

April 29, 2022

Children with Acute Hepatitis of Unknown Etiology – Reporting and Recommendations for Adenovirus Testing

Summary

The Tennessee Department of Health (TDH) is issuing this Health Alert Network (HAN) Health Advisory to 1) alert clinicians and laboratories regarding an increase in pediatric hepatitis of unknown origin with adenovirus as the possible etiology, 2) request reporting of cases to TDH, and 3) provide guidance to clinical laboratories. Clinicians and laboratories who encounter pediatric patients with hepatitis of unknown origin, presenting with gastrointestinal illness with jaundice, particularly those younger than 10 years should:

- Consider testing for adenovirus in respiratory specimens, stool or rectal swabs, and blood. [Reports from the field](#) indicate that NAAT (e.g. PCR) testing is preferable, and testing whole blood is more sensitive than testing plasma. Testing for hepatitis A, hepatitis B, hepatitis C, and liver function are also recommended.
- Adenovirus whole blood testing may be available at some laboratories (ex. Quest, ARUP).
- Clinical laboratories are requested to hold specimens that meet the case criteria below until consulting with TDH. A routing process for specimens to be sent to specific labs that offer adenovirus testing (detection and typing) is in development. This includes respiratory specimens, stool or rectal swabs, and whole blood collected in EDTA tubes that remain after recommended testing is complete. Respiratory specimens, stool and rectal swabs can be frozen (-70°C ideally, but if not possible then -20°C) and blood should be refrigerated. Detailed guidance regarding adenovirus testing options will be forthcoming.

TDH is requesting reports of patients who meet the following criteria:

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

Please report patients to TDH meeting this case description via [REDCap survey](#). TDH will report to CDC.

Background

At least [169 cases of acute hepatitis](#) in children with unknown origin have been reported in the UK (114), Spain (13), Israel (12), the US (9), Denmark (6), Ireland (<5), The Netherlands (4), Italy (4), Norway (2), France (2), Romania (1), and Belgium (1) in recent months. In TN, six cases have been identified to date. All were admitted to tertiary children's hospitals and were positive for adenovirus. None died. The possible association between pediatric hepatitis and adenovirus infection is [currently under investigation](#) by TDH, CDC, and other states.

Contact for Questions

Please email TDH at cedep.investigation@tn.gov with any related questions.

Thank you for all that you do in keeping Tennesseans safe and healthy.