to assure it is providing effective protection for you.

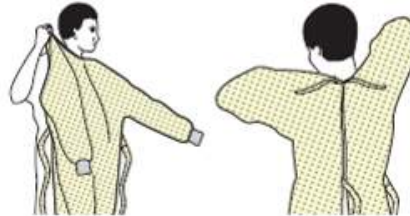
Click on the arrows below (<>) to review a few examples on how to safely don and doff your PPE.

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

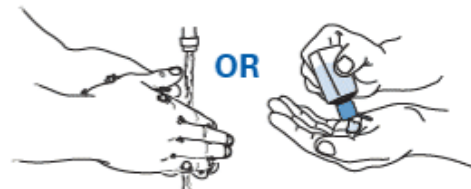


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS
BECOME CONTAMINATED AND IMMEDIATELY AFTER
REMOVING ALL PPE**

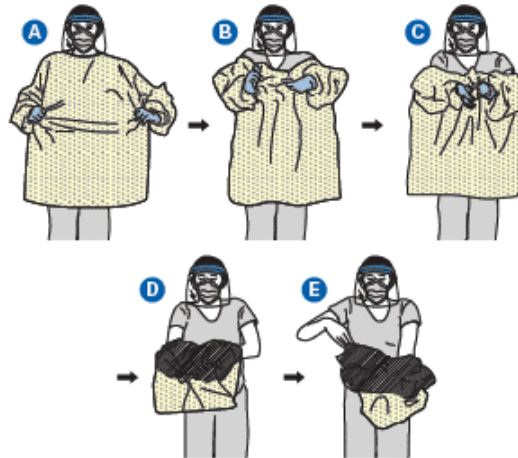


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

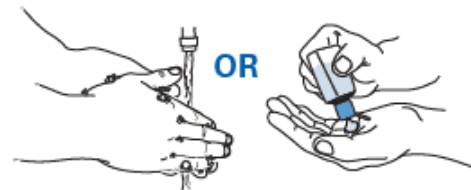


3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — **DO NOT TOUCH!**
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS
BECOME CONTAMINATED AND IMMEDIATELY AFTER
REMOVING ALL PPE**





Complete the content above before moving on.

Transmission-Based Precautions (Isolation)

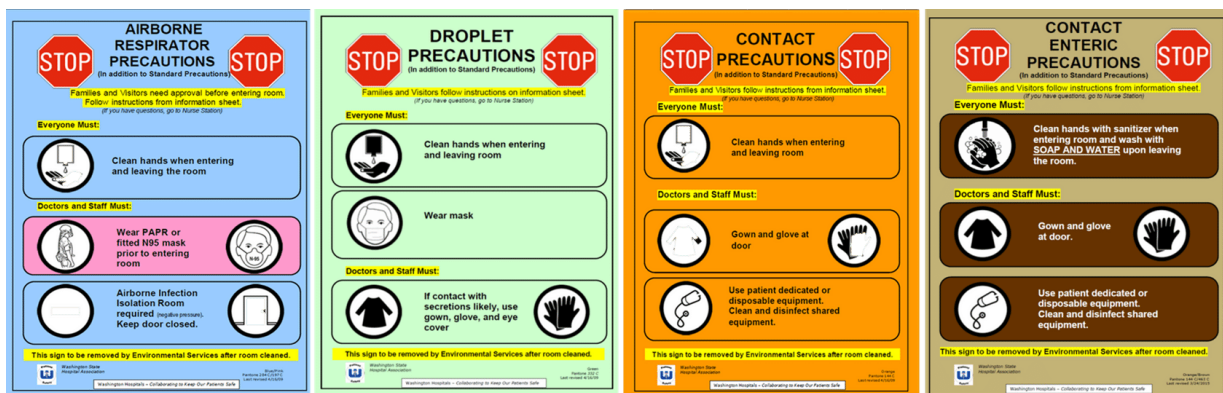
▶ ● 00:47

Optional audio narration

Transmission-based precautions (also known as isolation) are used for patients with specific infectious diseases. You must follow the instructions on the sign before entering the room.

Although the signs may look different in each region, the content will be very similar.

Transmission-based precautions **DO NOT** replace standard precautions, they are always used together with standard precautions.



Airborne Respirator Precautions

If patient has diarrhea and/or C. difficile and Contact Enteric Precautions

Display sign outside the door. At patient discharge, remove sign. (Sign room is terminally cleaned.)

Change Conditions:

- Pathogens or respiratory substrates
- Room equipment as designated by CDC

Poster Family and Visitors in wait only if previously exposed

Airborne Infection Isolation Room:

Comply with Facility Policy regarding airflow monitoring.

Decontamination:

- Decontaminate. Minimize contact in decontamination.

Equipment and Supplies:

- Use dedicated or disposable equipment when available.
- Clean and disinfect reusable equipment including eyeglasses, stethoscopes, cell phone or pager (if used in room), and other electronics, supplies, and other equipment prior to removing from patient's room.
- Ensure blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

- Remove blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

Display sign in the patient's room.

Personal Protective Equipment:

Put ON in this order:	Take OFF & dispose in this order:
1. Goggles or face shield	1. Goggles or face shield
2. Mask	2. Mask
3. Eye cover (if needed)	3. Eye cover (if needed)
4. Glove (if needed)	4. Glove (if needed)

Take OFF & dispose in this order:

- Goggles or face shield
- Eye cover (if used)
- Mask (if used)
- Gloves (if used)

Private Room:

If not available, please follow facility policy when contacting patients.

Room Cleaning:

Follow facility policy for Droplet Precautions distribution and contact change requirements.

Transport:

Isolation transport only. Have patient wear a surgical mask. Clean and disinfected transport vehicle. Alert receiving department regarding patient's isolation precautions status.

Discontinue precautions as per Facility Policy or Infection Prevention and Control Team.

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Droplet Precautions

If patient has diarrhea and/or C. difficile and Contact Enteric Precautions

Display sign outside the door. At patient discharge, remove sign. (Sign room is terminally cleaned.)

Change Conditions (refer to Facility Policy):

- Pathogens
- Pathogens
- Respiratory system
- Masks

Poster Family and Visitors in wait only if previously exposed

Decontamination:

Respirator precautions. Minimize contact in decontamination.

Equipment and Supplies:

- Only respiratory supplies in room.
- Use dedicated or disposable equipment when available.
- Clean and disinfect reusable equipment including eyeglasses, stethoscopes, cell phone or pager (if used in room), and other electronics, supplies, and other equipment prior to removing from patient's room.
- Ensure blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

- Display blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

Display sign in the patient's room.

Personal Protective Equipment:

Put ON in this order:	Take OFF & dispose in this order:
1. Goggles or face shield	1. Goggles or face shield
2. Mask	2. Mask
3. Eye cover (if needed)	3. Eye cover (if needed)
4. Glove (if needed)	4. Glove (if needed)

Take OFF & dispose in this order:

- Goggles or face shield
- Eye cover (if used)
- Mask (if used)
- Gloves (if used)

Private Room:

If not available, please follow facility policy when contacting patients.

Room Cleaning:

Follow facility policy for Droplet Precautions distribution and contact change requirements.

Transport:

Isolation transport only. Have patient wear a surgical mask. Clean and disinfected transport vehicle. Alert receiving department regarding patient's isolation precautions status.

Discontinue precautions as per Facility Policy or Infection Prevention and Control Team.

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Contact Precautions

If patient has diarrhea and/or C. difficile and/or with Contact Enteric Precautions

Display sign outside the door. Remove sign. (Sign room is terminally cleaned.)

Change Conditions (refer to Facility Policy):

- Pathogens
- Contact
- Multiple-resistant (Methicillin-resistant MRSA)
- Multiple-resistant (Enterobacteriaceae CRE)
- Mouths or airway with uncontained drainage

Decontamination:

No special precautions. Minimize contact in decontamination.

Equipment and Supplies:

- Use dedicated or disposable equipment when available.
- Clean and disinfect reusable equipment including eyeglasses, stethoscopes, cell phone or pager (if used in room), and other electronics, supplies, and other equipment prior to removing from patient's room.
- Ensure blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

- Display blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

Display sign in the patient's room.

Personal Protective Equipment:

Put ON in this order:	Take OFF & dispose in this order:
1. Goggles or face shield	1. Goggles or face shield
2. Mask	2. Mask
3. Eye cover (if needed)	3. Eye cover (if needed)
4. Glove (if needed)	4. Glove (if needed)

Take OFF & dispose in this order:

- Goggles or face shield
- Eye cover (if used)
- Mask (if used)
- Gloves (if used)

Private Room:

If not available, please follow facility policy when contacting patients.

Room Cleaning:

Follow facility policy for Contact Precautions distribution and contact change requirements.

Transport:

Isolation transport only. Have patient in clean gown. Clean and disinfected transport vehicle. Alert receiving department regarding patient's contact precautions status.

Discontinue precautions as per Facility Policy or Infection Prevention and Control Team.

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Contact Enteric Precautions

Display sign outside the door. Remove sign. (Sign room is terminally cleaned.)

Change Conditions:

- Contact
- Pathogens
- Multiple-resistant (Methicillin-resistant MRSA)
- Multiple-resistant (Enterobacteriaceae CRE)

Poster Family and Visitors in wait only if previously exposed

Decontamination:

No special precautions. Minimize contact in decontamination.

Equipment and Supplies:

- Use dedicated or disposable equipment when available.
- Clean and disinfect reusable equipment including eyeglasses, stethoscopes, cell phone or pager (if used in room), and other electronics, supplies, and other equipment prior to removing from patient's room.
- Ensure blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

- Display blood pressure cuff and stethoscope are cleaned and disinfected between patients.

Room Management:

Display sign in the patient's room.

Personal Protective Equipment: USE SOAP AND WATER TO WASH HANDS WHEN LEAVING ROOM

Put ON in this order:	Take OFF & dispose in this order:
1. Goggles or face shield	1. Goggles or face shield
2. Mask	2. Mask
3. Eye cover (if needed)	3. Eye cover (if needed)
4. Glove (if needed)	4. Glove (if needed)

Take OFF & dispose in this order:

- Goggles or face shield
- Eye cover (if used)
- Mask (if used)
- Gloves (if used)

Private Room:

If not available, please follow facility policy when contacting patients.

Room Cleaning:

Follow facility policy for Contact Enteric Precautions distribution and contact change requirements.

Transport:

Isolation transport only. Have patient in clean gown. Clean and disinfected transport vehicle. Alert receiving department regarding patient's contact precautions status.

Discontinue precautions as per Facility Policy or Infection Prevention and Control Team.

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The isolation sign will tell you what PPE **MUST** be worn to enter the room, regardless of what activity you plan to perform or amount of patient contact you intend to have.

When an isolation sign includes the word “respirator” you may only enter if you have been trained, fit tested, and may only wear the specific type of respirator on which you have been trained.

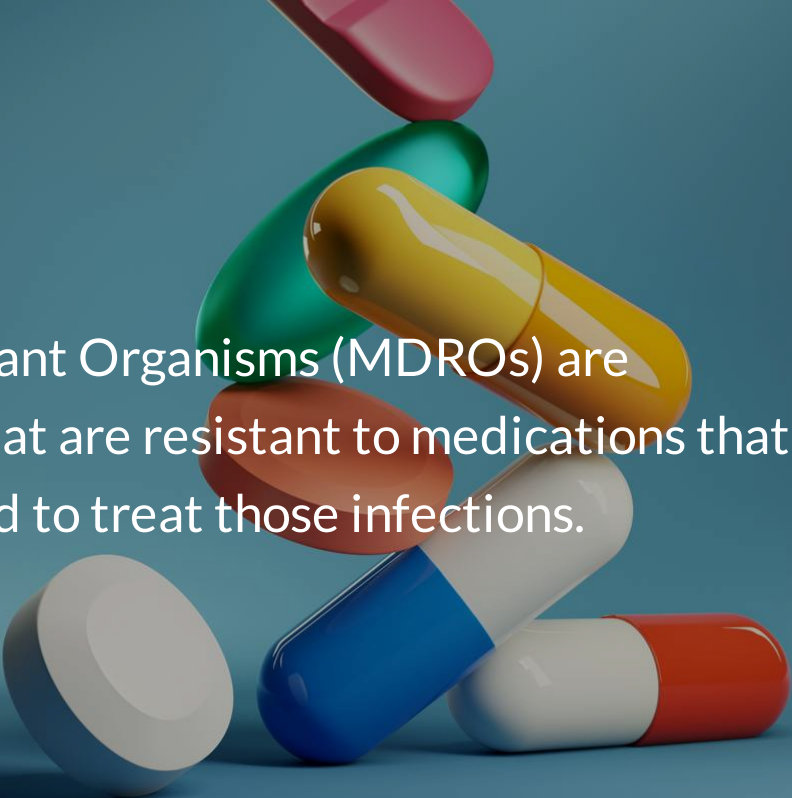
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Multi-Drug Resistant Organisms



01:27

Optional audio narration



Multi-Drug Resistant Organisms (MDROs) are microorganisms that are resistant to medications that are commonly used to treat those infections.

Some examples include:

- MRSA (Methicillin Resistant Staphylococcus aureus)

- VRE (Vancomycin Resistant Enterococci)
- CRE (Carbapenem Resistant Enterobacteriaceae)
- ESBL (Extended Spectrum Beta Lactimase)
- C.diff (Clostridioides difficile)
- Candida auris

The prevention and control of MDROs is a national priority, and includes the following strategies:

- Hand hygiene
- Isolation precautions (in some cases)
- MDRO monitoring and alerting
- Bundle strategies to prevent device-associated and surgical site infections
- Appropriate cleaning and disinfection
- Patient and family education
- Appropriate use of antimicrobials

Antimicrobial Stewardship

Upwards of 50% of antibiotic use in hospitals are unnecessary or inappropriate. Antibiotic overuse contributes to antibiotic resistance, C.diff infection, increased cost, and worse patient outcomes.

Antimicrobial stewardship is the practice of optimizing antibiotic therapy including drug selection, dosing, and duration of therapy.

- Primary strategies: Prospective audit and feedback (ie. review of antibiotics with the intent of providing feedback to prescriber) and preauthorizing (ie. requiring preapproval of certain antibiotics before prescribing)
- Secondary strategies: Education, local guidelines, clinical pathways / order sets

CONTINUE

Tuberculosis (TB)



01:09

Optional audio narration

What is Tuberculosis?

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body such as the kidney, spine, and brain. Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist. Latent TB infection (LTBI) and TB disease.

If not treated properly, TB disease can be fatal.



How is tuberculosis transmitted?

TB bacteria are spread through the air from one person to another. The TB bacteria are put into the air when a person with TB disease of the lungs or throat coughs, speaks, or sings. People nearby may breathe in these bacteria and become infected.

Symptoms of TB disease depend on where in the body the TB bacteria are growing. TB bacteria usually grow in the lungs (pulmonary TB).

Click the cards below to learn what symptoms you might see in someone with TB.

- A bad cough that lasts 3 weeks or longer

Symptoms of TB

- Pain in the chest
- Coughing up blood or sputum (phlegm from deep inside the lungs)

Additional Symptoms of TB

- Weakness or fatigue
- Weight loss
- No appetite
- Chills
- Fever



Complete the content above before moving on.



01:18

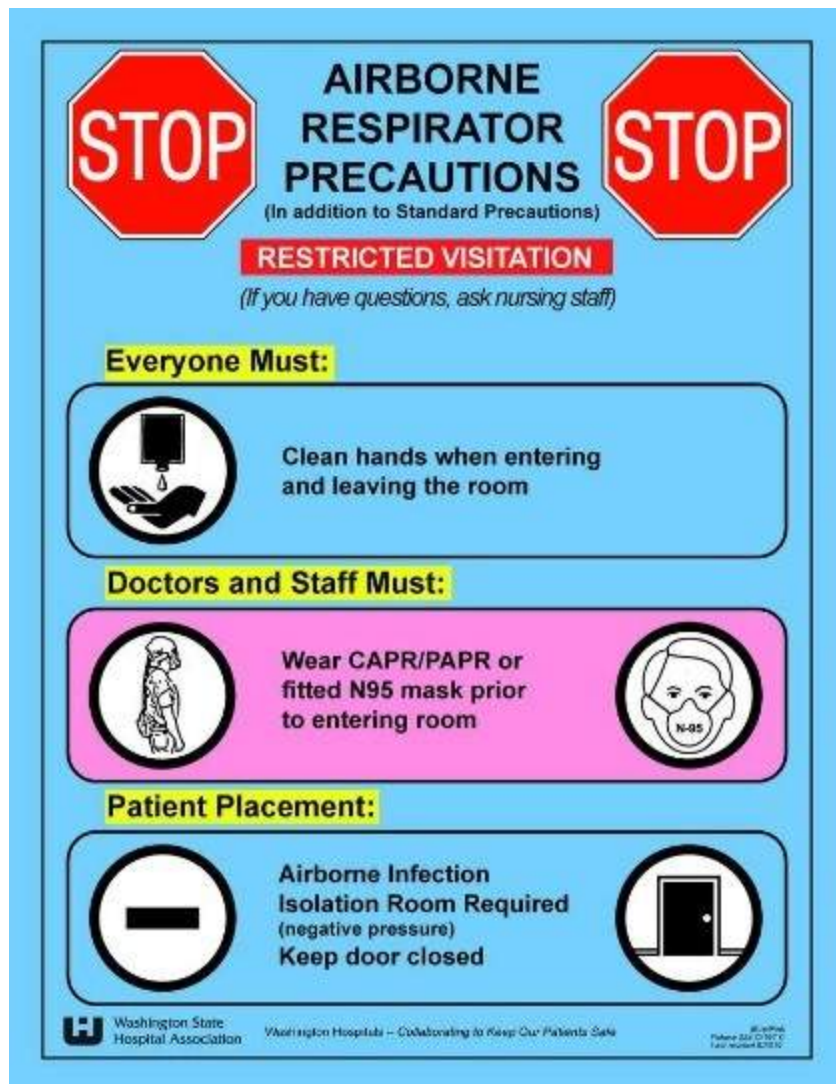
Optional audio narration

i Symptoms of TB disease in other parts of the body depend on the area affected.

Precautions

If a patient is exhibiting signs/symptoms suspicious for TB, the following measures should be taken:

- **Ensure appropriate patient placement in an airborne infection isolation room (AIIR)** constructed according to the Guideline for Isolation Precautions. In settings where Airborne Precautions cannot be implemented due to limited engineering resources, masking the patient and placing the patient in a private room with the door closed will reduce the likelihood of airborne transmission until the patient is either transferred to a facility with an AIIR or returned home.
- **Use personal protective equipment (PPE) appropriately**, including a fit-tested NIOSH-approved N95 or higher level respirator for healthcare personnel.
- **Limit transport and movement of patients** outside of the room to medically-necessary purposes. If transport or movement outside an AIIR is necessary, instruct patients to wear a surgical mask, if possible, and observe Respiratory Hygiene/Cough Etiquette.



01:24

Optional audio narration

Risk factors for getting TB

Health care personnel should be considered to be at increased risk for TB if they answer “yes” to any of the following statements.

1. Temporary or permanent residence (for ≥ 1 month) in a country with a high TB rate (i.e., any country other than Australia, Canada, New Zealand, the United States, and those in western or northern

Europe) **OR**

2. Current or planned immunosuppression, including human immunodeficiency virus infection, receipt of an organ transplant, treatment with a TNF-alpha antagonist (e.g., infliximab, etanercept, or other), chronic steroids (the equivalent of prednisone ≥ 15 mg/day for ≥ 1 month), or other immunosuppressive medication **OR**
3. Close contact with someone who has had infectious TB disease since their last TB test

Reducing the risk of TB transmission in our clinical settings:

Administrative Controls Engineering Controls

- Written exposure control plan
- Training
- Early isolation and identification
- Annual risk assessment
- Properly functioning negative pressure isolation rooms

Respiratory protection (PPE)

Caregivers working in airborne isolation rooms or near patients with known or suspected TB

- Powered air purifying respirators (PAPRs)
- N95 respirators after proper training, testing, and certification for use





01:51

Optional audio narration

If you experience an exposure to Tuberculosis in the workplace, report this to Caregiver Health Services immediately.

TB Testing

Click the plus signs (+) below to learn more about TB testing in the workplace.

New Hire Baseline Process

Upon hire, all health care personnel are screened for TB upon hire. The PSJH TB screening includes:

- A baseline individual TB risk assessment
- TB symptom evaluation,
- A TB test, most often a blood test (e.g., TB blood test or a TB skin test), and
- Additional evaluation for TB disease as needed, such as a chest x-ray

Information from the screening tools above is used to interpret the results. Health care personnel with a positive TB test will receive a chest x-ray to rule out TB disease. Additional evaluation may be needed based on those results.

Health care personnel with a documented history of a prior positive TB test receive a baseline individual TB risk assessment and TB symptom screen upon hire.

Annual Testing

Annual TB testing is performed where there is evidence of ongoing transmission or a regulatory requirement to do so. Compliance with annual testing is required.

Post - Exposure

Post-exposure testing is performed to help determine if an infection has occurred. A baseline test is performed and testing repeats at 8-10 weeks post last exposure unless directed otherwise by the local health department. Complying with post-exposure testing is required.

What happens if a caregiver has a positive TB test?

A caregiver with a positive TB test will require further evaluation. This may mean a repeat test, chest x-ray, and likely evaluation by a physician. The TB history, symptom, and risk assessment are all taken into consideration in determining what action is necessary.



Complete the content above before moving on.

What is the difference between TB and latent TB infection (LTBI)?



A Person with Latent TB Infection	A Person with TB Disease
Has no symptoms	<p>Has symptoms that may include:</p> <ul style="list-style-type: none"> • 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
Does not feel sick	Usually feels sick
Cannot spread TB bacteria to others	May spread TB bacteria to others
Usually has a skin test or blood test result indicating TB infection	Usually has a skin test or blood test result indicating TB infection
Has a normal chest x-ray and a negative sputum smear	May have an abnormal chest x-ray, or positive sputum smear or culture
Needs treatment for latent TB infection to prevent TB disease	Needs treatment to treat TB disease

CONTINUE

Newest CDC guidelines



00:29

Optional audio narration

The Centers for Disease Control and Prevention (CDC) revised its guidelines for TB prevention in healthcare settings in 2019. Some of the primary changes are:

- A thorough TB testing and risk factor assessment for all healthcare personnel upon hire
- Annual surveillance only in areas with ongoing transmission
- Annual education for all healthcare personnel
- Identification and treatment for healthcare personnel with LTBI

TUBERCULOSIS

TESTING



+

TREATMENT



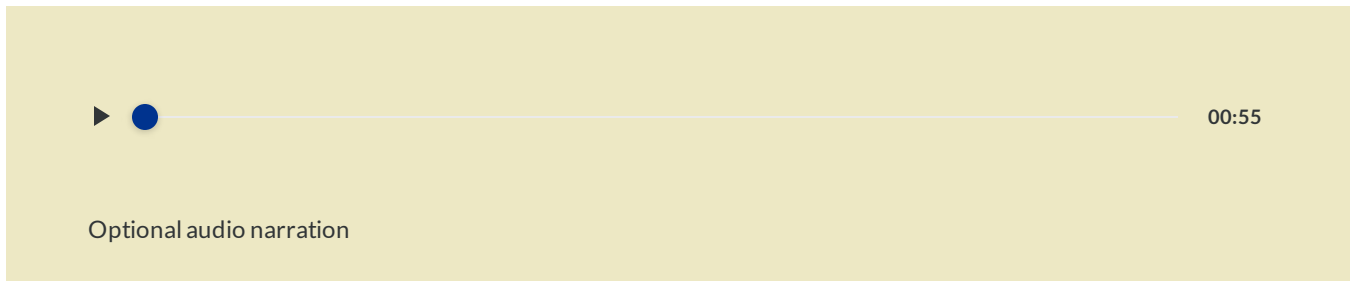
OF U.S.
HEALTH
CARE
PERSONNEL

Treatment is strongly encouraged
for health care
personnel
diagnosed
with latent
TB infection



CONTINUE

Respiratory Hygiene/Cough Etiquette for Patients and Caregivers



The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection:

- Cover your mouth and nose with a tissue when coughing or sneezing
- If tissue is not available, cough or sneeze into your elbow or sleeve
- Use the nearest waste receptacle to dispose of the tissue after use
- Perform hand hygiene after having contact with respiratory secretions and contaminated objects/materials



Healthcare facilities should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for patients and visitors.

- Provide tissues and no-touch receptacles for used tissue disposal
- Provide masks and separate persons with respiratory symptoms
- Provide conveniently located dispensers of alcohol-based hand rub. Where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.

CONTINUE

Cleaning and Disinfection



01:34

Optional audio narration



Linen is single patient use only and should be placed in a soiled linen bag immediately after use. Do not hold linen against your body or clothing, and avoid activities that agitate soiled linen. Wear a gown if contact between soiled linen and your clothing cannot be prevented.

Patient supplies are intended for either single use or single patient use and are labeled as such (gauze, tubing, syringes, basins, etc.). Patient supplies should be discarded immediately after use.

Patient equipment, devices, and instruments may be single use, single patient use, or reusable depending on the manufacturer's instructions for use. Any item that is reused must be either disinfected or sterilized according to the manufacturer's recommendations. You will be trained on the appropriate disinfection or sterilization practices for the items that you will use during the course of your work. If you are not trained or unsure about how to disinfect or sterilize a product, ask your supervisor.

Environmental surfaces are an important vehicle for the transmission of infection. Common high touch surfaces like bed rails, door handles, light switches, and keyboards require frequent disinfection .

i In order for disinfectants to work, they must remain wet on the surface being disinfected for the amount of time indicated on the label.

CONTINUE

Bloodborne Pathogens



01:31

Optional audio narration

Bloodborne pathogens (BBP) are microorganisms that can be present in human blood and body fluids. People can have these pathogens in their blood and look and feel perfectly healthy, but can still infect and cause disease to others if they are exposed.

BBP can be transmitted through contact with contaminated blood and body fluids via direct contact with broken skin or mucous membranes or needle/instrument puncture.

BBP are transmitted by sharing needles/syringes, unprotected sexual contact, mother-to-baby, or through sharps injuries/needle sticks.

Common BBP Facts

HIV	Hepatitis B	Hepatitis C
Most fragile of three viruses	Most easily transmitted of the three	Most common reason for liver transplant

HIV	Hepatitis B	Hepatitis C
Attacks immune system	May cause liver cancer	Most common chronic bloodborne infection in the US
Symptoms may start in 1-6 weeks: swollen glands, fever, fatigue, rash	Symptoms: jaundice, fatigue, abdominal or joint pain, nausea/vomiting	Symptoms: jaundice, fatigue, abdominal or joint pain, nausea/vomiting
Treatment can delay onset; no cure, no vaccine	Safe and effective vaccine available	No vaccine available; treatment now available

CONTINUE

▶ ● 01:03

Optional audio narration

To protect you, OSHA requires your facility to have a Bloodborne Pathogens Exposure Control plan. Your supervisor can show you where this is located and can review this with you in a language that makes it easy to understand.

OSHA also requires your employer to offer Hepatitis B vaccination free of charge. This vaccine is 95% protective after the 3 dose series. Ask your supervisor or Caregiver Health Services how to receive the vaccine.

If you are exposed to blood or body fluid, perform first aid immediately and then report the exposure to your supervisor. Do not wait until the end of your shift. Follow the exposure process according to your specific facility, your supervisor can explain this to you if you are unsure. Medical follow-up and treatment will be provided if it is needed.

First aid for exposures:

- Gently wash wounds and skin with soap and water
- Flush splashes to the nose, mouth, or skin with water
- Irrigate eyes with clean water, saline, or sterile irrigant

CONTINUE

Sharps Safety



01:03

Optional audio narration

Sharps Containers are to be used for the disposal of:

- All used needles and syringes
- Syringes removed from their sterile packaging, even if not used

No item classified as a sharp should ever be placed in a recycling container including syringes that can accept a needle.



Check your local policy regarding sharps disposal.

When Handling Sharps, Remember:

- Be aware of your surroundings
- Stop if you feel rushed or distracted and focus on the task
- Avoid passing sharps and use verbal alerts when moving sharps
- Be responsible for the device you are using
- Always activate sharps safety features
- Dispose of sharps in sharps containers only
- Keep fingers back from container opening when disposing of sharps

- Watch for sharps in linen, beds, on the floor and waste containers
- Hold bags with linen or medical waste away from your body when lifting or carrying
- Never recap needles
- Don't allow sharps containers to become overfull. Change before the fill line is reached or when $\frac{3}{4}$ full.

CONTINUE

Injection Safety



00:50

Optional audio narration

Injection Safety Guidelines from the CDC

- Follow proper infection control practices and maintain aseptic technique during the preparation and administration of injected medications (e.g., perform hand hygiene)
- Never administer medication from the same syringe to more than one patient, even if the needle is changed
- Never enter a vial with a used syringe or needle
- Do not use medications packaged as single-dose or single-use for more than one patient
- Do not use bags of intravenous solution as a common source of supply for more than one patient
- Limit the use of multi-dose vials and dedicate them to a single patient whenever possible
- Always use face masks when injecting material or inserting a catheter into an epidural or subdural space

Rx for Safe Injections in Healthcare

1 Needle
1 Syringe
+ 1 Time

0 Infections

Safe injection practices prevent transmission of infectious diseases. Patients and healthcare providers must insist on nothing less than *One Needle, One Syringe, Only One Time* for each and every injection.

For more information, please visit:

www.cdc.gov/injectionsafety/1anonly.html

The *One & Only Campaign* is a public health effort to eliminate unsafe medical injections. To learn more about safe injection practices, please visit www.cdc.gov/injectionsafety/1anonly.html



1 ONE NEEDLE,
ONE SYRINGE,
ONLY ONE TIME.



Safe Injection Practices Coalition

Click [here](#) for more information

CONTINUE

Biohazardous Waste and Spills



00:45

Optional audio narration

What do we consider biohazardous waste?

Click the cards below to find out!



Items with large amounts of blood; liquid or dried. If blood could be released when the item is compressed, it is considered biohazardous.



Human tissue



Used instruments such as
dirty scopes



Complete the content above before moving on.

How should you handle biohazardous waste?

Wear appropriate PPE.

May use a biohazard sticker on a closed container(i.e. transporting a dirty instrument in a closed container) or red biohazard bag (i.e. transporting heavily blood soaked wound dressing) depending on what is being transported.

Discard biohazard waste in red bins in soiled utility rooms.

CONTINUE



00:47

Optional audio narration

In the event of a spill of biohazardous materials:

Click on the pulsing icons (+) below to learn how to handle biohazardous material spills.





Keep others away from spill



If spill is small, don appropriate PPE before cleaning



Pick up broken glass or sharps with a dust pan and a scraper or forceps (not hands) and place in a sharps container



Wipe up spill with a paper towel (not linen)



Clean area with approved disinfectant



Repeat with a second application of disinfectant and allow to dry



Dispose of all items saturated with blood or other potentially infectious material in a red bag/ biohazardous waste container



Perform hand hygiene after removing PPE



For large spills, refer to your local policies.

CONTINUE

Important Caregiver Health Considerations



00:47

Optional audio narration

Vaccinations are a key component in preventing disease transmission and are available to you at no cost through Caregiver Health Services.

- Providence St. Joseph Health strongly supports caregiver vaccination and encourages you to be vaccinated
- Your local regulatory agency or state law may mandate the use of masks in healthcare facilities during influenza season if you do not receive the influenza vaccine
- Employee Health can provide Hepatitis B immune globulin (HBIG) for employees who have had exposure without the vaccine. This is followed by the vaccination series.
- Your local regulatory or state law may mandate caregivers who are non-immune to a vaccine-preventable disease may also be furloughed from work. It is extremely important to know your immunity status and keep vaccinations up to date, to prevent communicable disease transmissions for yourself, family, co-workers, patients, and the community at large.

CONTINUE



DO NOT COME TO WORK SICK

Caregivers with the following symptoms should notify their core leader and Caregiver Health Services and not come to work:

- A fever of 100.0F or higher, by itself or with any of the following symptoms: shortness of breath, acute muscle pain, acute fatigue, loss of taste or smell cough, runny nose, or sneezing, sore throat, swollen glands in the neck or an undiagnosed rash
- Any draining skin lesions which cannot be contained by an occlusive dressing
- Redness and/or discharge from either eye
- Acute vomiting and/or diarrhea (3 or more loose stools in 24 hr.) such as gastroenteritis lasting longer than 24 hours, or which is accompanied by other symptoms (e.g. fever, abdominal cramps). This must be evaluated by their healthcare provider before returning to work.
- New, undiagnosed rash (+/-fever) must be evaluated by their primary care provider and cleared through Caregiver Health Services before returning to work

CONTINUE

Let's do a quick knowledge check comparing Employer and Employee responsibilities.

Drag each responsibility into the correct category.

EMPLOYER

**Provide a safe environment,
promote safe work habits**

**Ensure appropriate types and
sizes of PPE are available**

**Provide training/education
regarding BBP, including a
BBP Exposure Control Plan**

**Document occupational
injuries/exposures, retain
records employment + 30
years**

EMPLOYEE

**Follow policies/procedures
including all elements of BBP
Exposure Control Plan**

**Use appropriate PPE as
directed, report non
functional or damaged PPE**

**Promptly report all worksite
injuries and exposures**

Receive training as required



Complete the content above before moving on.

**Congratulations! You have completed this eLearning module. Click
the Exit Course link above to return to HealthStream.**