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# MEMORANDUM

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Date: May 6, 2019

To: The Honorable Chairman and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator

A handwritten signature in black ink, appearing to be "CHH", is written over the printed name "C.H. Huckelberry".

Re: **Hepatitis A Outbreak Update in Pima County**

Please see the attached April 26, 2019 memorandum from the Health Department Director regarding an update on the Hepatitis A outbreak in Pima County.

Since November 2018, there have been 173 confirmed cases of Hepatitis A and 161 cases attributed to the current outbreak with 121 resulting in hospitalization. The Health Department has initiated a number of exposure control measures as well as prevention and outreach interventions, including vaccination clinics. As of April 19, 2019, the Health Department has hosted 106 vaccination clinics and completed a total of 3,468 encounters with individuals meeting the outbreak risk factors. Of these encounters, 1,712 received vaccinations, 1,159 declined vaccinations and 597 were previously immunized.

Our focus has been to continue hosting vaccination clinics and coordinating our activities with additional behavioral health and homeless services providers. The Health Department will also continue to work with local hospitals and clinics to assist them in setting up Hepatitis A vaccination strategies.

CHH/anc

Attachment

c: Jan Leshar, Chief Deputy County Administrator  
Dr. Francisco Garcia, Assistant County Administrator for Community and Health Services  
Marcy Flanagan, Director, Pima County Health Department

Date: April 26, 2019

To: Chuck Huckleberry  
County Administrator

From: Marcy Flanagan, Director   
Pima County Health Department

Via: Jan Leshar, Chief Deputy County Administrator 

Francisco Garcia, Assistant County Administrator 

Re: Hepatitis A Outbreak Situational Update

**Background**

Hepatitis A virus (HAV) is a vaccine-preventable infectious disease that can damage the liver. Infected people shed the virus in their stool in high concentrations two to three weeks before and one week after onset of clinical illness, and thereby spread the virus during this time. They often carry it on poorly washed hands. It spreads to others when they swallow invisible amounts of the virus through food, drink, sexual activity, or after touching contaminated objects. Hepatitis A symptoms include jaundice, fatigue, stomach pain, nausea, and diarrhea. People can be contagious for two weeks before and one week after symptoms appear, and unknowingly spread the virus. Rarely, the virus can cause liver failure and death – especially in persons with impaired immune systems or chronic liver disease. A blood test is the most common way to confirm hepatitis A.

While proper handwashing can prevent spread of infections, vaccination provides long-term protection against the virus. Although the hepatitis A vaccine is routinely given to children as part of the recommended vaccination schedule, most adults have not been vaccinated. Anyone can receive the vaccine, but it is especially recommended for:

- People who are experiencing homelessness
- People who use injection and non-injection illicit drugs
- People who are traveling to countries where hepatitis A is common
- Men who have sex with men
- People who have been recently incarcerated
- People who live with, or have sex with, someone who has hepatitis A
- People with chronic liver disease, such as cirrhosis, alcoholic liver disease, hepatitis B, or hepatitis C

Hepatitis A vaccine is readily available at doctor's offices, health clinics, and pharmacies. People who cannot pay for vaccinations or who do not have health insurance can contact the Health Department or a community health clinic near them. In addition to getting vaccinated, people

C.H. Huckelberry, County Administrator  
Re: Hepatitis A Outbreak Situational Update  
April 23, 2019

should wash their hands with soap and water after going to the bathroom and before eating or making food; avoid having sex with anyone who has hepatitis A; and avoid sharing towels, toothbrushes, eating utensils, food, drinks, smokes, or drug paraphernalia with others.

### **Discussion**

#### ***Hepatitis A Cases in Pima County***

Hepatitis A virus infections are on the rise in Pima County, with 173 confirmed cases as of April 22, 2019. An outbreak was officially declared in January 2019. Health Department epidemiologists and disease investigators believe the outbreak began in early November 2018. To date, there have been 161 cases linked to the outbreak, with 121 of the cases resulting in hospitalization.

The recent outbreak in Pima County HAV has surpassed the annual totals for the past 5 years. Through case investigations conducted by Health Department epidemiologists and disease investigators, it was determined that the primary means of transmission is through close contact with an infected person, typically among people experiencing homelessness and/or people using illicit drugs. While there have been cases due to contaminated food and international travel, they are not associated with the current outbreak. A confirmed case associated with this outbreak is defined as any person with an acute hepatitis A infection, with symptom onset on or after November 1, 2018 with any of the following exposure infection risk factors:

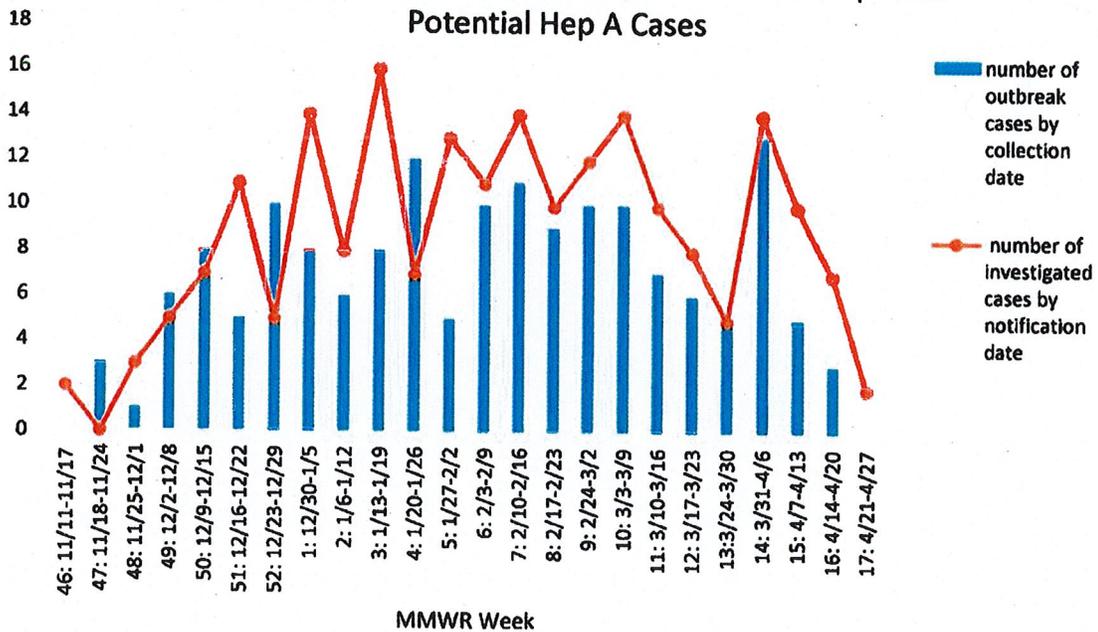
- Homelessness and/or contact with people experiencing homelessness
- Use of injection and non-injection illicit drugs
- Substance use treatment (inpatient or outpatient) and/or methadone use
- Transitional housing or sober living
- Screened and/or booked in jail

Since the beginning of the outbreak on November 1, 2018, there have been 173 confirmed cases of hepatitis A (Table 1). Of these, 12 (7%) are confirmed cases that are not known to be associated with this outbreak. The risk factors of these cases include international travel and contaminated seafood. Health Department epidemiologists and disease investigators are receiving and investigating an average of 8.7 reports of HAV a week, and typically 6.7 of these reports would result in a confirmed case of HAV associated with the outbreak (Chart A).

Table 1: Confirmed Hepatitis A Cases	
Hepatitis A Case Definition	n
Confirmed	173
Probable	0
Pending	7
Not a case	28
<b>Total</b>	<b>208</b>

**Of the 173 confirmed cases occurring since 11/1/2018:  
 12/173 (7%) of confirmed cases are not known to be associated with this outbreak but are associated with international travel and food exposure**

Chart A: Number of Outbreak Hep A Cases and Reported Potential Hep A Cases



C.H. Huckelberry, County Administrator  
 Re: Hepatitis A Outbreak Situational Update  
 April 23, 2019

There have been 161 cases attributed to the outbreak, with 121 of the cases resulting in hospitalization (Table 2). The majority of the confirmed outbreak cases are 18-44 years of age (116, 72%) and male (107, 66%).

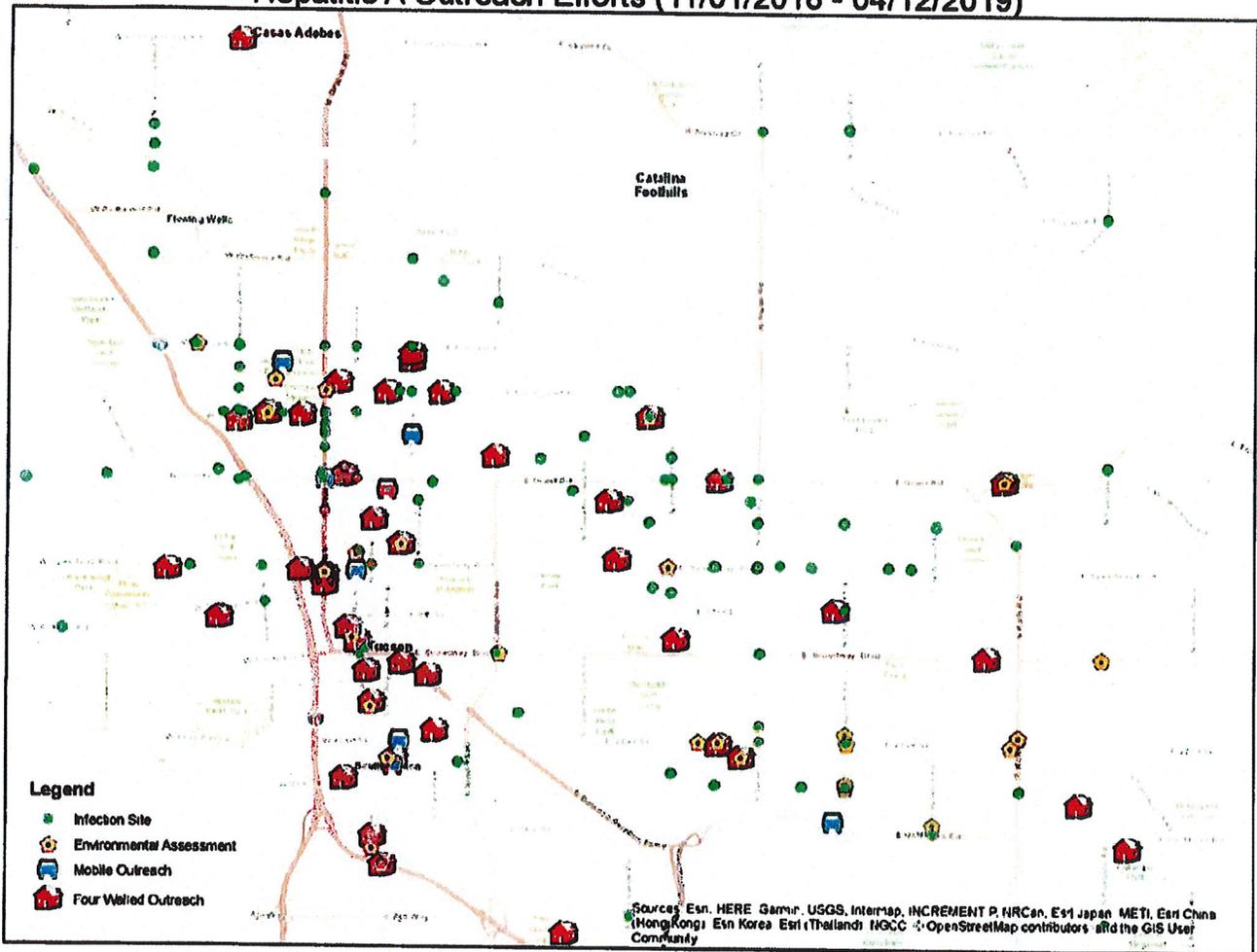
<b>Table 2: Confirmed Hepatitis A Outbreak Cases</b>		
<b>Of the 173 confirmed cases occurring since 11/1/2018:</b>		
<b>161/173 (93%) of confirmed cases are associated with this outbreak (145 are confirmed outbreak cases; 16 are probable outbreak cases)</b>		
		<b>n=161</b>
<b>Source</b>	<b>n</b>	<b>%</b>
Hospital admissions	121	75%
ER only/left AMA before admission	28	17%
Outpatient only	12	7%
<b>Total</b>	<b>161</b>	<b>100%</b>
<b>Potential Risk Factors</b>	<b>n</b>	<b>%</b>
Illicit substance use	107	66%
Street homelessness	37	23%
Homelessness and illicit substance use	33	20%
Transitional living	4	2%
Jail/prison	16	10%
<b>Symptom Onset Date Range</b>		11/15/18-4/12/19
<b>Contagious Date Range</b>		11/1/18-4/21/19

C.H. Huckelberry, County Administrator  
Re: Hepatitis A Outbreak Situational Update  
April 23, 2019

**Geography of Confirmed Hepatitis A Outbreak Cases Interventions**

Confirmed hepatitis A outbreak cases cluster around the metropolitan Tucson area, but reach as far north as Oro Valley and as southeast as Vail. The following map provides a detailed view of the outbreak infection sites and locations of current interventions.

**Hepatitis A Outreach Efforts (11/01/2018 - 04/12/2019)**



**Legend definitions:**

- Infection site: major cross streets where the case lives, hangs out, and/or was picked up
- Environmental assessment: review of contact surfaces and sanitation/cleaning practices at licensed facility that has been exposed to HAV
- Mobile outreach: outreach conducted by foot or vehicle in a community area exposed to HAV to reach target population
- Four-walled outreach: vaccination clinic held at a community partner facility

C.H. Huckelberry, County Administrator  
Re: Hepatitis A Outbreak Situational Update  
April 23, 2019

***Role of Health Department Epidemiology***

The Health Department epidemiology team is responsible for conducting case investigations of suspected hepatitis A virus infections. This includes receiving suspect and positive laboratory reports from medical providers and laboratories. Medical providers are required to provide reports to the Health Department within one working day of suspect or confirmed cases. Laboratories are required to provide disease panel result reports to the Health Department within one working day.

Once receiving these reports, epidemiologists and disease investigators conduct a medical records review and interview potential cases to determine the incubation period, which includes where and how they could have been infected, and the contagious period, which includes potential close contacts that could have been infected. As part of the case interview, epidemiologists and disease investigators implement prevention and control measures that include providing education to the case and close contacts, and recommending post-exposure prophylaxis to contacts within 14 days of exposure.

***Clinical Interventions, Outreach, and Prevention Efforts***

The Health Department has established two priorities to combat the current outbreak – exposure control measures and prevention and outreach interventions.

**Exposure control measures**

An important control measure during a hepatitis A outbreak is to provide post-exposure prophylaxis to people who have had close contact to a confirmed case. During case investigation interviews, Health Department epidemiologists and disease investigators try to identify people with whom potential cases have had close contact. This can prove difficult as it is up to a person whether he or she wants to provide this information. If contact information is provided, Health Department epidemiologists and disease investigators reach out to these people to recommend they receive post-exposure prophylaxis and inform them of the closest Health Department clinic to get it.

Another control measure being implemented is environmental assessments. During case investigation interviews, Health Department epidemiologists and disease investigators ask potential cases where they have eaten, frequented, or hung out. The purpose of these questions is to identify public areas that may have been exposed to the hepatitis A virus. If these public areas are licensed facilities, such as food establishments, grocery stores, mobile home parks, or communal living facilities, our Consumer Health and Food Safety environmental health specialists conduct an environmental assessment of the site. These assessments include assessing food preparation and sanitation practices, letting operators know that the facility may have been exposed to the hepatitis A virus and the current outbreak, and providing cleaning and sanitation guidelines. In most cases, environmental health specialists emphasize the importance of handwashing among staff and residents, and using appropriate cleaning products for sanitizing surfaces. To date, 30 environmental assessments have been completed with establishments such as restaurants, grocery stores, convenience stores, public libraries, behavioral health

C.H. Huckelberry, County Administrator  
Re: Hepatitis A Outbreak Situational Update  
April 23, 2019

providers, substance use and rehabilitation facilities, homeless shelters, and educational institutions. Additionally, Consumer Health and Food Safety has incorporated hepatitis A education and sanitation as part of routine inspections.

#### Prevention and outreach interventions

The Centers for Disease Control and Prevention has indicated that prevention and outreach interventions are the most effective ways to mitigate the spread of a hepatitis A outbreak. Prevention and outreach interventions currently being used are building community partnerships, hosting vaccination clinics, and conducting mobile and street outreach.

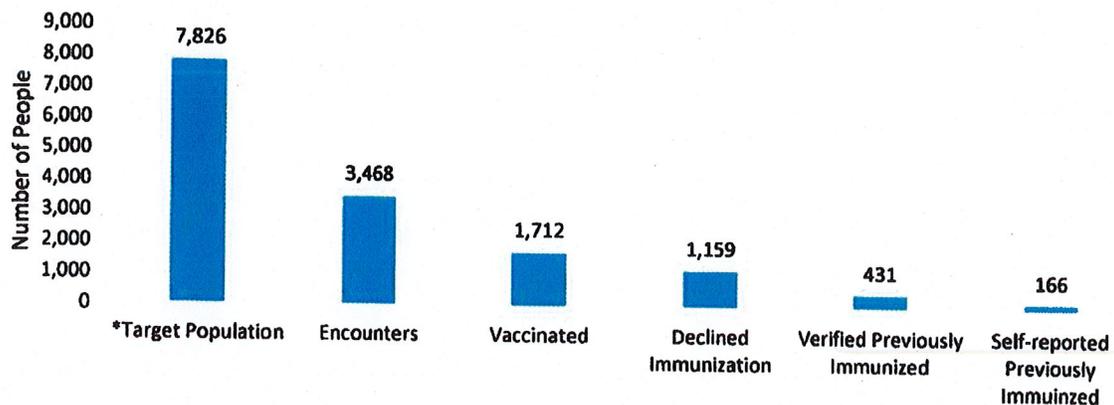
Health Department staff have been working with local hospitals, federally qualified health centers, behavioral health hospitals and providers, substance use and rehabilitation facilities, the Pima County Adult Detention Center, Pima County libraries, and other community providers to educate them about the current outbreak as well as inquire about potential partnerships to conduct education, outreach, and vaccination clinics. For example, Health Department staff are currently working with Banner-University Medicine Crisis Response Center, Palo Verde Behavioral Health, and Sonora Behavioral Health Hospital to assist them with setting up internal hepatitis A vaccinations clinics on site. Likewise, fostering strong relationships with behavioral health providers, methadone clinics, and substance use and rehabilitation facilities has allowed the Health Department to host numerous on site vaccination clinics. The Health Department also has been working closely with the Pima County Adult Detention Center. There have been 10 confirmed outbreak cases associated with the jail – one case was confirmed as internal and 9 cases were confirmed as external. As of April 9, 2019, 391 vaccines were administered to inmates through contact investigations and intake screening conducted by adult detention center contracted medical staff. This partnership has resulted in improved case reporting and the development of educational materials. To date, the Health Department has been working with 94 community partners to mitigate the spread of this outbreak as well as hosted a summit on March 13, 2019 for 60 community partners and health care providers to inform and engage them in the current outbreak.

Using these relationships, the Health Department has been able to host vaccination clinics at partner facilities, including behavioral health providers, substance use and rehabilitation facilities, transitional and sober living facilities, methadone clinics, needle exchanges, homeless shelters, feeding sites, libraries, and community events. Public health nurses have been coordinating, scheduling, and staffing these vaccination clinics. As a result, the Health Department has temporarily modified clinic schedules to make public health nurses available for these outreach opportunities. As of April 19, 2019, the Health Department has hosted 106 vaccination clinics. There have been a total of 3,468 encounters with people meeting the outbreak risk factors (Chart B). Out of these encounters, 1,712 people have received vaccinations, 1,159 people have declined vaccinations, and 597 people were previously immunized. This yields a 60% vaccination rate for Health Department efforts.

The Health Department is also exploring opportunities to conduct mobile and street outreach to the homeless population. On January 23, 2019, the Health Department partnered with the Tucson Pima Collaboration to End Homelessness to conduct education and outreach during the point in time homeless count. Over a few hour period, Health Department staff encountered 44 homeless people yielding 18 vaccinations. During additional street outreach conducted in February, March, and April 2019, Health Department staff encountered 118 homeless people yielding 46 vaccinations. Mobile and street outreach has proved more difficult than hosting vaccination clinics because of the transient nature of the population, the weather, and the time of day outreach is conducted. As the Health Department builds its mobile and street outreach, it will collaborate with the Tucson Pima Collaboration to End Homelessness to improve success rates.

Chart B: Hepatitis A Outbreak  
PCHD Outreach and Vaccination Clinics  
12/27/2018 - 4/19/2019  
(\*Homeless, IDU, Transitional/Sober Living, Jail)

Updated: 4/22/2019



### Conclusion

The Health Department has a number of operational objectives for mitigating the current outbreak. Focus will continue on recruiting and hosting vaccination clinics at new sites and coordinating with additional behavioral health providers and methadone clinics to schedule and host vaccination clinics. Simultaneously, staff will identify facilities where successful vaccination clinics were held to determine why they were successful and to schedule future outreach opportunities. There is also an opportunity to increase mobile and street outreach. Health Department staff will be consulting with members of the Tucson Pima Collaboration to End Homelessness to determine appropriate street outreach methods and to request

**C.H. Huckelberry, County Administrator**  
**Re: Hepatitis A Outbreak Situational Update**  
**April 23, 2019**

**assistance with outreach efforts. Additionally, the Health Department will continue to work with local hospitals, Banner-University Medicine Crisis Response Center, Palo Verde Behavioral Health, and Sonora Behavioral Health Hospital to assist them with setting up internal hepatitis A vaccination clinics on site. Health Department leadership will continue to provide regular updates on the status of the outbreak and our efforts to mitigate it.**