Hepatitis A in Philadelphia: Response to a public health emergency

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Philadelphia declares a public health emergency after surge of Hepatitis A

By Susan Scutti, CNN

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PUBLIC HEALTH EMERGENCY DECLARED IN PHILADELPHIA DUE TO HEPATITIS A OUTBREAK

Health Commissioner Declares Emergency for Outbreak of Hepatitis A Virus

PHILADELPHIA — Health Commissioner, Dr. Thomas Farley, declared that the ongoing outbreak of Hepatitis A in Philadelphia is a public health emergency and has directed health care providers and governmental and non-governmental agencies to help vaccinate those most at risk for the infection in order to stop the outbreak. As part of the Philadelphia Resilience Project, the City of Philadelphia will be expanding its own outreach to vaccinate homeless persons and others at greatest risk.

Hepatitis Type A is an infection of the liver caused by a virus that is spread by the fecal-oral route, either through personal contact or consumption of contaminated food or water. While most people with the infection recover without special treatment, the disease is particularly dangerous for older people and those with underlying liver disease. Those at the highest risk of contracting Hepatitis A include: people who use drugs, people experiencing homelessness, men who have sex with men, and people who are currently or were recently incarcerated.

There is a very effective vaccine against Hepatitis A, which is now given routinely to children, but most adults have not been vaccinated against the disease. Due to the vaccine, the number of cases of Hepatitis A reported to the Centers for Disease Control and Prevention in the U.S. fell to fewer than 2,000 cases per year. This was a 95% drop from before the vaccine was made readily available. However, in recent years, cities and states around the nation have seen outbreaks of the infection in homeless populations and opioid users. Hepatitis A outbreaks are currently being tracked by the Centers for Disease Control in 14 states, including Pennsylvania.

Philadelphia typically sees between two and six cases of Hepatitis A per year. Since January 2019, the Health Department has been notified of 194 cases, in response to a growing number of Hepatitis A cases, the Health Department has been working with nonprofit and health care organizations and City agencies to vaccinate those in at-risk populations. Since July 2016, the Health Department has coordinated the vaccination of 1,775 people considered at-risk, and reports that more than 12,439 total Hepatitis A vaccinations have been given in the city. Because these efforts have not been sufficient to end the outbreak, the Health Department is mobilizing with this declaration of emergency to vaccinate tens of thousands of additional at-risk folks.
States with Hepatitis A Outbreaks among at-risk Persons

- 29 states have publicly reported Hepatitis A outbreaks
  - PA joined this week
- Cases are being spread person to person and affecting at-risk groups:
  - People who use drugs (injection or non-injection)
  - People experiencing unstable housing or homelessness
  - Men who have sex with men (MSM)

Confirmed Hepatitis A Cases, Philadelphia, 2001–2019

Hepatitis A vaccine use expanded from routine vaccination of children in high incidence areas to all of the US

*Year to date
Confirmed outbreak Related Hep A Cases – exposure type, 2019

N=172
Hepatitis A, Confirmed Outbreak Related Cases by Zip Code, 2019 (N = 172)
## Confirmed Outbreak-Related Hepatitis A Cases, 2018-2019

<table>
<thead>
<tr>
<th></th>
<th>2018 (n=17) n (%)</th>
<th>2019 (n=172) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, median (range)</strong></td>
<td>39 (25-78)</td>
<td>36 (6-64)</td>
</tr>
<tr>
<td><strong>Male, n (%)</strong></td>
<td>13 (76)</td>
<td>125 (73)</td>
</tr>
<tr>
<td><strong>Hospitalized, n (%)</strong></td>
<td>14 (82)</td>
<td>130 (74)</td>
</tr>
<tr>
<td><strong>Death, n (%)</strong></td>
<td>0</td>
<td>1(&lt;1)*</td>
</tr>
<tr>
<td><strong>Epi-linked</strong></td>
<td>1 (5)</td>
<td>13 (8)**</td>
</tr>
<tr>
<td><strong>Congregate Setting</strong></td>
<td>1 (5)</td>
<td>25 (15)</td>
</tr>
</tbody>
</table>
Hepatitis Syndrome from Philadelphia Emergency Department 2016-2019

Time-series of the hepatitis visits by year

Date created: 23JUL2019
FOR INTERNAL USE ONLY

2016 2017 2018 2019
Hepatitis A

• Single-stranded RNA virus

• Survives in the environment → can contaminate food and water and concentrates in shellfish

• Fecal-oral or parenteral transmission

• Acid-resistant so can survive passage through stomach

• Replicates primarily in liver → excreted in bile to intestines then excreted through feces
Clinical Presentation

- Incubation period 15-50 days (mean 28 days)

- Wide range of symptoms
  - Asymptomatic
  - Subclinical: Asymptomatic with elevated transaminases
  - Clinically evident: Abrupt fever, malaise, nausea/abdominal pain, vomiting → dark urine, and/or jaundice

- Symptoms more likely in adults (70-95% symptomatic) than children (50-90% asymptomatic)
  - Jaundice rare in young children
  - Children may have diarrhea as part of prodrome

- Recovery can take several weeks but death uncommon (case fatality rate 0.1-0.7%)

Transmission

• Fecal excretion primary source of virus
  • In stool 14-21 days before and 8 days after jaundice
  • Longer shedding in infants and children

• Person-person via fecal-oral route most common mode of transmission
  • Young children with highest rates of infection and often source of infection for others

• Risk groups: international travelers, caregivers of adoptees, MSM, persons who use drugs, persons experiencing homelessness
Cornerstone of Prevention: Hepatitis A Vaccines

- 2 inactivated vaccines available in U.S. first licensed in 1996 for individuals >12 months or older

- Both vaccines highly immunogenic → within 4 weeks of 1st dose, 90-100% have protective antibody levels

- 1 dose is sufficient for outbreak prevention → booster dose helps confer long term protection
Vaccine Recommendations

• Routine administration to:
  • All children at age 12-23 months of age
  • Catch-up all unvaccinated children <19 years old
  • **Infants 6-11 months of age who are travelling internationally**
  • All individuals at increased risk of infection
    • Men who have sex with men (MSM)
    • Travel to endemic areas
    • People who use drugs
    • **Homelessness added as a risk factor in October 2018**
  • All individuals at increased risk for severe disease (chronic liver disease, receipt of clotting factor)
  • Any individual interested in obtaining immunity
Additional Prevention Strategies

• Standard precautions and hand hygiene
  • Hand washing reduces transmission risk
  • Soap and water or nonalcohol based sanitizers preferable

• Safe sex practices

• Avoid sharing needles and works
Response to a Public Health Emergency

Partnering with the Healthcare Community to bring Health Services to a Hard to Reach Population
Challenges to Outbreak Control

• Reaching at-risk persons for vaccination
• Vaccine supply
• Raising awareness
• Implementing improved sanitation practices in at-risk communities
Hepatitis A response: PDPH Activities

- Public Health Emergency Declaration: 8/1/19
- Hepatitis A vaccination: 2088 doses to date
  - 571 - Prisons
  - 636 – 2018-19 Street Outreach
  - 371 - Prevention Point
- Hepatitis A surveillance, investigation, and vaccination for close contacts of cases
- Community Education
- Provider Education
  - Health Advisories: Sign up at: https://hip.phila.gov/HealthAlerts
Adult Hepatitis A Vaccinations Reported into the Philadelphia Immunizations Registry (PhilaVax) 2019
San Diego County Hepatitis A Response

Outbreak-Associated Hepatitis A Cases & Vaccinations by Month, November 2016 through December 2018

Cases

Vaccinations

Prepared by County of San Diego, Health & Human Services Agency, Public Health Services, Epidemiology & Immunization Services, 2/4/19
### Adult HAV Vaccinations Registered
San Diego Immunizations Registry 3/10/17 through 9/5/18

<table>
<thead>
<tr>
<th>Vaccination Provider</th>
<th>Count*</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-exposure prophylaxis</td>
<td>1,015</td>
<td>0.5%</td>
</tr>
<tr>
<td>Jails</td>
<td>9,768</td>
<td>4.9%</td>
</tr>
<tr>
<td>Psychiatric Hospital</td>
<td>467</td>
<td>0.2%</td>
</tr>
<tr>
<td>Public Health Centers (IZ)</td>
<td>12,119</td>
<td>6.1%</td>
</tr>
<tr>
<td>Public Health Clinics (TB,STD)</td>
<td>1,626</td>
<td>0.8%</td>
</tr>
<tr>
<td>Field Events – Mobile Van</td>
<td>848</td>
<td>0.4%</td>
</tr>
<tr>
<td>Field Events – Foot Teams</td>
<td>5,787</td>
<td>2.9%</td>
</tr>
<tr>
<td>Field Events – POD/mass vaccination</td>
<td>26,521</td>
<td>13.3%</td>
</tr>
<tr>
<td><strong>Non-County</strong></td>
<td></td>
<td>29.1%</td>
</tr>
<tr>
<td>FQHC</td>
<td>28,843</td>
<td>14.5%</td>
</tr>
<tr>
<td>Healthcare systems (ED, hospitals, clinics)</td>
<td>94,025</td>
<td>47.2%</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>10,407</td>
<td>5.2%</td>
</tr>
<tr>
<td>Occupational health</td>
<td>7,800</td>
<td>3.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>199,226</td>
<td>100%</td>
</tr>
</tbody>
</table>
How Can We Work Together?

• **Vaccinate**: Offer vaccine to patients **most at-risk** for HAV infection or serious complications from HAV including:
  • People who use injection or non-injection drugs
  • People experiencing homelessness or unstable housing
  • People who are or were recently incarcerated
  • Men who have sex with men (MSM)
  • People with chronic liver disease (cirrhosis, hepatitis b, and hepatitis c)
  • People with HIV

• Other groups who may be at increased risk:
  • Healthcare workers who provide direct care to at-risk groups
  • Community service providers (i.e. shelter providers) who directly with at-risk groups
How Can We Work Together?

• **Recommend HAV control and prevention measures for cases:**
  • Offer HAV vaccine to susceptible, close contacts of cases (e.g., household members, sex partners, persons who shared drugs with the case) Guidance: [https://www.cdc.gov/mmwr/volumes/67/wr/mm6743a5.htm](https://www.cdc.gov/mmwr/volumes/67/wr/mm6743a5.htm).
  • Advise HAV cases to take other steps to prevent transmission, such as hand washing, avoiding food preparation for others and harm reduction practices while contagious (1 week after jaundice onset or if no jaundice, 2 weeks after illness onset).

• **Help raise awareness**
  • Post materials
  • Counsel at-risk patients about prevention measures

• **Keep reporting** cases
People who are homeless and people who use drugs are at risk of Hepatitis A infection.

**Hepatitis A**

- A serious liver disease that can put you in the hospital
- Easily spreads from person to person
- Spreads through poop from sick people

Signs of Hepatitis A

- Extreme tiredness and fever
- Stomach pain, vomiting, diarrhea
- Jaundice (yellow skin and eyes)

**How it spreads**

- Sharing needles or works
- Sex with someone who has it
- Germ from poop (even in small amounts you can’t see)
- Contaminated food

**How to protect yourself**

- Get the Hepatitis A shot (vaccine) at a hospital or clinic
- Wash your hands with soap and water, or hand sanitizer, after going to the bathroom
- Use condoms

**Need testing, treatment, or vaccination?**

Health Center 6
321 W. Girard Avenue
Philadelphia, PA 19123
215-685-3800

Prevention Point
2913-2915 Kensington Avenue
Philadelphia, PA 19134
215-634-5275

Call the Division of Disease Control at 215-685-6740 for additional information

November 2018
Resources: Health Information Portal
(https://hip.phila.gov)

• Philadelphia Department of Public Health website
• Houses current information for providers about:
  • How to report diseases
  • Disease surveillance
  • Disease Control guidance (e.g., influenza, travel health)
  • Emergency response
  • Health Alert Network messaging
    • Sign-up for the Health Alert Network: enrollment forms or
      https://hip.phila.gov/HealthAlerts/SignUpHealthAlerts