



Infectious Disease Epidemiology Report



Acute Hepatitis B in Maine, 2012

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 function tests. 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 to determine the exposure, identify close contacts, and provide education. Epidemiologists also make recommendations for prevention, follow up testing, and vaccination.

Results

In 2012, there were nine cases of acute hepatitis B reported in Maine, compared to eight cases the previous year. The rate of acute hepatitis B in Maine was 0.7 cases per 100,000 persons in 2012 (Figure 1).

The median age of cases was 44 years with a range from 19 to 63 years. About half (56%) of the cases in 2012 were male (Figure 2).

Figure 1. Rate of acute HBV, Maine and U.S., 2008-2012

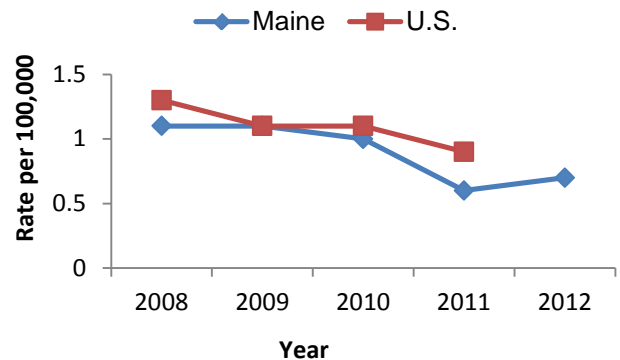
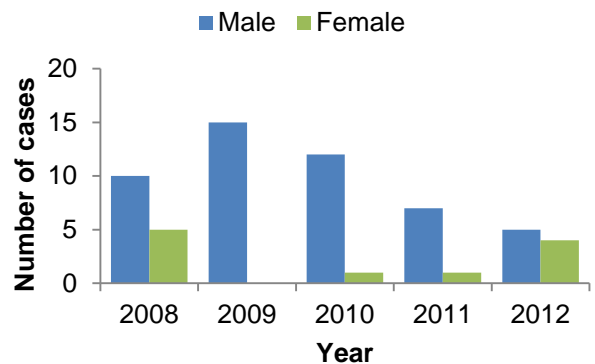


Figure 2. Count of acute HBV, Maine, 2008-2012



The cases were reported from seven Maine counties. Three cases (33%) were reported from Cumberland county. One case each was reported from Aroostook, Hancock, Penobscot, Piscataquis, Waldo, and York counties.

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

Acute Hepatitis B – Maine, 2012

Table 1. Reported risk factors* for acute hepatitis B cases, Maine 2012 (N=9)

<i>Selected Risk Factors*</i>	<i>Number of cases</i>
Injection drug use (IDU)	3
Non-injection drug use	3
Exposure to blood	2
Outpatient IV infusion	2
Multiple sex (>1) partners	2
Men who have sex with men (MSM)	2
Work in medical/dental field	1

*In the 6 weeks to 6 months prior to illness

Prevention and Control

Maine CDC's strategy for preventing the spread of HBV in Maine 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

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)

In 2011, CDC added a recommendation for adults ages 19-59 with diabetes mellitus to receive hepatitis B vaccine.

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 obstetrical practices.

The vaccination of previously unvaccinated children and adolescents, and adults at risk is widely recommended. Nationwide, the universal vaccination of children against HBV has reduced disease incidence substantially among younger age groups. 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 follows up with providers of known chronic cases of hepatitis B among females of childbearing age (defined as ages 15 to 49) to determine pregnancy status and whether they delivered an infant within the past 24 months. Lab reports of women who fall into either category are forwarded to the Perinatal Hepatitis B Coordinator in the Maine Immunization Program for additional follow up. This project, which started in December 2010, aims to improve prevention efforts for perinatal hepatitis B transmission.

Maine CDC also 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>.