Infection Prevention and Control
Annual Education & Back to Basics
2017

Authored by:
Infection Prevention and Control Department
Objectives

After you complete this Computer-Based Learning (CBL) module, you should be able to:

- Describe proper techniques for hand hygiene.
- Describe standard precautions designed to prevent transmission of blood borne pathogens.
- Describe proper disposal of biohazardous waste
- Describe proper storage of food, medication, linen, and clean equipment.
- Describe appropriate response to potential exposures to infectious disease.
- List the risks of TB transmission, prevention and control measures, screening and exposure mediation.
- Describe the transmission risk of flu, identify prevention methods and the benefits of flu vaccine.
Hand Hygiene

- Perform hand hygiene:
  - BEFORE eating, touching a patient or an aseptic or clean procedure;
  - AFTER body fluid exposure, touching a patient or their surroundings, using the toilet and when removing gloves.

- Wash hands with soap and water if:
  - Visibly dirty/soiled, or
  - If the patient has diarrhea; whether or not *Clostridium difficile* has been confirmed.

- Use alcohol based hand sanitizer for routinely decontaminating hands if hands are not visibly soiled (including prior to procedures requiring aseptic technique).

- **Foam In, Foam Out** whenever you **enter or leave** a patient room.
Standard Precautions and Respiratory Etiquette

• Standard Precautions
  – All staff must follow Standard Precautions.
  – This includes the use of hand hygiene and appropriate PPE before caring for any patient or if you anticipate any exposure to blood or body fluids.

• Respiratory Etiquette
  – Cover your mouth and nose with a tissue when coughing.
  – Place a surgical mask on a coughing patient if the patient can tolerate it.
  – Perform correct hand hygiene after contact with respiratory secretions.
  – In common waiting areas, separate persons with respiratory infections at least 3 feet apart, if possible.
Personal Protective Equipment

• Wear Personal Protective Equipment (PPE) whenever you anticipate contact with blood or body fluids.
  – For example, wear gloves when drawing blood.
• Don appropriate PPE before beginning the task or entering the patient’s room.
• Remove PPE and perform hand hygiene before moving on to the next patient or task.
Safe Injection Practices

• Practice basic principles of aseptic technique when preparing and administering parenteral medications.
• Use a sterile, single-use, disposable needle and syringe for each injection you give.
• Never use a single-use needle/syringe to administer intravenous medication to multiple patients.
• Do not reinsert the same needle into a multiple-dose vial or solution container (for example, saline bag).
  – This prevents contamination of injection equipment and medication.
• Do not prepare injectable medications in the same workspace where used needle/syringes are disassembled.
Food and Medication Safety

• **Each day**, check patient refrigerators used for food and medication for:
  – Cleanliness,
  – Expired food and medication, and
  – Proper temperature.

• Document your findings on a temperature log.

• Do not store food or medication or specimens in the same refrigerator.

• **No associate food allowed in clinical areas!**

• **Covered** drinks are allowed in pre-designated clean zones only.
Biohazard Waste

• Use **red** biohazard bags for **disposable** items that are so saturated with blood that you can squeeze blood from the item.

• Change sharps containers when 3/4 full and as necessary.

• Always use sharp safety devices correctly.

• Always place biohazardous waste in a biohazard bin, located in the soiled utility room in each department.

• **Never** place sharps, bloody items and red bags in patient linen.
Equipment Cleaning

• Cleaning patient care equipment is the **shared responsibility** of Sterile Processing/Patient Care Equipment, Environmental Services, patient care associates, and ancillary services.
• **All users** are responsible for ensuring that equipment is clean before using it on a patient.
• **Equipment not identified as clean is considered dirty.**
• Clean equipment before using it on a patient.
• At a minimum, clean equipment whenever it is visibly soiled.
• Also, clean patient care equipment before and after use on different patients.
• Clean equipment at predetermined frequencies (example: weekly), or as determined by hospital policy.
Determining If Equipment is Clean

• Identify clean equipment by one of three methods:
  1. Equipment with a plastic covering is considered clean.
  2. Equipment stored in a clean unoccupied patient room is considered clean.
  3. Equipment stored in the supply room is considered clean.

• Other cleaning tips:
  – Clean your computer at the beginning of your shift by wiping the keyboard and mouse with a disinfectant wipe.
  – Remember to access Stanley carts with clean hands only!
Disinfectants

• Unless otherwise specified, use the general hospital approved disinfectant disposable wipes to clean equipment.
• See product label for proper specified contact time.
  – Know the contact time for disinfectants when using them.
Linen Storage

• Keep clean linen covered at all times.
• Place soiled linen in blue linen bags.
• Do not mix soiled linen with sharps or red bag waste.
• Put nothing other than linen down the linen chute.
Occupational Health Basics

• Get the **Hepatitis B vaccine**.
  – It is available at **no charge** to associates considered “at risk.”
  – Occupational Health administers it in three doses.
    • It is safe and effective. Just do it!
• Use **safe work practices** such as the neutral zone in surgery or a splashguard in the lab.
• Use **engineering controls**, such as safety syringes and needleless IV tubing, whenever possible.
Blood Borne Pathogen Exposure

If you experience a blood borne pathogen exposure, immediately:

1. Stop what you are doing.
2. Clean the affected area.
3. Notify your supervisor.
4. Contact:
   - Occupational Health, if your exposure occurred during normal business hours.
   - The Emergency Department after normal business hours for an immediate medical evaluation.
Tuberculosis (TB) Bacterium: Basics

- Tuberculosis (TB) disease is caused by a bacterium called *Mycobacterium tuberculosis* (*M. tuberculosis*).
- *Mycobacterium tuberculosis*:
  - Is transferred through the air when a person coughs, sneezes, sings, talks, or breathes.
    - The particles are so small that normal air currents keep them airborne and can spread them throughout a room or building unless isolation measures are used.
  - May cause infection when you *inhale* the organism exhaled by a person with TB disease.
TB Infection: High-Risk Groups

• Contact with known or suspected infectious TB disease individuals.
• Traveled from or visited in countries within the last 5 years where TB is common.
  • Examples: Asia, Africa, Latin America
• People who live or work in congregate settings among individuals who are at increased risk for TB disease.
  – Examples: Prisons, homeless shelters
• Healthcare workers who serve individuals who are at increased risk for TB disease.
• Populations defined locally as high risk for latent TB infection or TB disease.
TB Exposures

• Persons who spend a lot of **time in enclosed spaces** with people who have TB disease are at the highest risk of becoming infected with *M. tuberculosis*.
• In the hospital this may include other patients and healthcare associates.
  – These persons are identified by Infection Prevention and Occupational Health through associate interviews and chart review.
• Occupational Health and Infection Prevention are responsible for ensuring that these individuals are **notified and evaluated for significant exposure**.
  – This activity is called a **contact investigation**.
Latent TB Infection

- Not everyone who is infected with TB bacteria becomes sick.
- A person who is infected with *M. tuberculosis* but does not have TB disease is said to have a latent TB infection.
- For such individuals, the only sign of TB infection is a positive reaction to the tuberculin skin test or TB blood test.
- Overall, without treatment, about 5% to 10% of infected persons will develop TB disease.
  - About half of those people who develop TB will do so within the first two years of infection.
  - For persons whose immune systems are weak, especially those with HIV infection, the risk of developing TB disease is considerably higher than for persons with normal immune systems.

TB Screening Criteria

<table>
<thead>
<tr>
<th>Symptoms without explanation * (score)</th>
<th>Recent is defined as 2 years (score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough &gt; 2 weeks* (3)</td>
<td>Recent exposure to TB (2)</td>
</tr>
<tr>
<td>Hemoptysis or bloody sputum* (5)</td>
<td>Recent incarceration/jail time (2)</td>
</tr>
<tr>
<td>Fever/chills/night sweats* (2)</td>
<td>Recent homelessness or in shelter (2)</td>
</tr>
<tr>
<td>Weight loss &gt; 10 lbs* in last 6 months (2)</td>
<td>Foreign born; in US less than 5 years (1)</td>
</tr>
<tr>
<td>HIV Positive (2)</td>
<td>Recent travel to Asia, Africa, Latin America, E. Europe (1)</td>
</tr>
<tr>
<td>History of TB (even if on meds) (4)</td>
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</tbody>
</table>

If patient meets a score of => 5:
- Place in Airborne Isolation, or,
- Have patient wear surgical mask and notify physician
Prevent Transmission: Isolate Early

Based on the TB screening criteria, if the patient is a high risk for TB or presents with signs and symptoms of TB:

– Place the patient in an AIIR (airborne infection isolation room).
  • If unable to place the patient in an AIIR, place a surgical mask on the patient.
– Notify Infection Prevention and Control.
– Notify the doctor.
– Give the patient the Patient Information Sheet for TB.
Controlling TB Transmission

• What you can do:
  – Place all patients with suspected or confirmed TB in an airborne infection isolation room (AIIR).
    • Keep door closed.
  – Perform daily checks of negative pressure for in use AIIR.
  – All associates who may enter an AIIR must:
    • Be fit-tested for an N95 respirator.
    • Perform fit check prior to each use.
    • Wear an N95 respirator prior to entering an AIIR.
The Flu

- The flu virus is spread by respiratory droplets when people with the virus:
  - Cough,
  - Sneeze, or
  - Talk.
- Most healthy adults might be able to infect others:
  - **1 day before** symptoms develop, and
  - **Up to 5 days after** becoming sick.
- The illness usually lasts one to two weeks.
- Getting the flu vaccine is your best protection against the flu.
Flu Vaccines

There are two types of flu vaccine:

1. The flu **shot**
   - **Regular** – for individuals age 6 months and older
   - **High dose** – for age 65 and older
   - **Intradermal** – for ages 18 – 64
   - **Flublok** – an egg-free influenza vaccine (restrictions apply; consult Occupational Health)

2. The **nasal spray** vaccine
   - This is made with a weakened flu virus.
   - May be used for non-pregnant individuals ages 2-49.
Flu Vaccines, continued

• The influenza vaccine is safe and effective.
• Serious side effects from the vaccine are very rare.
• It takes approximately 2 weeks for protection to develop after vaccination and lasts through the flu season.
## Vaccination Myths and Facts

<table>
<thead>
<tr>
<th>Myth</th>
<th>Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>“The flu vaccine will give me the flu.”</td>
<td>• The flu shot has killed viruses.</td>
</tr>
<tr>
<td></td>
<td>• The nasal spray has weakened viruses.</td>
</tr>
<tr>
<td></td>
<td>• Neither will cause the flu.</td>
</tr>
<tr>
<td>“I got a flu vaccine last year, so don’t need one this year.”</td>
<td>Each year a new flu vaccine is made to protect against the viruses likely to cause disease in the upcoming flu season.</td>
</tr>
<tr>
<td>“Flu vaccines are not safe.”</td>
<td>Flu vaccines have been given safely for more than 50 years.</td>
</tr>
</tbody>
</table>
# Vaccination Myths and Facts, cont.

<table>
<thead>
<tr>
<th>Myth</th>
<th>Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I’m healthy. I don’t need a flu vaccine.”</td>
<td>Anyone can get the flu.</td>
</tr>
<tr>
<td>“The flu is not too bad.”</td>
<td>The flu is the ninth leading cause of death annually in the U.S.</td>
</tr>
<tr>
<td>“Antibiotics can fight the flu.”</td>
<td>• Antibiotics fight bacteria.</td>
</tr>
<tr>
<td></td>
<td>• Flu is cause by a virus.</td>
</tr>
</tbody>
</table>
Steps to Prevent Spreading Flu

- **Wash your hands** often.

- **Cover your nose and mouth** with a tissue when you cough or sneeze.

- **Avoid touching** your **eyes, nose, and mouth**.
  - Germs spread this way.
Protect Yourself

• If you think you may be exposed, contact Occupational Health.
• If exposure is confirmed, follow up as instructed by the Occupational Health nurse.
• If you are ill with an infectious disease, don’t forget to:
  – Call the confidential sick call line at 678-312-2567
  – or-
  – E-mail sickcall@gwinnettmedicalcenter.org.
Part 2
Infection Prevention and Control: Back to Basics

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Back to Basics Campaign

• Based on our Infection Prevention audits and professional consulting survey results, we have opportunities for improvement regarding Infection Prevention practices.

• The following computer-based learning (CBL) module describes variances and opportunities for improvement within our facility.
Objectives

After you complete this Computer-Based Learning (CBL) module, you should be able to:

• Describe the need for the Back to Basics campaign.
• List components of Standard Precautions.
• Identify opportunities for improvement in your work area.
• Describe why infection prevention practices are the responsibility of all staff.
Standard Precautions

• Use with **every patient, every time** to reduce the risk of exposure to blood borne pathogens and disease.

• For Standard Precautions, you **must** use the correct personal protective equipment (PPE) depending on your risk of exposure.
  
  – **Determine your risk first**, then choose appropriate PPE.
Standard Precautions Examples

- Hand hygiene
- Personal protective equipment (PPE)
- Respiratory hygiene and cough etiquette
- Injection safety
- Patient supplies
- Medication storage
- Cleaning and disinfection
- Laundry
- Linen
- Waste disposal
Transmission Opportunities

When you do not follow Standard Precautions, you create a transmission opportunity!
Opportunities for Improvement

Anything our hands touch is likely to be contaminated.

Remember to Foam In and Foam Out!
Hand Hygiene

• Hand hygiene is the first and last line of defense against and the best way to prevent transmission of germs!

• Let your patients see you perform hand hygiene.
  • Perception is everything to our patients!

• As part of the Back to Basics campaign GOJO Purell dispensers will be placed strategically outside patient rooms.
  – We currently use this product in desk and lobby areas.
When to Perform Hand Hygiene

- **Before** patient contact
  - All contact prior to ‘touching’ the patient.

- **Before** an aseptic task
  - Changing dressings, etc.

- **After** body fluid exposure, **after** removing gloves
  - Foley care, bedpans, etc.

- **After** patient contact
  - All contact after ‘touching’ the patient

- **After** contact with patient surroundings
  - Any surface you touch in the patient’s environment such as light switch, door knob, bedside table, keyboard, monitor, etc.
Personal Protective Equipment (PPE)

OSHA regulation requires that you remove and dispose of all PPE in the area you use it.

- **Do not** wear PPE in the hall.
  - Discard it as you exit the patient room.
- **Only** exceptions:
  - Rehab staff during ambulation outside the patient room
  - When using an Ambu-bag during transport (gloves)
**Personal Protective Equipment (PPE)**

**Gloves**

- Wear for potential contact with blood, body fluids, mucous membranes, non-intact skin or contaminated equipment.
- Wear the right size glove.
- Clean hands and change gloves between tasks; e.g. after contact with contaminated surface or task.
- Do not wear the same pair of gloves for the care of more than one patient.
- **Immediately** after removing gloves, perform hand hygiene.
- **Before** wearing sterile gloves, perform hand hygiene.
- **Do not** re-use gloves.
Wear a gown when you anticipate contact with blood or body fluids.

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

Dispose of the gown after each use, even if for the same patient.

Remove and dispose of gown and perform hand hygiene before leaving the patient’s environment.
Wear a facemask when:

• You may have potential contact with respiratory secretions and sprays of blood or body fluids.
  – As defined in Standard Precautions and/or Droplet Precautions.
• Placing a catheter or injecting material into the spinal canal or subdural space (lumbar punctures).
  – This protects patients from exposure to infectious agents carried in the mouth or nose of healthcare providers.
Personal Protective Equipment (PPE)

Goggles and Face Shields

- Wear eye protection for potential splash or spray of blood, respiratory secretions, or other body fluids.
  - Personal eyeglasses and contact lenses are **not** considered adequate eye protection!
- You may use goggles with facemasks, or face shield alone, to protect your mouth, nose and eyes.
Personal Protective Equipment (PPE)

Respirators

• Wear N95-or higher respirators for potential exposure to infectious agents transmitted via the airborne route (e.g., tuberculosis).

• All healthcare personnel who use an N95 or higher respirator must be fit tested at least annually and according to OSHA requirements.

• Please review the N-95 position statement on the Infection Prevention and Control website.
Respiratory Hygiene and Cough Etiquette

For patients/visitors that have respiratory symptoms:

• Have supplies ready; mask and tissues.
• Instruct the patient/visitor to cover his/her mouth and nose with a tissue when coughing or sneezing.
  – Provide a facemask to all persons that have respiratory infection symptoms.
• Place coughing, sneezing patients in a closed room, if available; otherwise provide them a mask if in waiting areas.
Injection Safety

• **Always** use aseptic technique.
• One needle, one syringe, one time.
  – Draw up all medication from vial, **once**.
  – Dispose of needles in a sharps container at the point of use.
• Cleanse the access diaphragms of medication vials with 70% alcohol, **even if you just removed the plastic cap**.
• Use single-use, disposable finger stick devices (e.g., lancets) to obtain samples for checking a patient’s blood glucose, PT/INR, etc. and dispose of them in appropriate sharps container after each use.
Injection Safety, con’t.

• Use single dose vials for **only one patient**.
• Multi-dose vials:
  – Use for one patient **when possible**.
  – Restrict use to medication preparation area, if for multi-patient use.
    • Medication preparation areas must be separate and dedicated from other areas.
Injection Safety, con’t.

• Tubing
  – Do not use a fluid infusion or administration set (e.g., intravenous tubing) for more than one patient.
  – Examine contrast tubing in your area; most are single use and not for reuse.
• Phlebotomy
  – Do not bring common trays/supplies into immediate patient care area.
  – Label tubes before draw.
  – Place tubes in transport bag.
  – Do not store blood specimens near medications or preparation areas.
Patient Supplies

• Store patient supplies in protected areas such as designated supply rooms, cabinets or bins.
  – Sterile and clean supplies must be stored separately.
  – Never store supplies near sinks or within 36 inches of a sink splash zone.
    • Examine your area for splash guard installation.

• Single use supplies:
  – NEVER reuse any supply used on or with a patient that is designated as single use according to the manufacturer.
Examples include:
  • Contrast tubing, injection tubing, white blood pressure cuffs, etc.
  • Review your supply usage.
• Corrugated cardboard boxes:
  – **NEVER** use to store patient supplies.
  – **NEVER** store outside shipping boxes within clinical areas.
• Please refer to the Corrugated Cardboard Risk Assessment on the Infection Prevention and Control website.
Medication Storage and Handling

• Store all medications according to manufacturer’s instructions (e.g., shelf-life, temperature).
• **Always** store multi-dose vials in the designated medication room/area and **not** in the immediate patient area.
  – Disinfect preparation area between uses.
• Store medications that require refrigeration in a dedicated, labeled refrigerator.
  – Designated personnel **must** maintain a temperature log.
• Refer to pharmacy policies for specific storage and handling guidelines.
Cleaning and Disinfection

• All employees that clean/disinfect equipment must have a documented successful competency assessment on file.
  – Visit the Infection Prevention website for a general competency assessment form.
• You need to be able to verbalize your understanding of the contact time needed for each disinfectant used.
  – Contact time is the same as “wet”, “dwell” or “kill” time.
  – The grid is located on Infection Prevention and Control website.
Cleaning and Disinfection, con’t.

• Clean and disinfect **ALL** equipment:
  – **After** patient use.
  – **Prior to** removing from patient room.
  – **Prior to storage** in rooms or alcoves.
  – **Prior to use** if stored uncovered in an alcove.
• Equipment stored in alcoves must have appropriate signage indicating “clean”.
• Follow disinfectant manufacturer instructions for use.
Cleaning and Disinfection

Spaulding Criteria

Classification for reusable patient equipment and instruments:

- **Critical**: enters sterile tissue
  - Requires sterilization (instrument processing area)
- **Semi-critical**: contacts mucous membrane
  - Requires high level disinfection (HLD), at a minimum using Cidex OPA, Trophon, etc.
  - Examples include endocavitary probes and endoscopes, laryngoscope blades
  - If HLD used, items (bags, container, scope) must be labeled with HLD reprocessing date.
Cleaning and Disinfection

Spaulding Criteria

Classification for reusable patient equipment and instruments (con’t.):

• **Non-critical**: contacts intact skin
  – Requires low to intermediate level disinfecting (disinfectant wipes)
  – Examples include vital sign equipment, walkers, bedside commodes, IV pumps, etc.

*Reference: Cleaning and Disinfection Policy 600-04.*
Cleaning and Disinfection

Surgical Instrumentation

For surgical instrumentation in non-surgical areas:

• All hinged instruments must be in an open position.
• Rinse with sterile water (not saline).
• Apply enzymatic foam or spray to instrument.
• All instruments must remain wet prior to transport.
• Transport bin or container must:
  – Be stored in a soiled utility room prior to transport.
  – Be impermeable and leak resistant.
  – Have biohazard label or imprint on outside.
Cleaning and Disinfection

Imaging Lead Aprons

Clean imaging lead aprons per manufacturer instructions, including manufacturer instructions for the solution used.

– When you don’t have the manufacturer cleaning schedule, clean when visibly soiled and at least weekly.
Handling Laundry and Linen

• Wear appropriate PPE.
• Handle with minimal agitation.
• Use leak resistant containment device.
• For transporting and storing clean linen:
  – Store in a designated area.
  – Keep covered at all times.
  – Separate clean linen from dirty linen and other supplies.
Waste Disposal

• Puncture-resistant, leak-proof sharps containers are located in every patient-care area.
  – They must be disposed in appropriate containers.
• All trash and waste containers are emptied at least daily by designated personnel. They must:
  – Wear appropriate PPE.
  – Handle, transport, and dispose regulated waste, including antineoplastic and hazardous drugs, according to state and local regulations.
Congratulations!

• You have completed this CBL module.
• Proceed to take the test.
• Questions?
  • Visit the Infection Prevention and Control website.
  • Contact any Infection Prevention and Control team member.