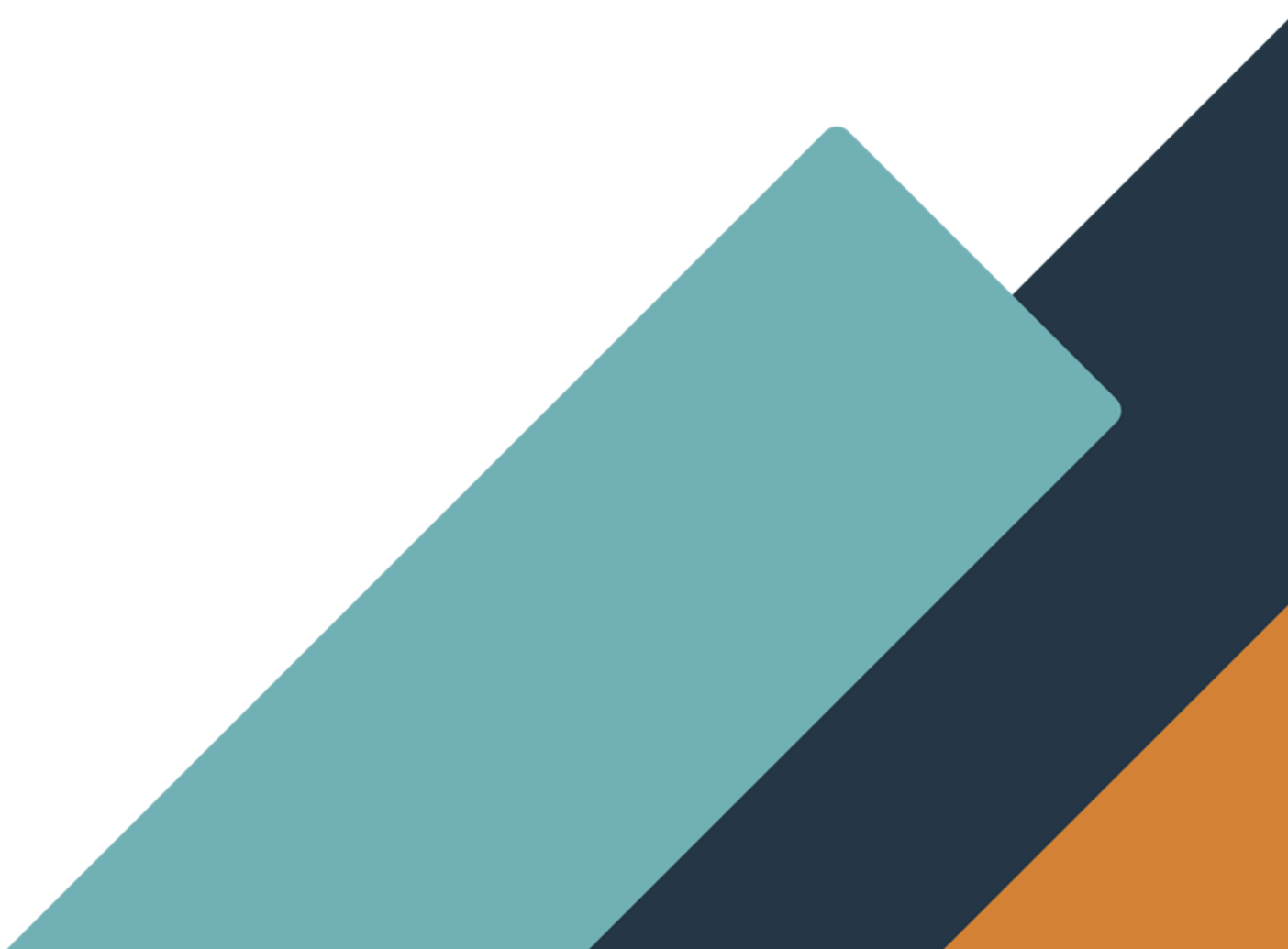
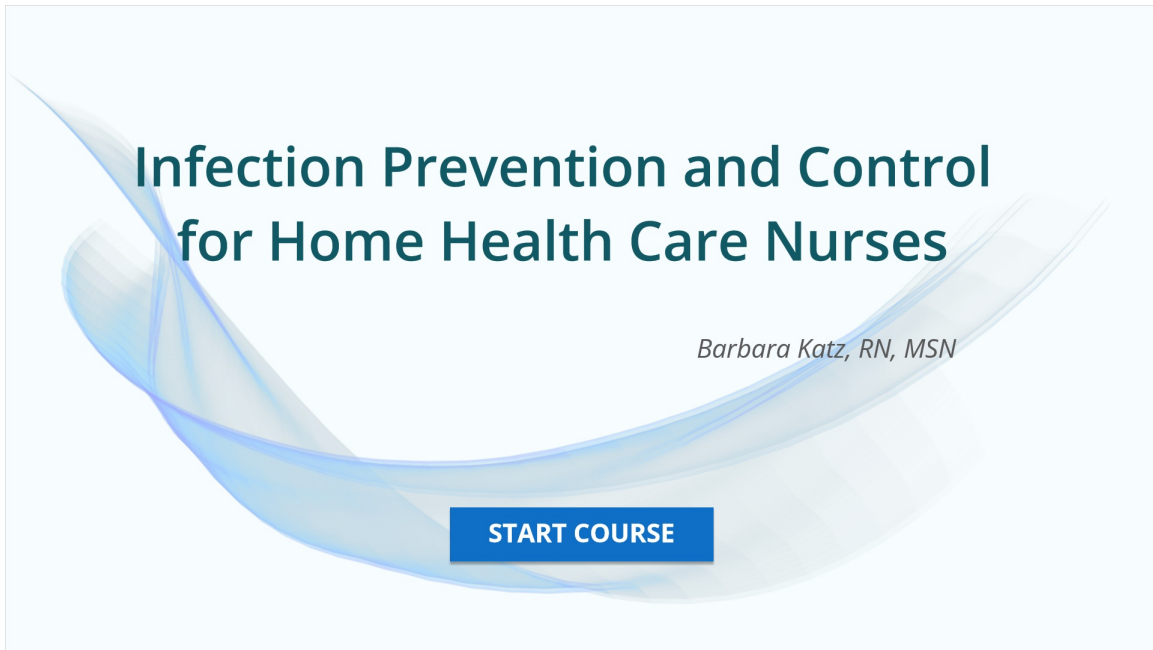


Infection Prevention and Control for Home Health Care Nurses



1.1 Infection Prevention and Control for Home Health Care Nurses



**Infection Prevention and Control
for Home Health Care Nurses**

Barbara Katz, RN, MSN

START COURSE

1.2 Learning Outcomes

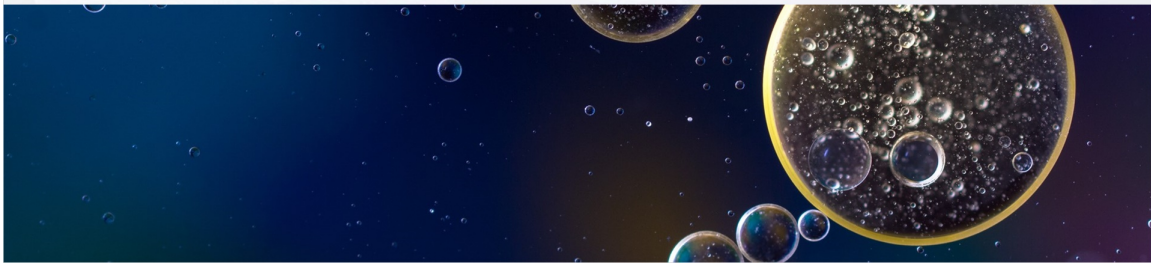
Learning Outcomes

- Define “infection control”
- Explain the home health nurse’s role in infection prevention and control
- Explain standard precautions
- Describe the proper use of personal protective equipment (PPE)
- Explain bloodborne pathogen procedures

1.3 Understanding Infection Control

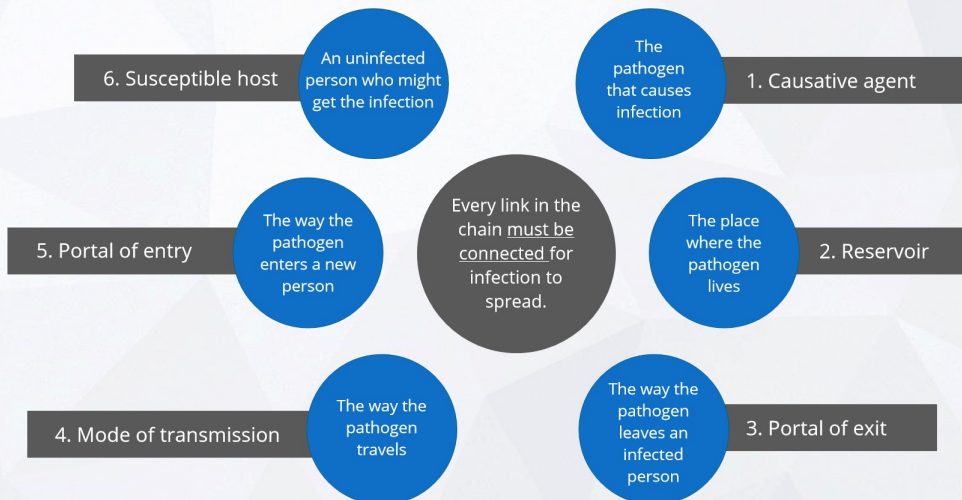
Understanding Infection Control

- Pathogens are microorganisms that cause infections
- Pathogens can be transmitted from people, food, water, medical equipment/supplies and other vehicles
- Infection control procedures stop pathogens from spreading



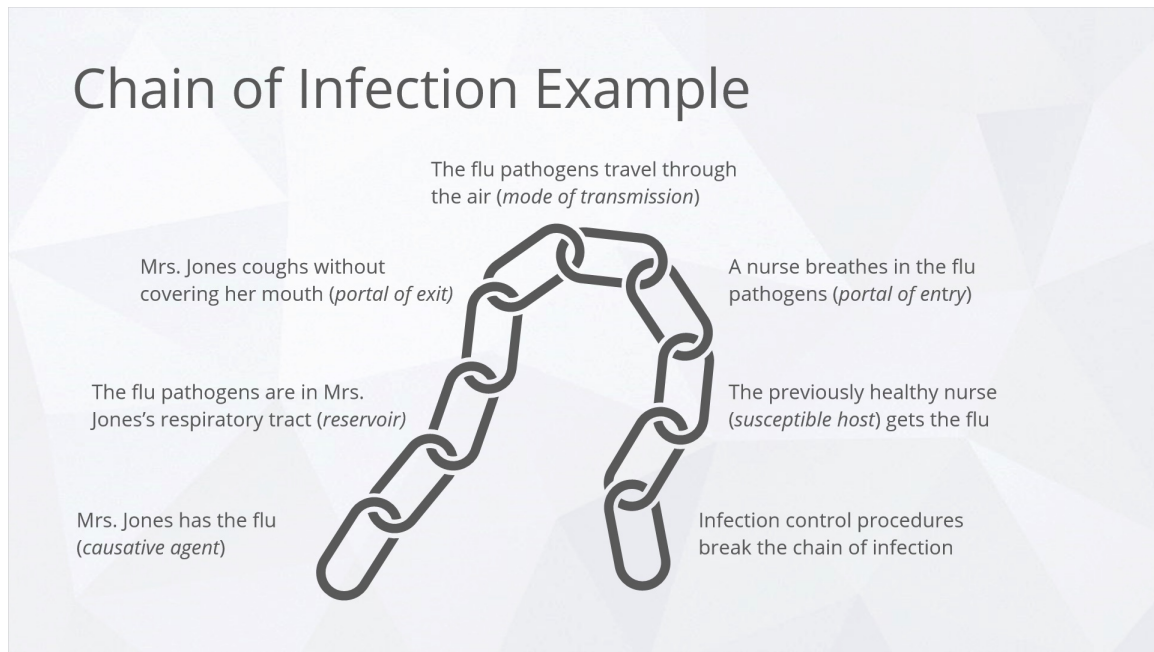
1.4 The Chain of Infection

The Chain of Infection



Source: *Break the Chain of Infection*, Association for Professionals in Infection Control and Epidemiology, 2018

1.5 Chain of Infection Example



1.6 Infection Control “CPR” Basics

Infection Control “CPR” Basics

- **CLEAN** – hands, skin and surfaces, equipment
- **PROTECT** – clothes, skin, mucus membranes, equipment and supplies
- **REPORT and MANAGE** – new or worsening patient infections or exposure

1.7 Personal Infection Prevention

Personal Infection Prevention

You as the patient's nurse do not want to become the source of an infection that can cause a cascade of poor outcomes for your patients.

- Get required immunizations (flu and hepatitis B)
- Understand and follow agency infection control procedures
- Stay home from work if you have an infection
- Get medical attention for potentially serious infections
- Sneeze or cough into your sleeve
- Keep open cuts covered
- Avoid touching mucus membranes after touching a contaminated surface



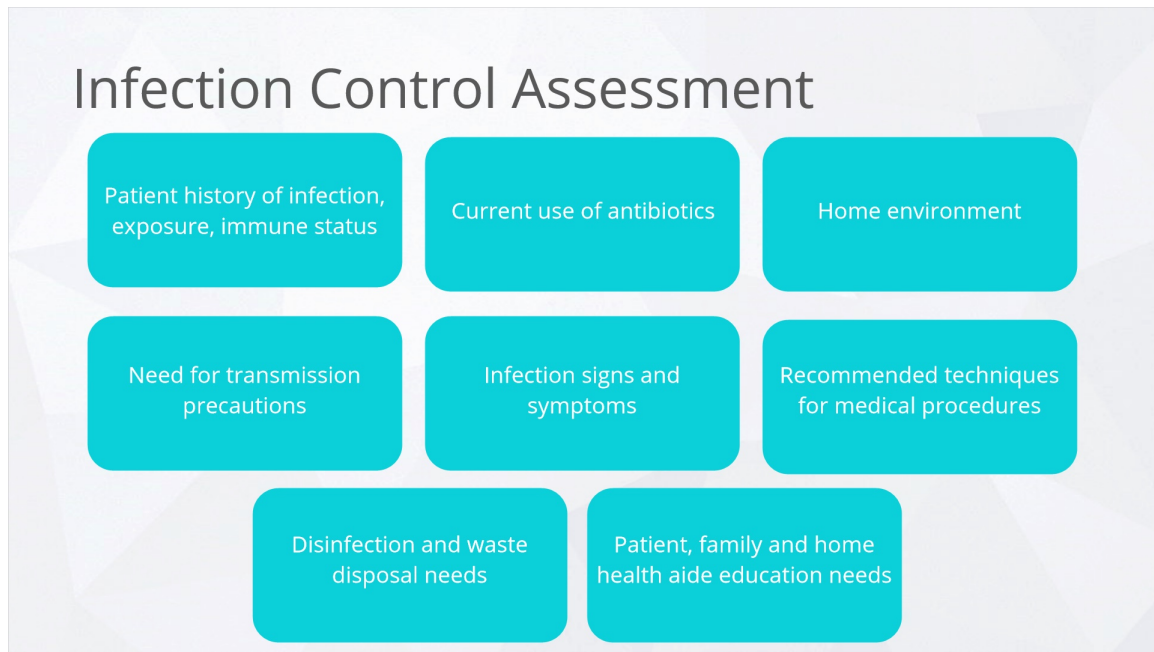
1.8 The Nurse's Role in Infection Control

The Nurse's Role in Infection Control

- Infection control assessment
- Proper use of precautions
- Patient and family education - infection prevention and use of antibiotics
- Protection and cleaning/disinfection of equipment
- Use of appropriate clean or aseptic technique for procedures
- Orient home health aides to infection control procedures
- Follow medical waste disposal procedures
- Follow bloodborne pathogen procedures
- Report patient infections and exposures and sharps injuries



1.9 Infection Control Assessment



1.10 Home Health Bag Technique

Home Health Bag Technique

- Keep home health care bag clean
- Place bag on a visibly clean, dry flat surface
- Consider use of a clean, water resistant barrier under the bag
- Avoid bringing the bag into a very dirty or pest infested home
- All items in the bag should be clean – no “dirty” areas
- Perform hand hygiene before using the bag
- Perform hand hygiene before replacing clean items in the bag

Source: McGoldrick, M.(2017) Best practices for “bag technique” and use of surface barriers, *Walters Kluwer Health Inc.*

1.11 Standard Precautions

Standard Precautions

Standard precautions are universal practices for preventing the spread of infectious disease. These practices assume that **anyone could be infectious** and that precautions should be used with **all** patients. Standard precaution elements include:

- Hand Hygiene;
- Environmental Cleaning and Disinfection;
- Injection and Medication Safety;
- Appropriate Use of Personal Protective Equipment;
- Minimizing Potential Exposures; and
- Reprocessing of reusable medical equipment between each patient and when soiled.

Source: Centers for Disease Control, Medicare Home Health Agency Interpretive Guidelines, 2018

1.12 When to Use Hand Hygiene

When to Use Hand Hygiene

Hand hygiene, using either handwashing or the use of antibacterial solutions, should be performed at a minimum:

- Before contact with a patient
- After contact with the patient or objects in the immediate vicinity of the patient;
- Moving from a contaminated body site to a clean body site during patient care; and
- Before performing an aseptic task (e.g., insertion of IV, preparing an injection, performing wound care)
- After contact with blood, body fluids or contaminated surfaces;
- After removal of personal protective equipment (PPE).

Source: Medicare Interpretive Guidance for Home Health Care COPS

1.13 Hand Hygiene - Handwashing

Hand Hygiene - Handwashing

- Wet hands with water and apply soap
- Point fingers down into the sink
- Lather the hands and rub all surfaces together for 20 seconds
- Rinse hands with clean water
- Use paper towels to dry hands and turn off the tap

Source: Medicare Interpretive Guidance for Home Health Care COPS



1.14 Hand Sanitizer for Hand Hygiene

Hand Sanitizer for Hand Hygiene

In the absence of visible soiling of hands, approved alcohol-based products for hand disinfection are preferred over antimicrobial or plain soap and water. Some additional guidelines for use of hand sanitizer include:

- Carry and use agency approved hand sanitizer (at least 60% alcohol) in the home health bag
- Put product on and rub hands together
- Rub all surfaces until hands feel dry (about 20 seconds)
- Hand sanitizer does not kill *Clostridium Difficile* – use handwashing if this pathogen is present or suspected

Source: VNAA Procedure Manual, 2014 and Medicare Interpretive Guidance. 2018



1.15 Personal Protective Equipment(PPE)

Personal Protective Equipment(PPE)

The use of PPE is part of standard precautions. PPE protects the caregiver's skin, hands, face, respiratory tract, and/or clothing from exposure. PPE consists of:



Gloves



Disposable gowns



Masks



Eye protection

Use PPE for: contact with blood or body fluids, open wounds, contaminated objects or surfaces

1.16 PPE Key Points

PPE Key Points

The use of PPE is part of standard precautions. PPE protects the caregiver's skin, hands, face, respiratory tract, and/or clothing from exposure. PPE consists of:

- Put PPE on in the right order:
 1. Gown
 2. Mask
 3. Goggles or face shield
 4. Gloves
- Remove PPE in this order: gloves, goggles, gown, mask
- Perform hand hygiene between steps if hands become contaminated and after using PPE
- After use, bag disposable PPE and discard in trash



1.17 Environmental Cleaning and Disinfection

Environmental Cleaning and Disinfection

There are several different ways to reduce the number of pathogens in the home environment including:

- **Cleaning** - removing visible soil, blood and other debris by mechanical or manual processes
- **Disinfection** with chemicals kills most organisms
- **Sterilization** destroys all microorganisms including spores
- **Cleaning and disinfection** are the methods most commonly used in home health care

1.18 Levels of Sterilization and Disinfection

Levels of Sterilization and Disinfection

| | | | |
|----------------------|--|-------------------------------------|---|
| Noncritical | BP cuff, stethoscope | Intact skin | Low level disinfection (alcohol wipes or 60% alcohol solution) 1/40-1/100 bleach solution |
| Semi-critical | Thermometers, equipment used on contaminated dressings | Non-intact skin or mucous membranes | High level disinfection (1:10 bleach solution) EPA approved disinfectant |
| Critical | Surgical instruments, needles, catheters | Sterile tissue or vascular system | Sterilization by exposure to prolonged heat and strong chemicals |

Sources: *Visiting Nurse Association of America Procedure Manual, 2014,*
CDC Guidelines for Disinfection and Sterilization in Health Care Facilities, 2008

1.19 Reprocessing of Medical Equipment Between Patients if Soiled

Reprocessing of Medical Equipment Between Patients if Soiled

Reusable medical equipment (e.g., blood glucose meters and other devices such as, blood pressure cuffs, oximeter probes) must be cleaned/disinfected prior to use on another patient and when soiled. Home health nurses must:

1. Maintain separation between clean and soiled equipment to prevent cross contamination.
2. Follow the manufacturer's instructions for use and current standards of practice for patient care equipment transport, storage, and cleaning/disinfecting.

1.20 Medical Waste Disposal Best Practices



Medical Waste Disposal Best Practices

- Follow agency procedures for waste disposal
- Don nonsterile gloves
- Dispose of blood and body fluids in patient's toilet
- Prepare a plastic bag to dispose of items contaminated with blood and body fluids
- After care is completed, close bag securely
- Double bag highly contaminated waste
- Throw the bag in household trash

1.21 Home Infection Control Step by Step

Home Infection Control Step by Step

- 1 Place bag on clean, dry surface or barrier
- 2 Wash hands with soap and running water
- 3 Remove supplies and place on a clean, dry, waterproof surface
- 4 Put on PPE as required by care plan
- 5 Perform patient care using appropriate procedures
- 6 Clean or disinfect equipment
- 7 Bag waste and discard
- 8 Remove PPE
- 9 Wash hands with soap and running water

1.22 Transmission Precautions

Transmission Precautions

- Higher level precautions that are used to prevent transmission of pathogens by specific routes
- The patient history and care plan determines use of transmission precautions
- Use transmission precautions **in addition** to standard precautions

1.23 Types of Transmission Precautions

| Types of Transmission Precautions | |
|-----------------------------------|--|
| Airborne | Use for pathogens that come from the respiratory tract and ride air currents such as: TB, chicken pox, measles, SARS, bioterrorism agents such as anthrax |
| Contact | For infections that can be spread by touching or contact with pathogens (GI infections, skin/wounds, parasites such as lice, drug resistant organisms like MRSA) |
| Droplet | For pathogens spread (up to 3-6 foot radius) by coughing, sneezing or even talking (cold, flu, whooping cough, strep) |

1.24 Contact Transmission Precautions

| Contact Transmission Precautions |
|--|
| • Use gown and gloves |
| • Wash hands with antibacterial soap |
| • Limit items brought into the home and leave them if possible |
| • Clean and disinfect surfaces touched by the patient |
| • Disinfect care equipment when taking it out of the home |
| • Discard used PPE in impervious trash bag |
| • Document use of precautions and patient education provided |

Source: CDC.com, *Transmission precautions*

1.25 Airborne Transmission Precautions

Airborne Transmission Precautions

- Use standard precautions
- Don a fit tested respirator and perform a fit test before entering the patient's room
- Ask the patient to wear a mask
- Avoid inducing patient coughing
- After care is performed, wash hands
- Remove mask after leaving the patient's room and discard in impervious trash bag
- Document precautions used and patient education provided



1.26 Droplet Transmission Precautions

Droplet Transmission Precautions

- Use standard precautions
- Wear a mask and eye protection
- Ask patient to use a mask
- Clinician and patient should cover the nose and mouth when sneezing or coughing
- Discard used tissues immediately
- When not providing care, stay 3 feet away from the patient
- After care, wash hands
- Discard surgical mask in impervious trash bag and close it

Source: CDC.com, *Transmission precautions*

1.27 Infection Control Techniques for Medical Procedures

Infection Control Techniques for Medical Procedures

- **Clean** technique is used to eliminate pathogens
- **Sterile** technique is used to eliminate all microbes
- The **“clean, no touch”** procedure reduces transmission of microbes by handling patient supplies with clean gloves, utilizing sterile packaging as a sterile field and not touching surfaces that will touch the patient
- Consult agency procedures or internal consultants for advice on which technique is appropriate

1.28 OSHA Bloodborne Pathogen Standard

OSHA Bloodborne Pathogen Standard

Bloodborne pathogens are viruses in the blood stream that cause hepatitis, HIV/AIDS, Ebola and other very serious illnesses.

- | | |
|---|---|
| <ul style="list-style-type: none">• Provide training on bloodborne pathogen safety• Have a written plan for employees, who are exposed to bloodborne pathogens, to follow• Provide proper PPE• Provide free hepatitis B immunizations to employees | <ul style="list-style-type: none">• Understand bloodborne pathogen infection prevention• Use PPE and cleaning procedures as indicated on the care plan• Follow sharps and blood and body fluid safety procedures• Report sharps injuries immediately• Get Immunized against hepatitis B |
|---|---|

Source: OSHA Bloodborne Pathogen Factsheet

1.29 Safe Injection Procedures

Safe Injection Procedures

- Use aseptic technique for injections
- Understand and use device safety features
- Use one syringe with one needle per patient
- Do not administer medication to multiple patients from single dose vials
- Discard multidose vials if sterility is compromised
- Never reuse needles or lancets
- Never bend or break contaminated needles
- Do not recap needles
- Discard used syringes in sealed biohazard containers

1.30 Preventing Sharps Injuries

Preventing Sharps Injuries

- Follow sharps safety procedures and teach patients who use sharps to do the same
- Never leave a used sharp on a table or counter or just thrown in the trash
- Pick up sharps with a brush and dustpan, tongs or long tweezers
- Put used sharps in agency approved "biohazard" containers
- Stop using sharps containers when $\frac{3}{4}$ full



1.31 Cleaning Blood and Body Fluid Spills

Cleaning Blood and Body Fluid Spills

- Put on gloves
- Mix a disinfectant solution (1 part bleach to 10 parts water)
- Wipe area with paper towel
- Clean area with disinfectant solution
- Discard paper towels in a plastic bag, tie, throw away



1.32 Managing Exposure to Blood or Body Fluids

Managing Exposure to Blood or Body Fluids

- Immediately wash cuts from sharps with soap and water
- Flush splashes to the nose, mouth, or skin with water
- Rinse eyes with clean water
- Report the incident to the agency's designated infection control professional and your manager right away
- Get medical treatment for sharps injuries, following your supervisor's instructions

1.33 Quick Quiz - Breaking the Chain of Infection

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Quick Quiz - Breaking the Chain of Infection

- Mrs. Jones has a respiratory infection (**causative agent**)
- The pathogens are in Mrs. Jones's respiratory tract (**reservoir**)
- Mrs. Jones coughs without covering her mouth (**portal of exit**)
- The pathogens travel through the air (**mode of transmission**)
- A nurse breathes in the pathogens (**portal of entry**)
- The previously healthy nurse (**susceptible host**) gets the respiratory infection

How could the nurse break the chain of infection?

Click next arrow to view answer

1.34 Case Study - Helping Mr. Mandel - Answer

*No Audio on this Slide

Quick Quiz - Breaking the Chain of Infection

How could the nurse break the chain of infection?

- Ask Mrs. Jones to cough into her sleeve or a tissue.
- The nurse can wear a mask when providing care.
- The nurse can wash her hands frequently.
- The nurse could wear gloves when picking up tissues and cleaning in areas where the patient has been coughing.

1.35 Stop and Think - Where are the Pathogens?

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Stop and Think - Where are the Pathogens?

- Mr. Haverill has occasional urinary incontinence and sometimes urinates on the toilet and floor.
- Mrs. Alvarez has pneumonia and is coughing constantly.
- Mr. Washington pricks his finger with a lancet to test his blood sugar and leaves the used lancets on the counter.
- Ms. Groninger has an infected pressure ulcer on her leg and drainage often leaks through the dressing.

In these situations, where are pathogens likely to be?

Click next arrow to view answer

1.36 Case Study - Helping Mr. Mandel - Answer

*No Audio on this Slide

Stop and Think - Where are the Pathogens?

In these situations, where are pathogens likely to be?

1. Pathogens are likely to be on the toilet, on the floor, and possibly on the patient's underwear and his hands if he does not wash them well after he urinates.
2. Pathogens are likely to be around her nose, mouth and face; on any tissues that she uses, on her clothing and on any towels, objects or surfaces that she touches or coughs on. There may also be pathogens on her hands if she is touching her nose, mouth or face.
3. Pathogens are likely to be on the lancet, on the counter and possibly on the patient's hands if he does not wash them thoroughly after testing his blood.
4. Pathogens are likely to be on the dressing itself, on parts of the patient's clothing close to the dressing, on the sheets of the patient's bed and anywhere else that the drainage might touch. Pathogens might also be on the patient's hands if he touches the dressing.

1.37 Quick Quiz - Standard Precautions

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Quick Quiz - Standard Precautions

- Mrs. Hobart who is 87 and never leaves home
- Mr. Schwartz who has a previous history of IV drug use
- Mrs. Diaz who has been in and out of the hospital with urinary tract infections

Standard precautions should be used for which of these patients?

Click next arrow to view answer

1.38 Case Study - Helping Mr. Mandel - Answer

*No Audio on this Slide

Quick Quiz - Standard Precautions

Standard precautions should be used for which of these patients?

The answer is **all of these patients**.
Standard precautions should be used with all patients; whether or not they are known to have, or seem to have, an infectious disease.

1.39 True/False Q1

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Handwashing Fact or Fiction?

You can use hand sanitizer in any situation in which you would normally wash your hands.

True

False

SUBMIT

1.40 True/False Q2

*No Audio on this Slide

Handwashing Fact or Fiction?

Washing your hands for 5-10 seconds is enough to clean off pathogens.

True

False

SUBMIT

1.41 True/False Q3

*No Audio on this Slide

Handwashing Fact or Fiction?

Washing your hands with hot water and no soap will get rid of pathogens.

True

False

SUBMIT

1.42 True/False Q4

(Multiple Choice, 10 points, unlimited attempts permitted)

*No Audio on this Slide

Using Personal Protective Equipment (PPE)

The home health nurse would put personal protective equipment on in this order:

1. Gloves
2. Mask
3. Gown
4. Goggles or face shield

True

False

SUBMIT

1.43 True/False Q5

*No Audio on this Slide

Handwashing Fact or Fiction?

When performing an in-home medical procedure, such as wound care, the home health nurse should always use full sterile technique.

True

False

SUBMIT

1.44 Quick Quiz - Bloodborne Pathogen Protection

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Quick Quiz - Bloodborne Pathogen Protection

Mr. Garabedian tests his blood sugar with a finger stick in the bathroom and leaves used lancets on the counter. Janine, the home health nurse, picks the lancets up with gloved hands.

What did Janine do wrong?
What should she do differently?

Click next arrow to view answer

1.45 Case Study - Helping Mr. Mandel - Answer

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Quick Quiz - Bloodborne Pathogen Protection

What did Janine do wrong?
What should she do differently?

- Janine should not pick up used sharps (the lancets) with her hands, even if she is wearing gloves. Gloves do not protect against cuts.
- Janine should use tongs, long handled tweezers or a dustpan and brush to clean up used sharps.

1.46 Quick Quiz - New Symptoms and Infection Control Measures

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Quick Quiz - New Symptoms and Infection Control Measures

Mrs. Millane suddenly starts vomiting and having diarrhea.

How should you apply the CPR (Clean, Protect, Report) principles in this case?

Click next arrow to view answer

1.47 Case Study - Helping Mr. Mandel - Answer

*No Audio on this Slide

Quick Quiz - New Symptoms and Infection Control Measures

How should you apply the CPR (Clean, Protect, Report) principles in this case?

- Report the change in Mrs. Millane's condition to the patient's physician. (Report)
- Protect yourself with gloves and an apron or gown if there is a danger of body fluids splashing on you. (Protect)
- If necessary, clean any place where body fluids spray or spill. (Clean)

1.48 References

References

- Centers for Disease Control, *Standard Precautions for All Patient care*, (Jan, 2017) www.cdc.gov/infectioncontrol/basics/standard-precautions.html
- VNAA, *Visiting Nurse Association of America Procedure Manual*, 2014
- Association for Professionals in Infection Control and Epidemiology, <http://professionals.site.apic.org>
- Center for Clinical Standards and Quality/Quality, Safety & Oversight Group Centers for Medicare and Medicaid (2018), *Home Health Agency (HHA) Interpretive Guidelines*, <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/QSO18-25-HHA.pdf>

1.49 Thank You!

Thank You!

Questions?

Email: learning@wellsky.com

EXIT COURSE