# Answers to Questions in the Workbook, Chapter 11, Common Communicable Diseases and Transmission in the Health Care Setting

**Activity A Short Answer**

In the health care setting, it is common to have a large number of patients and residents living in a small area. There are also numerous people providing care for those people, both directly and indirectly. Add to this mix the visitors who come into a facility on a daily basis. Just this sheer number of people under one roof dramatically increases the types of communicable diseases and the methods in which they can be transmitted. Because many of your patients and residents will have risk factors that make them more susceptible to infection, protecting them from transmission is very important.

**Activity B MULTIPLE CHOICE**

1. b. Bacteria

2. d. Hands of health care workers

3. a. Feces

**Activity C MULTIPLE CHOICE**

* 1. d. Water
  2. d. Hepatitis B
  3. c. Hepatitis B

**Activity D SHORT ANSWER**

A bloodborne pathogen is transmitted from one person to another through blood or other body fluids. For a bloodborne pathogen to be transmitted from one person to another, blood or body fluids from an infected person must enter the bloodstream of a person who is not infected. There are several ways this could occur:

1. Needlesticks (puncture wounds caused by dirty hypodermic needles)

2. Cuts from contaminated, broken glass (such as that from a broken blood tube)

3. Direct contact between infected blood and broken skin, mucous membranes, or the eyes

4. Sexual intercourse, or through blood transfusions

**Activity E CHOOSE THE RIGHT ANSWER**

2. X
3. X
4. X

**7. X**

**Activity F CHOOSE THE RIGHT ANSWER**

1. X

2. X

3. X

4. X

5. X

6. X

7. X

8.

**Activity G MATCHING**

1. d

2. c

3. a

4. b

**Activity H FILL IN THE BLANKS**

* 1. A person who is infected with HIV is said to be HIV-positive, because they have tested positive on the blood test for HIV antibodies.
  2. Bruises or dark bumps on the skin that do not heal are called Kaposi sarcoma.
  3. Pain or difficulty swallowing is called dysphagia.
  4. Currently, more than 1.2 million people in the United States are infected with HIV.
  5. At the end of 2020, the World Health Organization (WHO) reported that an estimated 37.7 million people worldwide were HIV-positive.

**Activity I TRUE OR FALSE**

1. F. The test for HIV MAY NOT always be positive if the person is tested for the virus within 3 to 6 months of acquiring it.

2. F. Although very expensive, medications have been developed that can DELAY THE ONSET OF AIDS in HIV-positive people.

3. F. Medications CANNOT kill the HIV virus.

4. T

5. T

6. T

**Activity J CHOOSE THE RIGHT ANSWER**

1. X

2. X

3.

4. X

5. X

6.

7. X

8. X

* 1. X
  2. X
  3. X
  4. X
  5. X
  6. X
  7. X
  8. X

**Activity K SHORT ANSWER**

1. Behaviors and situations that increase a person’s risk for becoming infected with HIV include the following: (1) having unprotected sex, (2) sharing needles, and (3) receiving tissue transplants or transfusions of blood or blood products prior to 1985.

2. HIV invades a person’s T cells. In doing so, the virus destroys the very cells that are responsible for protecting the body. As HIV takes over the body’s immune system, the infected person begins to have more and more health problems, such as severe infections and aggressive cancers. So, the cause of death is usually an infection or malignancy that the body is no longer able to fight.

3. AIDS is said to occur when the person’s weakened immune system is no longer able to fight off infections and malignancies.

**Activity L SHORT ANSWER**

1.

a. When Mr. Watson coughs and soils your uniform with bloody mucus, you have definitely put yourself at risk of getting infected with HIV. Although the virus is not known to be transmitted in saliva, the gums of people with periodontal (gum) disease may bleed during oral care and tooth brushing, exposing you to potentially contaminated blood.

b. Because a possible exposure has occurred, the first step to take is to follow the facility’s exposure control plan. The nursing assistant should report the exposure incident so that the employer can arrange for appropriate medical tests and treatment.

c. The employer must provide adequate personal protective equipment (PPE) as required by the employee’s duties. This includes gloves (nonlatex, if the employee has allergies), face and eye protection, gowns and aprons, and scrub attire. If an exposure occurs, the employer must also provide appropriate medical follow-up (tests and treatment, if necessary).

2. According to the OSHA Bloodborne Pathogens Standard:

a. People working in an area where exposure to bloodborne pathogens is possible must receive training on the risks associated with bloodborne pathogens and on the methods they can use to safeguard themselves. Only when the health care worker is able to take care of themself can they take care of others.

b. Employers must make the hepatitis B vaccine available to workers who are at risk, free of charge. Health care workers are at a highest risk of being infected with HBV since their activities involve exposures to blood or bodily fluids that can easily transmit the virus.

c. The employer must provide adequate personal protective equipment (PPE) as required by the employee’s duties. This includes gloves (nonlatex, if the employee has allergies), face and eye protection, gowns and aprons, and scrub attire. PPE helps to avoid infections that can be caused by contact with infected bodily fluids.

d. Environmental control methods must be used to protect both the employees and the patients or residents. Environmental control methods include special ventilation systems to keep the air clean, procedures for the disposal of liquid waste, the availability of sharps disposal containers, and procedures for handling contaminated linen and trash. Housekeeping and cleaning methods must also meet OSHA’s standards.

e. Each health care facility must have an exposure control plan in place, in case an employee is exposed to blood or other body fluids from a patient or resident. This plan must be up-to-date, available in written form, and available to all employees. It is the employee’s responsibility to report any exposure incidents so that the employer can arrange for appropriate medical tests and treatment.

**Activity M SHORT ANSWER**

1. Airborne pathogens are disease-producing microbes that are transmitted through the air. When an infected person coughs or sneezes, the microbes leave the body through particles of saliva or sputum. As these particles spray through the air, they dry out and remain in the air for a long time (much like particles of dust caught in a shaft of sunlight). Like dust, the dried-out droplets containing microbes are in the air we breathe and on the surfaces we touch. Infection spreads when a person breathes the air containing the suspended pathogens.

2. Many factors seem responsible for these new cases:

a. Strains of the bacterium that causes TB have become resistant to the antibiotics used to treat the infection, making the antibiotics less effective.

b. People with immunodeficiency syndromes, such as AIDS, are more at risk for infections such as TB, and the number of people with immunodeficiency syndromes has increased.

c. More people are traveling to developing nations, where TB is still common.

d. People who are poor or who live in crowded urban areas (e.g., homeless people, illegal immigrants) are at increased risk for TB. People who get TB need to be treated for a long time, with many different antibiotics. Unfortunately, the people who are most likely to get the disease are least likely to complete the course of treatment for it because they lack money, a stable home life, or both.

**Activity N IDENTIFY PATHOGENS**

1. B

2. A

3. B

4. B

5. A

6. B

7. A

8. A

**Activity O SHORT ANSWER**

A. A bloodborne pathogen can be transmitted by cuts from contaminated broken glass.

B. An airborne pathogen can be transmitted when an infected person coughs and you are not wearing personal protective equipment such as a face mask.

C. A needle stick with a dirty needle could lead to transmittal of a bloodborne pathogen.

D. If infected blood splashes or sprays and contacts mucous membranes or broken skin, it could cause infection with a bloodborne pathogen.

**Activity P CROSSWORD**