Kentucky’s Hepatitis A (HAV) Outbreak
Public Health Nurse ITV
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Dr. Jeffrey D. Howard, Commissioner
HAV Outbreak Epidemiology Updates

- Nationwide outbreak began August 2016
  - Michigan
  - Mainly Detroit
- San Diego, CA and Salt Lake City, UT next
  - Mostly urban
- Kentucky outbreak begins August 2017
  - Previous yearly average = 20 cases/year
  - 27 HAV cases by November, 2017
  - Outbreak declared November 22, 2017
  - Primarily Louisville until March, 2018
  - Vigorous spread to rural, drug-using population across state after that
National Picture as of 8/9/2019

- Outbreak has now reached 29 states
- 23,978 cases
- 14,330 (60%) hospitalizations
- 236 deaths
- Only two state have declared outbreak over – CA and UT
KY Outbreak Statistics (through 8/3/2019)

• Total Cases: 4,837
  • 2017: 59
  • 2018: Approximately 3,500
  • 2019: Approximately 1,278
  • New cases this week: 13

• Number of counties with cases: 113 (94% of KY counties)

• Hospitalizations: 2,340 (48%)

• Deaths: 60 (1.2%)

• Median Age: 36 years, Range: 0-88

• HAV genotype testing
  • 613 Genotype IB
    • Most CA Cluster A
## KY HAV Outbreak Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Number of Cases Reporting Risk Factor (n=3904)*</th>
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</thead>
<tbody>
<tr>
<td>Homelessness + No/Unk Illicit Drug Use</td>
<td>57 (1.5%)</td>
</tr>
<tr>
<td>Illicit Drug Use + No/Unk Homelessness</td>
<td>2801 (72%)</td>
</tr>
<tr>
<td>Homelessness + Illicit drug use</td>
<td>303 (7.8%)</td>
</tr>
<tr>
<td>No Outbreak-Related Risk Factors</td>
<td>743 (19%)</td>
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</tbody>
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* Risk factor information is unavailable for 933 (19.3%) of all outbreak-associated cases.
* MMWR weeks are based on date of specimen collection.
Kentucky – A Tale of Two Outbreaks

• Louisville outbreak
  • Began August, 2017
  • Identified October, 2017
  • Outbreak declared November, 2017
  • Experienced vast majority of cases until March 2018
  • Very low incidence by November, 2018 (only 16 cases since early Nov.)
  • Will most likely still experience cases due to statewide influence
  • But duration is closer to 1 year 3 months

• Statewide spread
  • Most early cases in other counties linked back to Louisville
    • Prisoner transfers out of Louisville
    • Substance abuse treatment programs referrals out of Louisville
  • Increased incidence per county more widespread around March 2018
  • Currently about a year into this phase
KY17-089 Outbreak-Associated Acute Hepatitis A Cases, by Date of Specimen Collection, August 1, 2017 to August 3, 2019 *

Number of Cases

Jefferson
Non-Jefferson

MMWR Week
Kentucky in the National HAV Picture

- Kentucky first to experience rapid spread in rural areas
  - Primarily due to prevalence of drug-use in rural areas
  - Appalachian region hardest hit – WV, OH experienced same
  - Kentucky a “home-rule” state (LHD’s independent)
    - First to deal with widespread response in this environment
  - KY faced steep learning curve to respond to the HAV outbreak in this setting

- Does Kentucky have the worst HAV outbreak nationally?
  - Yes, in raw numbers per state – 4,837 to date
  - No, in incidence (cases per population)
    - Kentucky – 108/100,000
    - West Virginia – 142/100,000 (2,534 cases)
  - No, in mortality rate (# deaths/# cases identified)
    - Kentucky – 1% mortality (60/4837)
    - Michigan – 3% mortality (28/918)
    - San Diego – 3% mortality (21/708)
Response Strategy Progression

- Louisville – ICS, funding, brainstorm strategies
- The rest of Kentucky
  - 1st strategy – Guidance to clinicians and local health departments
    - Drug users and homeless
    - Identify cases through appropriate testing
    - Identify best targets for vaccination locally
  - 2nd strategy – tiered funding
    - 4 Tiers
    - Based on incident cases first
    - Based on cases and ability to reach at-risk population
    - Finally based on projections of need and ability to reach at-risk population
  - 3rd strategy – Regional meetings
    - State meets with local health departments regionally
    - Sharing of best practices and strategies between counties
    - Focus on breaking down barriers to get vaccine to at-risk
  - Vaccination Strike Team
Primary Response Targeting

- Going to the at-risk people:
  - Hospital Emergency Departments
  - Correctional facilities (state and county)
  - Syringe services programs
  - Substance abuse treatment facilities (residential and outpatient)
  - Homeless shelters
  - Behavioral health facilities
All Doses of Adult Hepatitis A Vaccine Administered and Reported to the Statewide Immunization Registry (KYIR)
RedCap Survey of LHDs
Ongoing Response Needs

• Outbreak continuing and flaring up in places

• What can we do to end the outbreak?
  • Identify pockets of risk
    • Requires:
      • Identification of all cases
      • Thorough case investigation
  • Continue to and increase vaccination of at-risk populations
  • Institute best practices of identification and vaccination of these populations
    • Hospital ED’s serve both needs:
      • Identifying cases so PH can intervene
      • Identifying at-risk individuals to vaccinate
Emphasis on Hospital ED’s

• Webinar 8/14/19 asking for collaboration with Public Health:
  • Encourage use of data collection tool for potential cases
    • Before they are lost to follow-up
    • To prevent further cases
    • To identify risk groups to vaccinate
  • Encourage hospital ED’s to vaccinate at-risk individuals
    • Drug users are at increased risk for hospitalization and death due to HAV infection
    • Vaccine administration of those at-risk reduces transmission in the population
    • Many hospital ED’s have successfully implemented vaccination
    • Long-term goal should be to implement HAV vaccination for those at risk
      • Not just during outbreak, but ongoing
    • Collaboration with LHD’s recommended
When will the Outbreak be Declared Over?

- No indigenous cases for 2 incubation periods after last outbreak-associated case
  - 100 Days after last case transmitted in-state
  - Must be shown to be genetically linked to outbreak
- Imported cases will not count toward outbreak
- May be a “new normal” or baseline
Thank you!

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