When you complete this course, you will be able to:

- Recognize the basic principles of infection prevention and control
- Incorporate bloodborne pathogen and aerosol transmissible diseases exposure prevention strategies to your workflow
- Define Multi-Drug Resistant Organism (MDRO)
- Identify two MDROs in hospital setting
- Identify the elements of Central Line Associated Bloodstream Infection (CLABSI) Prevention Bundle
When you complete this course, you will be able to (continued)

- Identify the elements of the Surgical Site Infection (SSI) Prevention Bundle
- Identify the elements of Catheter Associated Urinary Tract Infection (CAUTI) Prevention Bundle
- Describe three measures to prevent breast milk exposure
- Access Infection Prevention & Control Policies and Procedures online
Infection Prevention Patient Safety

The NPSG sets proven preventative guidelines:

NPSG.07.01.01 - Hand cleaning guidelines from Centers for Disease Control & Prevention (CDC) or World Health Organization (WHO)

NPSG.07.03.01 - Prevent infections that are difficult to treat (Multi-Drug Resistant Organisms referred to as MDROs)

NPSG.07.04.01 - Prevent infection of the blood from central lines

NPSG.07.05.01 - Prevent infection after surgery

NPSG.07.06.01 - Prevent infections of the urinary tract that are caused by catheters
Preventing Hospital Acquired Infections

Hover over each icon to learn key facts about preventing Hospital Acquired Infections. You must view all items to proceed.

Next (Slide Layer)

- HAIs are not reimbursed to the reporting facility by the Centers for Medicare and Medicaid (CMS)
- According to the CDC, there were an estimated 687,000 HAIs in U.S. acute care hospitals in 2015. About 72,000 hospital patients with HAIs died during their hospitalizations
- Hospital Acquired Infections or HAIs are serious infections that patients get while receiving medical or surgical treatment in a healthcare facility like Lucile Packard Children’s Health Stanford (LPCH)
- California Department of Public Health mandates acute care facilities to report HAIs to CDC via National Healthcare Safety Network (NHSN)
- Quality outcome measures are publicly posted for consumers to see and used as a guide to make informed decisions when choosing a healthcare plan
- LPCH is focused on prevention and elimination of Healthcare Acquired Conditions (HACs) which includes HAIs like CLABSI, SSI, CAUTI, and VAP
• The Mission Zero initiative was established in 2011, in support of HAC and HAI reduction and elimination within LPCH
• LPCH has adopted the Solutions for Patient Safety (SPS) infection prevention bundles to support our Patient Care Services in eliminating HAIs
• A healthcare bundle is a set of evidence based practices that when consistently followed has been shown to lead to better outcomes

Hand Hygiene
Importance of Hand Hygiene

Hand hygiene is the single most important strategy to prevent the spread of germs and fight healthcare acquired infections.

Hand hygiene must be performed where you are delivering care (at the point of care).
World Health Organization has identified five critical moments when hand hygiene is indicated to protect the patient, healthcare worker, patient zone (patient’s immediate surroundings) and hospital environment.

Click each numbered arrow to learn more, and then click Close to return to the main page.
Five Moments for Hand Hygiene

1. BEFORE TOUCHING A PATIENT

Clean your hands before or when entering the patient zone and before touching the patient.

For example, clean your hands before:
- shaking hands, stroking a child's forehead
- helping a patient to move around
- applying oxygen mask
- taking pulse, blood pressure, chest auscultation, abdominal palpation, recording ECG
Clean your hands before performing a clean/aseptic task

Examples of clean/aseptic task:
- suctioning
- instilling eye drops
- skin lesion care, wound dressing
- catheter insertion, subcutaneous injection
- opening a vascular access system or a draining system
- food preparation, medication preparation, and administration
Clean your hands after performing your task and after glove removal.
Examples of body fluid exposure risk:
- subcutaneous injection, IV insertion
- skin lesion care, wound dressing
- drawing and manipulating any fluid sample, opening a draining system
- endotracheal tube insertion and removal
- clearing up urine, feces, vomit
- handling waste (incontinence pads, gauze soaked with blood)
Five Moments for Hand Hygiene

4 AFTER TOUCHING A PATIENT

Examples of direct patient contact:
- providing bed bath
- helping a patient get out of bed or ambulate
- applying oxygen mask
- taking vital signs, chest auscultation
- performing physical assessment

Clean your hands when you leave the patient zone.
Five Moments for Hand Hygiene

Examples of situations having in contact with patient surroundings:
- touching the door knob or cubicle curtain
- setting up bedside table for meals
- cleaning patient care equipment and medical devices (IV pumps, IV poles, vital signs machine, iStat, glucometer, stethoscope)
- holding a bed rail, telephone or call button

AFTER TOUCHING PATIENT SURROUNDINGS
Hand Hygiene Challenge

Action 1: Robert, RN, has finished his lunch break and is returning to work. He is about to enter the room of his patient Elsa, age five, who is currently under care for RSV.

As Robert cares for his patient, he will work in and around potential opportunities to spread infection to himself, the patient, items in the environment, coworkers, and future patients.

To successfully complete this challenge, **click the button for the correct hand hygiene choice** Robert should take after each action he performs.

Action 2: Robert moves to Elsa’s bed and performs a physical assessment, including checking lung and heart sounds, skin tone, and neurological function.

Action 3: Robert provides a Nebulizer treatment and is ready to exit the room.
Preventing HAI: Hand Hygiene

- Use hospital approved alcohol-based hand sanitizer
- Apply friction when rubbing your hands for at least 15 seconds
- Alcohol-based hand rubs are more effective and accessible than soap and water

Key things to remember when performing hand hygiene:
- Appropriate technique
- Time duration
How to Hand Rub

1. Apply a palmful of the product in a cupped hand, covering all surfaces.
2. Rub hands, palm to palm.
3. Right palm over left dorsum with interlaced fingers and vice versa.
4. Palm to palm with fingers interlaced.
5. Backs of fingers to opposing palms with fingers interlocked.
6. Rotational rubbing of left thumb clasped in right palm and vice versa.
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
8. Once dry, your hands are safe.
How to Hand Wash

• Apply friction when rubbing your hands

• Wash your hands for at least 15 seconds with friction

_Hint:_ Singing _“Happy Birthday”_ twice takes 15 seconds

_Click the button to view the correct handwashing technique:_

[View Hand Washing Technique]
How to Hand Wash

0. Wet hands with water;
1. Apply enough soap to cover all hand surfaces;
2. Rub hands palm to palm;
3. Right palm over left dorsum with interlaced fingers and vice versa;
4. Palm to palm with fingers interlaced;
5. Backs of fingers to opposing palms with fingers interlocked;
6. Rotational rubbing of left thumb clasped in right palm and vice versa;
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;
8. Rinse hands with water;
9. Dry hands thoroughly with a single-use towel;
10. Use towel to turn off faucet;
11. Your hands are now safe.
When to Use Soap and Water

Wash your hands with soap and water when visibly soiled

Wash also at these times:

- Before and after your shift
- Before and after eating and drinking
- Before and after using the bathroom
- When your hands feel sticky after several uses of hand sanitizer
- After taking care of a patient with suspected or confirmed C. difficile, Norovirus, or infectious diarrhea

Do not forget to use a paper towel when turning off the faucet
LPCH Hand Hygiene Policy

- Keep natural nails clean and neatly trimmed
- Artificial/acrylic/gel nails, overlays, tips, nail wraps and/or any type of nail accessory are not allowed to be worn by employees with direct patient care
- Hand, wrist, or arm jewelry and watches are not allowed during contact with patients, except for one plain band
- Use hospital approved hand hygiene products (hand sanitizer, soap, lotion)
- If you develop sensitivity to LPCH hand hygiene products:
  Report to your manager/supervisor as soon as possible
  You may be directed to go to Occupational Health Services for evaluation
True or False?
Hand hygiene is the #1 way to prevent the spread of infection.

○ True

○ False
Knowledge Check

Which of the following are standard precautions of the BBP Exposure Control Plan?

- Consider all patients as potentially infectious
- Consider all blood and body fluids potentially infectious
- Wear PPE when handling or anticipating exposure to blood, body fluids or OPIMS.
- All of the above

That is Correct
All of these are standard precautions.
Knowledge Check

What are the steps for correct hand washing?

Directions:
Drag and drop each number below to place the steps into correct sequence and select SUBMIT

1. Wet hands
2. Apply soap
3. Lather well for at least 15 seconds
4. Rinse completely
5. Use a paper towel to dry hands thoroughly
6. Turn the faucet handles with a paper towel
7. Apply soap
8. Wet hands

Feedback

Here is the correct sequence for hand washing:

1. Wet hands
2. Apply soap
3. Lather well for at least 15 seconds
4. Rinse completely
5. Use a paper towel to dry hands thoroughly
6. Turn the faucet handles with a paper towel
What Are Bloodborne Pathogens?

A bloodborne pathogen (BBP) is an organism that may be present in human blood, body fluids, and other potentially infectious materials (OPIMs) that can cause disease in humans.

*Click the photo to learn more:*
What Are Bloodborne Pathogens?

A bloodborne pathogen (BBP) is an organism that may be present in human blood, body fluids, and other potentially infectious materials (OPIMs) that can cause disease in humans.

Examples of BBPs:
- Hepatitis B virus (HBV)
- Hepatitis C virus (HCV)
- Human Immunodeficiency Virus (HIV)

Healthcare workers are at risk for acquiring BBPs that can be transmitted via contact with blood and body fluids.

Click the photo to learn more:
### Where are Bloodborne Pathogens Found?

<table>
<thead>
<tr>
<th>Blood</th>
<th>Vaginal secretions</th>
<th>Cerebrospinal fluid</th>
<th>Pleural fluid</th>
<th>Amniotic fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synovial fluid</td>
<td>Semen</td>
<td>Pericardial fluid</td>
<td>Peritoneal fluid</td>
<td>Breast Milk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Saliva</td>
<td>Vomitus</td>
</tr>
</tbody>
</table>

**Drag and drop each item** above to the left side of the arrow (if BBPs may be present in that substance) or to the right side (BBPs not present), and then **click SUBMIT**.
Where are Bloodborne Pathogens Found?

Bloodborne pathogens are found in all of these!

Blood
Semen
Vaginal secretions
Cerebrospinal fluid
Synovial fluid
Pleural fluid
Pericardial fluid
Peritoneal fluid
Amniotic fluid
Saliva
Breast milk
Vomitus

BBPs may be present

BBPs not present
Bloodborne Pathogen Exposure Control Plan

Click the gloves from 1 to 4 to read each part of the Bloodborne Pathogen Exposure Control Plan.
Part 1

Standard Precautions

- Consider all patients as potentially infectious
- Consider all blood, body fluids potentially infectious
- Wear appropriate Personal Protective Equipment (PPE) when handling or anticipating exposure to blood, body fluids or OPIMs (other potential infectious materials)

Engineering Controls

- **Sharps Safety**
  - Sharps containers and waste receptacles are appropriately labeled with a biohazard sign
  - Sharps containers are changed out when ¼ full
  - Proper handling of sharps—no needle recapping unless absolutely necessary for the procedure, and then only using the scoop method
  - Activate sharps safety device prior to disposal
  - Immediately dispose of sharps after use

- **Use of Needleless System and Needleless Devices**
  - Use of needleless IV tubing connectors and luer lock syringes and connectors
Part 2

Employee Hepatitis B Vaccination

Hepatitis B vaccine is offered to all employees free of charge upon hire and anytime you decide to get vaccinated.

Work Practice Controls

- Perform excellent hand hygiene to protect yourself, your patient and the hospital environment.
- Do not eat or drink in areas where patient care supplies are stored.
  - Covered drinks are only allowed in designated patient care unit Hydration Stations.
- Do not handle contact lenses, or apply cosmetics in patient care areas or areas where patient care supplies are stored.
- Store and dispose of infectious waste appropriately.
Part 3

Use of Personal Protective Equipment (PPE)

- Wear PPE whenever there is a potential or anticipated exposure to blood or body fluids
- PPE includes but are not limited to gown, gloves, mask, face shield, goggles, shoe covers, CAPR

Key Things to Remember when Wearing PPE to Protect Yourself

- Wear PPE appropriately and follow manufacturer’s instructions for use
- Remove and dispose of PPE before leaving your work area or patient zone
- Remove and change PPE when they are soiled, torn, damaged, or contaminated
Part 4

Post Exposure Medical Evaluation and Treatment

- Splashing/spraying and needle stick injuries are the most common ways of healthcare worker exposure to BBPs
- If you ever get exposed to BBPs or sustain a needle stick injury you must report the exposure incident to your manager/supervisor immediately
- You may be directed to go to Occupational Health Services (OHS) or Emergency Department for prompt medical evaluation, treatment, and follow-up
- Treatment, Post-Exposure Prophylaxis (PEP) and follow-up may vary and will depend on the severity of healthcare worker exposure and health status of source patient

Environmental and Equipment Cleaning and Disinfection

- It is crucial to clean and disinfect patient care equipment in between patients to prevent cross contamination
- Examples of patient care equipment: BP machine, glucometer, iStat, stethoscope, thermometer, toys
- Routine cleaning and disinfection of patient care areas and hospital environment is also important to prevent the spread of microorganisms
- Clean and dirty items should be separated in designated clean or dirty areas
For **both** clinical and non-clinical settings, anything involved in patient care that is not disposable **MUST** be disinfected. Everyone is responsible for cleaning.

Remember the “back to basics” approach...

**if you TOUCH IT or MOVE IT, you CLEAN IT!!!**
Part 4 - Cleaning and Disinfecting

How to disinfect:

- Wipe the surface and keep it wet to properly disinfect.
- Use several wipes as needed to assure that the surface stays wet for the ‘contact time’ necessary to kill germs and bacteria.
How long should the contact surface stay wet to sufficiently disinfect? Drag a timer under each brand of wipes then click submit.

4.7 Drag and Drop

(Drag and Drop, 10 points, 1 attempt permitted)
Part 4 - Cleaning and Disinfecting

How long should the contact surface stay wet to disinfect for each wipe? **Drag a timer into the red boxes.** The correct timer values will remain in the boxes under the wipe before continuing.

That's right! Wet the surface for 2 minutes when using Sani-Wipes (purple top) and for 3 minutes with Clorox wipes (blue top).
Access Bloodborne Pathogen and Exposure Control Plan


The LPCH Bloodborne Pathogen Exposure Control Plan is available on the [intranet](https://stanfordchildrens.sharepoint.com/.../Bloodborne Pathogen Exposure C...) and under the Resources tab on the right top corner.

![Search Result Image]