

Utah Health Status Update: *Hepatitis A Outbreak in Utah*

Special Edition 5 (January 2019)

Hepatitis A is a highly contagious, vaccine-preventable liver infection caused by the hepatitis A virus (HAV) and is primarily transmitted from person-to-person by the fecal-oral route. Some people who are infected with HAV may not look or feel sick. However, HAV infection can cause liver failure and death in people with underlying medical conditions. On average, fewer than 10 cases of HAV are identified in Utah every year.

Since May 2017, Utah public health staff have been responding to an outbreak of HAV among persons who are homeless and/or persons who use illicit substances. The outbreak in Utah is linked to a national outbreak involving several other states. As of September 26, 2018, the Centers for Disease Control and Prevention (CDC) has identified more than 6,476 outbreak-associated HAV cases across 10 states. Among these cases, 3,722 (57.5%) hospitalizations and 69 (1.1%) deaths have been reported. As of December 3, 2018, a total of 281 outbreak-associated cases have been identified in Utah (Figure 1). Of the 281 cases, 71.2% (n=200) reported homelessness, illicit substance use, or both. Furthermore, 55.9% (n=152) of cases have been hospitalized and three people have died (1.1%). In response to the outbreak, public health staff initiated strategies to rapidly identify cases, increase the number of contacts who receive susceptibility

assessments, provide timely administration of preventative hepatitis A vaccine to susceptible contacts, provide disease prevention education and awareness, and increase the vaccination rate in the homeless and illicit substance using community populations.

State and local public health staff learned early in the investigation that novel strategies would need to be used to control the outbreak. The main challenges were the transient nature of the affected population and a reluctance to provide information to public health investigators. This made it difficult for investigators to rapidly find cases and identify potentially exposed contacts who may benefit from hepatitis A containing vaccine post-exposure prophylaxis (PEP).

To address these challenges, staff utilized the Utah Department of Health Bureau of Epidemiology Infectious Disease Listserv to increase health-care provider outbreak awareness and worked with medical systems to encourage reporting of suspected HAV cases before laboratory confirmation. This helped local health department (LHD) investigators to rapidly identify and interview cases as well as collect information on contacts who might benefit from PEP. LHDs provided monetary incentives for cases to provide contact information of close contacts. Additionally, LHDs provided monetary incentives to close contacts to encourage vaccination. These processes increased the timeliness of PEP administration and prevented disease in exposed contacts.

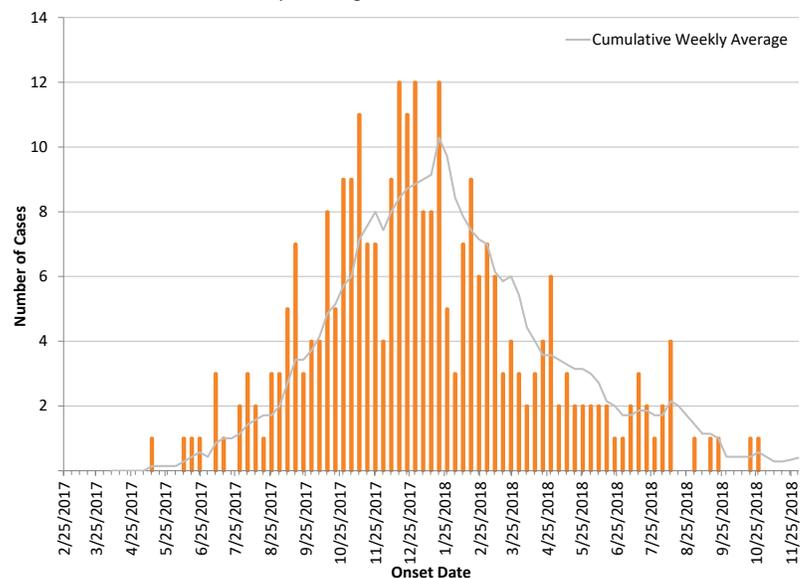
Vaccination prior to exposure to HAV is the best way to prevent the disease. In order to increase vaccination rates among at-risk community members, Utah public health staff conducted vaccination campaigns targeting illicit substance using community members and community

KEY FINDINGS

- An outbreak of hepatitis A occurred among the homeless and/or illicit drug users in Utah beginning in May 2017.
- More than half (55.9%) of the cases resulted in hospitalization and three Utahns have died as a result of the outbreak.
- As a result of the quick response of public health staff, case counts in Utah were not as high as other states associated in the nationwide outbreak.

Oubreak-associated Hepatitis A Cases by Week

Figure 2. Number of outbreak-associated hepatitis A cases by week of onset date and cumulative weekly average number of cases, Utah, 2017–2018



members who were experiencing temporary homelessness. Public health investigators collaborated with community partners to offer vaccine at clinic locations, temporary vaccination events, homeless community service facilities, substance use recovery facilities, and syringe service provider events. Furthermore, some LHDs deployed teams to offer vaccines at homeless community member encampments.

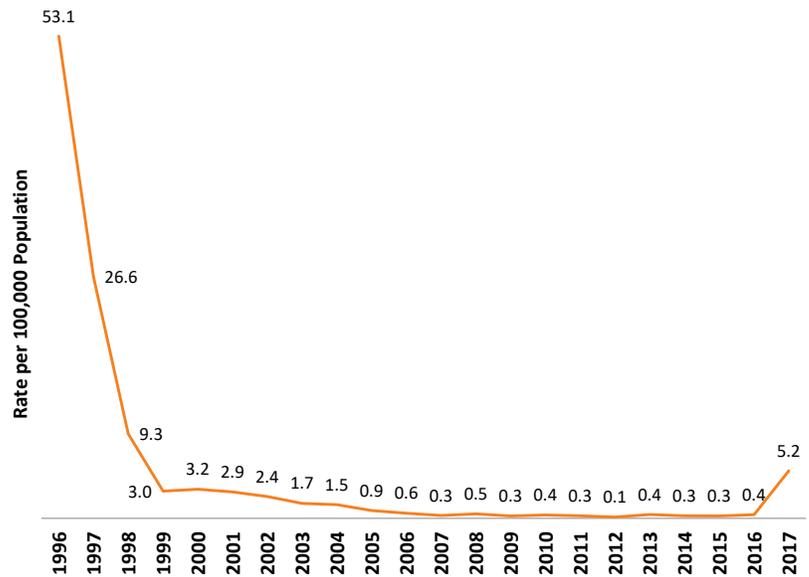
Another challenge encountered by Utah public health staff during the outbreak response was the availability of funding to support the purchase and administration of more than 12,000 hepatitis A containing vaccines. Redirection of vaccine funds from existing projects and a large donation from Intermountain Healthcare enabled the purchase of sufficient vaccine to sustain the outbreak response to date.

Through collaboration with local public health and community partners, Utah public health staff were able to quickly address the HAV outbreak and as a result, there have been fewer cases in Utah than other affected states. As a result of vaccination efforts, thousands of hepatitis A and hepatitis B vaccine doses were administered to susceptible individuals. These efforts will provide positive health impacts far beyond the current outbreak.

The current HAV outbreak resulted in the largest number of cases reported in Utah since 1997 when 550 cases were reported (Figure 2). During the five-year period before the introduction of hepatitis A vaccine in 1995, an average of 635 HAV cases were reported in Utah each year. From 1995–2001, as immunization rates increased, reports of HAV decreased dramatically. In 2002, the hepatitis A vaccine was added to the school entry immunization requirements in Utah which was followed by a further decline in cases. The routine vaccination of children has changed the epidemiology of HAV infection. Historically, HAV outbreaks were common among children and in childcare facilities. In the current outbreak, as of October 16, 2018, no HAV cases have been identified in persons under 18 years of age, which supports the effectiveness of HAV vaccination in school-aged children. For more information on HAV, visit <http://health.utah.gov/epi/diseases/hepatitisA>.

Hepatitis A Virus Rate Over Time

Figure 1. Hepatitis A virus rate per 100,000 population by year, Utah, 1996–2017



For additional information about this topic, contact Jeffrey Eason, Utah Department of Health, (801) 538-9141, email: jeason@utah.gov; or the Office of Public Health Assessment, Utah Department of Health, (801) 538-9191, email: chdata@utah.gov.

Breaking News, Special Edition 5 (January 2019)

Investigation of an Increased Incidence of Early Onset Group B *Streptococcus* Infections in Utah

Group B *streptococcus* (GBS) is a leading infectious cause of infant morbidity and mortality resulting in both early and late onset invasive disease in infants. Early onset GBS (EOGBS), defined as isolation of GBS from a normally sterile site (e.g., cerebrospinal fluid, blood, internal bodily fluids, etc.) in a live-born infant less than seven days old, is the focus of an ongoing public health investigation by the Utah Department of Health (UDOH). The investigation focuses on confirmed cases (n=70) from January 2015 through July 2018, analyzing data from UT-NEDSS (Utah public health surveillance system), vital records, medical records, and lab protocols. During this time period, the EOGBS incidence in Utah was 0.40 cases per 1,000 live births, compared to the national incidence of 0.22 cases per 1,000 live births. Cases peaked in 2015 (n=24; 0.47 cases per 1,000 live births). The UDOH confirmed seven EOGBS deaths, resulting in a mortality rate of 10% compared to the national EOGBS mortality rate of 5.5%. Four of these deaths occurred in 2018.

Local health districts with the highest EOGBS rates from January 2015 to July 2018 included Southwest Utah (n=12; 1.22 cases/1,000 live births), Utah County (n=20; 0.56 cases/1,000 live births), Salt Lake County (n=26; 0.50 cases/1,000 live births), Bear River (n=3; 0.32 cases/1,000 live births), and Davis County (n=5; 0.29 cases/1,000 live births).

EOGBS occurs when GBS bacteria is transmitted from mother to infant during delivery. Maternal GBS status should be assessed for all pregnant women between 35 to 37 weeks gestation. Antibiotic prophylaxis appropriately administered during labor and delivery to women who screen positive for GBS reduces transmission risk by 20 times. However, it is known that the maternal GBS screen results in some false-negatives. It is also possible for the mom to develop GBS colonization in the time between the prenatal screen and delivery. Thus, healthcare providers should also consider EOGBS in symptomatic infants regardless of maternal GBS screening results. The UDOH also urges all healthcare providers to adhere to the current Centers for Disease Control and Prevention (CDC) guidelines for GBS screening and ensure appropriate prophylaxis of known maternal GBS carriers and pregnant women with other clinical risk factors. The CDC guidelines related to GBS can be found at <https://www.cdc.gov/groupbstrep/guidelines/guidelines.html>.

Community Health Spotlight, Special Edition 5 (January 2019)

Increased Rotavirus Incidence in Utah

Rotavirus is a contagious virus that can cause acute gastroenteritis. Symptoms include severe watery diarrhea, vomiting, fever, and abdominal pain. Infants and young children are most likely to get rotavirus disease. Before the rotavirus vaccine was introduced in 2006, rotavirus was the leading cause of severe diarrhea among infants and young children in the U.S. Rotavirus is not a reportable disease in Utah or nationally.

In May 2018, the Utah Department of Health (UDOH) was notified of an increase in rotavirus activity across several health-care facilities in Utah. Between March and May 2018, a total of 80 cases of rotavirus were identified from 15 facilities, with an average of nine cases reported per week. Between July 2017 and March 2018, an average of two cases were reported per week from the same facilities. Data obtained from the Utah Statewide Immunization Information System (USIIS) showed that 67% of reported cases who were eligible to receive vaccine (n=31) received at least one dose prior to infection. Of those who were vaccinated, 55% had received all appropriate vaccine doses.

As a result of this noted increase, the Centers for Disease Control and Prevention (CDC) Rotavirus Surveillance and Molecular Epidemiology Team was contacted and agreed to provide genotyping of positive rotavirus specimens to determine if a rotavirus strain not covered by the vaccine was circulating in the community.

Beginning in June 2018, positive rotavirus specimens from selected facilities were sent to the CDC Rotavirus Surveillance Laboratory for genotyping. Preliminary findings indicated that a variant strain of rotavirus not typically seen in the U.S. was circulating in Utah. As a result of these findings, the CDC Rotavirus Surveillance Laboratory expressed interest in receiving additional specimens from Utah to inform and enhance future rotavirus surveillance efforts in the country.

Healthcare providers should continue to consider rotavirus as a suspected agent in cases of acute gastroenteritis across all ages and should promote rotavirus vaccination among eligible infants according to CDC recommendations.