Infectious Disease Epidemiology Report

Hepatitis C in Maine, 2014

Background

Hepatitis C is a liver infection caused by a virus. Hepatitis C virus (HCV) infection is the leading cause of liver transplant in the United States and is the most common chronic blood borne infection; approximately 3.2 million persons are chronically infected.

HCV can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. Transmission of HCV occurs through contact with blood of an infected person primarily through sharing of contaminated needles, syringes, or other injection drug equipment, and less commonly through sexual contact with an infected person, birth to an infected mother, and needle stick or other sharp instrument injuries.

Symptoms of acute HCV include tiredness, loss of appetite, nausea, abdominal discomfort, dark urine, clay-colored stool, jaundice, and elevated liver enzyme levels. Acute HCV is confirmed by serology. Symptoms are not always apparent but usually appear six weeks to six months after exposure. There is no vaccine for HCV, but new treatments are available that can treat and sometimes cure infection.

Methods

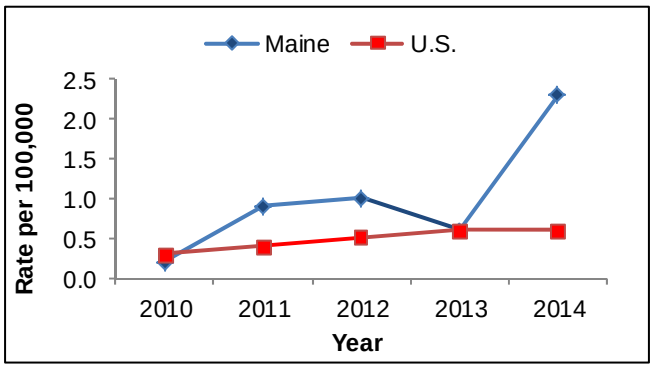
Acute HCV in Maine is reportable immediately and chronic HCV is reportable within 48 hours upon recognition or strong suspicion of disease. Acute HCV cases are investigated by Maine CDC epidemiologists to determine the exposure, identify close contacts, provide education, and make recommendations for prevention and follow up testing.

Results

Acute HCV

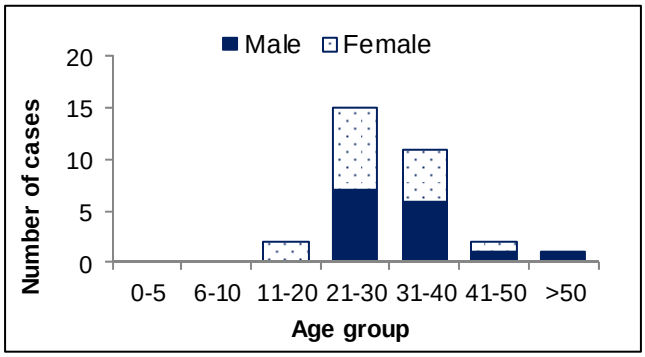
In 2014, there were 31 cases of acute hepatitis C, compared to nine cases in 2013. The rate of acute hepatitis C in Maine was 2.3 cases per 100,000 persons in 2014, whereas the US rate was 0.6 cases per 100,000 persons (Figure 1).

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



The median age of acute cases was 29 years with a range from 19 to 53 years. About half (48%) of acute cases in 2014 were male (Figure 2).

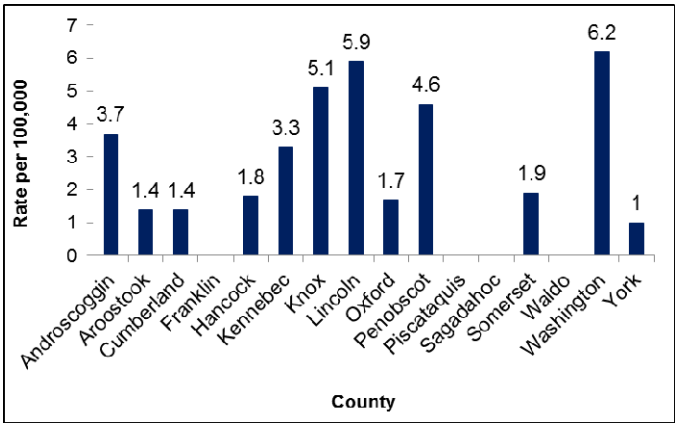
Figure 2. Acute HCV cases by sex and age group, Maine, 2014



Acute cases were reported from 12 Maine counties. Seven cases were reported from Penobscot County, and four cases each were reported from Androscoggin, Cumberland, and Kennebec counties (Figure 3).

All cases were symptomatic, had liver enzyme levels elevated over 400 IU/mL, and had positive serology (anti-HCV and/or HCV RNA). Nine cases (29%) were jaundiced. The major risk factor for acute cases in Maine was injection drug use. Twenty-one cases (68%) responded that they injected drugs within six months prior to symptom onset.

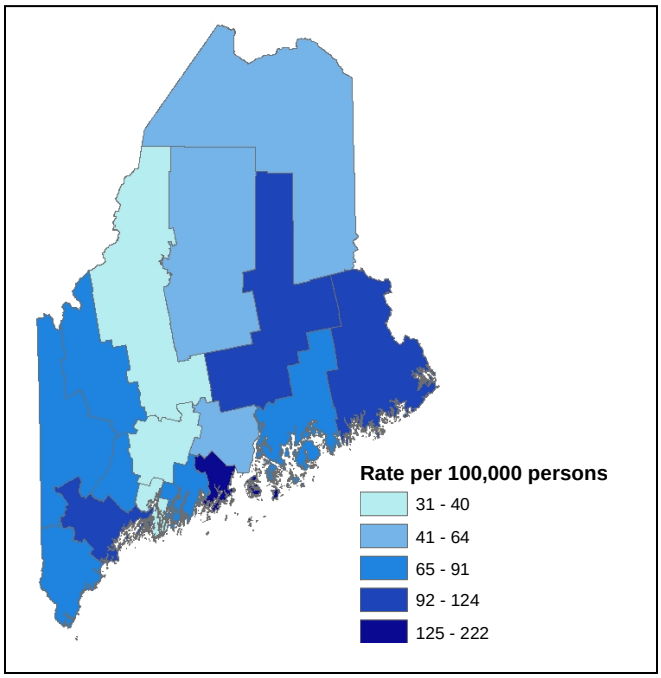
Figure 3. Rate of acute HCV by county, Maine, 2014



Chronic HCV

In 2014, there were 1,425 cases of newly reported chronic hepatitis C in Maine, compared to 1,266 cases in 2013. This is an 11% increase. The rate of chronic hepatitis C in Maine was 107.7 cases per 100,000 persons in 2014, and the U.S. rate was unavailable. The median age of chronic cases was 35 years with a range from 1 to 86 years. The majority (56%) of chronic cases in 2014 were male. Chronic cases were reported from all 16 counties in Maine (Figure 4). Risk factor data is not collected for chronic HCV cases.

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



Discussion

From 2013-2014, there was a sharp increase in the number of acute HCV cases reported in Maine. This increase is likely due to a combination of a true increase in the actual number of cases as well as an increase in the number of cases reported. Maine CDC requests that laboratories report liver enzyme results, when available, in addition to positive hepatitis results. This has led to an increase in the number of cases investigated as epidemiologists investigate new reports of hepatitis C with symptoms and/or elevated liver enzyme levels.

Epidemiologists investigate acute cases of HCV to learn the route of transmission in order to design public health interventions that halt further spread. As expected, the main risk factor for HCV was injection drug use.

There is no vaccine for hepatitis C. Cases should receive the hepatitis A and B vaccine, if susceptible, and should take steps to protect their livers. The best way to prevent infection with HCV is by avoiding behaviors that can spread the disease, especially injection drug use, or by taking precautions to minimize transmission, such as using clean needles and works.

In 2014, the Infectious Disease Epidemiology Program initiated an enhanced surveillance project to learn more about how Maine's young adults are becoming infected with HCV. In this project, epidemiologists are reaching out to newly reported cases of chronic HCV in persons aged 18-24 years to understand new routes of transmission to tailor public health interventions to reduce the risk of transmission. This project will continue in 2015 and de-identified, aggregate results will be compiled in a report and shared with the public.

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

More information about HCV is available online at:

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

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