

OBJECTIVES

After completing this program, the home health aide will be able to:

- » Name two early symptoms of hepatitis B infection
- » Define hepatitis as inflammation of the liver
- » Recognize that standard precautions are essential for preventing transmission of the hepatitis viruses in the workplace, and
- » Note that many people infected with hepatitis B virus or hepatitis C virus are unaware of the infection.

OVERVIEW

Despite development of vaccinations for hepatitis A and hepatitis B, the incidence of the three major types of viral hepatitis in the United States is widespread. The Centers for Disease Control and Prevention (CDC) estimates that the number of deaths from hepatitis C alone will triple in the next two decades. Hepatitis B is responsible for more than 6,000 deaths in the U.S. annually, and one out of every 250 Americans is a carrier of the virus. A high percentage of people infected with one of the hepatitis viruses are not aware they are infected.

The prevalence of the various hepatitis virus infections is so widespread that it is almost certain that many homecare patients are infected and are unaware of the infection. Therefore, home health aides are caring for infected patients without being aware of the infections.

Additionally, there are major differences among the various hepatitis viruses, their mode of transmission, and the severity of the illnesses they cause. The purpose of this in-service is to provide information about the various hepatitis viruses and how home health aides can protect themselves from infection.

CONTENT

Read the Fact Sheet	15 minutes
Read the Case Study	10 minutes
Complete "Think About It"	10 minutes
Complete the Post-test	15 minutes
Feedback Session	10 minutes

SUPPLEMENTAL LEARNING ACTIVITIES

- » Download or order educational materials from the CDC. Distribute and discuss with participants. The address for an index of available resources is <http://www.cdc.gov/ncidod/diseases/hepatitis/resource/index.htm>.
- » Arrange for a registered nurse to speak to participants. Have the nurse provide information about your agency's infection control plan and the importance of using standard precautions with every patient.
- » Ask the Director of Clinical Services to discuss the agency's post-exposure plan with participants. Ask him or her to clearly outline what the participants should do if they have accidental exposure to blood or body fluids.

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Hepatitis

- » Develop several patient care scenarios involving potential exposure to blood and body fluids or involving possible fecal-oral transmission of viruses. Distribute to participants and have the participants role-play the scenarios. Ask the other participants to observe and comment.
- » Provide copies of the agency's policies regarding personal protective equipment. Discuss how use of the equipment helps prevent the spread of the hepatitis viruses.

POST-TEST ANSWERS

INSTRUCTOR'S LOG

DATE / TIME / PLACE

Attachments

Participation Record Post-test Handouts Other

RN

FACTS ABOUT HEPATITIS INFECTION

Newspaper headlines often describe outbreaks of hepatitis A, perhaps among customers eating from a restaurant's salad bar. During your orientation to homecare, you were almost certainly offered vaccination against hepatitis B. Perhaps your infant or teenager has recently been vaccinated against hepatitis B. New treatments for hepatitis C are often administered in the home so more patients with hepatitis C are being seen in homecare.

With so much attention in the news, it is not surprising that there are misconceptions and fears about hepatitis. This in-service program will focus on the three most common forms of hepatitis that home health aides are likely to encounter.

HEPATITIS

Hepatitis is defined as an inflammation of the liver, usually caused by a viral infection. There are at least five different hepatitis viruses. Three of them are common in the U.S. Not all people infected with a hepatitis virus will have signs or symptoms of hepatitis. Many of them do not know they are infected and can transmit the viruses to others.

Hepatitis A

Hepatitis A is a liver infection caused by the hepatitis A virus (HAV).

HOW IT SPREADS

The virus is spread from person to person through the "fecal-oral" route. This means a person gets something in his or her mouth that has been contaminated with the stool of a person with HAV infection. If water or food becomes contaminated, the virus may infect anyone who drinks the water or eats the food. Outbreaks of hepatitis A sometimes occur when an infected food-service worker does not wash his or her hands well after using the bathroom and then prepares food. Outbreaks can also happen in day-care centers when the workers do not thoroughly wash their hands after changing diapers of an infected child. Many HAV infections come from contact with a household member who has HAV. The infection can also be spread among men who have sex with other men. Casual contact such as in the usual office or school setting does not spread HAV.

SIGNS AND SYMPTOMS

Some people do not have any signs/symptoms of infection with HAV. Others may have a mild, flu-like illness with fatigue, fever, muscle aches and pains, and nausea. In severe cases, the person may have dark urine, or a yellowing of the skin and eyes and develop a serious illness. The symptoms usually last less than 8 weeks.

TREATMENT

There is no specific treatment for hepatitis A, only for the symptoms that may be present. Hepatitis A usually goes away on its own. Immunity develops following an infection, and it is estimated that about one-third of Americans show evidence of having been infected and are immune.

PREVENTION

There are several methods of preventing HAV infection. They include:

- » **Vaccination** — There is a vaccination against HAV, but it is not recommended for everyone. The vaccine is typically given to people who are traveling to countries with high prevalence of hepatitis A, to men who have

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sex with men, to people who have chronic liver disease, and to people with blood clotting-factor disorders. The vaccine is not routinely given to health care workers, food service workers, or children attending day care.

- » **Immune globulin** — Immune globulin gives short-term protection against HAV if taken before and within two weeks after coming in contact with HAV.
- » **Hand washing** — Hands should be washed thoroughly with soap and water after using the bathroom, changing a diaper, and before preparing or eating food.
- » **Thorough cooking of food and drinking only pure water** — Eating raw or undercooked shellfish such as oysters or clams can cause HAV. The ground water in many countries is not safe.

Hepatitis B

Hepatitis B is caused by the hepatitis B virus (HBV). It is about twice as common as HIV, the virus that causes Acquired Immune Deficiency Syndrome (AIDS). Unlike HIV, the hepatitis B virus can live outside the body for days and still be able to cause infection.

HOW IT SPREADS

HBV is bloodborne and is spread by contact with contaminated blood or body fluids. The contact can be through needle sticks, tattoo needles, unprotected sex, broken skin, splashing of contaminated fluids into the mouth or eyes, or from an infected mother to her baby during birth. Because the virus can live for several days outside the body, sharing razors, toothbrushes, or manicuring tools that have been contaminated with blood can spread it. It is not spread by casual contact.

SIGNS AND SYMPTOMS

About one-third of infected patients do not have any signs or symptoms. Others may have flu-like symptoms such as fever, aches, nausea, or loss of appetite. Patients may have persistent fatigue and occasionally jaundice and/or abdominal pain. Some patients develop very serious illnesses and may die from hepatitis B.

CHRONIC INFECTION WITH HBV

In most cases, patients recover completely from hepatitis B. Some infected patients continue to carry HBV, although it does not cause illness. Others develop chronic hepatitis B with ongoing infection (chronic active hepatitis B). About 15 to 25% of patients with chronic active hepatitis B will eventually die of liver disease. Carriers and patients with chronic hepatitis B can transmit the virus to others.

TREATMENT

There is no known cure for hepatitis B, but most people manage to fight off the infection and become immune. Rest and good nutrition are important and patients should avoid alcohol or medications known to harm the liver. A combination of anti-viral drugs is used to treat people with chronic active hepatitis B.

PREVENTION

There are several methods for preventing HBV infection, including:

- » Hepatitis B vaccination, which should be given to:
 - All healthcare workers who have exposure to blood and body fluids
 - All newborn babies
 - Day-care workers and workers in prisons

- Anyone not previously vaccinated who is exposed to contaminated blood or body fluids
 - Recreational drug users, and
 - People who have sex with multiple partners.
- » Strict adherence to standard precautions in the workplace
- » Avoidance of high-risk behaviors such as multiple sex partners, unsafe sex, or illegal drug use.

Hepatitis C

Hepatitis C is caused by the hepatitis C virus (HCV). The existence of this virus was known long before it was identified, and for many years it was called, "Non-A, Non-B" hepatitis virus.

HOW IT IS SPREAD

HCV is bloodborne and spreads primarily through contact with blood, most often by sharing needles and other equipment used to inject blood. HCV can be spread from an infected mother to her baby at birth. The virus can also be spread by unprotected sex, but this does not occur very often. It is not spread by casual contact.

SIGNS AND SYMPTOMS

The symptoms of hepatitis C are often mild with fatigue, headache, and sore muscles being the most common. Jaundice is uncommon. In fact, 80% of people do not have signs or symptoms when they first become infected. Hepatitis C may go undetected until years later when liver damage occurs. Most people who get infected with HCV carry the virus for the rest of their lives. Some have no long-term effects, but for most patients, HCV infection is very serious.

CHRONIC INFECTION

Well over half the people with HCV infection will develop chronic infections and more than 70% of chronically infected patients will develop liver disease. Hepatitis C is the most common indication for liver transplants in the U.S.

TREATMENT

Chronic HCV infections are treated with a variety of anti-viral medications. Unfortunately, the drugs used for treatment can have significant side effects and not all patients can tolerate them. There are several sub-categories of HCV infection, and some of them do not respond well to treatment. It is estimated that treatment is effective in only 20 to 30% of patients. Severe liver disease may be treated with liver transplantation.

PREVENTION

There is no vaccine available to prevent hepatitis C. Prevention is aimed at avoidance of exposure to blood of potentially infected persons. This includes not sharing needles or drug works, toothbrushes, or razors that could be infected. The most important prevention strategy for healthcare workers is to strictly follow standard precautions.

PREVENTING HAV, HBV, AND HCV TRANSMISSION IN HOMECARE

1. Learn and follow your agency's infection control policies. Attend the annual bloodborne pathogens in-service program.
2. If you previously declined hepatitis vaccination, reconsider and discuss the matter with your employer.

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3. Assume that the stool, blood, and body fluids of all patients could possibly be infected with one of the hepatitis viruses.
4. Wash your hands thoroughly and often. Carry antiseptic handwashing materials to use in the event there is no available soap and water.
5. Use great caution when handling specimens.
6. Immediately inform the appropriate person at the agency if you are exposed to a patient's blood or body fluids.

IMPORTANT POINTS FOR HOME HEALTH AIDES

- ✓ About a third of patients infected with HBV do not have any signs or symptoms. Eighty percent of patients infected with HCV do not have signs or symptoms when first infected.
- ✓ Hepatitis C is the most common indication for liver transplantation in the U.S.
- ✓ HBV vaccination is recommended for all healthcare workers who may have exposure to blood and body fluids during the course of their jobs. This includes home health aides who make home visits.
- ✓ HAV vaccination is available but not currently recommended on a routine basis for most healthcare workers, including home health aides.
- ✓ There is currently no available vaccine that prevents hepatitis C infection.
- ✓ Most patients infected with HBV or HCV are receiving homecare for reasons other than the hepatitis.
- ✓ Carefully following standard precautions with every single patient during every single visit is the best method for controlling spread of the hepatitis viruses.

CASE STUDY

Julius is a home health aide who has two visits this morning. Joseph, a new home health aide who is in orientation, will accompany him.

The first visit is to Mr. Lane, a 45 year-old man who needs assistance with his bath and personal care due to injuries sustained in an accident several years ago. A nurse visits Mr. Lane regularly to administer an injection to treat hepatitis C. During the ride to the home, Julius tells Joseph about Mr. Lane. He cautions Joseph that they must be very careful since Mr. Lane has hepatitis C infection. "Try not to touch anything," Julius tells Joseph. "Hepatitis C is a very dangerous virus. It's a good thing we know to watch out." While caring for Mr. Lane, Julius uses a lot of personal protective equipment, including wearing a mask and gown while helping Mr. Lane ambulate. As they leave the home, Joseph asks Julius why he wore a mask. "You just can't be too careful when you know they have hepatitis C," he says. "Now if he had hepatitis B, I wouldn't have to be so careful. I've been vaccinated against hepatitis B, but there's no vaccination against hepatitis C."

The second visit is to Mr. Hall, a 70 year-old who needs assistance because of a stroke. While they are driving to Mr. Hall's home, Julius tells Joseph about Mr. Hall. He says that Mr. Hall is a retired banker who is very rich. Since they are seeing him because of a stroke, they don't need to be so careful as they were with Mr. Lane. "The assignment sheet will always tell you if they have anything you need to worry about," he says. "Mr. Hall has had a stroke, not hepatitis."

Joseph asks, "Will the assignment sheet always tell you which patients are infected with one of the hepatitis viruses?" "Absolutely," Julius responds. "That's how you know how careful you need to be."

THINK ABOUT IT

- » Identify some incorrect information Julius gave to Joseph. List some of the dangers of such misinformation.
- » What is the only disease hepatitis B vaccination protects against?
- » Do you think it is possible that Mr. Hall could also have hepatitis C infection?
- » Do you agree that home health aides will always know which patients are infected with hepatitis B or hepatitis C?

DIRECTIONS: READ EACH QUESTION CAREFULLY. THEN, DETERMINE THE BEST ANSWER. CHECK THE CORRESPONDING BOX ON YOUR ANSWER SHEET. DO NOT WRITE ON THIS POST-TEST.

1. Which of the following statements about hepatitis C is true?
 - a. Most people infected with hepatitis C do not have any early symptoms of hepatitis.
 - b. Hepatitis C is spread through contact with blood from an infected person.
 - c. Most people infected with hepatitis C remain infected for the rest of their lives.
 - d. All of the above statements are true.

2. Which of the hepatitis infections can be prevented with vaccinations?
 - a. Only hepatitis B
 - b. Hepatitis A and hepatitis B
 - c. Only hepatitis C
 - d. Hepatitis A and hepatitis C

3. Outbreaks of hepatitis are usually due to which of the hepatitis viruses?
 - a. Hepatitis A
 - b. Hepatitis B
 - c. Hepatitis C
 - d. All of the above

4. None of the hepatitis viruses is spread by casual contact.
 - a. True
 - b. False

5. What is a common method by which hepatitis A is spread?
 - a. Getting a tattoo
 - b. Having an infected person cough in your face
 - c. Eating food contaminated by the stool of an infected person
 - d. Hugging a person who is infected

6. Hepatitis A vaccination is recommended for which of the following groups of people?
 - a. Day-care workers
 - b. People with chronic liver disease
 - c. People who work in the food service industry
 - d. Health care workers

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POST-TEST, PAGE 2

7. Which is the best definition of hepatitis?
- a. Hepatitis is an inflammation of the liver, usually caused by drug toxicity.
 - b. Hepatitis is an inflammation of the kidneys, usually caused by streptococcal infection.
 - c. Hepatitis is an inflammation of the liver, usually caused by a viral infection.
 - d. Hepatitis is an inflammation of the kidneys, usually caused by excessive use of alcohol.
8. Which type of hepatitis is a leading indication for liver transplants in the U.S.?
- a. Hepatitis A
 - b. Hepatitis B
 - c. Hepatitis C
 - d. All of the above
9. What do all the hepatitis viruses have in common?
- a. They all invariably cause liver damage.
 - b. They are all transmitted in the same ways.
 - c. They can all be prevented with vaccinations.
 - d. They can all infect people without causing signs and symptoms.
10. Handwashing will prevent all hepatitis infections.
- a. True
 - b. False

- END -

MONTHLY INSERVICE ANSWER SHEET

In-service Month _____ Year _____

Name _____ Date _____

1. a. ___ b. ___ c. ___ d. ___

2. a. ___ b. ___ c. ___ d. ___

3. a. ___ b. ___ c. ___ d. ___

4. a. ___ b. ___ c. ___ d. ___

5. a. ___ b. ___ c. ___ d. ___

6. a. ___ b. ___ c. ___ d. ___

7. a. ___ b. ___ c. ___ d. ___

8. a. ___ b. ___ c. ___ d. ___

9. a. ___ b. ___ c. ___ d. ___

10. a. ___ b. ___ c. ___ d. ___