

ACUTE HEPATITIS C IN NEVADA, 2003-2012

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Edition 1.0

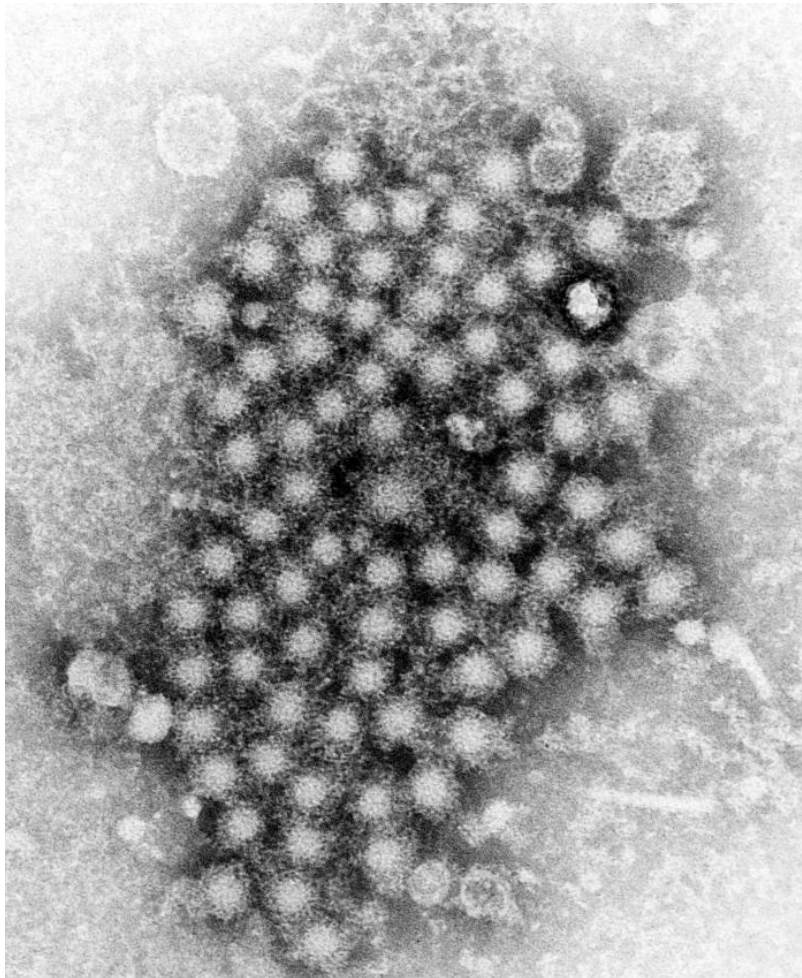


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Purpose

The purpose of this report is to provide a general overview of the incidence and recent trends of acute hepatitis C among Nevada residents. The report also includes Healthy People 2010 objectives, Healthy People 2020 objectives, and Nevada data collected from cases of acute hepatitis C from 2003 to 2012. Hepatitis C is listed as one of Nevada's reportable diseases pursuant to [NRS 441A](#) (1), and reporting is further regulated by [NAC 441A.570](#) (2).

Hepatitis C

Hepatitis C is a liver disease caused by the hepatitis C virus. It can present as an acute, short-term infection, or the virus may remain in the body causing a chronic, long-term infection. The statistics presented in this report are for cases of acute hepatitis C because usually, only acute cases of hepatitis C are reported to the Division of Public and Behavioral Health from all health districts. Between 75% and 85% of people infected with hepatitis C develop chronic infection. In 2009, there were approximately 16,000 acute hepatitis C infections in the United States; it is estimated 3.2 million people have chronic hepatitis C in the United States. About 15,000 people die each year from hepatitis C-related liver disease (3).

Hepatitis C is spread by blood. The most common way to become infected is sharing needles or other injection drug equipment. Other ways people can become infected are through needlestick injuries in health care settings or being born to a mother with hepatitis C. Less commonly, someone may be infected by sharing personal care items that may come in contact with an infected person's blood, such as razors or toothbrushes, or through sexual contact with an infected individual. Hepatitis C may be transmitted during tattooing or body piercing when poor infection-control practices are used; however, research studies have not found evidence of hepatitis C having been spread at licensed commercial tattooing facilities. Prior to 1992, hepatitis C was commonly spread through blood transfusions and organ transplants, but now the blood supply in the United States is screened for hepatitis C (3).

Acute and chronic hepatitis C infections often do not show any sign or symptom. For acute hepatitis C, 70-80% of patients are asymptomatic; when symptoms are present, patients may exhibit fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. Symptoms may appear 2 weeks to 6 months after exposure but typically occur 6 to 7 weeks after exposure. Most people with chronic hepatitis C are asymptomatic (3).

Chronic hepatitis C is a serious condition which can lead to liver damage, liver failure, liver cancer, or death. It is the leading cause of cirrhosis and liver cancer and is the most common reason for liver transplantation in the United States. For every 100 people infected with hepatitis C, 75-85 develop chronic hepatitis C. Of those people, 60-70 develop chronic liver disease, 5-20 develop cirrhosis over a period of 20-30 years, and 1-5 people die from cirrhosis or liver cancer (3).

Hepatitis C is diagnosed by laboratory testing of blood samples. If diagnosed, the recommended treatment of acute hepatitis C is adequate rest, nutrition, and fluids. Treatment for chronic hepatitis C varies for each patient, though it typically includes monitoring for signs of liver disease. Medications may be used to treat hepatitis C, but not everyone needs or benefits from treatment. The Centers for Disease Control and Prevention (CDC) recommends that individuals with chronic hepatitis C be monitored regularly by a physician, avoid alcohol, and consult with a health care provider prior to taking any prescription medication, supplements, or over-the-counter medications (3).

Summary

From 2003 to 2012, the annual number of reported acute hepatitis C cases ranged from a low of 5 cases in 2009 to a high of 27 cases in 2003. Over the ten years, a total of 125 cases were reported. After an increase in 2008, the crude incidence rate of acute hepatitis C decreased significantly in 2009. There were no other statistically significant differences from year to year.

In 2008, an outbreak of acute hepatitis C was linked to an endoscopy center in Las Vegas. Results of the investigation found unsafe injection practices placed patients at risk for exposure to blood-borne pathogens. A total of 9 cases were directly linked to 2 clinics, and a total of 106 cases were possibly linked to the clinics; this is the largest reported outbreak of health care-associated hepatitis C infection recorded in the United States (4). This outbreak and the ensuing investigation were responsible for the increase in the case count and crude incidence rate of acute hepatitis C cases reported in 2008. Acute and past or chronic hepatitis C infections were found in the outbreak investigation; however, only acute, not past or chronic, hepatitis C infections are reported in this document.

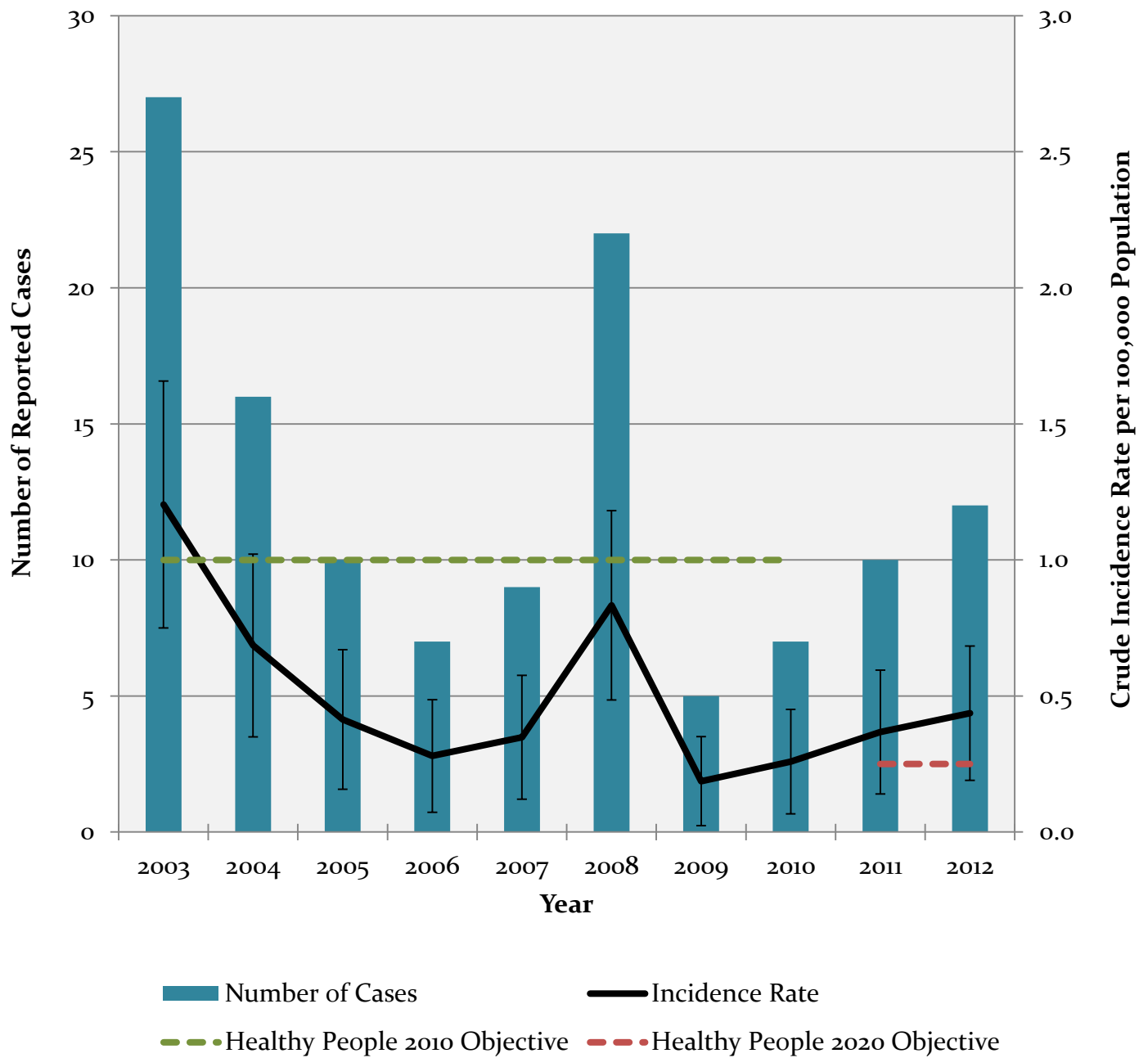
In 2005, 2006, 2007, 2009, and 2010, the incidence rate of acute hepatitis C was significantly lower than the Healthy People 2010 objective (objective: 1.0 cases per 100,000 population) (5); the rates for 2003, 2004, and 2008 were neither significantly higher nor lower than the objective. In 2011 and 2012, the incidence rate of acute hepatitis C was neither significantly higher nor lower than the Healthy People 2020 objective (objective: 0.25 cases per 100,000 population) (6).

From 2003 to 2012, the age-adjusted incidence rate of acute hepatitis C was significantly higher in rural and frontier counties (1.2 cases per 100,000 population) than Southern Nevada Health District and the entire state (0.3 and 0.5 cases per 100,000 population, respectively). Washoe County Health District also had a significantly higher age-adjusted incidence rate (0.8 cases per 100,000 population) than Southern Nevada Health District. There were no other significant differences between health districts or the state.

There was no discernable monthly or seasonal trend in reported cases of acute hepatitis C between 2008 and 2012 (years for which monthly data is available). The number of reported cases ranged between 0 and 5 cases per month, depending on the year.

From 2003 to 2012, there were no reported cases of acute hepatitis C in infants less than 1 year of age, children aged 1 to 4 years, and individuals aged 15 to 24 years. Adults aged 25 to 39 years had a significantly higher incidence rate (1.1 cases per 100,000 population) compared to other age groups. Adults aged 40 to 64 years had a significantly higher incidence rate of acute hepatitis C (0.6 cases per 100,000 population) compared to the 65 and older age group (0.2 cases per 100,000 population). There were no other significant differences between the other age groups.

Figure 1. Number of Reported Cases and Crude Incidence Rate of Acute Hepatitis C in Nevada Compared to Healthy People Objectives: 2003-2012



The crude incidence rate in Nevada from 2003 to 2012 was 0.5 cases per 100,000 population.

Figure 2. Age-Adjusted Incidence Rates of Acute Hepatitis C in Nevada and Nevada Health Districts: 2003-2012

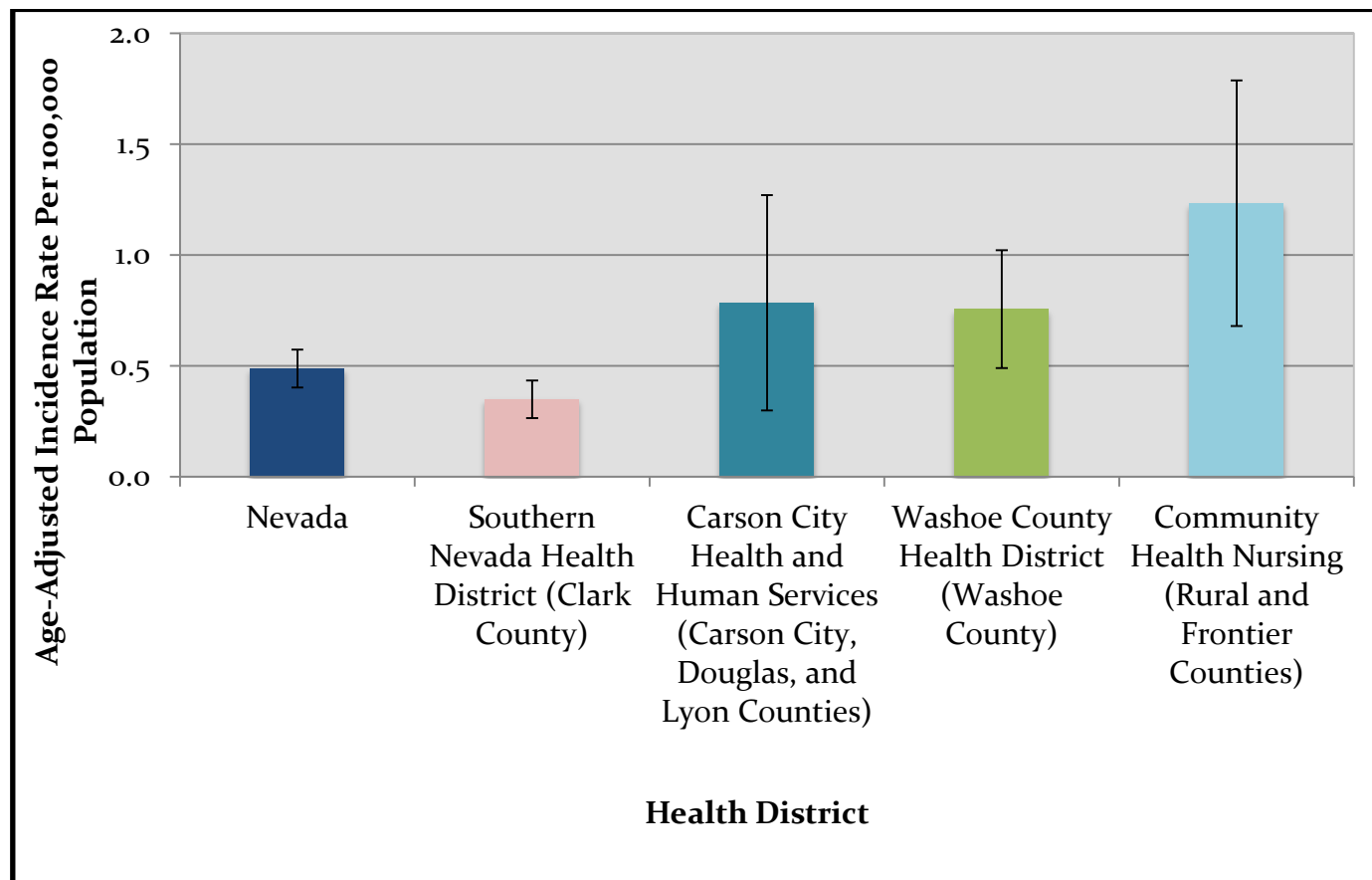


Figure 3. Number of Acute Hepatitis C Cases Reported in Nevada by Month: 2008-2012

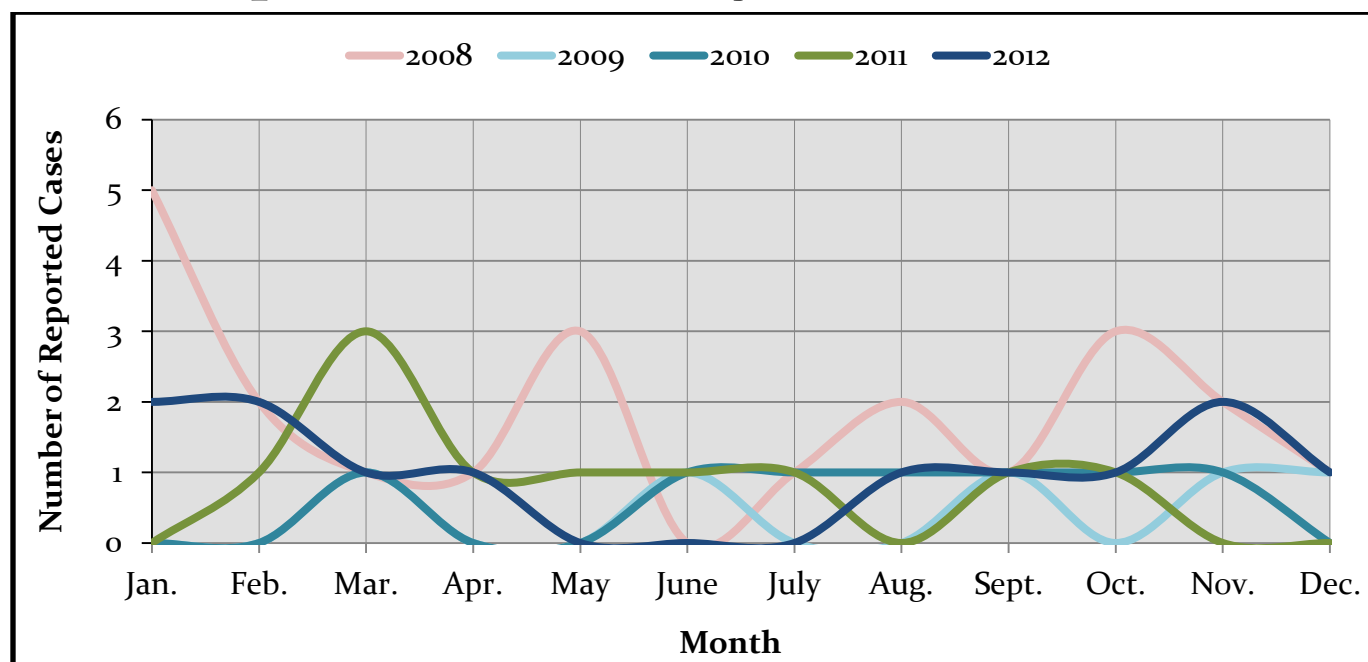
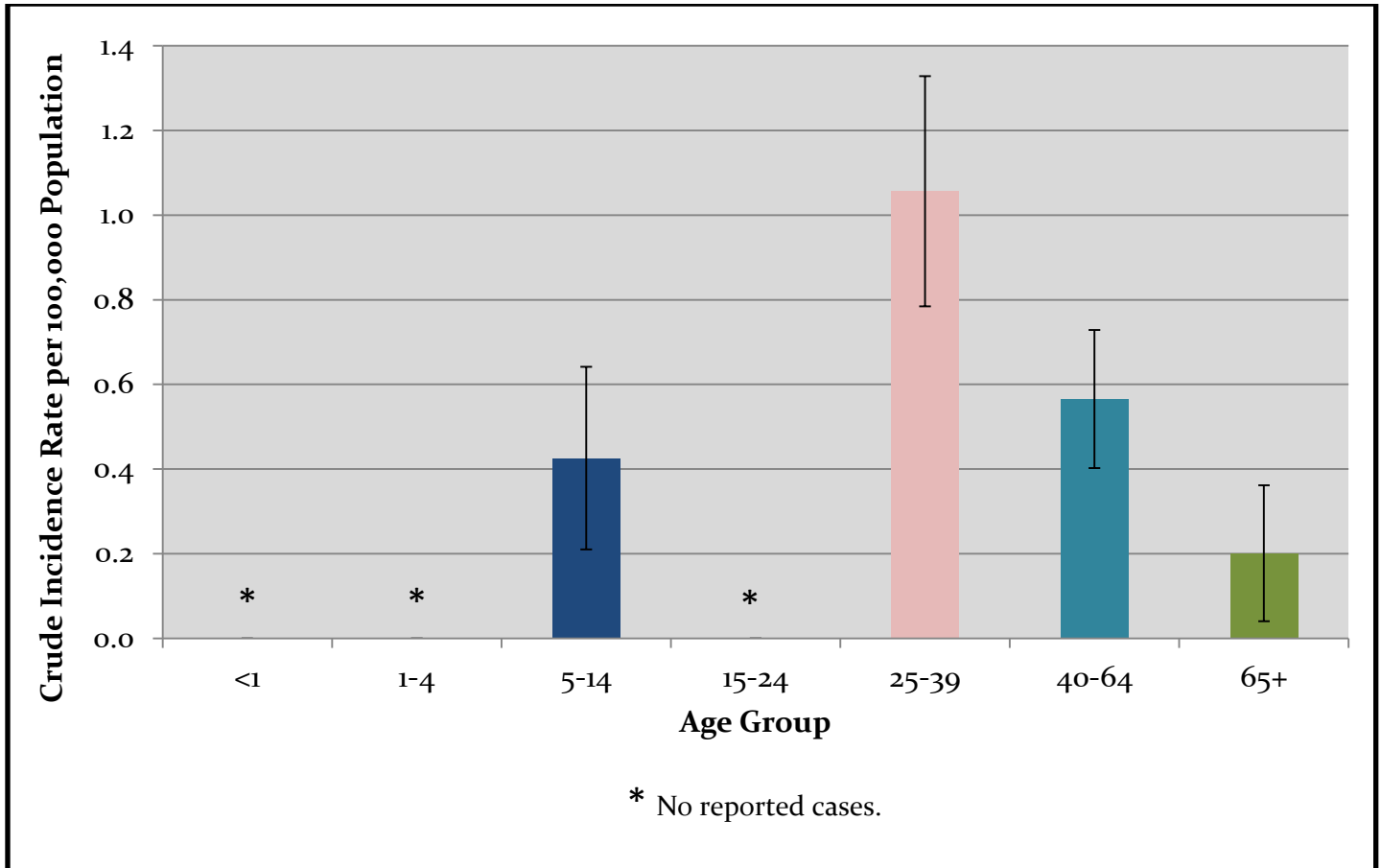


Figure 4. Crude Incidence Rates of Acute Hepatitis C in Nevada by Age Group: 2003-2012



Technical Notes

All Nevada data from 2003 to 2012 came from reported acute hepatitis C infections among Nevada residents (7, 8). The Centers for Disease Control and Prevention and the Council of State and Territorial Epidemiologists case definition of acute hepatitis C encompasses all cases classified as confirmed; all cases of acute hepatitis C used for this report follow this definition (9). Population estimates were obtained from Nevada State Demographer's Office (10). Age-adjusted rates per 100,000 population were calculated using the 2000 U.S. standard population. Sufficient case counts were not available to obtain age-adjusted incidence rates for racial/ethnic groups; therefore, racial/ethnic distributions of incidence are not presented in this report. When used for rates, error bars represent 95% confidence intervals. The Keyfitz method was used to calculate confidence intervals of age-adjusted rates (11). Due to their inherent unreliability, rates were not calculated for case counts lower than five.

Sources

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