

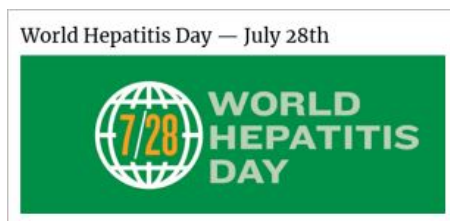
*epi*TRENDS

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World Hepatitis Day

July 28th was chosen as World Hepatitis Day for 2020. Viral hepatitis infections affect millions of people globally, and still present challenges for this country.



Viral Hepatitides

A diverse group of unrelated viruses that share the characteristic of infecting the liver are grouped as viral hepatitides. Included are two types that cause acute hepatitis and three types that can cause chronic hepatitis. Not included are other viruses such as Epstein Barr virus (the cause of mononucleosis) that can also infect the liver.

When symptomatic, acute viral hepatitis is characterized by nausea, vomiting, diarrhea, and jaundice. Chronic hepatitis can be asymptomatic until complications decades later due to liver cirrhosis or liver cancer resulting from the viral infection. Since symptoms are not specific to one type of viral hepatitis, serologic testing is needed for a diagnosis.

The five hepatitis viruses – A, B, C, D, and E – are distinct and can spread in different ways, affect different populations, and result in different health outcomes. In addition they differ in control measures and public health interventions.

The hepatitis A virus is transmitted through the fecal-oral route, either directly or through contaminated food, water, and surfaces. Perinatal transmission is a risk. Very rare bloodborne transmission has occurred. Almost all infections in young children are asymptomatic, while adolescents and adults almost all have a significant illness lasting weeks to months. Prolonged



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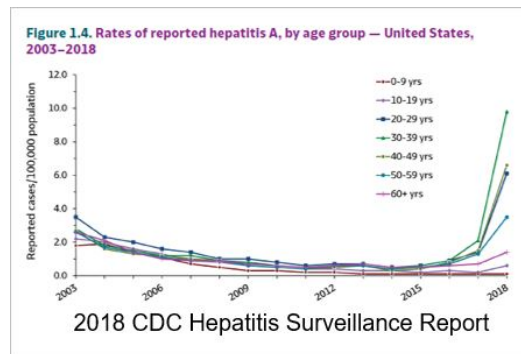
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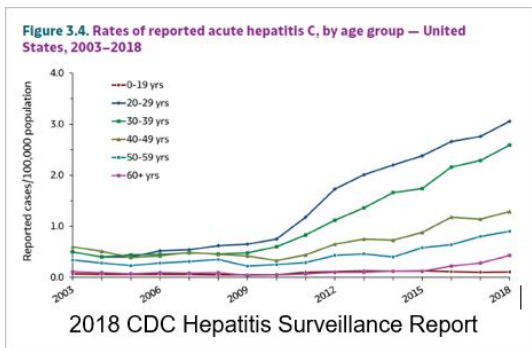
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shedding can occur in immunocompromised persons. The disease occurs in settings with reduced sanitation. In the past, large outbreaks occurred in child care centers but rates became low after vaccine introduction. Recently, many states including Washington have had hepatitis A outbreaks among persons experiencing homelessness or sharing fecally-contaminated drug equipment; as a result disease rates for adult age groups in the country increased greatly (see adjacent figure). Sexual transmission is implicated in some cases due to fecal-oral exposures.



The hepatitis B virus is transmitted through blood, semen, or other body fluids. Many acute infections are asymptomatic. About 10 percent of cases develop chronic infections with limited treatment options. At-risk populations include persons sharing blood-contaminated injection drug equipment as well as those with multiple sexual partners in a short time interval. Rates of acute hepatitis B have been gradually decreasing in the United States.



The hepatitis C virus is transmitted primarily through blood, but can be sexually transmitted. Chronic infections are common, the frequency depending on age at acquisition. A number of treatment options are available that can eliminate the infection. Transmission occurs mainly through sharing of blood-contaminated injection drug equipment. In the past, blood transfusion was a route of exposure. Rates in this country for acute hepatitis C have been gradually increasing, particularly among those age 20-39 years.

The hepatitis D virus infection occurs as either a simultaneous infection with hepatitis B or as a superinfection to a chronic hepatitis B infection. Transmission is almost entirely through sharing contaminated drug injection equipment. Washington has had cluster of cases in risk populations.

The hepatitis E virus is transmitted through the fecal-oral route. Most illnesses are mild but infection can be severe in pregnant women. The disease is rare in the United States.

Infection with more than one of the viruses increases the risk of severe illness. For this reason, it is important to prevent additional viral hepatitis infections in a person who has chronic hepatitis B or chronic hepatitis C. Public health agencies have a role in controlling these infections.

Public Health Role in Viral Hepatitis Control

Hepatitis A and hepatitis B infections are vaccine-preventable. Universal childhood vaccination can control both of these diseases in a population. In the United States, rates of hepatitis A and hepatitis B declined with the introduction of universal childhood vaccination.

Recently updated recommendations for hepatitis A vaccine include the following:

- Routine vaccination of children aged 12–23 months
- Catch-up vaccination for children and adolescents aged 2–18 years who have not previously received hepatitis A vaccine at any age
- Vaccination for adults at risk for HAV infection (international travel, use of illegal drugs, persons experiencing homelessness) and settings providing services to such persons
- Vaccination for adults at risk for severe disease from HAV infection (e.g., chronic liver disease from any cause, infected with HIV, or ALT or AST persistently over twice normal)
- Vaccination for adults on request

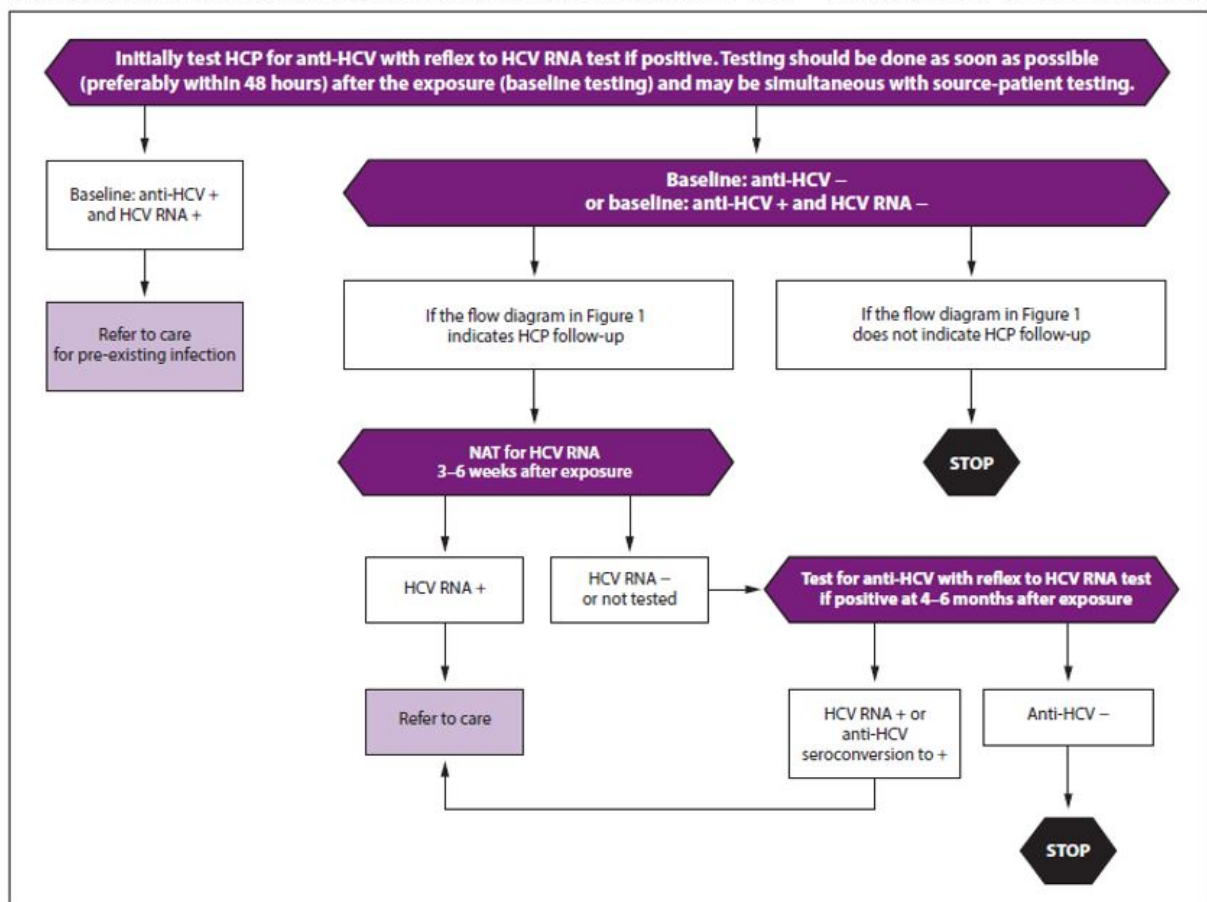
In addition to universal childhood vaccination and vaccination of persons at risk, hepatitis B prevention should address preventing perinatal transmission. Delivery hospitals should have standing orders to administer hepatitis B vaccine to all newborns within 24 hours of birth or before discharge, whichever comes first. There should also be identification and appropriate immunoprophylaxis of all infants born to women who are hepatitis B surface antigen positive or who have unknown HBsAg status. Preventing hepatitis B also prevents hepatitis D infection.

Unless prevalence in a setting is known to be less than 0.1%, universal hepatitis C screening is recommended at least once in a lifetime for all adults and during each pregnancy. Regardless of age or setting prevalence, one-time testing is recommended for persons with HIV, who has ever injected drugs and shared equipment, with selected medical conditions, or who received transfusions or organ transplants before routine screening. Routine periodic testing is recommended for persons with ongoing risk factors such as sharing drug injection equipment or receiving maintenance dialysis.

There are updated recommendations for health care workers with potential hepatitis C exposure including a testing algorithm and clinical management. Rapid baseline testing should be done for the source patient and the worker. Post-exposure prophylaxis of hepatitis C is not recommended. For details see Resources.

Although unrelated and often dissimilar agents, the causes of viral hepatitis can be addressed with public health actions. CDC publications below are another resource for local health jurisdictions and healthcare providers.

Testing of health care personnel after potential exposure to hepatitis C virus — CDC guidance, United States, 2020



Updated clinical management of health care personnel exposed to hepatitis C

Resources

2018 CDC hepatitis surveillance report:

<https://www.cdc.gov/hepatitis/statistics/2018surveillance/index.htm>

Updated hepatitis A immunization recommendations:

<https://www.cdc.gov/mmwr/volumes/69/rr/rr6905a1.htm>

Updated clinical management of health care personnel exposed to hepatitis C:

https://www.cdc.gov/mmwr/volumes/69/rr/rr6906a1.htm?s_cid=rr6906a1_e&deliveryName=US_CDC_921-DM33544