KERN COUNTY
Public Health Services
DEPARTMENT

MATTHEW CONSTANTINE
DIRECTOR

CLAUDIA JONAH MD
HEALTH OFFICER

1800 MT. VERNON AVENUE BAKERSFIELD, CALIFORNIA 93306-3302 661-321-3000 WWW.KERNPUBLICHEALTH.COM

HEALTH BULLETIN

Hepatitis A Virus Outbreaks Among Homeless and Illicit Drug Using Populations in California

October 2, 2017

SITUATION:

Multiple counties in California, including Los Angeles, San Diego, and Santa Cruz, are experiencing an outbreak of Hepatitis A virus (HAV). While most cases have been found among persons who are homeless and/or use illicit (injection and noninjection) drugs, other cases have occurred in persons with no known association to those groups. Both healthcare workers and food handlers have been identified in the outbreak, though no secondary cases have been reported in connection with these sensitive occupations. Vaccination and hand hygiene with soap and water are the best prevention against HAV.

There have been no confirmed cases of HAV in Kern County to date this year. Between 2011 and 2016, there were 24 confirmed cases of HAV in Kern County residents. The most common exposure/risk factor is recent international travel to a country where HAV is endemic. Providers should maintain a high index of suspicion in patients without a recent travel history as it may be an indication the outbreak has reached Kern County. Other outbreaks of HAV infection have been reported this year in New York City, Colorado, Western Europe, and Chile. These other outbreaks have been mainly associated with men who have sex with men (MSM).

RECOMMENDATION:

In a prevention response to these ongoing outbreaks outside Kern County, the Kern County Public Health Services Department (KCPHSD) recommends that Kern County healthcare providers **offer HAV vaccine to all susceptible persons, particularly to those who are homeless or might be using illicit drugs and those who have frequent close contact with persons who are homeless or use illicit drugs** (e.g. work or regularly volunteer in homeless shelters, jails, food pantries, drug rehabilitation programs, etc.). Adults should receive two doses of HAV vaccine separated by 6 to 18 months. A single dose of HAV vaccine protects most healthy persons, but completion of the recommended two-dose series achieves great than 99% protection.

HAV vaccination continues to be routinely recommended for all children at one year of age. Vaccination of children has been recommended in California since 1999 and in all states since 2005. Persons born before 2005 may not have previously been vaccinated. The Advisory Committee on Immunization Practices (ACIP) routinely recommends HAV vaccination for adults in the following high risk populations:

- Persons traveling to or working in countries with high or intermediate levels of HAV transmission
- Men who have sex with men
- Persons who use illicit (injection and noninjection) drugs
- Persons working with primates or HAV in a research laboratory
- Persons with clotting-factor disorders
- Persons with chronic liver disease, including Hepatitis B virus (HBV) or Hepatitis C virus (HCV)

ACIP also recommends vaccination "for any person wishing to obtain immunity" as well as persons who have been exposed to HAV in the prior two weeks and are not known to be immune.

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Post-exposure prophylaxis (PEP) should be provided to those with close contact to a confirmed HAV case as soon as possible and within two weeks of last exposure. Recommendations for PEP vary by patient age and risk for severe infection. See attached CDPH Hepatitis PEP guidelines for more details. Please be advised that the recommended dosage for immune globulin (IG) has recently increased to 0.1 mL/kg for PEP.

One dose of single antigen HAV vaccine (Havrix®, VAQTA®) appears to provide protection to more people than the first dose of the combined HAV/HBV vaccine (Twinrix®). This apparent advantage disappears when the respective series are completed. Providers should consider the short-term risks of exposure to HAV, the likelihood of follow-up to complete multidose immunizations and the need for protection against HBV when selecting vaccines for those at risk. HBV vaccine is also recommend for injection drug users not known to be immune; a complete series is needed for full protection. Immunization against HAV with existing supplies should not be delayed to obtain a different formulation of vaccine.

Consider HAV infection in individuals with discrete symptom onset and jaundice or elevated liver function tests, particularly for persons in a high risk group. The incubation period for HAV infection ranges from 15 to 50 days with an average of 28 days. Most immunocompetent adults shed virus in stool and are infectious from two weeks before through one week after onset of jaundice or elevated liver enzymes. In the absence of jaundice, persons should be considered infectious from two weeks before through one week after the onset of hepatitis symptoms.

- Symptoms of HAV may include nausea, vomiting, anorexia, fever, malaise, dark urine, diarrhea, light-colored stool, and abdominal pain.
- A complete serology panel with testing for Hepatitis A, B, and C is recommended in symptomatic patients. HIV testing is also recommended for those with undocumented HIV-status.
- Serologic testing for HAV infection is NOT recommended in asymptomatic individuals or as screening before vaccination.

Any person potentially contagious with HAV should be counseled on preventing the spread of disease. In addition to appropriate hand hygiene, patients should be advised of appropriate environmental cleaning measures, as HAV can survive outside the body for months.

Report all confirmed and suspected HAV cases to the KCPHSD within one working day. Cases can be reported through any of the following ways:

- Submit electronically via CalREDIE
- Fax a confidential morbidity report (CMR) to (661) 868-0261
- Call KCPHSD at (661) 321-3000 and ask to speak to Disease Control

All healthcare providers are reminded of the importance of hand washing with soap and warm water before and after each patient contact. Employees in very close contact with high risk populations may consider being vaccinated through their primary care provider. Coordinate with your occupational health provider to determine if HAV vaccine should be offered to employees. Maintain routine and consistent environmental cleaning of restrooms using chlorine-based disinfectant.

Vaccine Resources

- Medi-Cal: HAV vaccine is covered for patients enrolled in fee-for-service and managed care plans. Vaccine administration is covered if administered in a provider's office or by an in-network pharmacy. No prior authorization is required. Patients or those assisting them can call the plan's member services

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number listed on the back of their Medi-Cal Benefits Identification Card to obtain information on pharmacy services. Prior to referring a patient to an in-network pharmacy for HAV vaccination, please contact the pharmacy to verify vaccine availability.

- AIDS Drug Assistance Program (ADAP): HAV vaccine is included on the ADAP formulary.
- Private Insurance: HAV vaccine is included under most private insurance plans without a copayment. Individual insurance plans should be contacted to verify coverage of HAV vaccine.
- KCPHSD Clinics: HAV vaccinations can be received at the KCPHSD main clinic located at 1800 Mt Vernon Avenue, Bakersfield, CA 93306. Most insurances are accepted and low cost options may be available. Please contact KCPHSD at (661) 321-3000 to verify availability.

Providers should use the California Immunizations Registry (CAIR) to determine if patients were previously vaccinated and note any vaccinations given.

If you have any questions, please contact KCPHSD at (661) 321-3000. Thank you for your commitment to the health of the community.

Sincerely,

C. Jonah, M.D.

Claudia Jonah, MD
Health Officer

California Department of Public Health – July 2017

Hepatitis A Postexposure Prophylaxis Guidance

Postexposure prophylaxis (PEP)
Susceptible people exposed to hepatitis A virus (HAV) should receive:

- A dose of single-antigen HAV vaccine; and/or
- **0.1 mL/kg***intramuscular (IM) immune globulin (IG)

PEP should be given as soon as possible <2 weeks of last exposure. The efficacy of combined HAV/HBV vaccine for PEP has not been studied so it is not recommended.

HAV vaccine is preferred over IG for PEP in persons 1-40 years of age because the effectiveness of vaccine for PEP has been studied only in this age group and data on vaccine efficacy at older ages are limited. However, other countries recommend vaccine for PEP in people >40 years of age and there is evidence that HAV vaccine is immunogenic in older people. Therefore, CDPH suggests consideration of HAV vaccine for PEP in persons 41-59 years of age because it confers long-term immunity.

Local health departments may also wish to evaluate the likelihood and intensity of HAV exposure (e.g., possible commercial food exposure vs. known household or sexual contact) when making decisions about PEP regimens.

*In July 2017, the recommended dose for IMIG (GamaSTAN® S/D) for HAV pre- and post-exposure prophylaxis was increased by the manufacturer due to declining HAV antibody levels in the U.S. blood supply.

Age/years	<1†	1-40	41-59	60-74†	75+
Healthy	IG only	Vaccine preferred	Vaccine	IG + vaccine	IG + vaccine
Other‡	IG	IG	IG	IG	IG

†When IG is unavailable or in short supply, single-antigen HAV vaccine may be used for PEP in healthy people 60-74 years of age and in infants >6 months of age.

For additional guidance on administration of IG, see: https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/HepatitisA-IGPEPGuidance.pdf

‡People who should receive IG for HAV PEP
Per CDC, the following persons should receive IG:

- Children aged <12 months;
- Immunocompromised persons§
- Persons with chronic liver disease; and
- Persons for whom vaccine is contraindicated‖.

To provide long-term protection against HAV, persons administered IG for whom HAV vaccine is also recommended for other reasons should receive a dose of vaccine simultaneously with IG or may receive vaccine first and IG as soon as it can be accessed.

IM IG (GamaSTAN® S/D) is available in 2 mL and 10 mL single use vials. One source of IG is FFF Enterprises, which can be reached 24/7 at: 1-800-843-7477.

§Although the CDC HAV guidance does not provide a definition of immunocompromised, IDSA guidance (http://tinyurl.com/y8n8qpv6) defines patients with high-level immunosuppression as those:

- with combined primary immunodeficiency disorder (e.g., severe combined immunodeficiency);
- who are receiving cancer chemotherapy;
- on treatment for ALL within and until at least 6 months after completion of immunosuppressive chemotherapy;
- within 2 months after solid organ transplantation;
- who have received a bone marrow transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed graft-versus-host disease;
- with HIV infection with a CD4 T-lymphocyte count <200 cells/mm3 (age >5 years) and percentage <15 (all ages) (some experts include HIV-infected persons who lack recent confirmation of immunologic status or measles immunity);
- receiving daily corticosteroid therapy with a dose ≥20 mg (or >2 mg/kg/day for patients who weigh <10 kg) of prednisone or equivalent for ≥14 days; or
- receiving certain biologic immune modulators, such as a tumor necrosis factor-alpha (TNF-α) blocker or rituximab.

Vaccine may be given in addition to IG to potentially provide longer-term protection for immunosuppressed persons but vaccine response may be limited. Clinical guidance should be obtained if patient's immune status is unclear.

Exposed susceptible pregnant women
Pregnant women who become infected with hepatitis A have an increased risk of gestational complications and preterm labor. Although there are no specific CDC recommendations for PEP for susceptible exposed pregnant women, it may be reasonable to offer IG in addition to vaccine for PEP, particularly if the woman is a household or sexual contact of a case.

Immunization Branch/Division of Communicable Disease Control
850 Marina Bay Parkway, Building P, 2nd Floor, Richmond, CA 94804
(510) 620-3737 Internet Address: www.cdph.ca.gov

Definition of HAV immunity
Persons are considered immune to HAV if they have:

- received two doses of HAV vaccine; or
- a history of IgM or total anti-HAV positivity during or <4 months after clinically consistent illness; or
- are IgG anti-HAV positive.

Pre- or post-vaccination testing are not indicated. Most adults will be protected within 2-4 weeks after one dose of vaccine. HAV vaccine has been routinely recommended for California children since 1999, and most children and adolescents in California are immune to HAV.

Persons exposed to HAV >2 weeks prior to consult
The efficacy of PEP when given >2 weeks of exposure is unknown. IG is not recommended >2 weeks after exposure, but vaccine may be given at any time to susceptible people to protect against future exposures.

Incompletely immunized people
Most persons have protective levels of antibody after one dose of HAV vaccine. Persons who have had one prior dose of vaccine may receive their second dose if it has been at least 6 months since their first dose.

Pediatric vs. adult formulations of HAV vaccine
Single-antigen HAV vaccines are available in a pediatric formulation containing half the dose and volume of the adult formulation. When the adult formulation is unavailable, adults may be given two doses of the same pediatric HAV vaccine (2 pediatric doses = 1 adult dose).

[||]HAV vaccine contraindications and precautions

- HAV vaccine should not be administered to persons with a history of a severe allergic reaction to a previous dose of HAV vaccine or vaccine component.
- Pregnant women may be given HAV vaccine as PEP. Although the safety of HAV vaccination during pregnancy has not been determined, because HAV vaccine is produced from inactivated HAV, the theoretical risk to the fetus is expected to be low.
- Because HAV vaccine is inactivated, no special precautions need to be taken when vaccinating immunocompromised persons.

Administration of HAV vaccine with other vaccines
HAV vaccine may be administered simultaneously with Td, Tdap, DTaP, OPV/IPV, Hib, HepB, MMR, cholera, Japanese encephalitis, rabies, or yellow fever vaccines.

Clinical symptoms
HAV is an acute, self-limiting viral illness associated with abrupt onset of fever, malaise, jaundice, anorexia, nausea, abdominal discomfort, and dark urine. Presence of clinical symptoms is highly age dependent; among older children and adults, 70% of cases present with jaundice. In children <6 years of age, 70% of infections are asymptomatic.

Incubation period
A range of 15-50 days with a mean of 28 days.

Modes of transmission
HAV is primarily transmitted via the fecal-oral route (e.g., consuming fecally contaminated foods/liquids). HAV is present in blood/feces 10-12 days after infection. HAV is rarely transmitted by blood (e.g., via transfusion) or saliva.

Period of communicability
Most immunocompetent adults shed virus in the stool and are infectious from two weeks before through one week after the onset of jaundice. HAV can be detected in the stool for longer periods (up to 10 weeks after illness onset), particularly in infants/young children.

Clinical case definition
An acute illness with:
a) discrete onset of symptoms; **and either**
b) jaundice or elevated ALT or AST levels.

Laboratory criteria for diagnosis
IgM antibody to HAV (anti-HAV) positive.

Confirmed case definition
A case who meets the clinical case definition; **and**

- is laboratory confirmed; **or**
- has an epidemiologic link with a person who has laboratory-confirmed HAV (i.e., household or sexual contact with an infected person during the 15-50 days before the onset of symptoms).

Laboratory testing
IgM anti-HAV is present at illness onset and usually disappears <4 months, but may persist ≥6 months. IgM anti-HAV may also be detectable 2 weeks after receiving HAV vaccine. IgG anti-HAV is detectable shortly after IgM appears and remains for the person's lifetime.

False positive IgM anti-HAV test results
A positive IgM anti-HAV test result in a person without typical symptoms of HAV may indicate:

- asymptomatic acute HAV infection; or
- previous HAV infection with persistent IgM; or
- a false-positive test result.

IgM anti-HAV testing should be limited to symptomatic persons and should not be used as a screening tool or part of testing panels for nonacute liver function abnormalities because of the risk of false positive test results.

If a positive IgM anti-HAV report is received on a patient without hepatitis symptoms or history of recent contact with an HAV-infected person, consider repeat IgM testing and a review of ALT or AST levels (often >500 units/L in acute hepatitis) before PEP recommendations are made for contacts.