

Hepatitis A

Outbreak Resources



ADHS

PREPAREDNESS

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Hepatitis A Outbreak and Case Definition

Hepatitis A Outbreak

Arizona, along with many other states, is currently experiencing a large outbreak of hepatitis A primarily among individuals who use drugs and/or are experiencing homelessness.

[CDC: Widespread outbreaks of hepatitis A across the United States](#)

[CDC HAN: Widespread Outbreaks of Hepatitis A among People Who Use Drugs and People Experiencing Homelessness across the United States](#)

[Increase in Hepatitis A Virus Infections – United States, 2013–2018](#)

Case Definition

Confirmed outbreak case (effective 5/19/2019)

A confirmed hepatitis A case (meeting the [ADHS public health surveillance case definition](#)) with symptom onset on or after 11/1/18 with any of the following:

- A case that meets the clinical criteria and is IgM anti-HAV positive, **OR**
- A case that has hepatitis A virus RNA detected by NAAT (such as PCR or genotyping), **OR**
- A case that meets the clinical criteria and occurs in a person who has an epidemiologic link (household contact, drug partner, or sexual contact) with a laboratory-confirmed hepatitis A case 15–50 days prior to onset of symptoms

Exclusions

A case will be excluded if any of the following conditions apply:

- In the absence of known risk factors (injection or non-injection drug use, men who have sex with men, homelessness, recent incarceration), any case that occurs in a patient who reports travel to a country or U.S. territory with endemic hepatitis A during the 15–50 days before symptom onset, **OR**
- Any case that is linked to a foodborne outbreak by matching sequencing, **OR**
- In the absence of known risk factors (injection or non-injection drug use, men who have sex with men, homelessness, recent incarceration), any case that is epi-linked to a foodborne outbreak, **OR**
- Any case with a specimen collected within four weeks of symptom onset that is negative for HAV RNA.



Jurisdiction

This outbreak of hepatitis A has had a number of cases with multijurisdictional exposures and residences. To help clarify primary jurisdiction of cases, we have included excerpts from the CSTE/CDC's National Notifiable Diseases Surveillance System Notification Policies [Revised Guidelines for Determining Residency for Disease Notification Purposes](#) and some examples.

Concept of usual residence

"Usual residence is defined as the place where the person lives and sleeps most of the time, which is not necessarily the same as the person's voting residence, legal residence, or the place where they became infected with a notifiable disease. Determining usual residence for most people is easy and unambiguous. However, the usual residence for some people is not obvious. A few examples are people without housing, commuter workers, retirees who spend the winter months in warmer climates ("snowbirds"), college students, military personnel, and migrant workers."

Reference Point

"Date of symptom onset is selected as the reference point for establishing "usual residence." If date of symptom onset is not available, the date of diagnosis, lab result or the first case report to the health department is recommended, in that order, as the reference point."

U.S. resident institutionalized persons

"In general, case notifications to CDC for cases of NNDs in persons who are institutionalized for indefinite or long-term stays should be made by the jurisdiction of the facility where the people are staying at the time of disease onset. Examples of such facilities include: chronic or long-term disease hospitals; hospices; nursing or convalescent homes; inpatient drug/alcohol recovery facilities; homes, schools, hospitals, or wards for the physically handicapped, mentally retarded [*sic*], or mentally ill; federal and state prisons, jails, detention centers, and halfway houses; orphanages; residential care facilities for neglected or abused children."

Examples:

- Case is living and exposed to hepatitis A in County A. When Case becomes symptomatic, they are living in inpatient drug recovery facility in County B. Case should have primary jurisdiction in County B. County A and County B should coordinate investigations.
- Case is incarcerated and exposed to hepatitis A in County A. Case is unsure of location where symptom onset occurred but has a positive hepatitis A IgM result while incarcerated in County B. Case should have primary jurisdiction in County B. County A and County B should coordinate investigations.
- Case is incarcerated and exposed to hepatitis A in County A. Case has symptom onset while in County A then transferred to correctional facility in County B. Case should have primary jurisdiction in County A. County A and County B should coordinate investigations.



Jurisdiction

U.S. residents without housing

“Cases notifications to CDC for cases of NNDs in U.S. residents without a usual residence should be made by the jurisdiction where they were staying on the day of disease onset.”

Examples:

- Case is homeless and exposed to hepatitis A in County A. When Case becomes symptomatic, they are staying in County B. Case should have primary jurisdiction in County B. County A and County B should coordinate investigations.
- Case is homeless and exposed to hepatitis A in County A or County B where they stayed during incubation period. Case is unsure of location where symptom onset occurred but has a positive hepatitis A IgM result while staying in County C. Case should have primary jurisdiction in County C. County A, County B, and County C should coordinate investigations.
- Case is homeless and exposed to hepatitis A in County A or County B. Case is diagnosed while staying in County B but symptom onset was in County A. Case should have primary jurisdiction in County A. County A and County B should coordinate investigations.
- Case is homeless and exposed to hepatitis A in County A. Case is diagnosed while staying in County B and has unknown location at symptom onset. Case should have primary jurisdiction in County B. County A and County B should coordinate investigations.
- Case is transient or has unstable housing and stayed in County A and County B during the incubation period. Case is diagnosed while staying in County C and has unknown location at symptom onset (e.g., LTFU, doesn't recall). Case should have primary jurisdiction in County C. County A, County B, and County C should coordinate investigations.
- Case is transient or has unstable housing and stayed in County A and County B during the incubation period. Case is diagnosed while staying in County C but symptom onset was in County B. Case should have primary jurisdiction in County B. County A, County B, and County C should coordinate investigations.



Vaccination Recommendations

The best way to prevent hepatitis A is through vaccination with the hepatitis A vaccine. Vaccination is recommended for all children, for travelers to certain countries, and for people at high risk for infection with the virus, including individuals with unstable housing or experiencing homelessness. Frequent handwashing with soap and warm water after using the bathroom, changing a diaper, or before preparing food can help prevent the spread of hepatitis A.

Vaccination Recommendations for High Risk Population

The Advisory Committee on Immunization Practices (ACIP) recommends that the following high risk populations be vaccinated:

- Men who have sex with men,
- People who use illegal drugs, and
- People with unstable housing or experiencing homelessness.

Additional Vaccination Recommendations

Who else should get vaccinated against hepatitis A?

- All children at age 1 year,
- People who are at increased risk for infection*,
- People who are at increased risk for complications from hepatitis A, and
- Any person wishing to obtain immunity (protection).

*Additional people who are at increased risk of infection include the following:

- People with chronic liver disease,
- People with clotting factor disorders,
- Work with hepatitis A virus in a research laboratory or nonhuman primates with hepatitis A virus infection,
- Travel in countries with high or intermediate endemic hepatitis A, and
- Close personal contact with an international adoptee (e.g., household, regular babysitting) in the first 60 days after arrival from a country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival).

[CDC Vaccination Recommendations](#)



Vaccination Recommendations

Vaccination Schedule & Recommendations

Formulation	HAVRIX	VAQTA	TWINRIX	TWINRIX (rapid/alternate)
Pediatric				
Age	1 through 18 years	1 through 18 years	Not recommended	Not recommended
Volume	0.5 mL	0.5 mL	--	--
Schedule	0, 6–12 months later	0, 6–18 months later	--	--
Doses	2	2	--	--
Adult				
Age	19 years and older	19 years and older	19 years and older	19 years and older
Volume	1.0 mL	1.0 mL	1.0 mL	1.0 mL
Schedule	0, 6–12 months later	0, 6–18 months later	0, 1 month later, 6 months after initial	0, 7 days, 21–30 days, 12 months after initial
Doses	2	2	3	4

Post Exposure Vaccination Recommendations

Indication/Age group	Risk category/Health status	Hepatitis A vaccine	Immune globulin*
<12 months	Healthy	No	0.1 mL/kg
12 months–40 years	Healthy	1 dose†	None
>40 years	Healthy	1 dose†	0.1 mL/kg§
≥12 months	Immunocompromised or chronic liver disease	1 dose†	0.1 mL/kg¶
≥12 months	Vaccine contraindicated**	No	0.1 mL/kg

* Measles, mumps, and rubella vaccine should not be administered for at least 3 months after receipt of immune globulin.

† A second dose is not required for post exposure prophylaxis; however, for long-term immunity, the hepatitis A vaccination series should be completed with a second dose at least 6 months after the first dose.

§ The provider's risk assessment should determine the need for immune globulin administration. If the provider's risk assessment determines that both vaccine and immune globulin are warranted, hepatitis A vaccine and immune globulin should be administered simultaneously at different anatomic sites.

¶ Vaccine and immune globulin should be administered simultaneously at different anatomic sites.

** Life-threatening allergic reaction to a previous dose of hepatitis A vaccine, or allergy to any vaccine component.



Vaccines for Children (VFC)

Vaccines for children (VFC) are federally funded, and must only be administered by providers enrolled in the VFC program to VFC eligible patients. VFC eligible patients are children 18 years of age or younger who meet at least one of the following criteria:

- American Indian or Alaska Native (AI/AN),
- Medicaid-eligible,
- Uninsured, and
- Underinsured.*

* Definition of underinsured

- Children who have health insurance, but coverage does not include any vaccines.
- Children who have health insurance, but coverage does not include all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP).
- Children who have health insurance, but there is a fixed dollar limit or cap for vaccines.

Underinsured children are **only** eligible to receive VFC vaccines at a federally qualified health center (FQHC), a rural health clinic (RHC), or a deputized provider.

Providers who are enrolled in the VFC program must order VFC vaccines through the Arizona Immunization Program Office (AIPO) using the [Arizona State Immunization Information System \(ASIIS\)](#). Once administered, it is required to [document vaccine administration](#) in ASIIS per VFC requirement and Arizona Revised Statute (ARS) §36-135.



Vaccines for Adults (VFA)

Also known as 317 federally funded vaccines, Vaccine for Adults (VFA) is only available to County Health Departments and their VFA enrolled designees. Each county is assigned a set amount of funds for the fiscal year to order VFA vaccines.

During an outbreak, VFA vaccines may be used to vaccinate fully insured individuals seeking vaccines. Outbreak response activities may include activities identified as necessary to prevent and/or contain an outbreak among identified at-risk populations. Screening for insurance status is not required during an outbreak, however, it is advised to maximize available VFA vaccines. Please note the screening process should not be a barrier to vaccination. As with all vaccines, VFA vaccines used during an outbreak must be properly stored and handled, and doses used must be properly documented.

When there is **not** an outbreak, VFA vaccines must **only** be administered to VFA eligible patients.

The 317 funding for VFA vaccines is finite and limited. The entire annual state allocation must be exhausted before requesting additional 317 vaccines. Counties who are enrolled in the VFA program must order VFA vaccines through AIPO using ASIIS. Once administered, it is required to [document vaccine administration](#) in ASIIS per VFA requirement.

Private Vaccines:

If the individual is **not** eligible for VFC/VFA or if VFA funds have been depleted, each county can use their own funds to purchase vaccine. Vaccines can be ordered by any provider with a medical license. A direct contract with a manufacturer is the easiest way to order. A contract can take approximately two weeks to execute. Once in place, vaccine orders can be placed within 24 hours.

There is **no** shortage of hepatitis A monovalent vaccine. Sometimes it may appear that providers cannot order monovalent vaccine because the wholesaler they are purchasing from does not have available doses.

Providers are currently limited to 1,000 doses per an order. There are no limitations on the number of orders. If a provider is requesting more than 1,000 doses, the order will be sent to AIPO for approval.

It is required under ARS §36-135 to document vaccine administration to patients age 18 years and younger in ASIIS.



Hospital & ED Partners

Due to the high rates of hospitalization observed in this outbreak, it is necessary to foster good relations with hospital stakeholders and get facility buy-in to aid in prevention efforts. Relationships with infectious disease physicians and infection preventionists can aid in identifying hospital leadership contacts. Presenting data on the current outbreak situation, how the situation has escalated in other states, and the [cost of hepatitis A hospitalization](#) for a facility /system can help with leadership buy-in.

Once leadership buy-in is accomplished, a variety of simple hepatitis A prevention activities can be included into hospital workflow. For example, a [hepatitis A risk assessment](#) can be used to identify opportunities to provide pre-exposure hepatitis A vaccination for high-risk individuals.



Laboratory

CDC is able to perform [genotyping](#) on approved hepatitis A samples which can give additional information about the spread of this outbreak.

However, due to the burden of multiple states submitting samples, CDC has limited the number of samples that can be submitted to the following criteria outlined below.

Summary:

- CDC has defined risk factors as: people who use drugs, people experiencing homelessness and men who have sex with men (MSM).
- All specimens will need CDC approval before they can be sent. Counties will notify the state of cases eligible for genotyping as soon as possible and the state will communicate with CDC to gain approval.
 - Samples will only be sent if they **meet at least one** of the following criteria:
 1. The case lives in a county that doesn't already have outbreak-associated cases.
 2. The case, or anyone they have contact with, does not have risk factors (drug use, homelessness, MSM).
 3. Foodborne illness is the only suspected transmission route.
 4. The patient has died.
 5. Other scenarios, to be discussed on a case-by-case basis.

Hepatitis A specimens are not typically sent to the Arizona State Public Health Laboratory (ASPHL) but labs will usually submit the sample if requested. **Please keep in mind that samples are only available at most labs for 7 days.**

If you would like for ADHS to request the sample, please let us know as soon as possible.

If you would like to request the sample, here are some things to consider before you make the request:

- You will still need to email ADHS (outbreak@azdhs.gov) so we can get approval from CDC.
- Hepatitis A testing tends to be a send-out test, so it's possible that the lab reporting didn't do the test and doesn't have the actual sample. This is the case for Banner facilities, they all use Sonora Quest Laboratories which is the lab that should be contacted about sending the sample. If a lab does perform hepatitis A testing, it will usually be done in the microbiology or serology section.



Genotyping

Genotyping is available at CDC and can be conducted by request only (see genotyping guidelines above). The main purpose of genotyping is to detect foodborne or other common source outbreaks that may be occurring amid an outbreak among risk groups (those using drugs, experiencing homelessness or among men who have sex with men [MSM]). Genotyping results should only be used confirm what is being seen epidemiologically, and to rule in (or out) common source outbreaks among individuals reporting no risk factors. There is no genotype or strain that is more or less virulent than another. The vaccine covers all genotypes of the virus.

It should be anticipated that an interview may not always yield full risk history, especially when the risk factors are highly stigmatized. With this, there is no genotype strain that is more or less associated with drug use, homelessness or MSM, and all outbreaks in recent years have had cases with no identified risk factors. It is impossible to discern exactly where a strain came from, who introduced the strain into the community, risk behaviors of the person infected with a particular strain, where it will be seen next, and/or clinical course based on genotype/strain alone. As the outbreak progresses, the proportion of cases without risk factors increase as the overall numbers go down, this is an indication that the “at-risk” population has hit the immunity threshold (whatever that threshold may be) and it’s a way to monitor the effectiveness of the response.

Genotyping does not indicate any travel patterns (e.g., if the predominant strain seen in Arizona is from Michigan, it does not mean that the index case in Arizona moved from Michigan). Rather, the geographic patterns that exist are due to social networks. Most of the strains have been seen in all the affected states which shows that it’s the social networks among these groups (who cases are doing drugs with) more than geographic location in regards to what strain will predominate.

From time to time, a sample may come back negative when sent to CDC for genotyping. In addition to genotype testing to determine the virus strain, they also perform a PCR test to detect Hepatitis A virus RNA. If this occurs, the case should not necessarily be ruled out as a “not a case.” Rather, it is possible the virus degraded if the sample integrity was not maintained (such as temperature extremes in storage or shipping). Please check with outbreak@azdhs.gov to determine next steps. In most cases, if the case meets the clinical and laboratory criteria and would have met case definition prior to sending to CDC, then it should still be considered a case.



Communications

As hepatitis A outbreaks continue around the nation communication with the at risk population, the general public, and between public health will remain important as questions and challenges arise. It is also expected that the Arizona Department of Health Services remain in constant communication with CDC to provide situational awareness of the ongoing community wide outbreak.

From Counties to ADHS

[Weekly Update Template for Counties](#)

General Messaging

[HAV Infographic](#) – Maricopa County

[Food Managers/Operators Messaging](#) – Pima County

[Vaccination Clinics](#) – Pima County

[Vaccination Clinics #2](#) – Pima County

[Letter to Homeless and Substance Abuse Service Providers and Advocates](#)

[Hepatitis A Exposure Letter Example](#)



Correctional Facilities

Inmates are at high risk for hepatitis A due to close living conditions, making it easier for the disease to spread throughout the facility. While hepatitis A is highly contagious, it is also highly preventable.

Resources

[Template Letter to Jails – County](#)

[BOP Guidelines](#)

[BOP Hep A Timeline Calculator](#)

[West Virginia Hepatitis A Incarceration Fact Sheet](#)

[Indiana Hepatitis A Letter to Jail Commanders and Sheriffs](#)

[Indiana Hepatitis A Letter to Correctional Facilities](#)



Additional Resources

CDC:

[Widespread outbreaks of hepatitis A across the United States](#)

[Hepatitis A General Fact Sheet](#)

Resources from other health departments:

[San Diego Resources](#)

[Texas Communication Toolkit](#)

[Michigan Social Media Toolkit](#)

[Michigan Resources](#)

[Indiana Resources](#)

AZ specific resources

[Maricopa Hepatitis A Public Fact Sheet](#)

[Maricopa Hepatitis A Surveillance Alert](#)

