



Infectious Disease Epidemiology Report

Hepatitis B in Maine, 2014



Background

Hepatitis B is a liver infection caused by a virus. Hepatitis B virus (HBV) can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. HBV can be transmitted through exposure to blood from an infected person, such as from sharing needles in injection drug use (IDU), sexual contact with an infected person, 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 tiredness, 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

Acute HBV in Maine is reportable immediately and chronic HBV is reportable within 48 hours upon recognition or strong suspicion of disease. 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 HBV

In 2014, there were 12 cases of acute hepatitis B, compared to 11 cases in 2013. The rate of acute hepatitis B in Maine was 0.9 cases per 100,000 persons, which was the same as the U.S. rate (Figure 1).

The median age of cases was 39 years with a range from 23 to 60 years. The majority (58%) of cases in 2014 were male (Figure 2). Acute cases were reported from eight Maine counties, with five (42%) from Kennebec County (Figure 3).

Figure 1. Rate of acute HBV, Maine and U.S., 2010-2014

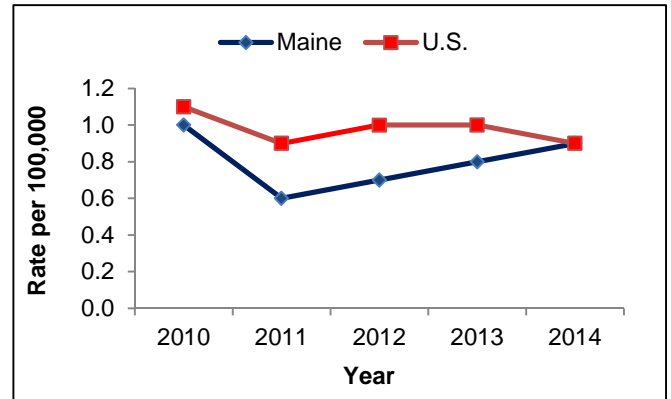


Figure 2. Acute HBV cases by sex and age group, Maine, 2014

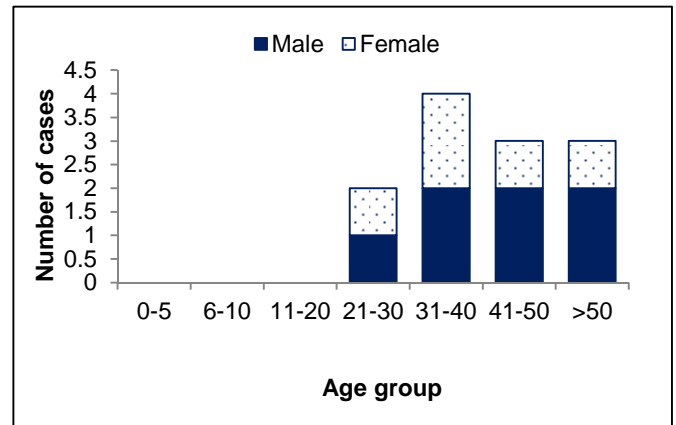
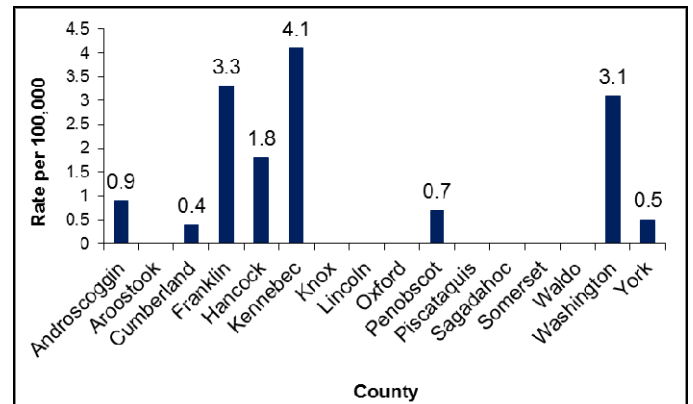


Figure 3. Rate of acute HBV by county, Maine, 2014



Hepatitis B – Maine, 2014

All acute cases were tested due to symptoms of acute hepatitis and/or evaluation of elevated liver enzymes. All were symptomatic, had liver enzyme levels elevated over 100 IU/L, and had positive serology (HBsAg). Eleven of the cases were also positive for IgM anti-HBc. Ten (83%) of the cases were jaundiced. Six (50%) cases were hospitalized.

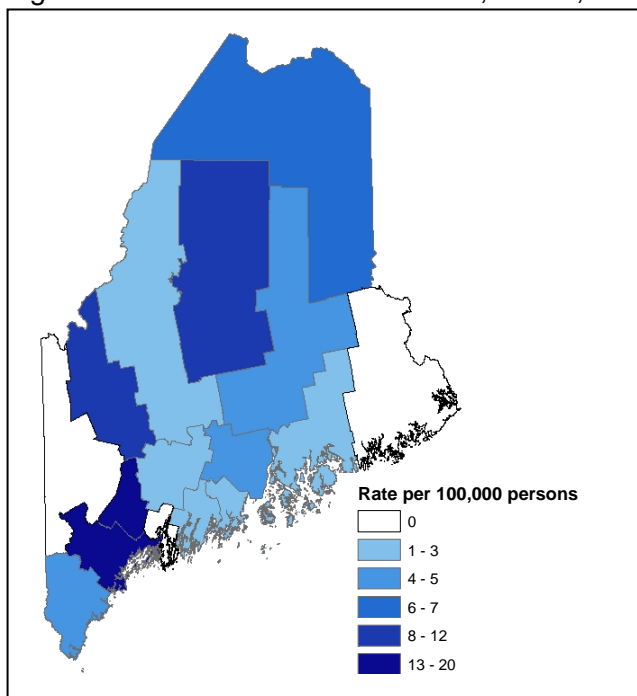
The most important risk factors for acute HBV in Maine during 2014 were injection drug use and multiple (>1) sex partners. Three cases (25%) reported injection drug use and two cases (17%) reported multiple sex partners in the six months prior to the onset of symptoms.

Chronic HBV

In 2014, there were 108 cases of probable and confirmed chronic hepatitis B reported, compared to 107 cases in 2013. The rate of chronic hepatitis B in Maine was 8.1 cases per 100,000 persons, and the U.S. rate was unavailable.

The median age of chronic cases was 41 years with a range from 2 to 80 years. The majority (67%) of cases in 2014 were male. The chronic cases were reported from 13 of Maine's 16 counties (Figure 4). Risk factor data is not collected for chronic HBV cases.

Figure 4. Rate of chronic HBV cases, Maine, 2014



Discussion

The rate of acute HBV in Maine has been steadily increasing since 2011 and is now on par with the national rate.

Maine CDC's strategy for preventing the spread of HBV focuses on prevention, education, and surveillance and is based on the national strategy for the elimination of HBV transmission. The four elements of the strategy are:

- Universal vaccination of infants at birth
- Routine screening of all pregnant women for hepatitis B and vaccinating infants born to infected women (or women of unknown infection status)
- Routine vaccination of previously unvaccinated children and adolescents
- Vaccination of adults at increased risk for HBV

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 now also recommends adults age 19-59 years with diabetes mellitus to receive hepatitis B vaccine.

Cases should be vaccinated for hepatitis A, if susceptible, and should be taught ways to protect their liver.

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

More information about HBV is available online at:

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