Hepatitis
End of Module Quiz (9 Questions)

1. Which of the following is true regarding hepatitis?
   A. Hepatitis means inflammation
   B. Hepatitis can result from both infectious and non-infectious causes
   C. There are five major hepatitis viruses, three of which are prevalent in the US
   D. All of the above. (Correct)

Incorrect Answer Response: All are true.
- Hepatitis is a general term that means “inflammation of the liver”, and Hepatitis can result from both infectious and non-infectious causes
- These may include: heavy alcohol use, side effect of certain medications, ingestion of toxins, auto-immune disease, or bacterial or viral infections
- Of the five major hepatitis viruses (A, B, C, D, and E), three are the most common causes of viral hepatitis in the US: hepatitis A virus (HAV), hepatitis B virus (HBV), and hepatitis C virus (HCV)

Relates to Key Learning Point #1 and 2: Explain the difference between hepatitis and viral hepatitis. List the most common types of viral hepatitis in the United States.

Where Question Content is presented: Passport to Partner Services – Key Disease Concepts Unit 8; Topic 1, pages 1 and 2; Topic 2, pages 2, 3, and 4.

2. Which is true about Hepatitis transmission?
   A. Hepatitis A is transmitted by the fecal oral route and can spread through close physical contact or contaminated food
   B. Hepatitis B is transmitted through contact with infectious blood, semen and vaginal fluids, often through sex
   C. Hepatitis C is transmitted through infected blood, often through injection drug use
   D. Hepatitis D is transmitted through infectious blood and is acquired with HBV
   E. Hepatitis E is transmitted through the oral fecal route and is often spread through contaminated water
   F. B and D.
   G. All of the above. (Correct)

Incorrect Answer Response: Each statement was true.
- Hepatitis A virus (HAV) is transmitted by the fecal-oral route. Microscopic quantities of contaminated feces can infect others through very close physical contact (including sex) and from contaminated food or water.
- Hepatitis B virus (HBV) is a blood-borne virus. HBV is efficiently transmitted by percutaneous or mucous membrane exposure to infectious blood or body fluids that contain blood (and is efficiently spread via sex and from mother to infant at birth).
- HCV is most efficiently transmitted through large or repeated percutaneous exposure to infected blood (e.g., through transfusion of blood from unscreened donors or through use
of injection drugs). Although much less frequent, occupational, perinatal, and sexual exposures also can result in transmission of HCV.

- HDV is transmitted through percutaneous or mucosal contact with infectious blood and can be acquired either as a coinfection with HBV or as superinfection in persons with HBV infection.
- Hepatitis E virus (HEV) is transmitted through ingestion of fecal matter, even in microscopic amounts. Outbreaks are usually associated with contaminated water supply in countries with poor sanitation.

**Relates to Key Learning Point #3:** List the ways HIV can be transmitted.

**Where question content is presented:** Passport to Partner Services – Key Disease Concepts Unit 8; Topic 2, page 4 (under each viral description).

3. Which are true statements about acute and chronic hepatitis?
   - A. If the initial attack of acute viral hepatitis is not severe and not prolonged, the liver will heal itself with no long term damage (Correct)
   - B. Symptoms of chronic viral hepatitis will always develop in 1-2 years
   - C. Acute Hepatitis is a short term infection that occurs within the first six weeks of exposure to the virus
   - D. Hepatitis A, Hepatitis B, and Hepatitis C can develop into a chronic or lifelong infection
   - E. A and D
   - F. All of the above

**Incorrect Answer Response:**
The correct answer was that if the initial attack of acute viral hepatitis is not severe and not prolonged, the liver heals itself with no long-term damage. An extensive, severe acute hepatitis infection, however, can cause the liver to be totally destroyed, placing the infected person's life in danger.

**The other responses were inaccurate because:**
- **Acute viral hepatitis** is a short-term infection that occurs within the first 6 months (not 6 weeks) after exposure.
- Hepatitis A is a short-term infection and does not develop into chronic infection. Hepatitis B virus and hepatitis C virus, however, can establish chronic infections in the liver known as **chronic viral hepatitis**. In most cases, chronic infection is manifest by continuing inflammation that damages the liver over a period of years. Chronic viral hepatitis may take up to 20 or 30 years to develop (so will not always develop in 1-2 years).

**Relates to Key Learning Point #4 and #5:** Explain the difference between acute and chronic viral hepatitis. List the two types of viral hepatitis that can become a chronic infection.

**Where question content is presented:** Passport to Partner Services – Key Disease Concepts Unit 8, Topic 2, page 3.

4. Which of the following are symptoms of viral hepatitis?
   - A. Vomiting
   - B. Abdominal pain
   - C. Grey-colored bowel movements
D. Joint pain  
E. Jaundice  
F. All of the above (Correct)

Incorrect Answer Response: All of the listed symptoms are associated with viral hepatitis. When the acute infection is symptomatic, symptoms of all types of viral hepatitis are similar and can include one or more of the following: fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, grey colored bowel movements, joint pain, or jaundice.

Relates to Key Learning Point #6: List at least 4 of the symptoms of viral hepatitis.
Where Question Content is presented: Passport to Partner Services – Key Disease Concepts Unit 8, Topic 2, page 5.

5. Which statement is not true regarding Hepatitis testing?
   A. Hepatitis A must be confirmed by a positive serologic test for immunoglobulin M antibody to hepatitis A virus
   B. Hepatitis infection can be confirmed if a case meets the clinical case definition and occurs in a person who has an epidemiological link with a person who has laboratory confirmed hepatitis
   C. Hepatitis B serologic testing can be complex and involves measurement of several HBV-specific antigens and antibodies
   D. The first line of screening for chronic hepatitis B is generally done with Hepatitis B surface antigen (HBsAg)
   E. There is no reliable test available for Hepatitis C. (Correct response)

Incorrect Answer Response: The incorrect response was that there is no reliable test available for Hepatitis C. Serological assays that detect specific antibody to HCV are always used as the first screening test for hepatitis C. A nucleic acid test is the second recommended test, which is used to detect and confirm the presence of genetic material from the virus, or HCV ribonucleic acid (RNA).

The other statements are true:
- Hepatitis A diagnosis must be confirmed by a positive serologic test for immunoglobulin M antibody to hepatitis A virus (IgM anti-HAV). HAV infection can also be confirmed if the case meets the clinical case definition and occurs in a person who has an epidemiologic link with a person who has laboratory-confirmed hepatitis A (i.e., household or sexual contact with an infected person during the 15–50 days before the onset of symptoms).
- Hepatitis B serologic testing involves measurement of several HBV-specific antigens and antibodies. Different serologic “markers” or combinations of markers are used to identify different phases of HBV infection and to determine whether a patient has acute or chronic HBV infection, is immune to HBV as a result of prior infection or vaccination, or is susceptible to infection. The first line of screening for chronic infection, however, is generally done with Hepatitis B surface antigen (HBsAg).

Related to Key Learning Points #9 and #10: Briefly describe the serologic tests for Hepatitis B and C. Discuss the testing recommendations for Hepatitis B and C.
6. Hepatitis A vaccine and hepatitis B vaccine are recommended for which of the following?
   A. Men who have sex with men
   B. Users of injection drugs
   C. Persons with chronic liver disease
   D. All of the above (Correct)

Incorrect Answer Response: These vaccines are recommended for all of the listed groups.

To review:
- Hepatitis A vaccination is recommended for all children at age 1 year; persons traveling to or working in countries that have high or intermediate rates of hepatitis A; men who have sex with men; users of illegal injection and non-injection drugs; persons who have occupational risk for infection; persons who have chronic liver disease; persons who have clotting-factor disorders.
- Hepatitis B vaccination is recommended for all infants at birth; older children not previously been vaccinated; sex partners of infected persons; persons with multiple sex partners or sexually active persons who are not in long-term, mutually monogamous relationships; persons seeking evaluation or treatment for a STD; men who have sex with men; injection drug users; household contacts of infected persons; persons with HIV infection; persons who have chronic liver disease, travelers to regions with intermediate or high rates of hepatitis B; residents and staff of facilities for developmentally disabled persons; healthcare and public safety workers at risk for exposure to blood or blood-contaminated body fluids.

Relates to Key Learning Point #8 and 7: Discuss the ACIP vaccine recommendations for hepatitis A and hepatitis B. Describe the groups at risk and the prevention measures for: Hepatitis A, Hepatitis B, and Hepatitis C. Where question content is presented: Passport to Partner Services – Key Disease Concepts Unit 8; Topic 3, page 9; Topic 4 page 10; Topic 3, page 9 Topic 4, page 10.

7. Which type of viral hepatitis is not vaccine preventable?
   A. Hepatitis A
   B. Hepatitis B
   C. Hepatitis C (Correct)
   D. None of the above

Incorrect Answer Response: Currently, there are vaccines for Hepatitis A and B, but there is no vaccine for hepatitis C.

Relates to Key Learning Point 7: Describe the prevention and control measures for Hepatitis C. Where question content is presented: Passport to Partner Services – Key Disease Concepts Unit 8; Topic 5, page 7.

8. Which is not true of treatment for hepatitis?
   A. There is no medication to treat hepatitis A
B. Hepatitis A infection can be treated with antiviral drugs and interferon (Correct)
C. Rest, nutrition, and fluids are often used to treat acute hepatitis A and B
D. Acute HCV can be treated with antiviral medication, including ribavirin
E. None of the above.

Incorrect Answer Response:
- There is no drug regimen to treat Hepatitis A infection. Since there is no specific medication available, Hepatitis A is best addressed through supportive treatment including rest, adequate nutrition, and fluids.
- Acute HBV infection is best addressed through supportive treatment including rest, adequate nutrition, and fluids. For chronic HBV infection, several antiviral drugs (adefovir dipivoxil, interferon alfa-2b, pegylated interferon alfa-2a, lamivudine, entecavir, and telbivudine) are available.
- Acute HCV infection may be treated with antiviral medication and may result in prevention of chronic infection. The current standard of treatment includes the use of pegylated interferon (an immune booster) and ribavirin (an antiviral).

Relates to Objective #11: Describe the treatment for Hepatitis A, B, and C. Where question content is presented: Passport to Partner Services – Key Disease Concepts Unit 8, Topic 3, page 13; Topic 4, page 18; and Topic 5, page 10.

9. People who test positive for HCV, should be counseled with the following messages:
A. HCV-positive women do not need to avoid pregnancy or breastfeeding
B. To reduce the risk for transmission to others, HCV-positive persons should be advised to 1) not donate blood, body organs, other tissue, or semen; 2) not share any personal items that might have blood on them (e.g., toothbrushes and razors); and 3) cover cuts and sores on the skin to keep from spreading infectious blood or secretions
C. HCV-positive persons with one long-term, steady sex partner need to adopt safer sexual practices
D. To protect their liver, HCV-positive persons should be advised to avoid taking any new medicines, except OTC and herbal/natural remedies
E. A and B (Correct)
F. All of the above

Incorrect Answer Response: Persons who test positive for antibody-HCV should be provided with the following counseling messages:
- To 1) not donate blood, body organs, other tissue, or semen; 2) not share any personal items that might have blood on them (e.g., toothbrushes and razors); and 3) cover cuts and sores on the skin to keep from spreading infectious blood or secretions.
- Check with their doctor before taking any new medicines (including OTC and herbal supplements)
HCV-positive persons with one long-term, steady sex partner do not need to change their sexual practices. They should discuss the low but present risk for transmission with their partner. HCV-positive women do not need to avoid pregnancy or breastfeeding.

Where question content is presented: Passport to Partner Services – Key Disease Concepts Unit 8, Topic 5, page 11.