



Infectious Disease Epidemiology Report



Acute Hepatitis B in Maine, 2013

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.

Methods

Acute HBV infections in Maine are reportable immediately upon recognition or strong suspicion of disease. Chronic HBV infections are reportable within 48 hours of recognition and results are reported elsewhere. Reported cases are investigated by Maine CDC epidemiologists to determine the exposure, identify close contacts, and provide education. Epidemiologists also make recommendations for prevention, follow up testing, and vaccination.

Results

In 2013, there were eleven cases of acute hepatitis B reported in Maine, compared to nine cases the previous year. The rate of acute hepatitis B in Maine was 0.8 cases per 100,000 persons in 2013, whereas the US rate was 1.0 cases per 100,000 persons (Figure 1).

The median age of cases was 44 years with a range from 28 to 62 years. The majority (64%) of cases in 2013 were male (Figure 2).

Figure 1. Rate of acute HBV, Maine and U.S., 2009-2013

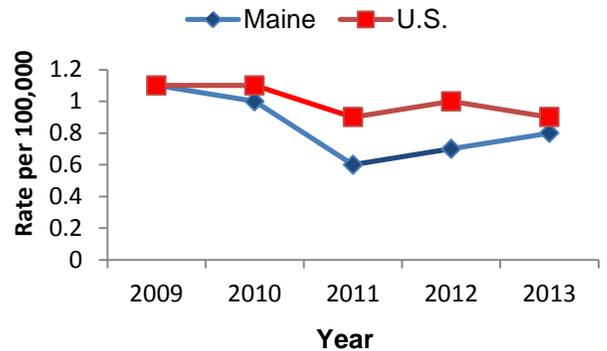
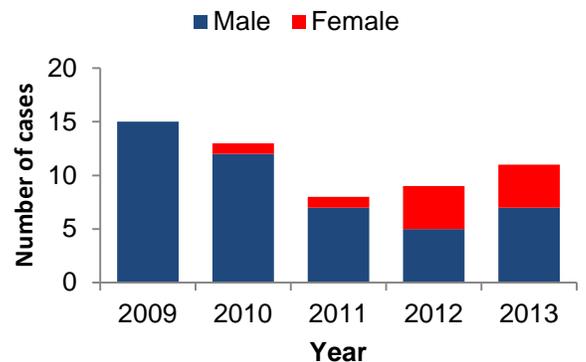


Figure 2. Count of acute HBV, Maine, 2009-2013 (N=56)



The cases were reported from four Maine counties. Six cases (55%) were reported from Cumberland County. One case was reported from Sagadahoc and two cases each were reported from Somerset and Waldo counties.

All cases were symptomatic, had liver enzyme levels elevated over 100 (units), and had positive serology (HBsAg and IgM anti-HBc positive). Fifty five percent (55%) of cases were jaundiced.

Acute Hepatitis B – Maine, 2013

Risk factor information was available for all eleven cases. Cases could report more than one risk factor (Table 1).

Table 1. Reported risk factors* for acute hepatitis B cases, Maine 2013 (N=11)

<i>Selected Risk Factors*</i>	<i>Number of cases</i>
Non-injection drug use	7
Injection drug use (IDU)	2
Contact of a case	2
Multiple sex (>1) partners	2
Men who have sex with men (MSM)	1
History of blood transfusion	0

*In the 6 weeks to 6 months prior to illness

Discussion

The rate of acute HBV in Maine has been steadily increasing since 2011 but is still below the national rate. In the last couple of years, there are more female cases. However, higher rates of HBV infection continue among adults, particularly males aged 25–44 years, reflecting the need to vaccinate adults at risk for HBV infection.

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 infection

All newborns should receive their first dose of vaccine at birth and complete the vaccine series by 18 months of age. The routine screening of pregnant women for HBV infection and the provision of vaccine to infants born to infected women is practiced within Maine's hospitals and obstetrics practices.

The vaccination of previously unvaccinated children and adolescents and adults at risk is widely recommended. CDC now recommends adults age 19-59 years with diabetes mellitus to receive hepatitis B vaccine.

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 a recent history of multiple sex partners
- Injection drug users
- Persons with an STD
- Men who have sex with men (MSM)

Maine CDC provides safe sex materials to populations at risk, delivers materials to locations where sex is solicited, posts educational materials on internet sites known for solicitation, and continues to provide education and vaccination information to individuals with acute and chronic hepatitis B and their close contacts.

Acute HBV infection must be reported immediately to Maine CDC by calling 1-800-821-5821. Information about HBV is available online at <http://www.maine.gov/dhhs/boh/ddc/epi/hepatitis/B.shtml> and <http://www.cdc.gov/hepatitis>.