Hepatitis A Outbreak In Persons Experiencing Homelessness and Substance Use Disorder

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Hepatitis A background

- Liver disease caused by hepatitis A virus (HAV)
- Symptoms may include fever, fatigue, loss of appetite, stomach pain, nausea, diarrhea and jaundice
  - Ranges from mild to severe disease; more severe in individuals with pre-existing liver disease
- Acute infection only
- Spread via fecal-oral route
- Average incubation period is 28 days (range 15-50 days)
Hepatitis A vaccine

- Two single-antigen and one combination vaccine (all inactivated) currently licensed in US
- Advisory Committee on Immunization Practices (ACIP) recommends vaccine for:
  - All children at age 1 year,
  - Persons who are at increased risk for infection,
  - Persons who are at increased risk for complications from hepatitis A, and
  - Any person wishing to obtain immunity (protection).
- Single-antigen vaccine (and IG) also used for post-exposure prophylaxis (PEP), within two weeks of exposure
Hepatitis A in Massachusetts

• Each case investigated by local board of health (LBOH) and MDPH
  – Demographic, clinical, and risk data collected
  – Vaccination recommended for close contacts

• Typically about 50 confirmed reported cases per year
  – At least 25% associated with international travel

• Males and females affected equally

• 50% hospitalization rate
Recent outbreaks

- Since 2017, CDC has been tracking multiple outbreaks of HAV infection in other states
  - Affecting people who use drugs and/or people who are homeless
  - Person-to-person spread
  - Certain states with case counts >1000

Outbreak in Massachusetts

- Since April 2018, 168 cases reported to MDPH in individuals experiencing homelessness and/or substance use disorder

Cases occurring in November Week 2 and later excluded. Data for more recent weeks may be incomplete due to diagnosis and reporting delays.

Data source: MDPH Bureau of Infectious Disease and Laboratory Sciences. Data as of 11/14/2018 and subject to change.
Outbreak cases (N= 168)

• Complications
  – Hospitalization rate: 84%
  – Mortality rate: 2%

• Demographics
  – Gender: 58% male
  – Age: Range 21-78, Median 32
  – Race/ethnicity: predominantly white non-Hispanic

Data as of 11/14/2018 and subject to change.
Outbreak cases (N= 168)

• Risks:
  – Homelessness/unstable housing: 55%
  – Injection drug use: 70%
  – Any illicit drug use: 85%
  – Current or recent incarceration: 9%

Data as of 11/14/2018 and subject to change.
Outbreak cases (N= 168)

- Affected counties
  - Barnstable: 3%
  - Bristol: 7%
  - Essex: 8%
  - Hampden: 2%
  - Middlesex: 10%
  - Norfolk: 5%
  - Plymouth: 13%
  - Suffolk: 38%
  - Worcester: 14%

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Outbreak cases (N= 168)

- Coinfections
  - Confirmed chronic hepatitis C infection: 61%
  - HIV infection: 5%

- Genotyping/sequencing analysis (CDC) to date
  - Predominantly genotype IIIA

Data as of 11/14/2018 and subject to change.
MDPH response

• Case investigations!
  – Infectious period is 2 weeks prior to symptom onset through 1 week after symptom onset
  – PEP recommended for close contacts:
    • Household members
    • Sexual contacts
    • Anyone sharing food, beverages, or eating utensils with case
    • Special considerations for settings such as correctional facilities, drug treatment facilities, and homeless shelters

• 9 cases in foodhandlers since start of outbreak
MDPH response

• Communications recommending vaccination of at-risk population (at least one dose of single-antigen vaccine) and other prevention measures:
  – Clinical advisory August 2 (with Boston Public Health Commission)
  – Clinical advisory August 22
  – Public health alert September 24
MDPH response

- Outreach to LBOHs, homeless shelters, community health centers, syringe services programs, jails, emergency departments, and other agencies serving at-risk populations
- Provision of state & CDC supplied HAV vaccine
- Development of communications materials
Questions?

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• Outbreak web page: www.mass.gov/info-details/hepatitis-a-outbreak-2018