

# Acute Hepatitis A Outbreak

**Jonathan Ballard MD, MPH, MPhil**

State Epidemiologist

Division Director, Division of Epidemiology and Health Planning

Kentucky Department for Public Health

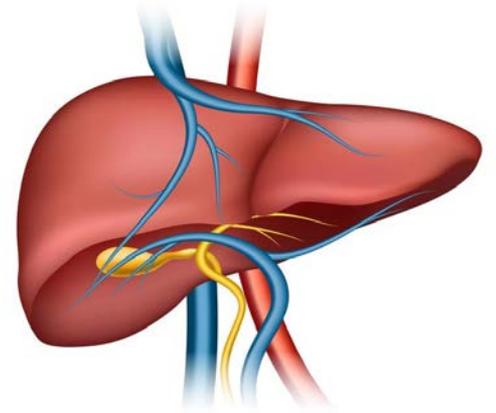


**Kentucky Public Health**

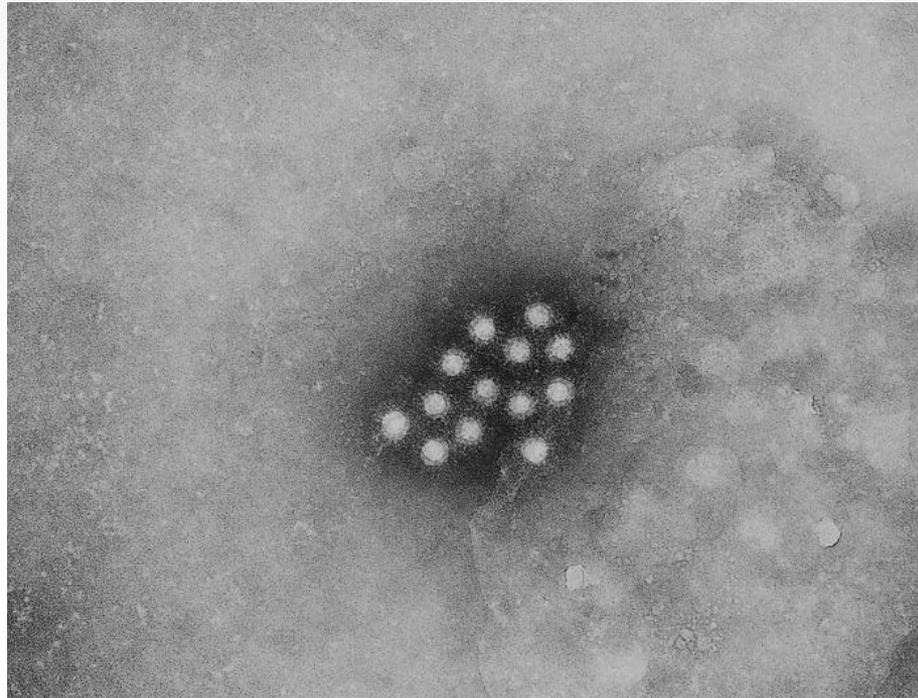
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# Hepatitis A

- Vaccine preventable, communicable disease of the liver
- Caused by hepatitis A virus (HAV)
- Fecal-oral transmission
- No chronic infection
- Usually resolves within 2 months of infection



# Hepatitis A Virus



A transmission electron micrograph of a small cluster of hepatitis A virus ribonucleic acid (RNA).

Adapted from CDC/Betty Partin, 1976, retrieved from <https://phil.cdc.gov>

# Signs and Symptoms

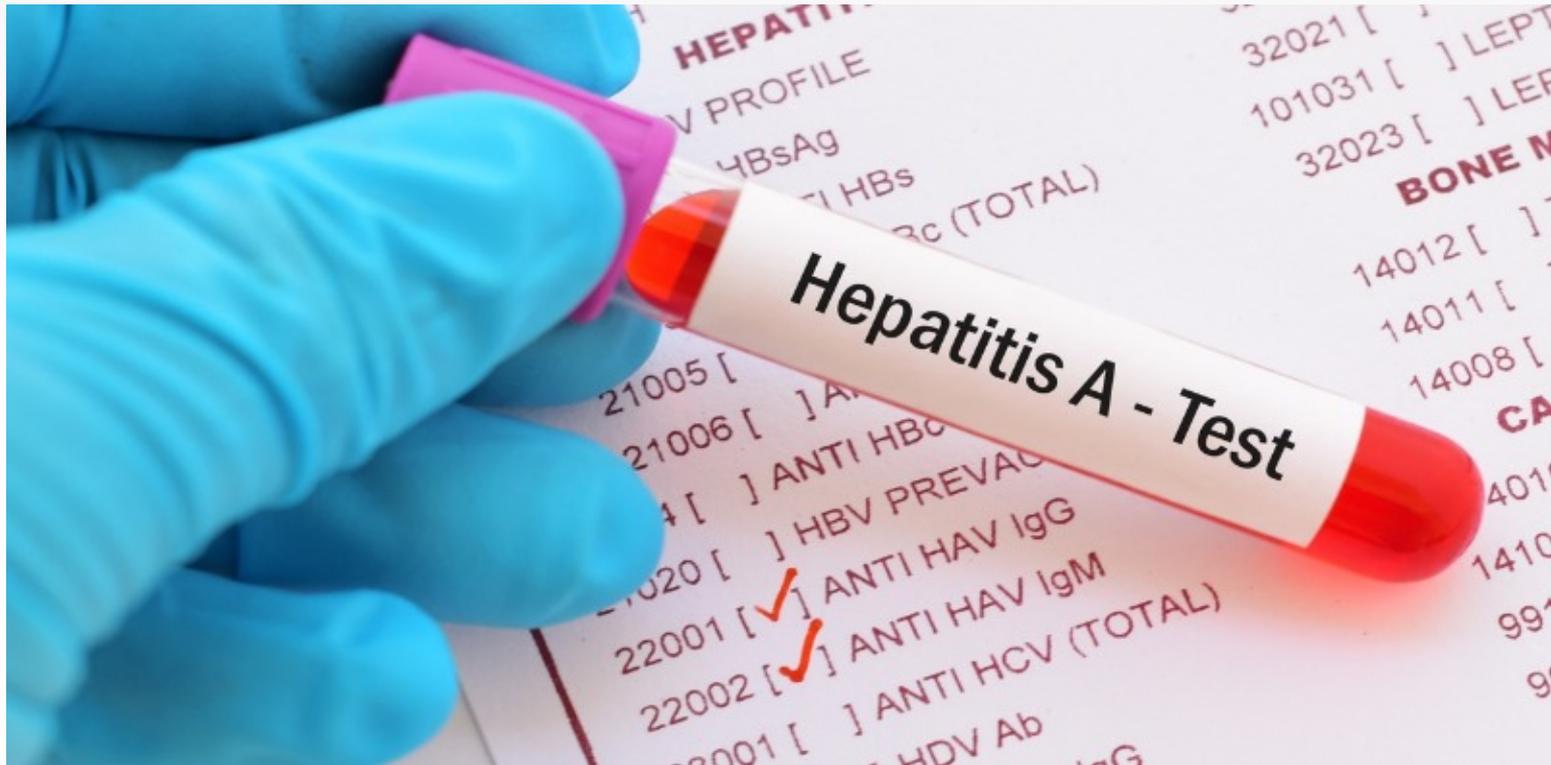
Discrete onset of:

- Fatigue/Malaise
- Decreased appetite
- Nausea/Vomiting
- Abdominal Pain
- Jaundice
- Dark urine
- Pale stools
- Fever



\*May have several symptoms or very few.

# Diagnosis and Treatment





- **Diagnosis of Hepatitis A**

- › Based on symptoms and lab results
- › IgM antibody to hepatitis A virus  
(IgM anti-HAV)
- › Specimens are requested to the state lab for confirmation during the current outbreak
- › Specimens are sent to CDC for special genetic testing of the RNA in the virus to determine if cases are linked together.



- **Treatment of Hepatitis A**

- › Supportive Treatment
- › Rest, adequate nutrition, fluids
- › Avoid alcohol and medications or supplements that may damage the liver
- › Majority of cases require hospitalization
- › Antibodies are developed and offer life-long protection against the disease

# How is HAV Transmitted?



- **Person-to-person transmission through the fecal-oral route**
  - › Primary means of transmission in the US
  - › Usually from close contact with an infected household member or sex partner
  - › Lack of thorough handwashing after using the bathroom or changing a diaper
  - › Accidental ingestion of fecal bacteria



- **May Occur Through Contaminated Food**

- › More likely to occur in countries where hepatitis A virus is endemic
- › May be transmitted through uncooked food if contaminated with hepatitis A virus
- › Cooked foods can also transmit HAV if not heated to >185 degrees for one minute
- › Waterborne outbreaks are infrequent in countries with well-maintained sanitation and water supplies

# Who Is at Risk?

- Persons who use illicit drugs\*
- Persons who do not have access to adequate hygiene facilities (i.e.: homelessness)\*
- Men who have sex with men (MSM)\*
- Persons with chronic liver disease
- Travelers to countries with high or intermediate endemicity of HAV infection
- Persons with close contact with an international adoptee during first 60 days of arrival to US



\*Associated with KY17-089

# Infectious Period

- Average incubation is 28 days (range:15-50 days)
- Infected individuals can transmit the virus to others for up to two weeks *before* their own symptoms appear
- Cases remain contagious until 7 days after illness onset



# 2017-18 Acute Hepatitis A Outbreaks

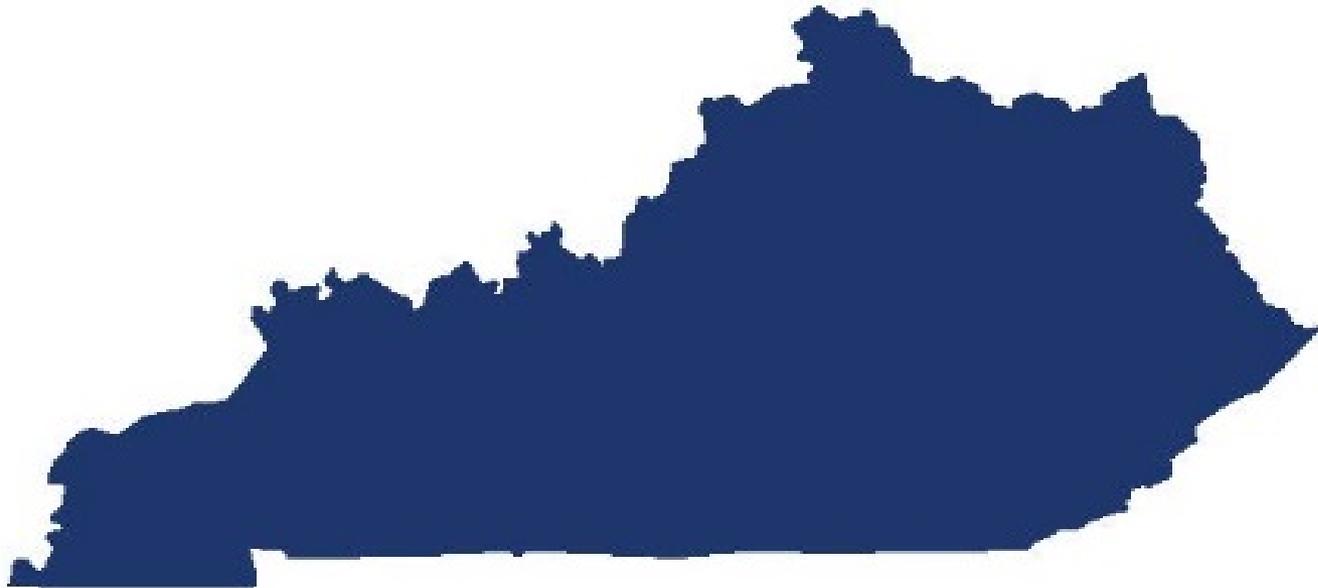
- [California](#)
- Case Count: 700
- Hospitalizations: 458
- Deaths: 21
  
- [Michigan](#)
- Case Count: 751
- Hospitalizations: 609
- Deaths: 25
  
- [Utah](#)
- Case Count: 176
- Hospitalizations: 86
- Deaths: 0

Source: CDC 2017 – Outbreaks of hepatitis A in multiple states among people who are homeless and people who use drugs.

<https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>

Accessed on 3/14/18

**KY17-089**



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- 
- Uptick in cases beginning August 1, 2017
  - Statewide outbreak declared November 2017
  - Cases primarily among homeless or persons who use drugs

# Current Counts

- As of **March 14, 2018:**
- Total number of outbreak associated cases: **173**
- Hospitalizations: **123**
- Deaths: **1**
- Cases who report homelessness: **49**
- Cases who report drug use: **113**
- Cases who report homelessness *and* drug use: **36**
- Cases without risk factors identified: **39**
- Cases linked to CA and UT by viral sequencing: **41**



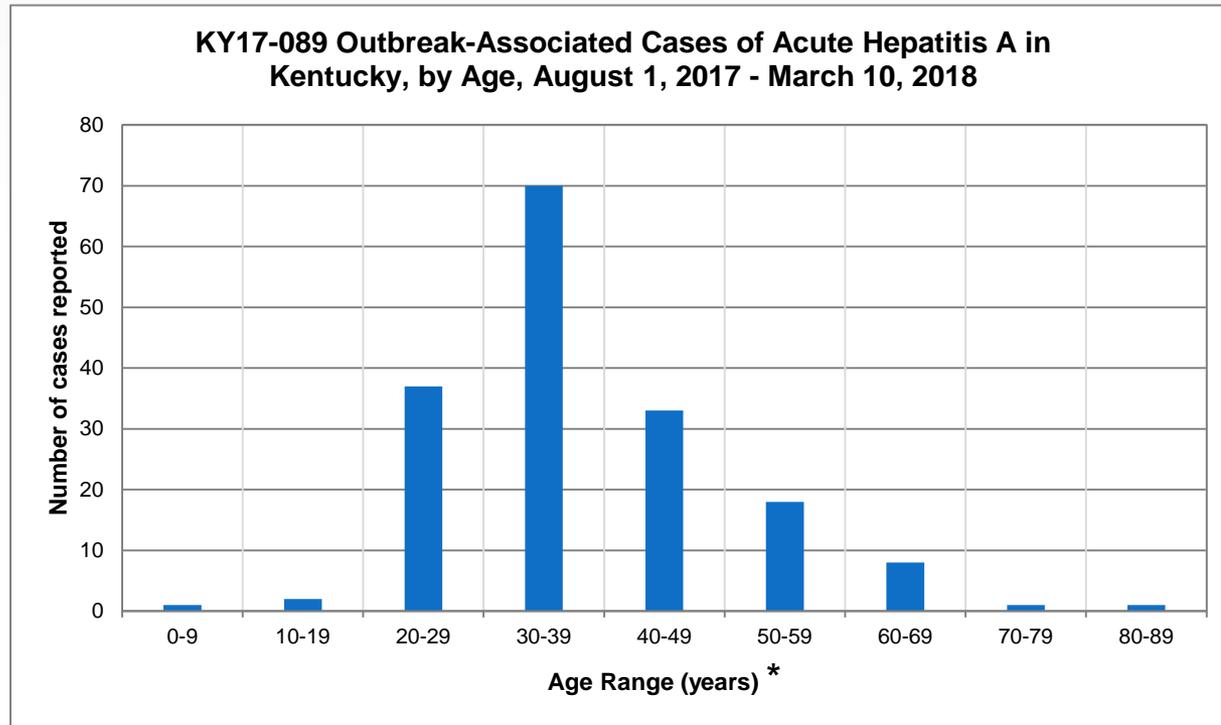
# Current Counts

- As of **March 14, 2018:**
- Cases identified in County Detention Centers: **5**
- Cases in Substance Use Treatment Facilities or Transitional Housing Facilities: **13**

# Cases by Age

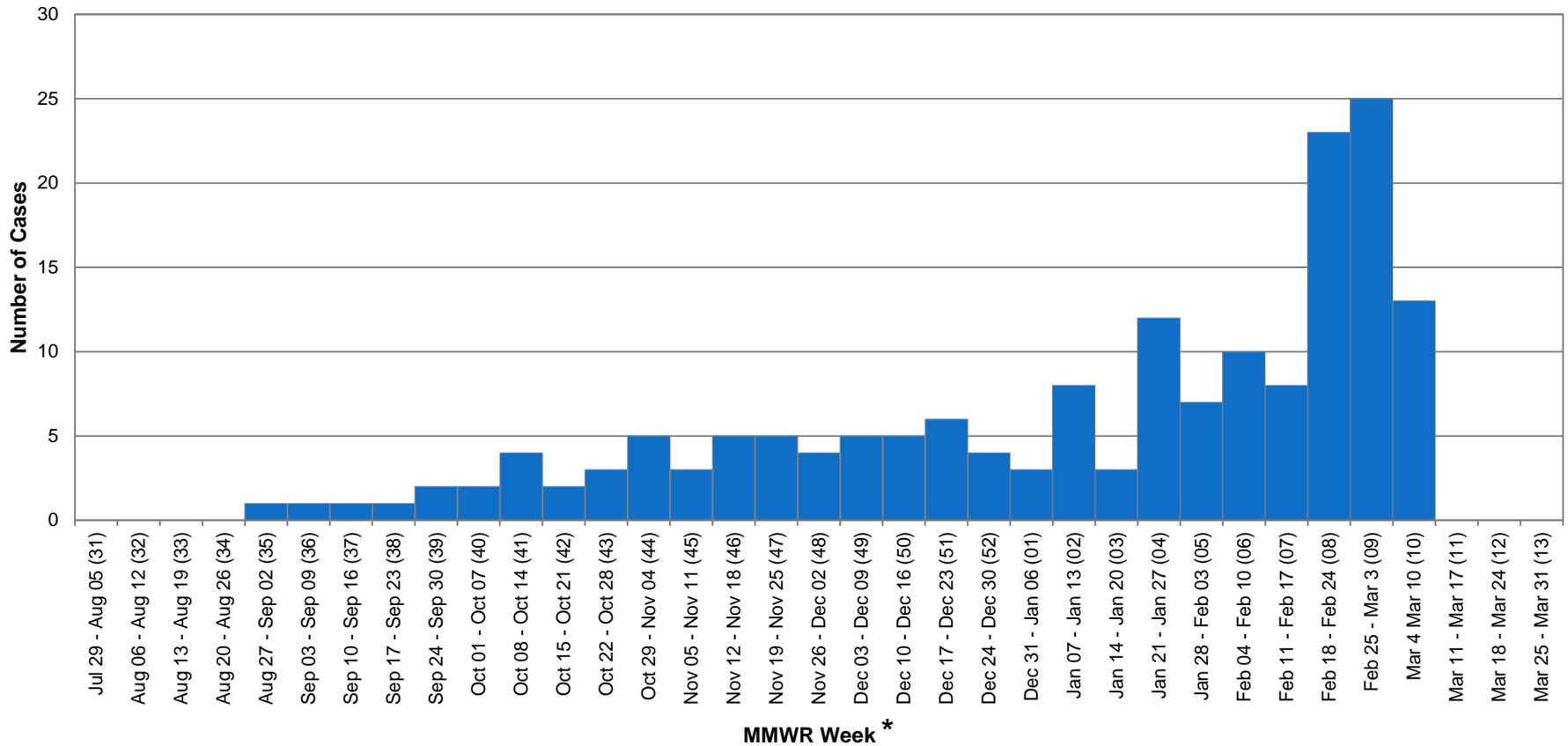
## Outbreak-Associated Cases by Age

\* The mean age of cases is 38.2 years, and the median age is 36.0 years.



# Epidemic-curve (Epi-Curve) of Outbreak-Associated Cases

KY17-089 Epi-Curve of Outbreak-Associated Cases by MMWR Week, August 1, 2017 - March 10, 2018



# Acute Hepatitis A Outbreak Response

- Partner with Louisville Metro Department of Public Health and Wellness (LMPHW) for response in Jefferson Co.
- Enhanced Surveillance and Supplemental Questionnaires
- Activation of the State Health Operations Center to coordinate response
- Continual submission of updates to state vaccination plan to request allocation adult Hep A vaccine (317 funded vaccine) for high risk populations
- Communications outreach to at risk population
- Provided written materials to local health departments and other partners about Clinical Advisories and Health Alerts.

# Vaccinations Requests to CDC for Local Health Departments as of 3/14/18

- Statewide: 8,200 Vaccines  
\$344,708.90
- Louisville: 7,620 Vaccines  
\$327,068.20

# Acute Hepatitis A Outbreak Response

- Communication with Hospitals
- Enhanced Laboratory Testing
- Daily Hepatitis A Outbreak Meetings at KDPH
- Weekly SHOC meetings
- Conference Calls with affected states
- Weekly Meetings with CDC Division of Viral Hepatitis
- Communication with high risk populations in multiple formats

# Vaccination Recommendations

- All Children 1-18 per immunization schedule  
School entry requirement starting 7/1/2018 per  
**902 KAR 2:060**
- All High Risk Individuals
  - Men who have sex with men
  - Drug Use (Injection and Non-Injection Drug Use)
  - Homeless
  - Persons traveling to countries with high rates of hepatitis A
  - Persons with Chronic liver disease
- Exposed persons to someone with known Acute Hepatitis A are also recommended to receive Post-Exposure Prophylaxis (PEP)
  - Age-appropriate hepatitis A vaccination and immune globulin (IG)



**Kentucky Department for Public Health  
Division of Epidemiology and Health  
Planning**

**275 East Main Street HS2E-A  
Frankfort, KY 40621**

**Telephone: 502-564-3261**

**Secure Fax: 502-696-3803**