



Infectious Disease Epidemiology Report



Hepatitis B in Maine, 2015

Background

Hepatitis B is a liver infection caused by a virus. Infection with the hepatitis B virus (HBV) can be lifelong, causing cirrhosis (liver scarring), liver cancer, liver failure, and death. It can be transmitted through exposure to blood from an infected person, such as from sharing needles in injection drug use (IDU), sexual contact, or from an infected mother to her child during childbirth. Sexual transmission is common among men who have sex with men (MSM).

Symptoms of acute hepatitis B include fatigue, loss of appetite, nausea, abdominal discomfort, dark urine, clay-colored stool, jaundice, and elevated liver enzyme levels. Acute hepatitis B is confirmed by serology. Symptoms are not always apparent but usually appear six weeks to six months after exposure. Hepatitis B can lead to chronic infection if the virus is not cleared within the first six months of infection.

Methods

Both acute and chronic hepatitis B are reportable conditions in Maine. Reported cases are investigated by Maine CDC epidemiologists to determine the exposure, identify close contacts, provide education, and make recommendations for prevention, follow up testing, and vaccination.

Results

Acute hepatitis B

In 2015, there were 9 cases of acute hepatitis B in Maine, compared to 12 in 2014. The 2015 Maine rate was 0.7 cases per 100,000 persons, which is less than the most recently reported 2014 U.S. rate of 0.9 (Figure 1). The median age was 40 years with a range from 31 to 53 years. The majority of cases (56%) were male (Figure 2). Cases were reported from only four Maine counties, including Hancock (3), Kennebec (3), Penobscot (2), and Washington (1).

All acute cases were symptomatic, had alanine aminotransferase (ALT) levels of over 100 IU/L, and had positive serology (HBsAg and IgM anti-HBc). Four (44%) of the cases were jaundiced. Three (33%) cases were hospitalized. Five (56%) cases were co-infected with hepatitis C virus.

Figure 1. Rate of acute hepatitis B, Maine and U.S., 2011-2015

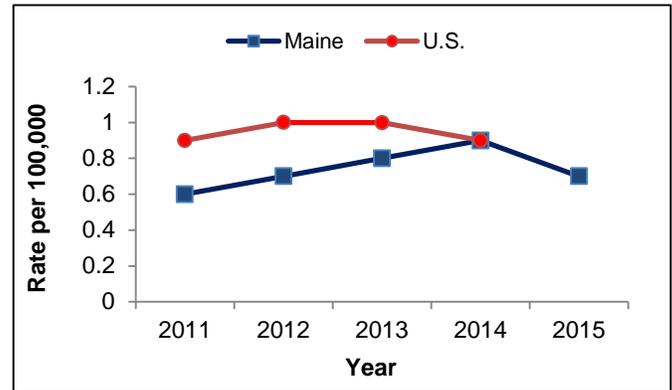


Figure 2. Acute hepatitis B cases by sex and age group, Maine, 2015

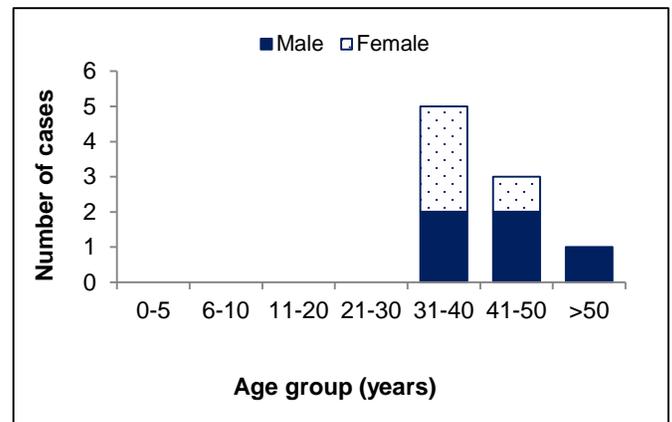
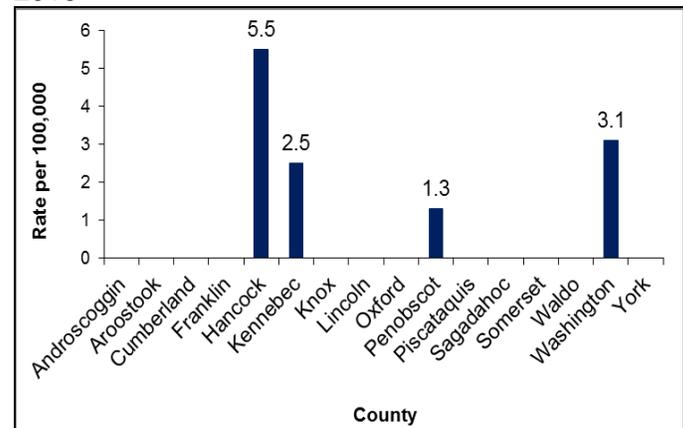


Figure 3. Rate of acute hepatitis B by county, Maine, 2015



The most important risk factors for acute hepatitis B in Maine during 2015 were injection (44%) and non-injection (56%) drug use. Two cases reported multiple (>1) sex partners, and three cases reported

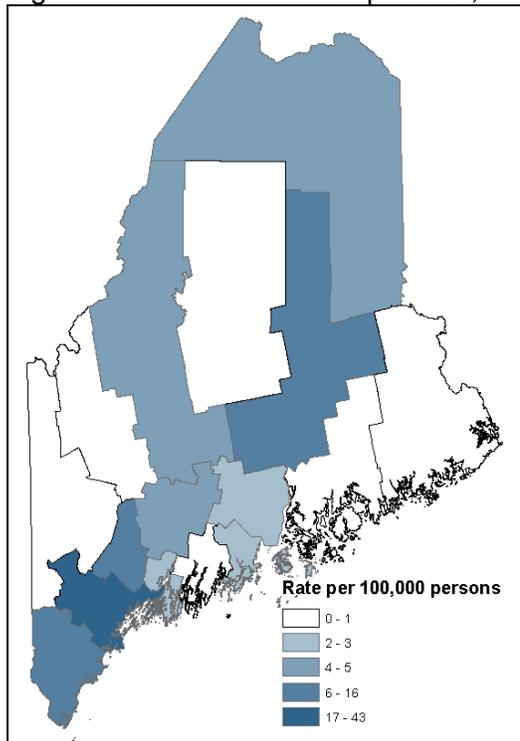
Hepatitis B – Maine, 2015

men who have sex with men as a risk factor. Two cases were contacts of a case of hepatitis B in the six weeks to six months prior to onset of symptoms. Cases could report more than one risk factor.

Chronic HBV

In 2015, there were 107 cases of probable and confirmed chronic hepatitis B, compared to 108 cases in 2014. The 2015 rate of chronic hepatitis B in Maine was 8.1 cases per 100,000 persons; the U.S. rate was unavailable.

Figure 4. Rate of chronic hepatitis B, Maine, 2015



The median age of chronic cases was 42 years with a range from 17 to 81 years. The majority (55%) of cases in 2015 were male. The chronic cases were reported from 11 of Maine's 16 counties (Figure 4). Risk factor data is not collected for chronic hepatitis B cases.

Discussion

Though the state rate of acute hepatitis B dropped from 2014-2015, the rate increased in Hancock and Penobscot counties. The case rate in Washington County remained steady, but rates decreased in all 13 remaining Maine counties during this time period.

Though acute hepatitis B is usually reported year round, all nine cases from 2015 were reported from July to December. The 5-year median for acute hepatitis B is nine cases.

The primary risk factors for acute hepatitis B in 2015 were injection and non-injection drug use. Prevention messages should include the use of clean drug preparation equipment in addition to clean needles. HBV can remain viable on surfaces for up to seven days. It is 10 times more infectious than hepatitis C virus and 100 times more infectious than HIV. More than half of all acute hepatitis B cases reported in 2015 were co-infected with hepatitis C. Providers are urged to vaccinate cases of hepatitis C for hepatitis A and hepatitis B.

Hepatitis B is vaccine-preventable. Adults at risk for acute hepatitis B should receive hepatitis B vaccine. Cases should be vaccinated for hepatitis A, if susceptible, and taught ways to protect their liver. Adults at increased risk include:

- Health care workers
- Dialysis patients
- Household contacts and sex partners of persons with chronic hepatitis B
- Recipients of blood products
- Persons with multiple sex partners
- Injection drug users
- Persons with a sexually transmitted infection
- Men who have sex with men (MSM)

Federal CDC also recommends hepatitis B vaccine for adults age 19-59 years with diabetes mellitus.

Maine CDC's Adult Viral Hepatitis Program provides hepatitis A and B vaccine at no charge for high risk individuals.

Acute hepatitis B must be reported immediately to Maine CDC by calling 1-800-821-5821. Chronic hepatitis B must be reported by telephone, fax, or mail within 48 hours of recognition or strong suspicion of disease.

More information about hepatitis B is available online at:

- www.maine.gov/idepi
- www.cdc.gov/hepatitis