

A low-angle photograph of Philadelphia City Hall, showing its ornate facade and the prominent clock tower. The building is made of light-colored stone with many windows and decorative carvings. In the foreground, there are traffic lights and a street sign for "BRAND ST".

Hepatitis A Outbreak Response Update Report

JANUARY 23, 2020

Philadelphia Department of Public Health
Division of Disease Control

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Executive Summary

On August 1, 2019, the Philadelphia Department of Public Health (PDPH) declared a public health emergency in response to the rapid increase in hepatitis A virus infections among persons who use drugs and/or are experiencing homelessness. From January 2019-January 2020, there were 426 outbreak-related cases of hepatitis A in Philadelphia, including four deaths. Hepatitis A vaccination is the most effective mechanism for controlling person-to-person outbreaks, so PDPH implemented an extensive campaign to vaccinate persons at higher risk for getting hepatitis A. In 2019, PDPH provided 12,442 hepatitis A vaccinations through targeted outreach events and in collaboration with partner agencies. As vaccinations increased, cases decreased. However, while a downward trend was observed, critical vaccination and outreach activities, as well as community-based sanitation measures, must be sustained to prevent a resurgence of the disease. The strategies and partnerships established to respond to this specific outbreak, as described in this update report, will be instrumental in responding to future disease outbreaks that may affect persons who use drugs and/or are experiencing homelessness.

Hep A Outbreak: Key Statistics (2019)

- **426** outbreak-related cases
- **4** deaths
- **60%** of cases report drug use and/or homelessness
- **12,442** vaccinations provided through PDPH activities
- **204** vaccination outreach events
- Collaboration with over **30** community partners
- Nearly **7,000** hygiene kits distributed

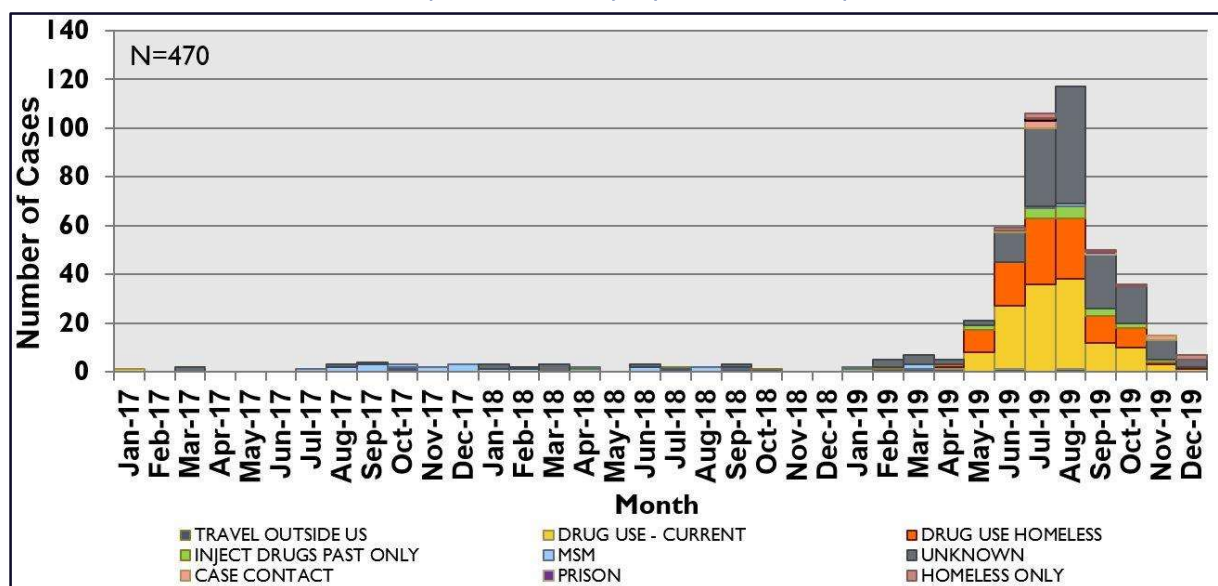
Background

Hepatitis A is a contagious liver disease, which causes fatigue, jaundice, stomach pain, and other symptoms. Primarily spread from person-to-person contact via the fecal-oral route, the virus can also be transmitted through the consumption of contaminated food or water. The incubation period for hepatitis A is on average 28 days, and infected persons can transmit the virus for up to two weeks before symptoms appear, two factors that make outbreak control difficult. While hepatitis A outbreaks in the United States have typically been associated with foodborne transmission, recent outbreaks have occurred among people who are experiencing homelessness and/or using drugs due to lack of access to sanitary facilities. Given the complex barriers that often inhibit these populations from accessing healthcare, providing vaccination opportunities to prevent and/or control outbreaks is very challenging.

The number of hepatitis A cases in Philadelphia has been increasing in recent years. While fewer than ten cases were reported annually from 2011 to 2016, the Philadelphia Department of Public Health (PDPH) detected a rise in hepatitis A infections in 2017, with 19 confirmed cases—more than double the previous year's total. Although this case count may not seem alarmingly high, the increase from prior years, as well as the evolving outbreaks in other states, alerted PDPH to the threat of a local outbreak and prompted the initiation of disease prevention activities. In 2018, the PDPH Division of Disease Control (DDC) began conducting targeted outreach to offer hepatitis A vaccinations to high-risk populations. These high-risk populations, as defined by the Centers for Disease Control and Prevention (CDC), include people who use drugs (injection or non-injection) and people experiencing unstable housing or homelessness. As shown in Figure 1, these two groups represent the majority of hepatitis A cases in Philadelphia (60%). Other risk groups include men who have sex with men (MSM) and people who are currently or were recently incarcerated. However, it should also be noted that 35% of cases have no identified risk factors, which may indicate broader community transmission.

Focusing vaccination efforts on high-risk populations has proven to be an effective disease control response in other jurisdictions, most notably San Diego, California, which experienced a large-scale hepatitis A outbreak in 2017. One dose of hepatitis A vaccine, which provides up to 95% seroprotection for up to 11 years, has been shown to control outbreaks. In an effort to prevent a local outbreak, PDPH began deploying street outreach teams to administer vaccine to high-risk and hard-to-reach populations, specifically in Kensington—the neighborhood at the epicenter of the opioid crisis—beginning in October 2018. While hundreds of doses of vaccine were administered during the six months prior to the outbreak, hepatitis A cases rapidly increased in May 2019 among these high-risk groups and continued to increase through August, as shown in Figure 1. From January 2019 to December 2019, there were 426 outbreak-related cases, including four deaths, in Philadelphia.

Figure 1. Confirmed Outbreak-Related Hepatitis A Cases by Exposure Risk Group



Declaration of Public Health Emergency

Despite early vaccination and outreach efforts, these measures were insufficient in preventing an outbreak. In order to generate public awareness, scale up PDPH's response, and galvanize the healthcare community, PDPH declared a public health emergency on August 1, 2019. With the infusion of additional resources following the declaration, PDPH was able to significantly expand vaccination capabilities, both through Department-led activities and in collaboration with partner agencies, specifically organizations that regularly interact with high-risk populations.

Outbreak Response Strategies

As cases began increasing in late spring 2019, PDPH implemented a three-pronged outbreak response strategy, including the following: 1) a targeted campaign to administer vaccine to high-risk populations; 2) enhanced sanitation measures in the highest-risk area; and 3) public messaging and educational outreach with partner agencies, healthcare providers, and the broader Philadelphia community.

Targeted Vaccination Campaign

Vaccination is the most effective method in preventing hepatitis A and controlling an outbreak. In summer 2019, PDPH scaled up street outreach in the greater Kensington area, where cases have been predominantly concentrated. In teams of three—one clinician and two support staff—PDPH offered hepatitis A vaccinations to anyone interested in highly trafficked areas, such as McPherson Square Park. In addition to these mobile street teams, PDPH collaborated with the Southeastern Pennsylvania Transportation Authority (SEPTA) to offer

vaccinations at Frankford and Arrott Stations in June 2019. Since August 2019 when the public health emergency was declared to December 2019, PDPH administered 3,448 hepatitis A vaccinations through over 200 outreach events (see Figure 2).

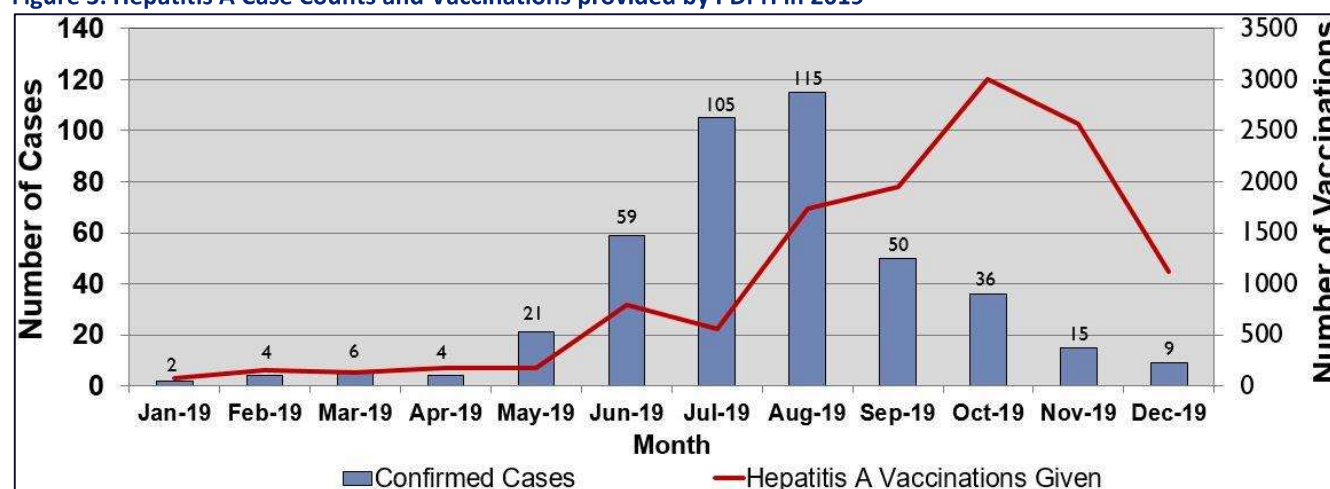
Figure 2. Hepatitis A Vaccinations via PDPH Outreach Events since the Public Health Emergency Declaration

Month	Number Of Events	Vaccinations Given
August	61	1,276
September	60	1,167
October	40	640
November	24	224
December	19	141
Total	204	3,448

To expand its reach and capacity, PDPH partnered with organizations that regularly interact with high-risk populations, such as Prevention Point Philadelphia, which hosted a PDPH contract nurse to administer vaccinations inside their drop-in center for several months. PDPH also partnered with other recovery and addiction services centers, as well as homeless shelters and soup kitchens, to provide on-site vaccination clinics for both clients and staff. PDPH worked with the Philadelphia Department of Prisons and six hospital emergency departments, which vaccinated inmates (4,310) and patients (3,000), respectively, using vaccine provided by PDPH between January 2019 and January 2020. The mobilization of emergency departments to provide hepatitis A vaccination to all patients at risk of acquiring infection was pivotal in reaching persons who often do not have a consistent medical provider and may only seek emergency care.

In addition to these activities, PDPH also responded to 57 hepatitis A cases that occurred in settings where the probability for transmission was high, such as restaurants and shelters. Post-exposure prophylaxis (PEP) with hepatitis A vaccine prevents infection with hepatitis A virus when administered within two weeks of exposure, so response time is critical. PDPH rapidly responded to each of these events by providing hepatitis A vaccination to any previously unvaccinated persons who may have been exposed. As hepatitis A vaccinations increased among the target population, hepatitis A infections decreased, as shown in Figure 3.

Figure 3. Hepatitis A Case Counts and Vaccinations provided by PDPH in 2019



Community-based Sanitation

Although vaccination is the most critical mechanism for controlling an outbreak, community-based sanitation and hygiene interventions may also help to curb person-to-person hepatitis A transmission. In conjunction

with the city's Resilience Project to combat the opioid crisis, PDPH supported the installation of hand-washing and sanitation stations. PDPH provided signage to promote proper hand-washing, as well as hand sanitizer dispensers for public spaces in the highest risk area. PDPH outreach teams also provided hygiene kits to high-risk individuals and over 30 city and community partner agencies that serve high-risk populations, including the Office of Homeless Services and the Department of Behavioral Health and Intellectual disAbility Services. Kit materials have included hand sanitizer, soap, antimicrobial body wipes, waste bags, and condoms, among other items, as well as wallet-sized pamphlets on hepatitis A prevention and opioid addiction resources. As of January 2020, nearly 7,000 kits were distributed.

Public Messaging and Education

PDPH pursued a variety of mediums for public messaging to ensure that relevant information about the outbreak and prevention measures was shared with healthcare providers, community-based organizations, and the broader community. This was achieved through a media campaign, consisting of press releases, prevention information on a billboard on I-95 and on a SEPTA bus and bus shelters, and consistent and active messaging through social media. Additionally, the healthcare community remained regularly engaged for the entirety of the outbreak through advisories issued via the Health Alert Network, PDPH's healthcare provider notification system, as well as weekly updates on the PDPH Health Information Portal (HIP) website, informational webinars, and in-person presentations at hospitals throughout the city. For community-based organizations that serve high-risk clients, printed materials on hepatitis A prevention were provided in both longer format health bulletins and easily disseminated palm cards.

Recommendations for Sustained Outbreak Control

Between August 2019 and January 2020, PDPH significantly expanded its efforts to control the hepatitis A outbreak in Philadelphia. However, given the higher prevalence of hepatitis A in the city and surrounding area, and in accordance with CDC recommendations, vaccination activities must be sustained to continue this decline and prevent subsequent outbreaks even after the current outbreak has been declared over. PDPH will remain proactive in providing vaccinations through collaboration with partner agencies. Likewise, healthcare providers, in both primary care and emergency department settings, will be encouraged to continue offering hepatitis A vaccine to all high-risk individuals. Additionally, to prevent future outbreaks, PDPH will continue to promote community-based sanitation measures in the highest-risk area. While the work to end the current hepatitis A outbreak remains underway, the public health strategies and partner networks that were established during this response provide a blueprint for preventing and responding to future disease outbreaks among these high-risk individuals, who are among the city's most vulnerable. As the city unifies to support the residents impacted by the opioid crisis, sustained investment in public health is vital to safeguard the community.

Figure 4. PDPH Hepatitis A Outbreak Response Timeline

