

# ACUTE SEVERE HEPATITIS IN YOUNG CHILDREN Call for Cases

Date: April 22, 2022

Public Health Message Type: 
Alert Advisory Update Information

**Intended Audience:**  $\boxtimes$  All public health partners  $\boxtimes$  Healthcare providers  $\boxtimes$  Infection preventionists  $\boxtimes$  Local health departments  $\boxtimes$  Schools/childcare centers  $\square$  ACOs

 $\Box$  Animal health professionals  $\Box$  Other:

## Key Points or Updates:

- (1) CDC is investigating nine cases of severe hepatitis of unknown cause in otherwise healthy children in Alabama. These cases are potentially linked to adenovirus type 41, although the cause is not yet known. Multiple cases are also under investigation in several western European countries.
- (2) The New Jersey Department of Health (NJDOH) Communicable Disease Service (CDS) is working with CDC to ascertain if similar illnesses have been detected in New Jersey.

#### **Action Items:**

- 1. In addition to workup for common causes of hepatitis (viral testing for hepatitis A,B,C,E), healthcare providers should consider testing for adenovirus using NAAT (e.g. PCR) of respiratory specimens, blood, stool, and rectal swabs.
- 2. NJDOH requests that healthcare providers report suspected cases of hepatitis of unknown etiology to NJDOH, specifically:
  - a. Children <10 years of age with elevated aspartate aminotransferase (AST) or alanine aminotransferase (ALT) (>500 U/L) who have an unknown etiology for their hepatitis (with or without any adenovirus testing results, independent of the results) since October 1, 2021.
- 3. Cases should be reported to NJDOH via a secure online portal: <u>http://healthsurveys.nj.gov/NoviSurvey/n/zz36l.aspx</u>
- 4. NJDOH will help coordinate additional testing for individuals who meet the above case definition and test positive for adenovirus.

# **Contact Information:**

- Reed Magleby, MD at <a href="mailto:reed.magleby@doh.nj.gov">reed.magleby@doh.nj.gov</a> , or
- The Communicable Disease Service at (609) 826-5964 during regular business hours

#### **References and Resources:**

• https://emergency.cdc.gov/han/2022/han00462.asp Apr 21, 2022

- <u>https://www.ecdc.europa.eu/en/news-events/update-hepatitis-unknown-origin-children</u> Apr 19, 2022
- https://www.alabamapublichealth.gov/blog/2022/04/nr15.html Apr 15, 2022
- https://www.nj.gov/health/cd/topics/hepatitis\_viral.shtml
- NJDOH Reporting Portal: http://healthsurveys.nj.gov/NoviSurvey/n/zz36l.aspx
- https://www.cdc.gov/adenovirus/about/prevention-treatment.html

# Background:

The Centers for Disease Control and Prevention (CDC) and the Alabama Department of Public Health are investigating nine cases of severe acute hepatitis of unknown cause in otherwise healthy young children in Alabama. These nine cases occurred since October 2021 and ranged from 1-6 years in age. The children presented with symptoms of gastrointestinal illness and varying degrees of liver injury, with two requiring liver transplantation. None of the cases were found to be infected with hepatitis A, B, C, or E, and all cases were subsequently found to be infected with adenovirus. None of the children had underlying health conditions of note and none had COVID-19.

In addition, the European Centre for Disease Prevention and Control (ECDC) is investigating reports of acute hepatitis of unknown cause in the United Kingdom (where approximately 74 cases are currently under investigation), Denmark, Ireland, the Netherlands and Spain. Of 11 cases reported in Scotland for which detailed testing results are available, five tested positive for adenovirus.

Adenoviruses are DNA viruses that spread by close personal contact, respiratory droplets, and contact with high-touch surfaces. Adenoviruses most commonly cause respiratory illnesses that can range from common cold to pneumonia, croup and bronchitis. Depending on the type they can also cause gastroenteritis, conjunctivitis, cystitis or less commonly neurological disease. There is no specific treatment for adenovirus or. Adenovirus 41 can cause acute gastroenteritis in children, but rarely causes severe disease except for among those with weakened immune symptoms. Hepatitis is rare among otherwise healthy children who are infected with any type of adenovirus.

# **Case Reporting and Testing:**

# Case Definition:

Children <10 years of age with elevated aspartate aminotransferase (AST) or alanine aminotransferase (ALT) (>500 U/L) who have an unknown etiology for their hepatitis (with or without any adenovirus testing results, independent of the results) since October 1, 2021.

Providers who encounter any individuals who meet the above case definition should report these cases to NJDOH via secure online portal: <u>http://healthsurveys.nj.gov/NoviSurvey/n/zz36l.aspx</u>

In addition to workup for common causes of hepatitis (viral testing for hepatitis A,B,C,E) providers should consider testing for adenovirus using NAAT (e.g. PCR) of blood, stool, rectal swab, and/or respiratory specimens. Some anecdotal reports suggest testing whole blood by PCR may be more sensitive than testing plasma, therefore testing of whole blood, if available, should be considered in those without an etiology of hepatitis who tested negative for adenovirus in plasma samples. Providers with questions about laboratory testing for adenovirus may contact NJDOH CDS 609-826-5964 during

business hours. NJDOH will help coordinate additional testing for individuals who test positive for adenovirus.

## **Preventive Measures:**

Children who are sick with gastrointestinal illness should:

- Stay home
- Cough and sneeze into a tissue or upper shirt sleeve, not their hands.
- Avoid sharing cups and eating utensils with others.
- Refrain from kissing others.
- Wash hands often with soap and water for at least 20 seconds, especially after using the bathroom.

Frequent handwashing is especially important in childcare settings and healthcare facilities. Additionally, adenoviruses are resistant to many common disinfectants and can remain infectious for long periods on environmental surfaces and medical instruments. To prevent spread of adenoviruses EPA-registered disinfectants effective at killing adenoviruses and compatible with the surfaces and equipment should be used.