
Infection Prevention Basics for Students

Together we can make the difference!



Objectives

At the conclusion of this cbl, the student should be able to:

1. List the components of Standard Precautions.
2. Identify the Blood-borne Pathogens that practicing Standard Precautions can prevent the spread of.
3. Identify Environmental and Work Place controls to prevent the spread of infection.
4. Verbalize the steps to take in the event of a blood or body fluid exposure.



Objectives

5. Describe the components of Respiratory Hygiene and Cough Etiquette.
6. Recognize the meaning of a posted STOP sign and describe the steps the employee should take for each type of precaution it represents.
7. Discuss how to respond to a Code N95.
8. Describe how to don (put on) and remove PPE safely.
9. Describe actions to prevent Healthcare-Associated Infections (HAIs) within the Tift Regional Health System.



Prevent Infections

Practice Standard Precautions

- ❖ Hand hygiene
- ❖ Use Personal Protective Equipment or PPE (i.e. masks, gowns, or gloves)
- ❖ Safe work practices
- ❖ Engineering controls
- ❖ Respiratory hygiene/cough etiquette



Standard Precautions

Standard Precautions are a set of infection control practices that healthcare personnel use to reduce transmission of microorganisms in healthcare settings, and should be used for all patients, all the time.

Standard Precautions protect both healthcare personnel and patients from contact with infectious agents.



Bloodborne Pathogens

Bloodborne Pathogens are microorganisms that can be spread from one person to another through blood and body fluids. Viruses that live in the blood and are transmitted through direct contact with infected blood or body fluid are:

HIV, Hepatitis B, and Hepatitis C.

Standard Precautions prevent the spread of bloodborne pathogens.



Standard Precautions include:

- **Hand hygiene** (hand washing with soap and water, or use of an alcohol-based hand sanitizer) before and after patient contact, or contact with the immediate patient care environment.
- Using **personal protective equipment (PPE)** when direct contact with blood or body fluids is anticipated.
PPE includes:

***Gloves** - when hand contamination is anticipated*

***Masks and eye protection** - when splashes may occur*

***Gowns** – when soiling of clothes may occur.*



Why are alcohol-based hand rubs so great?

- Alcohol-based hand rubs kill microorganisms more effectively, and more quickly than hand washing with soap and water.
- They are less damaging to skin than soap and water, resulting in less dryness and irritation.
- They require less time than hand washing with soap and water.
- Dispensers are often more accessible than a sink.



When is soap and water best?

A soap and water hand wash is preferred:

- When hands are visibly dirty or contaminated
- Before eating or handling food
- After using the restroom
- When providing care to patients with known, or suspected, infections caused by “spore-forming bacteria”, such as *C. difficile* or anthrax.



Staff providing direct patient care must practice Good Hand Hygiene

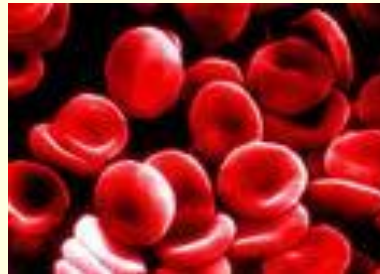
In addition to keeping your hands clean with soap and water, or alcohol hand sanitizer:

- When at Tift Regional Service areas, use hand lotion provided by the hospital (this helps to prevent dryness and breaks in the skin).
- Keep your fingernails short to about ¼ inch length beyond your finger tips.
- Do not wear artificial nails if you take care of patients.



Work Practice Controls

Work Practice Controls are practices that reduce the likelihood of exposure to bloodborne pathogens, and other infections, by altering the manner in which a task is performed.



Work Practice Controls

- Do not eat or apply cosmetics in patient care areas or where potential for blood contamination exists.
- Minimize splashing of blood or other potentially infectious materials when performing all tasks.
- Clean up spills of blood or body fluid as quickly as possible using the hospital-approved disinfectant.



Work Practice Controls

- Handle linen in a manner that minimizes dispersion of aerosols from contaminated laundry (i.e.—do not shake or toss linens, do not let linens touch your clothing).
- Bag contaminated laundry at the point of use (i.e. do not take soiled linens out of a patient room without it being in the appropriate linen bag).
- Do not overfill laundry bags.
- Close laundry bags securely before placing into laundry chute.



Segregation of Waste

Dispose of sharps into sharps containers.



Dispose of waste that is obviously bloody into red biohazard bags.



Dispose of chemotherapy waste into yellow containers marked “Chemotherapy”.



Dispose any medication waste into the appropriate designated containers for pharmaceutical waste.



Work Practice Controls

Use the **biohazard symbol** on containers of waste, specimens, or equipment that are contaminated with blood or body fluids.



Engineering Controls

Engineering controls, such as sharps disposal containers, needleless IV systems, safety devices on needles, and safer medical devices are controls that isolate or remove bloodborne pathogen hazards from the workplace.



Respiratory Hygiene and Cough Etiquette



Standard Precautions that prevent the transmission of respiratory infections, such as common colds or flu (like H1N1 flu) are called:

Respiratory Hygiene/Cough Etiquette.

Everyone should practice good ***Respiratory Hygiene/Cough Etiquette***, including all healthcare workers, students, visitors, and patients.



Respiratory Hygiene and Cough Etiquette

- Cover your nose and mouth when coughing or sneezing with a tissue or mask.
- If tissue or mask is unavailable, cough into your sleeve.
- Perform Hand Hygiene after contact with respiratory secretions.
- Maintain spatial separation of at least 3 feet from persons with respiratory symptoms.



Report Blood or Body Fluid Exposures Immediately

An Exposure is defined as blood or body fluid that comes in direct contact with non-intact skin or mucus membrane. For example, a needlestick or a splash of blood or body fluid to an unprotected face is an Exposure.

If an exposure occurs, **IMMEDIATELY** clean the area with soap and water, or flush for 5 minutes with water if eyes are involved. Report the exposure incident to your instructor/preceptor **immediately!**



OBEY the STOP SIGN

Patients that require precautions, in addition to Standard Precautions, will have a STOP sign on their door.



The STOP sign will indicate the type of precautions required to enter the room. Stop Signs should remain on the door even after a patient is discharged and until after Environmental Services completes the terminal cleaning and disinfection of the room.



Obey the STOP SIGN



Airborne Precautions

for diseases, such as TB, that are transmitted through the air

- Private room with negative pressure air flow.
- Students **MAY NOT** be assigned to a patient in Airborne Precautions since a fit tested N-95 mask is required to enter the room.
- Keep both doors closed at all times, except for entering and exiting.
- The patient should wear a regular mask when outside of the room.



Obey the STOP SIGN



Droplet Precautions

for infections spread by respiratory droplets, such as flu or bacterial meningitis

- Wear a mask when within 3-6 feet of patient's face or place a mask on the patient.
- Patient should wear a mask when outside of his room.
- Explain precautions to patient, family, and visitors, and teach them Respiratory Hygiene /Cough Etiquette.



Obey the STOP SIGN



Contact Precautions

are used for resistant (difficult to treat) infections, such as MRSA, VRE, and C difficile

- Wear gloves to touch anything in the room.
- Remove gloves and wash hands before leaving the room.
- Wear gown if your clothing will touch anything in the room.
- Clean and disinfect any equipment that comes out of the room.
- Explain precautions to patient, family, and visitors.



How to Don a Gown

- Select appropriate type and size
- Opening is in the back
- Secure at neck and waist
- If gown is too small, use two gowns
 - Gown #1 ties in front
 - Gown #2 ties in back



PPE Use in Healthcare Settings



How to Don a Mask

- Place over nose, mouth and chin.
- Fit flexible nose piece over nose bridge.
- Secure on head with ties or elastic.
- Adjust to fit.



PPE Use in Healthcare Settings



How to Don a Particulate Respirator (N95 Mask)

- Select a fit tested respirator.
- Place over nose, mouth and chin.
- Fit flexible nose piece over nose bridge.
- Secure on head with elastic.
- Adjust to fit.
- Perform a fit check –
 - Inhale – respirator should collapse
 - Exhale – check for leakage around face

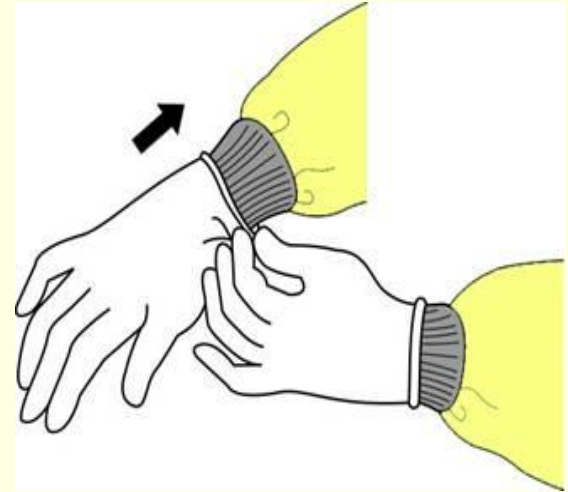


PPE Use in Healthcare Settings



How to Don Gloves

- Don gloves last.
- Select correct type and size.
- Insert hands into gloves.
- Extend gloves over isolation gown cuffs.

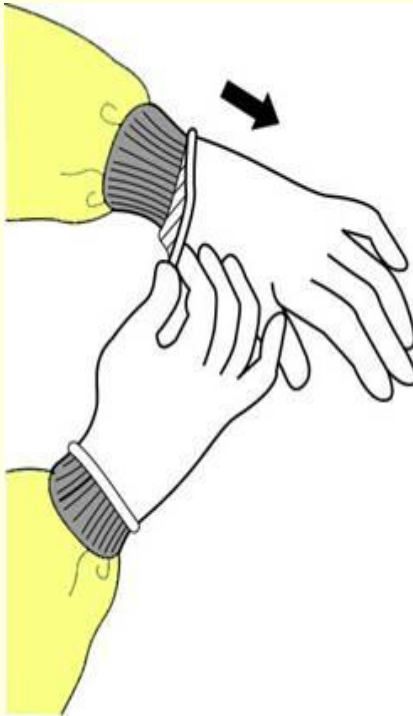


PPE Use in Healthcare Settings



Removal of PPE

Remove Gloves First

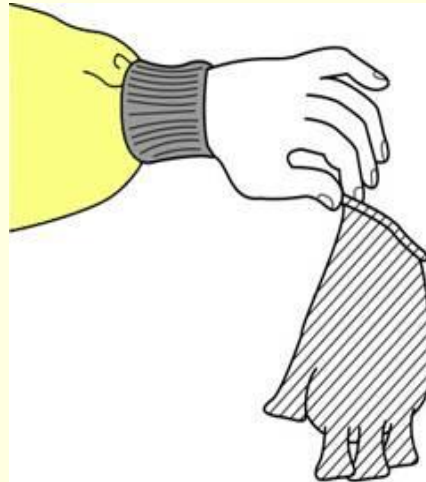


- Grasp outside edge near wrist
- Peel away from hand, turning glove inside-out
- Hold in opposite gloved hand

PPE Use in Healthcare Settings



How to Remove Gloves



- Slide ungloved finger under the wrist of the remaining glove
- Peel off from inside, creating a bag for both gloves
- Discard

PPE Use in Healthcare Settings



Removing a Mask



- Untie the bottom tie, then untie the top tie
- Remove from face
- Discard



PPE Use in Healthcare Settings



Removing a Gown



- Unfasten ties
- Peel gown away from neck and shoulder
- Turn contaminated outside toward the inside
- Fold or roll into a bundle
- Discard

PPE Use in Healthcare Settings



Safe Injection Practices

- In the last decade, the CDC has reported numerous outbreaks of bloodborne diseases resulting from inappropriate handling of IV medications. Most of these outbreaks occurred in outpatient settings such as doctor's offices, outpatient clinics, dialysis centers, and nursing homes. Unsafe injection practices, such as reuse of syringes, accounted for most of the infections and exposures.
- Safe injection practices are a set of measures to perform injections in an optimally safe manner for patients, healthcare providers, and others.



Safe Injection Practices

- Use aseptic technique to avoid contamination of sterile injection equipment.
- Do not administer medications from a syringe to multiple patients, even if the needle or cannula on the syringe is changed. Needles, cannula, and syringes are sterile, single-use items; they should not be reused for another patient nor to access a medication or solution that might be used for a subsequent patient.



Safe Injection Practices

- Use fluid infusion and administration sets (i.e., intravenous bags, tubing, and connectors) for one patient only and dispose appropriately after use. Consider a syringe or needle/cannula contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set.
- Use single-dose vials for parenteral medications whenever possible.



Safe Injection Practices

- Do not administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use.
- If multidose vials must be used, both the needle or cannula and syringe used to access the multidose vial must be sterile.
- Do not keep multidose vials in the immediate patient treatment area and store in accordance with the manufacturer's recommendations; discard if sterility is compromised or questionable.



Safe Injection Practices

- Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients.



Safe Blood Glucose Monitoring

- **Fingerstick devices should never be used for more than one person.**
- Single-use, auto-disabling fingerstick devices: These are devices that are disposable and prevent reuse through an auto-disabling feature. In settings where assisted monitoring of blood glucose is performed, single-use, auto-disabling fingerstick devices should be used.



Safe Blood Glucose Monitoring

■ **Blood Glucose Meters**

- Whenever possible, blood glucose meters should be assigned to an individual person and not be shared.
- If blood glucose meters must be shared, the device should be cleaned and disinfected (a 2-step process) after every use, per manufacturer's instructions, to prevent carry-over of blood and infectious agents. If the manufacturer does not specify how the device should be cleaned and disinfected then it should not be shared.



Healthcare-Associated Infections (HAIs)

The most common Hospital acquired infections are:

- VAP - Ventilator Associated Pneumonia
- CLABSIs - Central Line Associated Blood Stream Infections
- CAUTIs - Foley Catheter Associated Urinary Tract Infections
- SSIs - Surgical Site Infections
- Best-practice bundles are used within TRHS to reduce device-related infections.
- All staff, patients, and visitors should be aware of the infection risks associated with these devices and take the recommended precautions when providing care to patients with these devices.



Healthcare-Associated Infections (HAIs)

VAP - Ventilator Associated Pneumonia Prevention Bundle

- Hand Hygiene should be completed before and after touching the ventilator or the patient.
- Keep the head of the bed elevated 30° - 40°.
- Daily assess the patient's ability to wean and get the patient off the vent as soon as possible.
- Provide regular mouth care.
- Give medications to prevent peptic ulcer disease and blood clots.



Healthcare-Associated Infections (HAIs)

CLABSI - Central Line Associated Bloodstream Infection Prevention Bundle

- The CDC defines a central line as a line whose tip ends in one of the major vessels near the heart. Central lines include Subclavian, Internal Jugular, Femoral, PICCs, and Implanted Ports (if accessed).
- Physicians and nurses use the CLABSI Bundle during the insertion of central lines.
- Hand Hygiene before insertion.



Healthcare-Associated Infections (HAIs)

- Use maximal barrier precautions, including a mask, cap, sterile gloves, and a large sterile drape when inserting the catheter.
- Chloraprep for skin prep.
- Avoid femoral site.
- Daily review of line necessity, with prompt removal of unnecessary lines.
- Wash hands or use alcohol hand rub before accessing or handling a central line.
- Wear gloves when accessing or handling a central line.



Healthcare-Associated Infections (HAIs)

- Keep dressing over site clean and intact (change gauze dressing every 48 hrs and transparent dressing every 7 days). Scrub the hub with alcohol before each access.
- Report signs of infection, such as redness or drainage at site, or unexplained fever.
- Remove lines as soon as they are no longer necessary.



Healthcare-Associated Infections (HAIs)

CAUTI - Foley Catheter Associated Urinary Tract Infection Prevention Bundle

- Hand Hygiene before inserting or handling a foley catheter.
- Use aseptic technique during insertion.
- Use foley catheters only when necessary for patient care, and remove them as soon as possible.
- Keep tubing secured to leg to prevent discomfort and urethral traction.
- Keep collection bag off of the floor and below the level of the bladder at all times.



Healthcare-Associated Infections (HAIs)

SCIP Prevents SSIs (Surgical Site Infections)

- Give the appropriate prophylactic pre-op antibiotic within one hour of surgery.
- Discontinue the prophylactic antibiotics within 24 hours after surgery ends.
- DO Not use razors to remove hair at the operative site—use designated hair clippers only.
- Keep the patient warm before and during surgery.
- Keep blood glucose levels in the normal range.



Influenza (Flu) Facts

- The flu virus usually causes mild respiratory symptoms, but some people develop serious complications, such as pneumonia. Some require hospitalization, and over 20,000 people die annually from flu related illnesses. People at higher risk for complications from flu include older adults, pregnant women, young children, and people with chronic diseases, such as, asthma, COPD, diabetes, heart disease or a weakened immune system.



Influenza (Flu) Facts

- The Flu virus is spread from person to person in respiratory droplets of coughs and sneezes. Influenza viruses may also be spread when a person touches respiratory droplets on another person or an object and then touches their own mouth or nose before washing their hands.
- Practicing good hand hygiene and cough etiquette can help to prevent the spread of the flu virus, but the most effective way to prevent the flu is to get vaccinated.
- **The CDC recommends an annual flu vaccine for everyone over 6 months old.**



Influenza (Flu) Facts

Health care workers have a special role in the fight against influenza.

- By getting vaccinated themselves, health care workers can protect their health, their families health and the health of their patients.
- Encouraging vaccination of vulnerable patients can protect them from the flu.
- High rates of vaccination among nurses and health care workers have been linked to improved patient outcomes and reduced absenteeism and influenza infection among staff.



Take Your Vaccines



- All vaccines recommended by the Centers for Disease Control for Healthcare Workers are required for students.
- In order to protect our patients, staff and families, Tift Regional Health System does not accept declinations for vaccines. If you have questions or concerns regarding this requirement, please contact your faculty.



In Summary



- **Always practice Standard Precautions:**
 - Hand Hygiene
 - Use PPE to avoid direct contact with blood or body fluids
 - Use good work practices and utilize engineering controls
 - Practice Respiratory Hygiene/Cough Etiquette
- **Keep vaccines up to date.**
- **Report any exposure to blood or other body fluids *IMMEDIATELY*.**
- **Obey the Stop Signs.**

