

**IN THIS ISSUE: Hepatitis A Outbreaks in California, Michigan, and New York City****HEPATITIS A OUTBREAKS IN CALIFORNIA, MICHIGAN, AND NEW YORK****Introduction**

On October 13, 2017 California Governor Brown declared a state of emergency to help control the state's hepatitis A outbreak. This outbreak is the largest person-to-person (not related to a common source or contaminated food product) hepatitis A outbreak in the United States since the hepatitis A vaccine became available in 1996. Currently three California counties (San Diego, Santa Cruz, and Los Angeles) have declared local outbreaks; however, outbreak-associated cases have been identified in other states (including Utah and Arizona) and other California counties. Other states and localities experiencing unrelated hepatitis A outbreaks include Michigan and New York City.

No cases of Hepatitis A linked to these outbreaks have been reported in Washoe County to date. However, it is possible that cases linked to these outbreaks could occur. Washoe County Health District (WCHD) wants community providers to be aware of these outbreaks, the risk they pose to our community, and protective actions.

**Hepatitis A Background<sup>1</sup>**

Hepatitis A virus (HAV) infection can cause a range of symptoms. In adults and older children it typically presents with fever, jaundice, nausea, vomiting, abdominal pain, dark urine, fatigue, loss of appetite, or clay-colored stools. Infections among children are primarily asymptomatic (>70%). The average incubation period is 28 days with a range of 15-50 days. The virus is shed in stool. Typically the infectious period begins two weeks before symptom onset through one week after the onset of jaundice. Unlike hepatitis B or C, HAV does not cause chronic infection. Symptoms typically resolve within two months. While rarely fatal, death occurs more commonly in persons 50 years of age or older and persons with other liver diseases, such as hepatitis B or C. There is no specific treatment for HAV infection.

In the US, HAV is transmitted primarily from person-to-person via the fecal-oral route. Ingestion of contaminated food or water can also cause infection. Risk factors for infection include travel to another country where HAV transmission is common, close personal contact with infected persons, sex among men who have sex with men, and behaviors associated with injection drug use.

Vaccination with Hepatitis A vaccine is the best prevention against infection with HAV. Vaccination is routinely recommended for: all children at age 1 year; travelers to countries that have high rates of Hepatitis A; family members or caregivers of a recent adoptee from countries where Hepatitis A is common; men who have sexual contact with other men; users of injection and non-injection illegal drugs; people with chronic (lifelong) liver diseases, such as hepatitis B or hepatitis C; people who are treated with clotting-factor concentrates; and people who work with hepatitis A infected animals or in a hepatitis A research laboratory. Frequent handwashing, especially after using the bathroom, changing a diaper, or before preparing food can also prevent HAV infection. If a person is infected with HAV they will develop lifelong immunity to the disease.

**Epidemiology of the Current Outbreaks<sup>2,3</sup>**

As of November 10, 2017, a total of 649 cases had been identified, with 417 hospitalizations and 21 deaths, in California. Nearly 98% of cases (633/649) were reported in three California counties. Laboratory testing had identified the cause of the outbreak to be related strains of the same HAV genotype (1B). This genotype is not commonly seen in the US, but is common in the Mediterranean region, South Africa, and Turkey. This outbreak is being spread person-to-person and through contact with a fecally contaminated environment.

The majority of patients report experiencing homelessness and/or using illicit drugs (injected, non-injected, or both). The increased mortality seen in this outbreak is most likely due to the affected population having more underlying conditions that cause liver disease, which can result in more severe disease if infected with HAV. Homeless people and illicit drug users often have underlying liver damage due to alcoholic cirrhosis or hepatitis B or C infection. In San Diego, 18% of outbreak cases have chronic hepatitis C infection and 5% have chronic hepatitis B infection.

Michigan is also experiencing an outbreak of HAV genotype 1B. This outbreak is not linked to California but is similarly being propagated through person-to-person spread. As of November 3, 2017 there were 486 cases, 409 (84.2%) of whom were hospitalized. There have been 19 deaths. A greater risk of infection in this outbreak is thought to be associated with homelessness

<sup>2</sup><https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Hepatitis-A-Outbreak.aspx>. Accessed 20 November 2017.

<sup>3</sup>"Hepatitis A and Herpes Zoster Vaccines." [Current Issues in Immunization NetConference](https://www2.cdc.gov/vaccines/ed/ciinc/archives/17/11_18.asp). 8 November 2017. Accessed 20 November 2017. [https://www2.cdc.gov/vaccines/ed/ciinc/archives/17/11\\_18.asp](https://www2.cdc.gov/vaccines/ed/ciinc/archives/17/11_18.asp).

<sup>1</sup> <https://www.cdc.gov/hepatitis/hav/havfaq.htm>. Accessed 20 November 2017.

or transient housing, using illicit drugs (injected and non-injected), and incarceration. New York City is currently experiencing an outbreak of HAV genotype 1A among men who have sex with men (MSM).

## Vaccine Shortages<sup>4,5</sup>

At this time California is experiencing a shortage of adult hepatitis A vaccine. California is recommending that vaccine be prioritized for areas with ongoing transmission of hepatitis A and for groups at increased risk of infection in those areas. Local jurisdictions are releasing their own local immunization recommendations. The national supply of HAV vaccine is also constrained due to outbreaks of HAV throughout many cities in the US. CDC and vaccine manufacturers are working together to monitor and manage public and private vaccine orders to make the best use supplies of adult Hepatitis A vaccine.

Despite reports of national vaccine supply constraints, at this time WCHD does not believe HAV vaccination should be deferred or withheld from members of our community routinely recommended to receive vaccine.

All children in the US are recommended to receive hepatitis A vaccine. At this time pediatric vaccine supplies are not constrained, and recommendations for routine childhood immunization are unchanged.

## Post-exposure Prophylaxis<sup>6</sup>

Post-exposure prophylaxis (PEP) is recommended for previously unvaccinated close personal contacts of persons with serologically confirmed hepatitis A, including household and sexual contacts and persons who have shared injection drugs with someone with hepatitis A. PEP may also be warranted in special circumstances (e.g., daycare settings, infected food handlers). WCHD will evaluate the need for PEP in these special circumstances and provide guidance as appropriate.

PEP should be administered within two weeks after exposure. For healthy persons aged 12 months--40 years, single-antigen hepatitis A vaccine at the age-appropriate dose is preferred. For persons aged >40 years, immune globulin (IG) is preferred; however, vaccine can be used if IG cannot be obtained. IG should be used for children aged <12 months, immunocompromised persons, persons who have chronic liver disease, and persons for whom vaccine is contraindicated. Last month CDC released updated dosing instructions for Immune Globulin (human) GamaSTAN S/D for HAV prophylaxis, available at [https://www.cdc.gov/mmwr/volumes/66/wr/mm6636a5.htm?s\\_cid=mm6636a5\\_e](https://www.cdc.gov/mmwr/volumes/66/wr/mm6636a5.htm?s_cid=mm6636a5_e). California recently released their own PEP guidance that incorporates CDC's guidance while providing additional guidance and considerations for special populations, available at

<sup>4</sup> <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/CDPH-HAVProviderGuidanceUpdate.pdf>. Accessed 26 October 2017.

<sup>5</sup> <https://www.cdc.gov/vaccines/hcp/clinical-resources/shortages.html>. Accessed 26 October 2017.

<sup>6</sup> <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5641a3.htm>. Accessed 26 October 2017.

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/HepatitisA-PEPQuicksheet.pdf>.

## Recommendations for HCPs

WCHD strongly recommends that healthcare providers (HCPs) in Washoe County take the following actions:

1. When infection with HAV is suspected, please ask the patient about travel outside of Washoe County within the two (2) months prior to symptom onset, illicit drug use, or homelessness/transient housing.
2. Confirm diagnoses of HAV infection with HAV IgM testing. HAV total antibody tests (total anti-HAV), which include both IgM and IgG anti-HAV, may provide information about a patient's prior infection or susceptibility to future infection, but are not helpful in diagnosis of acute illness. Ordering an acute viral hepatitis panel test is highly recommended to rule out acute hepatitis B or C.
3. Provide post-exposure prophylaxis, which consists of hepatitis A vaccine and/or immune globulin, for any susceptible close contacts (described previously) of persons with serologically confirmed hepatitis A.
4. Despite reports of national vaccine supply constraints, at this time WCHD does not believe HAV vaccination should be deferred or withheld from members of our community routinely recommended to receive vaccine. Please continue to consider vaccination of persons routinely recommended to receive hepatitis A vaccine.
5. **Report cases of HAV infection to WCHD at 775-328-2447 (24/7) and 775-328-3764 (Fax).**

## Recommendations for Health Care Facilities<sup>7</sup>

1. Ensure appropriate cleaning of HAV patient areas with a hospital grade cleaner/disinfectant effective against hepatitis A. In areas with ongoing transmission of HAV, restrooms frequented by patients or visitors who have risk factors for HAV infection should be appropriately cleaned. Implement environmental cleaning methods similar to those used for norovirus.
2. Use standard precautions in the care of continent patients with HAV infection.
3. Use contact precautions in addition to standard precautions in the care of diapered or incontinent HAV patients.
4. Ensure HCPs practice proper hand hygiene before and after patient care, after eating, and after using the restroom. Appropriate hand hygiene for HCPs is hand washing with soap and running water for at least 20 seconds.
5. Ensure that HCPs use employee-designated restrooms when available.
6. Provide post-exposure prophylaxis, which consists of hepatitis A vaccine and/or immune globulin, for any susceptible HCP who may have been exposed to HAV.
7. **Report cases of HAV infection to WCHD at 775-328-2447 (24/7) and 775-328-3764 (Fax).**

<sup>7</sup> <https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/AFL-17-21.aspx>. Accessed 26 October 2017.