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AIDS Update

(2 credits)

After completing this section, you should be able to:

1. Discuss AIDS and recognize common myths about HIV and AIDS
 2. Understand Standard Precautions and hand hygiene
 3. Demonstrate the proper use of personal protective equipment (PPE)
 4. Describe OSHA's Bloodborne Pathogen Standard
 5. Discuss care guidelines for the person who has HIV or AIDS
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1. Discuss AIDS and recognize common myths about HIV and AIDS

Acquired immune deficiency syndrome, or AIDS, is an illness caused by the human immunodeficiency virus, or HIV. HIV attacks the body's immune system and gradually disables it. Eventually the HIV-infected person has less resistance to other infections. Death may be the result of these infections. However, medications help people live longer. HIV is a sexually-transmitted disease. It is also spread through infected blood, infected needles, or to a fetus from an infected mother.

In general, HIV affects the body in stages. The first stage shows symptoms like the flu, with fever, muscle aches, cough, and fatigue. These are signs of the immune system fighting the infection. As the infection worsens, the immune system overreacts. It attacks not only the virus, but also normal tissue.

When the virus weakens the immune system in later stages, a group of problems may appear. These include opportunistic infections, tumors, and central nervous system symptoms. These would not occur if the immune system were healthy. This stage of the disease is known as AIDS.

In the late stages of AIDS, damage to the central nervous system may cause memory loss, poor coordination, paralysis, and confusion. These symptoms together are known as AIDS dementia complex.

These are the signs and symptoms of HIV infection and AIDS:

- Appetite loss
- Involuntary weight loss of ten pounds or more
- Vague, flu-like symptoms, including fever, cough, weakness, and severe or constant fatigue
- Night sweats
- Swollen lymph nodes in the neck, underarms, or groin
- Severe diarrhea
- Dry cough
- Skin rashes
- Painful white spots in the mouth or on the tongue
- Cold sores or fever blisters on the lips and flat, white ulcers on a reddened base in the mouth
- Cauliflower-like warts on the skin and in the mouth
- Inflamed and bleeding gums
- Bruising that does not go away
- Low resistance to infection, particularly pneumonia, but also tuberculosis, her-

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- Kaposi's sarcoma, a form of skin cancer that appears as purple or red skin lesions
- AIDS dementia complex

Opportunistic infections, such as pneumonia, tuberculosis, or hepatitis, invade the body when the immune system is weak and cannot defend itself. These illnesses worsen AIDS. They further weaken the immune system. It is hard to treat these infections. Generally, over time, a person develops a resistance to some antibiotics. These infections often cause death in people with AIDS.

Persons with HIV are treated with drugs that slow the progress of the disease. They do not cure it. The medicines must be taken at precise times. They have many unpleasant side effects. For some people, the medications work less well than for others. Other aspects of HIV treatment are relief of symptoms and prevention and treatment of infection. Always follow Standard Precautions at work to help prevent the spread of HIV/AIDS.

There are many myths associated with HIV and AIDS, including the following:



Myth: If I am HIV-positive, that means I have AIDS.



Fact: HIV-positive means that your body was exposed to the virus. Since your body was exposed, there is a good chance that you are infected with the virus. But it does not mean that you have AIDS. AIDS develops over time.



Myth: HIV is the same as AIDS.



Fact: HIV is the virus that causes AIDS. AIDS is a group of symptoms that develop during the later stages of HIV infection.



Myth: I can get HIV from an infected person by shaking hands, hugging, or kissing.



Fact: HIV is not spread through casual contact. There is a slight possibility that you could become HIV infected through kissing if you and the infected person both had open bleeding sores in your mouths and the infected person's blood got into yours. If you are really worried about this, do an oral exam on your partner before kissing him/her.



Myth: I can get HIV from telephones.



Fact: The HIV virus can't live outside of the body. You cannot become infected through saliva.



Myth: I can get HIV from door knobs, tables, chairs, or push buttons.

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Fact: The HIV virus can't live outside of the body.



Myth: I can get HIV from toilets.



Myth: I can get HIV from eating food that was prepared by an infected person.



Fact: Toilets have been blamed for just about everything, from getting you pregnant to giving you sexually transmitted diseases (STDs). The only way you might possibly become HIV infected from a toilet seat is to have unprotected sex with an infected partner while sitting on it!



Fact: Once again, HIV dies very quickly outside the body. Even if the food prep person cut his finger and then arranged your food on your plate, you would not become infected from eating this food. Once any body fluid is dry, you can be absolutely sure that the virus is dead. Just about the only way you could become infected this way is if the food prep person cuts off a finger, and as he is bleeding in your food, you are eating it at that exact moment. How likely is that to happen?



Myth: I can get HIV from mosquitoes.



Fact: Although it sounds possible, you cannot become HIV-infected through mosquitoes, fleas, ticks, or lice. For this to happen, the HIV would have to survive in the insect saliva and salivary glands. HIV is a human virus and cannot survive outside of the human body. As a result, HIV does not survive in mosquitoes, fleas, ticks, or lice. If this were a route of transmission, many more people would have been infected by now.



Myth: I can get HIV from breathing the same air as an infected person.



Fact: HIV does not spread through the air. You cannot get HIV by being in the same room with someone who is infected with the virus.

Directions. Briefly state the fact associated with each of the following myths about HIV and AIDS.

1. Myth: If I am HIV-positive, that means I have AIDS. Fact: _____

2. Myth: HIV is the same as AIDS. Fact: _____

3. Myth: I can get HIV from kissing. Fact: _____

4. Myth: I can get HIV from eating food that was prepared by an infected person. Fact: _____

5. Myth: I can get HIV from toilets. Fact: _____

6. Myth: I can get HIV from mosquitoes. Fact: _____

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Directions. Answer the following questions.

7. How is HIV spread?

8. What symptoms are usually present in the first stage of HIV? _____

9. How is HIV treated? _____

2. Understand Standard Precautions and hand hygiene

The Centers for Disease Control and Prevention (CDC) is a federal government agency that issues guidelines to protect and improve health. It promotes public health and disease, injury, and disability prevention and control through education. In 1996, the CDC recommended a new infection control system to reduce the risk of contracting infectious diseases in healthcare settings. In 2007 some additions and changes were made to this system.

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Following **Standard Precautions** means treating all blood, body fluids, non-intact skin (like abrasions, pimples, or open sores), and mucous membranes (lining of mouth, nose, eyes, rectum, or genitals) as if they were infected with an infectious disease. Following Standard Precautions is the only safe way of doing your job. You cannot tell by looking at your residents, clients or their charts if they have a contagious disease such as HIV.

Under Standard Precautions, "body fluids" include saliva, sputum (mucus coughed up), urine, feces, semen, vaginal secretions, and pus or other wound drainage. They do not include sweat. You will use Standard Precautions on every single person in your care. Guidelines for Standard Precautions include the following:

Wash your hands before putting on gloves. Wash them immediately after removing your gloves. Be careful not to touch clean objects with your used gloves.

Wear gloves if you may come into contact with: blood; body fluids or secretions; broken skin, such as abrasions, acne, cuts, stitches or staples; or mucous membranes. Such situations include mouth care; toilet assistance; perineal care; helping with a bedpan or urinal; cleaning up spills; cleaning basins, urinals, bedpans, and other containers that have held body fluids; and disposing of wastes.

Remove gloves immediately when finished with a procedure.

Immediately wash all skin surfaces that have been contaminated with blood and body fluids.

Wear a disposable gown that is resistant to body fluids if you may come into contact with blood or body fluids.

Wear a mask and protective goggles if you may come into contact with splashing or spraying blood or body fluids (for example, emptying a bedpan).

Wear gloves and use caution when handling razor blades, needles, and other sharps. Sharps are needles or other sharp objects. Discard these objects carefully in a puncture-resistant biohazard container.

Never attempt to put a cap on a needle or syringe. Dispose of them in a biohazardous waste container.

Avoid nicks and cuts when shaving residents/clients.

Carefully bag all contaminated supplies. Dispose of them according to your facility's policy.

Clearly label body fluids that are saved for a specimen with the person's name and a biohazard label. Keep them in a container with a lid. Put in a biohazardous specimen bag for transportation, if required.

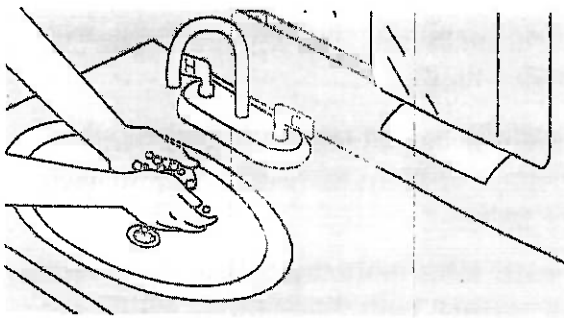
Dispose of contaminated wastes according to your facility's policy. Waste containing blood or body fluids is considered biohazardous waste. Liquid waste can usually be disposed through the regular sewer system as long as there is no splashing, spraying, or aerosolizing of the waste as it is being disposed. Appropriate personal protective equipment (PPE) needs to be worn, followed by proper removal and handwashing. Follow instructions at your facility.

Again, Standard Precautions should ALWAYS be practiced on those in your care regardless of their infection status.

You cannot tell by how someone looks or acts, or even by reading his chart, if he carries a bloodborne disease. If you practice Standard Precautions, you greatly reduce the risk of transmitting infection to yourself and others.

Hand Hygiene

As you work, your hands will constantly come in contact with microorganisms. Contamination on the hands is the most common way that pathogens are spread in healthcare settings. Washing your hands is the single most important thing you can do to prevent the spread of disease.



The Centers for Disease Control and Prevention (CDC) has defined **hand hygiene** as handwashing with either plain or antiseptic soap and water and using alcohol-based hand rubs. Alcohol-based hand rubs include gels, rinses, and foams. They do not require the use of water. **Hand antisepsis** refers to washing hands with water and soap or other detergents that contain an antiseptic agent.

Alcohol-based hand rubs—often just called “hand rubs”—have proven effective in reducing bacteria on the skin.

However, they are not a substitute for proper handwashing. Always use plain or antimicrobial soap and water for visibly soiled hands. An antimicrobial agent

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destroys or resists pathogens. Once hands are clean, hand rubs can be used in addition to handwashing any time your hands are not visibly soiled. When using a hand rub, the hands must be rubbed together until the product has completely dried.

Common reasons cited for poor hand hygiene by healthcare workers include:

- Dryness and irritation of hands from handwashing agents
- Sink, soap and paper towels inconveniently located
- Insufficient time
- Understaffing
- Patient needs take priority

These difficulties are easy to remedy. Lotion can be used to prevent dryness of the hands, and alcohol rubs can make hand hygiene quicker and more convenient. One of the most pressing of your residents'/clients' needs is to be protected from infection; take time to do this for them. Residents, clients and their families should be encouraged to remind staff to wash their hands.

You should wash your hands:

- When you arrive at work
- Whenever they are visibly soiled
- Before, between, and after all contact with residents/clients
- Before putting on gloves and after removing gloves
- After contact with any body fluids, mucous membranes, non-intact skin, or dressings
- After handling contaminated items
- After contact with objects in the resident's/client's room (care environment)
- Before and after touching meal trays and/or handling food
- Before and after feeding residents or clients

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- Before getting clean linen
- After touching garbage or trash
- After picking up anything from the floor
- After using the toilet
- After blowing your nose or coughing or sneezing into your hand
- Before and after you eat
- After smoking
- After touching areas on your body, such as your mouth, face, eyes, hair, ears, or nose
- Before and after applying makeup
- After any contact with pets and after contact with pet care items
- Before leaving the facility

Keep your fingernails short, smooth, and clean. Do not wear artificial nails or extenders because they harbor bacteria and increase the risk of contamination.

Directions. For each of the following sentences, write "T" for true or "F" for false.

1. _____ Standard Precautions means treating all blood, body fluids, non-intact skin, and mucous membranes as if they were infected with an infectious disease.
2. _____ Standard Precautions relate to all body fluids except saliva.
3. _____ You can usually tell if someone is infectious by looking at him.
4. _____ You should wash your hands before putting on gloves.
5. _____ Syringes should be re-capped after use.
6. _____ Giving mouth care will require you to wear gloves.

7. _____ It is a good idea to wear a mask and protective goggles if you are emptying a bedpan.
8. _____ When cleaning a urinal, you do not need to wear gloves.

3. Demonstrate the proper use of personal protective equipment (PPE)

Personal protective equipment (PPE) is equipment that helps protect employees from serious workplace injuries or illnesses resulting from contact with workplace hazards. PPE helps protect you from contact with potentially infectious material. Employers must provide appropriate PPE for employees and ensure that it is appropriately cleaned, repaired, and/or disposed of.

The PPE you will wear on the job will vary according to the type of exposure anticipated for the task you are doing. For example, is there a possibility that there will be spraying or splashing of body fluids during a procedure?

Personal protective equipment includes gloves, gowns, masks, goggles, and face shields. Gloves protect the hands. Gowns protect the skin and/or clothing. Masks protect the mouth and nose. Goggles protect the eyes. Face shields protect the entire face—the mouth, nose, and eyes.

Gloves

You must wear gloves when there is a chance you may come into contact with body fluids, open wounds, or mucous membranes. Your facility will have specific policies and procedures on when to wear, or don, gloves. Learn and follow these rules. Always wear gloves for the following tasks:

- Any time you might touch blood or any body fluid, including vomitus, urine, feces, or saliva
- Performing or helping with mouth care or care of any mucous membrane
- Performing or helping with perineal care (care of the genitals and anal area)
- Performing personal care on **non-intact skin**—skin that is broken by abrasions, cuts, rashes, acne, pimples, or boils
- Assisting with personal care when you have open sores or cuts on your hands
- Shaving a resident/client
- Disposing of soiled bed linens, gowns, dressings, and pads

Gloves should fit your hands comfortably. They should not be too loose or too tight. If you have cuts or sores on your hands, first cover these areas with bandages or gauze, and then put on gloves. Disposable gloves are to be worn only once. They may not be washed or disinfected for reuse. Change gloves right before contact with mucous membranes or broken skin, or if gloves are soiled, torn, or damaged. Wash your hands before putting on fresh gloves.

Remove, or doff, gloves promptly after use and wash your hands. Remove your gloves before touching non-contaminated items or surfaces. You are wearing gloves to protect your skin from becoming contaminated. After giving care, your gloves are contaminated. If you open a door with the gloved hand, the doorknob becomes contaminated. Later, when you open the door with an ungloved hand, you will be infected even though you wore gloves during the procedure. It is a common mistake to contaminate the room around you. Do not do this. Before touching surfaces, remove your gloves. Wash your hands. Afterward, put on new gloves if needed.

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Gowns

Clean, non-sterile gowns protect your exposed skin. They also prevent soiling of your clothing. Gowns should fully cover your torso. They should fit comfortably over your body, and have long sleeves that fit snugly at the wrist. When finished with a procedure, remove the gown as soon as possible. Use a gown only once, discard it, and then wash your hands.

Masks and Goggles

Masks should also be worn when caring for people with respiratory illnesses. Sometimes special masks are required for certain diseases, such as tuberculosis (TB). Masks should fully cover your nose and mouth and prevent fluid penetration. Masks should fit snugly over the nose and mouth. Always change your mask between caring for residents/clients; do not wear the same mask from one resident or client to another.



Goggles provide protection for your eyes. Eyeglasses alone do not provide proper eye protection. Goggles should fit snugly over and around your eyes or eyeglasses.

Face Shields

When additional skin protection is needed, a face shield can be used as a substitute for wearing a mask or goggles. The face shield should cover your forehead

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and go below the chin. It wraps around the sides of your face.

When applying PPE, remember this order:

1. Apply gown.
2. Apply mask.
3. Apply goggles or face shield.
4. Apply gloves last.

When removing PPE, remember this order:

1. Remove gloves.
2. Remove goggles or face shield.
3. Remove gown.
4. Remove mask.

Performing hand hygiene is always the final step after removing and disposing of PPE.

Directions. Answer the following questions.

1. What are five occasions when you will need to wear gloves?

2. How often can disposable gloves be worn?

3. In what order should PPE be applied?

4. In what order should it be removed?

5. What is always the final step after removing PPE?

4. Describe OSHA's Bloodborne Pathogen Standard

Bloodborne pathogens are microorganisms found in human blood that can cause infection and disease in humans. They may also be in body fluids, draining wounds, and mucous membranes. Bloodborne diseases, such as AIDS, can be transmitted by infected blood entering your bloodstream, or if infected semen or vaginal secretions contact your mucous membranes. You can become infected with a bloodborne disease by having sexual contact with someone with that disease. It is not necessary to have sexual intercourse to transmit disease. Other kinds of sexual activity can just as easily cause infection.

Using a needle to inject drugs and sharing needles can also transmit bloodborne diseases. In addition, infected mothers may transmit bloodborne diseases to their babies in the womb or during birth. In health care, contact with infected blood or certain other body fluids is the most common way to be infected with a bloodborne disease.

The **Occupational Safety and Health Administration (OSHA)** is a federal government agency that makes rules to protect workers from hazards on the job. OSHA has set standards for special procedures that must be followed in healthcare facilities. One of these is the **Bloodborne Pathogens Standard**. The Bloodborne Pathogens Standard requires that healthcare facilities protect employees from bloodborne health hazards. By law, employers must follow these rules to reduce or eliminate the risk of exposure to infectious diseases. The Standard also guides employers and employees through the steps to follow if exposed to infectious material. Significant exposures include:

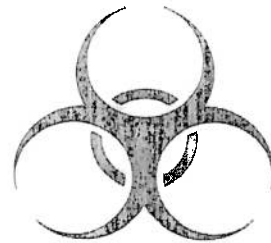
- Exposure by injection; a needle stick
- Mucous membrane contact
- Cut from an object containing a potentially infectious body fluid (includes human bites)
- Non-intact skin (OSHA includes acne as non-intact skin)

Guidelines employers must follow include the following:

- Employers must have a written **exposure control plan** designed to eliminate or reduce employee exposure to infectious material. This plan also identifies what to do if an employee is exposed to infectious material. This plan must be accessible to all employees, and they must

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- receive training on the plan.
- Employers must give all employees, visitors, and residents proper personal protective equipment (PPE) to wear when needed at no cost. Employers must make sure the PPE is available in the appropriate sizes and is readily accessible.
- Employers must make biohazard containers available for disposal of sharps and other infectious waste. These containers must be puncture resistant, labeled or color-coded, and leakproof.



BIOHAZARD

- Employers must provide a free hepatitis B vaccine to all employees after hire. This vaccine must be made available at no cost to the employee.

Directions. Answer the following questions.

1. What are bloodborne pathogens?

2. What are considered significant exposures under the Bloodborne Pathogens Standard?

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3. Why is it important to report any potential exposure immediately?

5. Discuss care guidelines for the person who has HIV or AIDS

Understand that even though people who have HIV or AIDS may require special care, their basic human needs remain the same. Do not avoid people with HIV or AIDS. Do not rush through care tasks or make the person feel that he or she should be avoided.

Use the following care guidelines for residents or clients who have HIV or AIDS:

- People with poor immune systems are more sensitive to infections. Wash your hands often. Follow Standard Precautions. Keep everything clean.
- When working in the home, it is extremely important to carefully follow guidelines for safe food preparation and storage when working with a client who has HIV/AIDS. Food-borne illnesses caused by improperly cooking or storing food can cause death for someone with HIV/AIDS. Wash your hands frequently.

Keep everything clean, especially countertops, cutting boards, and knives after they have been used to cut meat. Thaw food in the refrigerator, and wash and cook foods thoroughly. When storing food, keep cold foods cold and hot foods hot. Use small containers that seal tightly. Check expiration dates, and remember "when in doubt, throw it out."

- Involuntary weight loss occurs in almost all people who develop AIDS. High-protein, high-calorie, and high-nutrient meals can help maintain a healthy weight.
- Some people with HIV/AIDS lose their appetites and have difficulty eating. These people should be encouraged to relax before meals and to eat in a pleasant setting. Familiar and favorite foods should be served. Report appetite loss or difficulty eating to your supervisor. If appetite loss continues to be a problem, the doctor may prescribe an appetite stimulant.
- Persons with infections of the mouth may need food that is low in acid and neither cold nor hot. Spicy seasonings should not be used. Soft or pureed foods may be easier to swallow. Liquid meals and fortified drinks may help ease the pain of chewing. Warm salt water or other rinses may ease the pain of mouth sores. Good mouth care is vital.
- Someone who has nausea or vomiting should eat small, frequent meals, if possible. The person should eat slowly. The person should avoid high-fat and spicy foods, and eat a soft, bland diet. When nausea and vomiting persist, liquids and salty foods should be encouraged. Residents/clients should eat small, frequent meals and drink fluids in between meals. Care must be taken to maintain proper intake of fluids.

- Persons with mild diarrhea may need frequent small meals that are low in fat, fiber, and milk products. If diarrhea is severe, the doctor may order a "BRAT" diet (a diet of bananas, rice, apples, and toast). This diet is helpful for short-term use.
- Diarrhea rapidly depletes the body of fluids. Fluid replacement is necessary. Good rehydration fluids include water, juice, soda, and broth. Caffeinated drinks should be avoided.
- Neuropathy, or numbness, tingling, and pain in the feet and legs is usually treated with medication. Going barefoot or wearing loose, soft slippers may be helpful. If blankets cause pain, a bed cradle can keep sheets and blankets from resting on legs and feet.
- People with HIV/AIDS may have anxiety and depression. They often suffer the judgments of family, friends, and society. Some people blame them for their illness. People with HIV/AIDS may have tremendous stress. They may feel uncertainty about their illness, health care, and finances. They may also have lost people in their social support network of friends and family. People with this disease need support from others. This may come from family, friends, religious and community groups, and support groups, as well as the care team. Treat all your residents/clients with respect. Help give the emotional support they need.
- Withdrawal, apathy, avoidance of tasks, and mental slowness are early symptoms of HIV infection. Medications may also cause side effects of this type. AIDS dementia complex may cause further mental symptoms. There may also be muscle weakness and loss of muscle

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control, making falls a risk. Residents and clients will need a safe environment and close supervision in their personal care tasks.

Directions. Fill in the blank with the correct answers.

1. To help prevent infection, wash your _____ often.
2. When working in the home, thaw food in the _____. When storing food, keep cold foods _____ and hot foods _____.
3. Serve _____ and _____ foods when people have lost their appetite and have a difficult time eating.
4. Infections of the mouth may be helped by foods that are easier to swallow, such as _____ or _____ foods.
5. A person with nausea and vomiting should have small, _____ meals.
6. A person with diarrhea should avoid high-fat, high-fiber foods, as well as _____ products.
7. Going barefoot or using a _____ can keep covers off the feet for a person who has neuropathy.