

Module 6: Infection Control and Prevention

Lesson 1

Breaking the Chain of Infection

Infectious Disease

- Infectious diseases can cause pain, injury, disability, or even death. They develop when pathogens such as bacteria, virus, or fungus enter a person's body and multiply.
- Recognizing when someone might have an infection helps you provide treatment and prevent the spread of the disease to others.
- Understanding how pathogens grow and spread will help you protect yourself and others from disease. Page 114. The chain of infection

Standard Precautions

- **Hand Hygiene:**
- Hand hygiene means cleaning your hands by handwashing with soap and water or using alcohol based hand rub.
- You must make hand hygiene a constant part of your daily activity.
- Home Care Aides must wash their hands before performing any personal care task. Every personal care skill procedure includes the acronym “S.W.I.P.E.S.”

- **Using Alcohol-based hand rub (ABHR)**
- ABHR is another way to kill germs on your hands. However, if your hands are visibly dirty, soap and water are still the best choice.
- To use ABHR effectively:
 - • use a product with 60-95% ethanol or isopropyl alcohol;
 - • apply a palm full of the product in a cupped hand, enough to cover all surfaces;
 - • rub hands together, covering all surfaces including palms, backs of each hand, and between fingers;
 - • rub until dry - this should take around 20 seconds.

- Wearing Gloves

- Gloves provide protection for you and the client. Proper use of disposable gloves helps you avoid spreading germs from one person to another.

- You must wear gloves when you:

- • have direct contact with blood, body fluids, or mucous membranes;
- • handle things contaminated with germs such as tissues, disposable undergarments, or soiled clothing or linens;
- • provide first-aid;
- • have contact with a client who has an open wound;
- • assist a client with toileting or other personal care tasks; or
- • have a cut, scrape, chapped hands, or dermatitis, etc.

- Disposable gloves should:
 - fit well and not feel loose;
 - • be made of the appropriate material, usually latex*, nitrile, or vinyl;
 - • not be peeling, cracked, discolored, or have punctures or tears;
 - • be thrown away after each use; and
 - • be changed between tasks and when they have become contaminated with germs (e.g. bodily fluids)

- Personal Protective Equipment (PPE)
 - Personal Protective Equipment can help break the chain of infection. Masks/respirators and eye protection prevent coughs, sneezes, and droplets from entering your eyes, nose, and mouth.
 - Gowns or aprons keep your clothing and skin clean to prevent accidentally spreading germs to others.
 - You should wear PPE when there is a potential for exposure of blood or bodily fluids from a client. If a client has symptoms or a confirmed infection, put PPE on before entering their room.
- See Using Personal Protective Equipment in the Skills Checklists on page 421 for the detailed steps

Respiratory Hygiene and Cough Etiquette

- Practice respiratory hygiene to prevent the spread of pathogens through droplet transmission:
 - Cover your mouth and nose with a tissue when coughing or sneezing
 - Dispose of the tissue in the nearest waste container.
 - If you do not have a tissue, cough or sneeze into your upper sleeve or elbow instead of your hands.
 - Wash your hands or use an alcohol-based hand rub. If you are coughing or sneezing frequently, consider wearing a facemask to protect others.

Sharps Safety

- Syringes, needles, blades, lancets, and other sharp items can puncture your skin and expose you to blood-borne pathogens
- Many sharps come with built-in safety devices such as retractable needles or plastic caps or sheaths.
- One important sharps safety device is a sharps disposal container. These are strong plastic containers that cannot be punctured by a needle.
- Be aware of where you might find needles or other sharps in your workplace. For example, if you support a client who takes insulin injections, check for needles before reaching into a pile of laundry.

Handling Needles Safely

- The following guidelines will help to prevent accidental needle sticks.
 - Do not bend, recap, or attempt to remove the needles from a syringe
 - Do not break needles
 - Place used sharps immediately in the appropriate containers
- Sharps safety containers should be disposed of when the container is $\frac{3}{4}$ full. Never over-fill a sharps container.

Cleaning and Disinfecting the Environment

- . Always wear gloves when cleaning contaminated surfaces and things
 - treat laundry= soiled with body fluids or blood as contaminated. It is best to not mix one client's soiled laundry together with another client's soiled laundry in order to minimize spreading of germs.
- Cleaning and disinfecting are not the same.
 - Cleaning with soap, water, and scrubbing removes dirt and some germs.
 - Disinfecting with a bleach solution or a commercial household cleaning solution kills additional germs. you can make a bleach solution by mixing 5 tablespoons (1/3 cup) of bleach per gallon of room temperature water.
- Contaminated waste needs to be disposed of safely.

Strengthening the Immune System

- As we age, our immune systems become less effective at fighting infections.
- Making healthy choices for yourself, and encouraging clients to do the same, can help prevent infection.
- Health care workers should stay current on their vaccines. Because you work directly with clients and handle bodily fluids, you are more likely to get and spread serious disease.

- Infectious diseases can be extremely dangerous.
- There are several ways that Home Care Aides can prevent the spread of infection.
- Knowing and watching for the symptoms of common infections, washing hands, following standard precautions, and using proper cleaning and housekeeping measures all keep clients and caregivers safe

Lesson 2

Blood-Borne Pathogens

- Key Terms
- **Acquired Immune Deficiency Syndrome (AIDS):** the most advanced stage of HIV when the immune system is badly damaged. The body becomes vulnerable to many kinds of serious infections.
- **Blood-Borne pathogen:** infectious microorganisms in human blood that can cause disease in humans.
- **Hepatitis (B and C):** viral infections of the liver.
- **Human Immunodeficiency Virus (HIV):** a virus that attacks the immune system, preventing the body from fighting infections. If untreated, HIV may cause AIDS.
- **Opportunistic infections:** infections that attack the body due to the person's weakened immune system.

- **Stigma:** negative attitudes and discrimination against a person based on physical appearance, diagnosis of a condition, and/or beliefs which cause a sense or feeling of shame.
- **Transmitted:** the process of passing something from one person or place to another.
- **Undetectable** = Untransmittable (U=U): a prevention strategy against HIV in which reducing the amount of virus in the blood prevents the transmission of the virus through sex.
- **Viral load:** the amount of virus present in the blood, saliva, mucus, or other body fluid.

Blood-Borne Pathogens and Diseases

- The three most common blood-borne diseases caused by blood-borne pathogens are
 - Hepatitis B,
 - Hepatitis C, and
 - HIV/AIDS.
- Syphilis and the West Nile Virus are also caused by blood-borne pathogens.

Hepatitis B (HBV)

- Hepatitis B is a viral infection that infects the liver.
- It is a more common infection and it is contagious.
- Approximately 90% of adults infected with HBV will recover. Some people exposed to HBV may not have any symptoms.
- It has vaccine.

Hepatitis C

- is also a viral infection of the liver that may cause chronic inflammation with possible scarring (cirrhosis) and causes permanent liver damage.
- CDC reports that 75%–85% of people who become infected with HCV will develop a chronic infection.
- There are no vaccines currently available, but there are several medications available to cure chronic Hepatitis C
- HCV and HBV can be spread through contact with dried blood.

How Blood-Borne Pathogens Spread in the Workplace

- Blood-borne pathogens spread under specific circumstances. However, not all contact can spread blood-borne pathogens. Ways that blood-borne pathogens CAN spread:
 - A needle stick or other puncture wound
 - Helping a client who is bleeding
 - Changing linens that are contaminated by blood or other body fluids
 - Helping to clean up blood, vomit, urine or feces
 - Changing a dressing or bandage with blood that has oozed from a wound
 - Contact with broken skin (chapped, weeping, or dermatitis)
 - Contact with mucous membranes (mouth, nose, and eyes)

Ways that blood-borne pathogens can NOT spread.

- Providing care for a client with a blood-borne disease when standard precautions are used
- Sharing eating utensils, plates, or glasses
- Sharing bathrooms
- Through the air
- Hugging
- Shaking or holding hands

Exposure to Blood-Borne Diseases

- Any time a person comes into direct contact with blood or other body fluids, there is a risk of exposure to blood-borne pathogens.
- Home Care Aides should know what to do right away if they are exposed

Your eyes are splattered with blood or body fluids

- Flush immediately with water for at least five minutes. Rinse under clean running water.

Blood or any body fluids get into your mouth.

- Rinse your mouth with a 50/50 mix of hydrogen peroxide and water. Then rinse with plain water. Get medical attention for further action

.

Both eyes and mouth are exposed.

- Immediately rinse both as recommended above and get medical attention for further action.

A needle stick or puncture wound.

- Wash thoroughly with soap and water or pour a small amount of hydrogen peroxide on the wound. Get medical attention.

Any bite, scratch, or lesion that may have had blood or body fluid exposure

- Wash the area thoroughly with soap and water or pour a small amount of hydrogen peroxide on the wound.
- Cover the wound with a sterile dressing. Get medical attention for further action.

Human Immunodeficiency Virus (HIV)

- Human Immunodeficiency Virus (HIV) is a virus that attacks the body's immune system. If a person with HIV does not receive treatment, they can develop AIDS (acquired immunodeficiency syndrome).
- There is no vaccine against HIV.
- Early symptoms of HIV may include tiredness, fever, diarrhea, enlarged lymph nodes, loss of appetite, or night sweats. People with untreated HIV infection can develop many different health problems. These include severe pneumonia, several forms of cancer, damage to the brain and nervous system, and extreme weight loss

How HIV Spread

- when infected blood, semen, vaginal fluids, and/or breast milk enter the body through mucous membranes of the anus, vagina, penis (urethra), or mouth or through cuts, sores, or abrasions on the skin. The highest concentrations of the HIV virus are in the blood, semen, vaginal fluid, and breast milk.
- Having unprotected vaginal, anal, or oral sex with a person who has HIV. Unprotected sex is sexual intercourse without consistent or correct condom use.
- Using or being stuck with a needle or syringe that has been used by an infected person, including tattoo needles or ink and body piercing needles
- Sharing of drug paraphernalia, Giving birth, Breast feeding, Receiving blood.

- HIV is not transmitted through saliva, tears, or sweat. You cannot get HIV from hugging, shaking hands, sharing toilets, closed-mouth kissing, sexual activities that do not involve the exchange of bodily fluids, or through the air.

How HIV Works in the Body

- Once a person is exposed to HIV, the virus enters the blood and attaches to certain white blood cells, called T-cells.
 - The role of T-cells is to signal other cells to produce antibodies to fight off pathogens. Producing antibodies is a critical function of our immune system.
- With the HIV virus attached to the T-cells, the antibodies produced to fight the HIV virus are unable to do so.
- Over time, HIV destroys the T-cells and the body's immune system.
- The destruction leaves the person vulnerable to opportunistic infections, cancer, and other life-threatening disease.

Prevention of HIV

- Choosing sexual activities that don't involve contact with body fluids (semen, vaginal fluid, or blood).
 - Using condoms—they are highly effective in preventing HIV and other sexually transmitted diseases (STDs).
 - Taking PrEP (pre-exposure prophylaxis)—a medicine people at risk for HIV take to prevent HIV. It must be taken as prescribed.
 - Decide not to have sex (abstinence). Not having sex prevents other STDs and pregnancy.
 - Get tested and treated for other STDs—people who have another STD are more likely to get HIV. Getting tested and treated for other STDs can lower the chance of getting HIV.

Acquired Immune Deficiency Syndrome (AIDS)

- All people diagnosed with AIDS have HIV, but not all people with HIV have an AIDS diagnosis. AIDS begins when a person with HIV infection has a T-cell count below 200
- Without treatment, a person has an average of ten years between the time of initial infection with HIV and the start of the symptoms of AIDS.
- Opportunistic infections usually pose little or no threat to people with healthy immune systems. For people diagnosed with HIV/AIDS, these infections may cause one or more diseases, page 129,

Treatment for HIV/AIDS

- There is no cure for HIV, but it is treatable.
- In fact, most people are able to take a simple once-a day medication to treat their HIV. Anti-Retroviral Therapy (ART) reduces the amount of HIV in the blood. Treatment can lead to a viral load so low that it referred to an “undetectable viral load.”
- When people living with HIV achieve and maintain an undetectable viral load, they cannot sexually transmit the virus to others. This progress in treatment is called “U=U” (Undetectable = Untransmittable). U=U is a “treatment as prevention” strategy.

Testing for HIV

- Any person exposed to the blood or body fluids of another person may need an HIV test.
- The time between when a person may have been exposed to HIV and when a test can confirm whether they have the virus is called the **window period**. The window period varies from person to person and depends on the type of test used to detect HIV. It can be as short as 10 days or up to 3 months.
- According to the CDC, you should be tested for HIV as soon as possible after exposure to gain a baseline. You must give verbal or written informed consent for HIV testing.
- Testing can be either confidential or anonymous.

- HIV infection and AIDS are medical conditions that are considered disabilities under the Washington State Law Against Discrimination, Chapter 49.60 RCW and the Federal Americans with Disabilities Act. This means it is illegal to discriminate against someone who has or is believed to have AIDS or who is HIV-positive.

Psychosocial Support

- Infection with HIV can cause distress for those who have HIV and for those who care for them.
 - Physical weakness and pain can diminish a person's ability to get pleasure from normal daily activities.
 - Some people with HIV/AIDS may become socially isolated, which can lead to loneliness and other mental health issues, including depression and thoughts of suicide.
- Often a caregiver may have similar feelings to the person living with HIV.
 - Caregivers may experience the same isolation as the person with HIV infection.
 - Finding a support system, including a qualified counselor, can be just as important for the caregiver as for the person who has HIV/AIDS.
 - Support from co-workers can be especially important.

Stigma

- People living with HIV/AIDS may face negative attitudes and discrimination. This can cause harm and prevent the person from receiving the care and support they need. Always treat people with respect and dignity regardless of their HIV status. Maintain a client's confidentiality and do not discuss their HIV status with others unless necessary for their care.