Infectious Disease Epidemiology Report

Acute Hepatitis B in Maine, 2011

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), through 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. 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 2011, there were eight cases of acute hepatitis B reported in Maine, compared to 13 cases the previous year. The rate of acute hepatitis B in Maine was 0.6 cases per 100,000 persons in 2011. This is lower than the national rate of 0.9 cases of acute hepatitis B per 100,000 persons (Figure 1).

The median age of cases was 46 years with a range from 29 to 57 years. The majority (88%) of cases in 2011 were male (Figure 2).

Figure 1. Rate of acute hepatitis B, Maine and U.S., 2007-2011

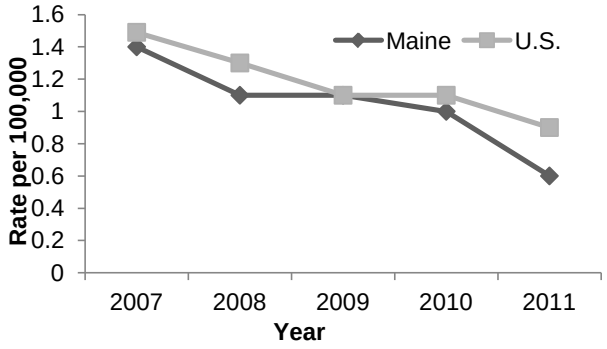
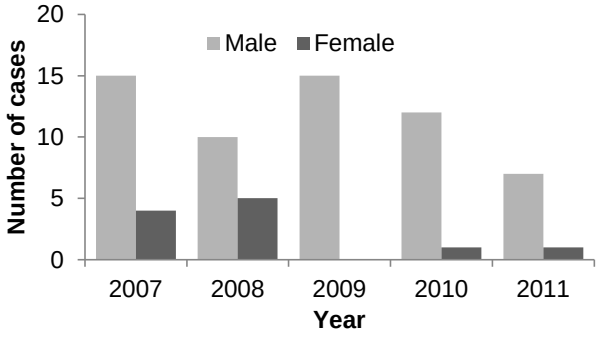


Figure 2. Count of acute hepatitis B, Maine, 2007-2011 (N=70)



The cases were each from one of the following eight Maine counties: Androscoggin, Aroostook, Hancock, Kennebec, Oxford, Penobscot, Sagadahoc, and Somerset.

Risk factor information was available for all 8 cases. Cases could report more than one risk factor (Table 1).

Table 1. Reported risk factors* for acute hepatitis B cases, Maine 2011 (N=8)

*Selected Risk Factors**	*Number of cases*
Injection drug use (IDU)	3
Non-injection drug use	3
Exposure to blood	2
Outpatient IV infusion	1
Incarcerated >24 hours	1
Multiple sex (>1) partners	1
Dialysis	0
Needle stick	0
Blood received	0
Work in med/dental field	0
Work in public safety	0
Tattoo	0
Piercing	0
Men who have sex with men (MSM)	0

*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 Maine strategy are based on vaccination and include 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, and 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 certain blood products
- Persons with a recent history of multiple sex partners
- Injection drug users
- Persons with an STD
- MSM

All newborn infants should receive their first dose of HBV vaccine at birth and complete the Hepatitis B vaccine series by 18 months of age. The routine screening of all pregnant women for HBV infection and the provision of vaccine to infants born to infected women is routinely practiced within the State'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 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.

Maine CDC's Infectious Disease Epidemiology Program performs active follow 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 Immunization Program for additional follow up. This project, which started in December 2010, aims to improve prevention efforts for perinatal hepatitis B transmission.

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.

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