Best Practice:

Infection Control
in the Home Care Setting

Infection Control

Many of the clients that you will work with as a caregiver will be vulnerable to catching diseases. Working in the home care setting is different in many ways to working in a hospital or other facility.

What are some of the differences between working in a home care setting and working in a facility?

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What is the single most effective way to help stop the spread of infection?

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What other ways are there to prevent infections from spreading?

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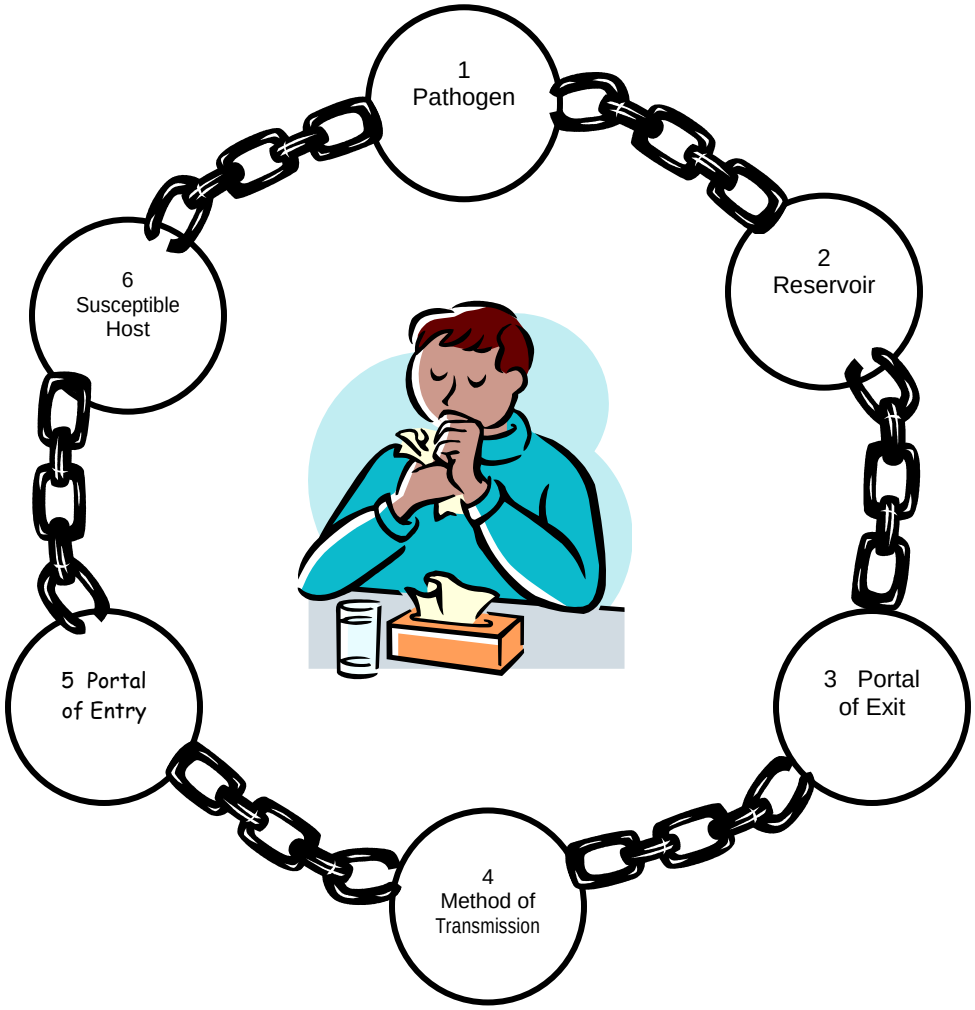
Chain of Infection

For a person to get a communicable infection, six key conditions must be met. These six key elements are known as the chain of infection. The chain of infection can be broken by taking away just one of the six required elements.



Chain of Infection

1. Pathogen: A microbe capable of causing disease
    - ♥ Bacteria
    - ♥ Viruses
    - ♥ Fungi
    - ♥ Parasites

2. Reservoir: A place where the pathogen can live
    - ♥ The human body
    - ♥ Food and water
    - ♥ Contaminated objects

3. Portal of Exit: A way for the pathogen to leave the reservoir
    - ♥ Through the digestive tract in feces, saliva, or vomitus
    - ♥ Through the respiratory tract in mucus or sputum
    - ♥ Through the urinary or reproductive tract in urine, semen, or vaginal secretions
    - ♥ Through the skin in blood, pus, or wound drainage

4. Method of transmission: A way for the pathogen to get from one person to another
    - ♥ By touching an infected person
    - ♥ By breathing infected air
    - ♥ By eating or drinking contaminated food or fluids
    - ♥ By touching contaminated objects
    - ♥ By vectors, such as mosquitoes, rodents, and ticks

5. Portal of Entry: A way for the pathogen to enter the new person's body
    - ♥ Through the digestive tract
    - ♥ Through the respiratory tract
    - ♥ Through the urinary or reproductive tract
    - ♥ Through breaks in the skin

6. A susceptible host
    - ♥ A very young or very old person
    - ♥ A person in poor general health
    - ♥ A person who is stressed or tired
    - ♥ A person with an indwelling medical device

Adapted from: Carter, PJ (2007) Lippincott's Essentials for Nursing Assistants,
Philadelphia: Lippincott Williams & Wilkins, p229

Handwashing

Handwashing is the most important method of preventing the spread of infection. For handwashing to be effective in preventing the spread of infection, it must be performed thoroughly, properly, and consistently.

1. Remove all jewelry.
2. Turn on faucet using a paper towel.
3. Wet your hands and apply liquid soap.
4. Work soap into a lather and scrub hands for at least two minutes.
5. Keep your hands at a lower angle than your elbows to prevent the dirty water running back onto your arms.
6. Interlace your fingers to clean between them
7. Scrub your fingernails with a nail brush.
8. Dry your hands with clean paper towels.
9. Turn off the faucet using a clean paper towel.

Because frequent handwashing can cause the skin to become excessively dry, leading to cracking, applying a lotion or hand cream after washing is recommended. Remember, your own intact skin is important to help protect you from infection too.

At the minimum wash your hands:

- When you first arrive at your client's home
- Before handling clean linen
- Before handling a client's meal tray
- Before you go on a break and before you leave your shift
- Before and after drinking, eating, or smoking
- After using the bathroom
- After coughing, sneezing, or blowing your nose
- After touching anything that may be considered dirty, especially objects contaminated with blood or other body fluids
- After picking up an object from the floor
- After removing disposable gloves, including those times when you are replacing a torn glove
- After touching your hair or applying make-up or lip gloss

Risk factors for infection:

- Very young or very old age
- Poor general health
- Stress and fatigue
- Indwelling medical devices

The Ways Infections are transmitted

- Some infections are transmitted through the air. The person becomes infected when he or she breathes contaminated air.
- Some infections are transmitted through contact with an infected person or objects that the person has used.
- Some infections are transmitted when feces containing a pathogen contaminate food or water that is then consumed by another person.
- Some infections are transmitted when blood or body fluids enters the bloodstream of a non-infected person. Bloodborne pathogens are not found in sweat and tears. They are most likely to be found in blood, semen, vaginal secretions, wound drainage, cerebrospinal fluid (CSF), amniotic fluid and breast milk.
- Needlesticks, cuts from contaminated glass, and splashes and sprays of contaminated body fluids can put a health care worker at risk for a bloodborne disease.

Maintaining a Clean Environment

- Wash your hands after contact with any body fluid, whether it is your own or another person's. Examples of body fluids include blood, saliva, vomitus, urine, feces, vaginal discharge, semen, wound drainage, pus, mucus, and respiratory secretions.
- Wash your hands frequently, especially after using the bathroom; before handling food, drink, or eating utensils; and before and after any contact with a client.
- Cover your mouth or nose with a tissue when you cough or sneeze, and teach your clients to do the same. Dispose of tissues properly by placing them in a waste container.

- Provide each client with individual personal care items, such as toothbrushes, drinking glasses, towels, washcloths, and soap.
- Keep dirty items, such as soiled linens, away from your uniform.
- When cleaning, take care not to stir up dust. For example, wiping dusty surfaces with a damp cloth or mop helps to prevent the movement of dust and lint into the air. Do not shake linens when making beds.
- Dispose of trash properly.
- Maintain good personal hygiene, and help your clients to do the same. Bathing, washing hair, brushing teeth, and wearing clean clothing are all grooming practices that help to prevent the spread of infection.

Guidelines for Using Gloves

What you do	Why you do it
If the glove tears when you are putting it on, discard it.	*A glove that has a hole or tear will not protect your hands from contamination.*
Choose gloves that fit properly	*Gloves that are too tight are uncomfortable and may tear. Gloves that are too loose will not stay on your hands.*
Use gloves made from another material if you or the person you are caring for is sensitive to latex.	*Depending on the severity of the allergy, exposure to latex can cause redness and cracking of the skin, a severe rash, or problems breathing.*
Remove contaminated gloves before touching any other surface. You may need to change gloves several times during one procedure.	*Replacing your gloves when they become contaminated prevents the transfer of pathogens from dirty areas to clean areas. If you touch a surface (such as a light switch or doorknob) with your contaminated gloves, the pathogens will be transferred from your gloves to that surface. The next person who touches the surface could then pick up the pathogens you left there with your contaminated gloves.*
Wash your hands after removing gloves	*Gloves are easily torn or may have holes too small to see, causing your hands to become contaminated. Handwashing removes any microbes that may be one your hands.*

Using Alcohol-Based Hand Rubs

An alcohol-based hand rub is a product that may be used instead of handwashing to clean the hands in certain situations.

- Using an alcohol-based hand rub is quicker than washing your hands at the sink.
- Alcohol-based hand rubs are gentler on the skin than soap and water.
- Alcohol-based hand rubs are used without water, so they can be used anywhere.

It is easy to use an alcohol-based hand rub:

- Apply the recommended amount of product to one of your palms.
- Rub your hands together, covering your hands and fingers (front and back) with the product. Keep rubbing your hands together until your skin is dry.

Remember, if your hands are soiled with dirt or body fluids, you must wash them at the sink using soap and water!

Adapted from: Carter, PJ (2007) Lippincott's Essentials for Nursing Assistants, Philadelphia: Lippincott Williams & Wilkins, p235

Food Safety

Some people are more likely than others to get a foodborne illness. Older people, the disabled, and those with chronic illnesses may have difficulties that put them at higher risk.

Oral-fecal transmission

Some pathogens are transmitted through the oral-fecal route. The pathogen lives in an infected person's digestive tract and leaves the body in the feces. The feces can contaminate food or water. Then, when another person eats or drinks the contaminated food or water, he or she becomes infected. Proper handwashing and sanitation help to prevent infections that are spread through the oral-fecal route. Infections that are transmitted in this way include hepatitis A, hepatitis E, and some types of parasitic infections.

Ensuring Food Safety At Home

- Wash hands often
- Wash produce before cutting, cooking or eating
- Wash utensils and cutting boards after each use
- Keep kitchen surfaces clean
- Keep raw meat and ready-to-eat foods separate
- Cook food to proper temperatures
- Refrigerate food promptly to below 40^{o}F
- Pay close attention to use-by dates

Ten Hygiene Commandments

1. Wash hands with hot soapy water before touching food.
2. Wash hands thoroughly after using the bathroom or providing personal care.
3. Cover or restrain hair.
4. Do not work around food if you have any infection or infectious disease. This includes a boil, an infected wound, or an acute respiratory infection.
5. Wash your hands, utensils, cutting boards, plates, and all work surfaces thoroughly with hot soapy water after they touch raw meat, fish, or poultry.
6. Utensils and surfaces must be cleaned, rinsed, and sanitized before use.
7. Keep fresh foods separate from each other. Use different surfaces and utensils when preparing each one, or thoroughly wash utensils and surfaces between foods.
8. Prepare and serve food with the least possible manual contact, meaning that it should be touch as little as possible.
9. Wash fruits and vegetables thoroughly.
10. Keep unserved food covered at all times.

You cannot get AIDS from tears

- HIV is not transmitted by day-to-day contact in the workplace, schools or social settings
- HIV is not transmitted through shaking hands, hugging, or a casual kiss
- You cannot become infected from a toilet seat, a drinking fountain, a door knob, dishes, drinking glasses, food, or pets
- HIV is not an airborne or food-borne virus, and it does not live long outside the body
- HIV can be found in the blood, semen, or vaginal fluid of an infected person
- The three main ways HIV is transmitted are:
  - ♂ *Through having sex (anal, vaginal, or oral) with someone infected with HIV*
  - ♂ *Through sharing needles and syringes with someone who has HIV*
  - ♂ *Through exposure (in the case of infants) to HIV before or during birth, or through breast feeding*

The risk of health care workers being exposed to HIV on the job is very low, especially if they carefully follow universal precautions (i.e. using protective practices and personal protective equipment to prevent HIV and other blood-borne infections). It is important to remember that casual everyday contact with an HIV-infected person does not expose health care workers or anyone else to HIV. For health care workers on the job, the main risk of HIV transmission is through accidental injuries from needles and other sharp instruments that may be contaminated with this virus; however even this risk is small. Scientists estimate that the risk of infection from a needle-stick is less than 1 percent, a figure based on the finding of several studies of health care workers who received punctures from HIV-contaminated needles or were otherwise exposed to HIV-contaminated blood.

From: www.cdc.gov/hiv/pubs/faq
National Center for HIV, STD and TB Prevention
Divisions of HIV/AIDS Prevention

How can I protect my client & myself?

Standard precautions

Because of the type of work you do, you will come into contact with body fluids that carry bloodborne pathogens. Bloodborne pathogens that pose the greatest risk to health care workers in the workplace are hepatitis B virus (HBV), hepatitis C virus (HCV), hepatitis D virus (HDV), and human immunodeficiency virus (HIV). The diseases caused by these pathogens are potentially life threatening. In many cases, you will not be able to easily identify clients who are infected with bloodborne pathogens. **This is why you must treat**

each client you have contact with as if he or she *may be* infected with a bloodborne pathogen. To protect yourself from exposure to bloodborne pathogens, you will take standard precautions with every client. *For these methods to be effective, they must be used consistently!*

- Gloves, gowns, masks, face shields and eye goggles must be worn if the possibility exists that you could come in contact with blood or other body fluids. Be sensible and use good judgment when wearing personal protective equipment.
- Handwashing is the most important method of preventing the spread of infection. If accidental exposure to blood or other body substances occurs, hand must be washed thoroughly and immediately.
- Sharps, such as used needles, razors or broken glass must be disposed of properly. Contaminated, broken glass should not be handled, even with gloved hands. They should be swept or vacuumed up for disposal.

Adapted from: Carter, PJ (2007) Lippincott's Essentials for Nursing Assistants, Philadelphia: Lippincott Williams & Wilkins, pp240-2

Name: _____

What did you learn?

Multiple Choice

Select the single best answer for each of the following questions.

1. When should you wash your hands?
    a. When you wake up in the morning and before you go to bed at night
    b. Before and after contact with a client
    c. When your supervisor tells you to
    d. When you notice that they look or feel dirty

2. Bacteria may enter the body through:
    a. The mouth
    b. The nose
    c. Cuts in the skin
    d. All of the above

3. Microbes can be spread by:
    a. Looking at a person with a communicable disease
    b. Coughing and sneezing
    c. Touching a person with a communicable disease
    d. Both "b" and "c"

4. Which one of the following must be present in order for infection to spread?
    a. A caregiver
    b. An indwelling medical device
    c. A susceptible host
    d. A patient or resident who looks ill

5. For health care workers, which of the following is the most important method of preventing the spread of infection?
    a. Standard precautions
    b. Handwashing
    c. Wearing gloves
    d. Wearing gowns and goggles

Adapted from: Carter, PJ (2007) Lippincott's Essentials for Nursing Assistants, Philadelphia: Lippincott Williams & Wilkins, pp252-3