

# Hepatitis B Professional Materials

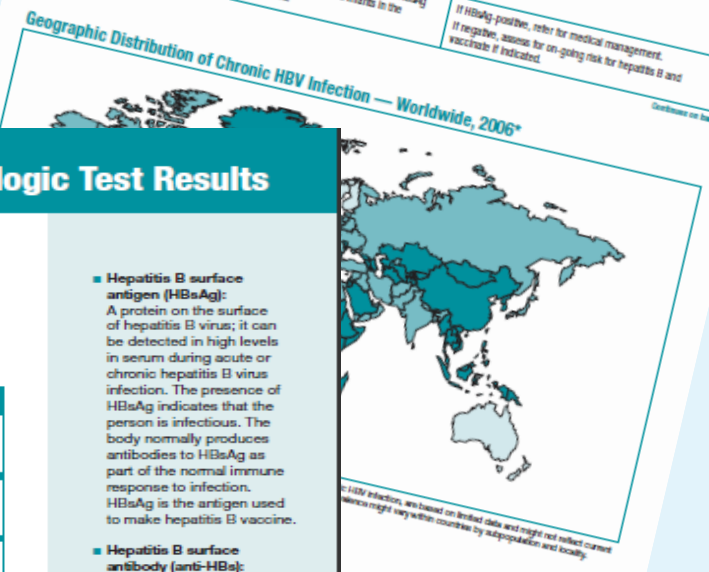
## The ABCs of Hepatitis

	<b>HEPATITIS A</b> is caused by the hepatitis A virus (HAV)	<b>HEPATITIS B</b> is caused by the hepatitis B virus (HBV)	<b>HEPATITIS C</b> is caused by the hepatitis C virus (HCV)
<b>Statistics</b>	• Estimated 25,000 new infections in 2007	• Estimated 43,000 new infections in 2007 • Estimated 800,000–1.4 million people with chronic HBV infection	• Estimated 17,000 new infections in 2007 • Estimated 2.7–3.0 million people with chronic HCV infection
<b>Mode of Transmission</b>	Ingestion of fecal matter, even in microscopic amounts, from: • Close person-to-person contact with an infected person • Sexual contact with an infected person • Ingestion of contaminated food or drink	Contact with infectious blood, semen, and other body fluids, primarily through: • Birth to an infected mother • Sexual contact with an infected person • Sharing of contaminated needles, syringes or other injection drug equipment • Needlesticks or other sharp instrument injuries	Contact with blood of an infected person, primarily through: • Sharing of contaminated needles, syringes, or other injection drug equipment • Less commonly (trauma) • Sexual contact with an infected person • Birth to an infected mother • Needlesticks or other sharp instrument injuries
<b>Persons at Risk</b>	• Travels to regions with intermediate or high rates of hepatitis A • Sex contacts of infected persons • Household members or caregivers of infected persons • Men who have sex with men • Users of certain illegal drugs (injection and non-injection) • Persons with clothing-factor disorders	• Inherits from infected mothers • Sex partners of infected persons • Persons with multiple sex partners • Persons with a sexually transmitted disease (STD) • Men who have sex with men • Injection drug users • Household contacts of infected persons • Healthcare and public safety workers exposed to blood on the job • Hemodialysis patients • Residents and staff of facilities for developmentally disabled persons • Travels to regions with intermediate or high rates of hepatitis B (HBsAg prevalence of ≥2%)	• Current or former injection drug users • Recipients of clotting factor concentrates before 1987 • Recipients of blood transfusions or donated organs before July 1992 • Long-term hemodialysis patients • Persons with known exposure to HBV (e.g., healthcare workers after needlesticks, recipients of blood or organs from a donor who later tested positive for HCV) • HIV-infected persons • Infants born to infected mothers
<b>Incubation Period</b>	15 to 50 days (average: 28 days)	45 to 160 days (average: 120 days)	14 to 180 days (average: 45 days)
<b>Symptoms of Acute Infection</b>	Symptoms of all types of viral hepatitis are: • Loss of appetite • Nausea • Vomiting		
<b>Likelihood of Symptomatic Acute Infection</b>	• < 10% of children < 6 years have jaundice • 40%–50% of children age 6–14 years have jaundice • 70%–80% of persons > 14 years have jaundice		
<b>Potential for Chronic Infection</b>	None		
<b>Severity</b>	Most persons with acute disease recover with no lasting liver damage; rarely fatal		
<b>Serologic Tests</b>	• IgM anti-HAV is recommended for diagnosing acute disease • Screening for past infection is generally not recommended		

## Recommendations for Routine Testing and Follow-up for Chronic Hepatitis B Virus (HBV) Infection

Population	Testing	Recommendation
Persons born in regions of high and intermediate HBV endemicity (HBsAg prevalence ≥2%)	Test for HBsAg, regardless of vaccination status in their country of origin, including: – immigrants – refugees – asylum seekers – internationally adopted children	If HBsAg-positive, refer for medical management. If negative, assess for on-going risk for hepatitis B and vaccinate if indicated.
US born persons not vaccinated as infants whose parents were born in regions with high HBV endemicity (>8%)	Test for HBsAg regardless of maternal HBsAg status if not vaccinated as infants in the United States.	If HBsAg-positive, refer for medical management. If negative, assess for on-going risk for hepatitis B and vaccinate if indicated.

*(Continued on back)*



## Interpretation of Hepatitis B Serologic Test Results

Hepatitis B serologic testing involves measurement of several hepatitis B virus (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.

HBsAg	anti-HBc	Interpretation
negative	negative	Susceptible
negative	positive	Immune due to natural infection
negative	positive	Immune due to hepatitis B vaccination
positive	positive	Acutely infected
positive	negative	Chronically infected

- Hepatitis B surface antigen (HBsAg):** A protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.
- Hepatitis B surface antibody (anti-HBs):** The presence of anti-HBs is generally interpreted as indicating recovery and immunity from hepatitis B virus infection. Anti-HBs also develops in a person who has been successfully vaccinated against hepatitis B.
- Total hepatitis B core**

# Additional Resources

- NPIN National Prevention Information Network [www.cdcpin.org](http://www.cdcpin.org)
- CDC grantees:
  - Asian Health Coalition [www.asianhealth.org](http://www.asianhealth.org)
  - University of Alabama – Birmingham [www.KnowHepatitis.org](http://www.KnowHepatitis.org)
  - University of Washington – Seattle [www.HepWebStudy.org](http://www.HepWebStudy.org)

# NPIN Materials Inventory

Adding new hepatitis related materials to be listed in [www.cdcpin.org](http://www.cdcpin.org)

- HIV/AIDS
- Viral Hepatitis
- STDs
- Tuberculosis
- Communities at Risk
- Partner Forum
- Web Tools
- Home

## DOWNLOADABLE MATERIALS SEARCH

This database contains information about educational materials tailored to a variety of audiences and focusing on the prevention of HIV/AIDS, viral hepatitis, STDs, and TB. Users may search for currently available downloadable materials.

For additional information, please contact an NPIN Information Specialist at 800-458-5231; TTY 800-243-7012; or e-mail [info@cdcpin.org](mailto:info@cdcpin.org).

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*For specific searches, select a Topic and, if desired, add a Format and/or a Language selection.*

Topic:   
Health Professionals  
**Hepatitis**  
Hispanics/Latinos

Format:   
Audiocassette  
CD/CD ROM/DVD  
Computer Disk

Languages:   
Albanian  
American Sign Language  
Amharic

*For a broader search, use the Keyword search, which will display all material records that contain the search term entered, regardless of where the term appears in the record.*

Keyword:

# Asian Health Coalition

- CDC Grantee
- Supported projects:
  - Community Health Worker Model Manual
  - Midwest Viral Hepatitis Conference
    - May 11,2012
      - Focus on Hepatitis B and API populations
      - For public health professionals, clinicians, and leaders of Asian-serving CBOs

# Asian Health Coalition



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 Hepatitis Web Study

Case-Based Modules

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Authors

## Editors

**Jeanne Mrazzozzo, MD, MPH**  
Professor of Medicine  
Division of Infectious Diseases  
University of Washington

**David H. Spach, MD**  
Professor of Medicine  
Division of Infectious Diseases  
University of Washington

**H. Nina Kim, MD**  
Assistant Professor of Medicine  
Division of Infectious Diseases  
University of Washington

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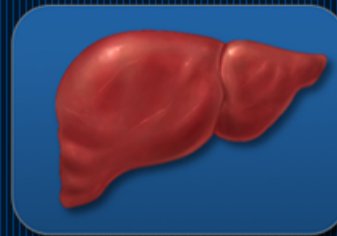
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## Hepatitis Web Study

Featuring  
Interactive, case-based modules with free CE credits  
Slide library with presentations for downloading  
A glossary of definitions and terms



C

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E2

p7

NS2

NS3




NS4A

NS4B

NS5A

NS5B

# Hepatitis B Case-Based Modules

 Hepatitis Web Study	Case-Based Modules	Slide Library	Definitions
<b>CASE-BASED MODULES</b>			
Hepatitis A			
<b>Hepatitis B</b>			
Hepatitis C			
Common Management Issues			
Health Educator			
Home			
 			

**Natural History:**

- [Natural History of Chronic Hepatitis B Infection](#)

**Clinical/Diagnosis:**

- [Serologic and Virologic Markers of Hepatitis B Virus Infection](#)
- [Interpretation of Isolated Hepatitis B Core Antibody](#)



**Management:**

- [Approach to the Patient with Positive Hepatitis B Surface Antigen](#)
- [Approach to Hepatitis B e Antigen Negative Patients with Increased Hepatic Aminotransferase Levels](#)
- [Deciding to Initiate Antiviral Treatment in Patients with Chronic Hepatitis B Virus Infection](#)
- [Antiviral Agents Used to Treat Hepatitis B Virus Infection](#)
- [Choosing an Antiviral Agent for Initial Treatment of Hepatitis B Virus Infection](#)
- [Monitoring and Management of Patients on Therapy for Chronic Hepatitis B](#)
- [Management of Patients with Chronic Hepatitis B and Antiviral Resistance](#)
- [Initiating Treatment in Patients with Hepatitis B and HIV Coinfection](#)

**Prevention:**

- [Vaccination for Hepatitis B in Adults](#)
- [Postexposure Prophylaxis following Occupational Exposure to Hepatitis B Virus](#)
- [Prevention of Mother-to-Child \(Perinatal\) Transmission of Hepatitis B](#)

# Case-Based Module on Monitoring and Management

 Hepatitis Web Study	Case-Based Modules	Slide Library	Definitions
<b>CASE-BASED MODULES</b>			
Hepatitis A	<a href="#">Question</a>   <a href="#">Discussion</a>   <a href="#">References</a>   <a href="#">CME Credit</a>   <a href="#">CNE Credit</a>		
<b>Hepatitis B</b>	<b>Monitoring and Management of Patients on Therapy for Chronic Hepatitis B</b>		
Hepatitis C	<b>Authors:</b> John D. Scott, MD, MSc David H. Spach, MD		
Common Management Issues	<b>Last updated:</b> December 10, 2009 <a href="#">Learning Objectives</a>		
Health Educator	<p>A 38-year-old Vietnamese man with chronic hepatitis B infection comes to you for follow-up. His past laboratory studies show positive hepatitis B e antigen (HBeAg), negative hepatitis B e antibody (anti-HBe), HBV DNA level of 108 IU/ml, and an alanine aminotransferase (ALT) between 30 to 40 U/L over a period of 12 months. A liver biopsy shows grade 3 inflammation and stage 2 fibrosis. He is started on entecavir (<i>Baraclude</i>).</p> <p><b>Which of the following statements is TRUE regarding recommendations from the American Association for the Study of Liver Diseases (AASLD) regarding monitoring and management of patients on therapy for chronic hepatitis B?</b></p> <ul style="list-style-type: none"><li><b>A</b> For HBeAg-positive patients, monitoring for HBeAg seroconversion should occur only after the patient has achieved HBsAg seroconversion.</li><li><b>B</b> After starting therapy, the patient should have his ALT and HBV DNA level next measured at the end of 1 year of therapy.</li><li><b>C</b> As soon as the patient obtains an undetectable HBV DNA level, it is advisable for him to stop therapy.</li><li><b>D</b> If the patient's HBV DNA level declines by 1 log<sub>10</sub> after 6 months of therapy, the response is termed a primary non-response.</li></ul>		
Home			
			



# Hepatitis B Slide Library

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**SLIDE LIBRARY** 21

Hepatitis A

**Hepatitis B**

- » HBV: Epidemiology  
*Updated: June 3rd, 2011*
- » Therapeutic Agents

Hepatitis C

Other Hepatitis Viruses

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**HEPATITIS B : EPIDEMIOLOGY**

## Prevalence of Chronic HBV Infection, Worldwide, 2006

**HBsAg Prevalence**

- ≥8% = High
- 2-7% = Intermediate
- < 2% = Low

Source: CDC and Prevention. MMWR 2008;57(RR-8):1-20.

Hepatitis web study

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# KnowHepatitis.org

KnowHepatitis.org

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## Training Needs Survey

Please help us serve you better by filling out the following Hepatitis Training Needs Assessment Survey:

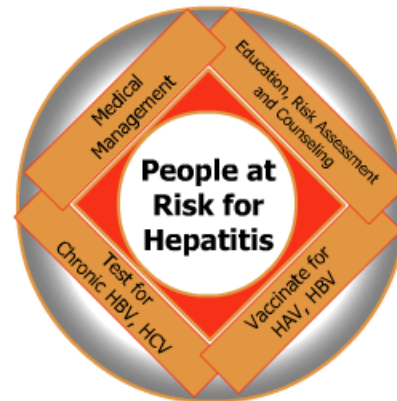
[Training Needs Survey](#)

## Search

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## NTC for Integrated Hepatitis HIV/STD Prevention Services



### Medical Management

Welcome to the National Training Center for Integrated Hepatitis HIV/STD Prevention Services. The National Training Center provides training to frontline workers in community based organizations and clinics on hepatitis prevention, diagnosis, management, treatment and integration. Hepatitis, STDs and HIV are preventable diseases. Despite this it is estimated that up to 5 million people nationwide are chronically infected with hepatitis B or C and many of them do not know it. Concurrently, it is estimated that in 2006 that there were

## Register For Webinars

### Training sessions available:

- UFO: A Model HCV Prevention Intervention for Young Adult IDU
- Understanding Hepatitis C (HCV) Prevalence and Risk Among Young Adult IDU
- Hepatitis A and Hepatitis B Vaccination for High Risk Adults
- Hepatitis as an STD: The 2010 STD Treatment Guidelines, Service Integration, and Trends
- Recent Advances in the Diagnosis and Treatment of Hepatitis B for Front-line Workers
- Recent Advances in the Diagnosis and Treatment of Hepatitis C for Front-line Workers
- Living Well with Hepatitis C
- What Every Outreach Worker Should Know About Hepatitis C Treatment
- Chronic Hepatitis B in Asian American, Native Hawaiian and

# Hepatitis B webinars

**Recent Advances in the  
Diagnosis and Treatment  
of Hepatitis B for  
Front-line Workers**

Produced by the Alabama  
Video Communications and Distance Learning Division

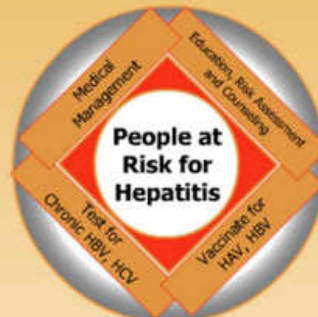
**Hepatitis A and Hepatitis B  
Vaccination  
for High-risk Adults**

Alabama Training Center  
Hepatitis/HIV/STD Prevention and  
Community Based Organizations  
and Clinics

Division of Viral Hepatitis, STD & TB Prevention



**Chronic Hepatitis B in Asian  
American, Native Hawaiian &  
other Pacific Islander Communities**



Produced by the Alabama Department of Public Health  
Video Communications and Distance Learning Division

# The Future

- Continue ***Know More Hepatitis*** Campaign
- Anticipated PPHF funds to address hepatitis B
  - Hepatitis B education campaign
- Partner with Hepatitis B organizations

**Thank You**

