

MLS Laboratory Update: Guidance for Acute Hepatitis of Unknown Etiology Testing

MAY 5, 2022

Purpose of this Message:

To inform clinical laboratories and hospitals about pediatric hepatitis associated with adenovirus and gastrointestinal illness

To provide guidance for adenovirus testing recommended clinically, and the submission process for additional testing that may occur at MDH-PHL.

Action Items:

- Please review the testing information below and hold residual specimens until result consultation has occurred with MDH for possible submission to MDH-PHL.
- Please forward this information to Laboratory staff and Infection Prevention and Control Partners.

Background:

A cluster of children with hepatitis and significant liver injury who had adenovirus infection detected in clinical specimens has been identified and reported to CDC since November 2021. A possible association between pediatric hepatitis and adenovirus infection is currently under investigation. Cases of pediatric hepatitis in children who tested negative for hepatitis viruses A, B, C, D, and E were reported from multiple countries, including many with adenovirus infection. <https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7118e1-H.pdf>

The CDC (4/21/22) and MDH (4/26/22) notified clinicians and public health authorities of cases of children identified with hepatitis and adenovirus infection.

CDC Emergency Preparedness and Response HAN Archive:

<https://emergency.cdc.gov/han/2022/han00462.asp>

Minnesota Department of Health, Health Alert Network:

<https://www.health.state.mn.us/communities/ep/han/2022/apr26hep.pdf>

MDH is working with CDC to investigate possible cases of acute hepatitis in children. Because the relationship between adenovirus and acute hepatitis is still under national investigation, testing for adenovirus is recommended.

Testing Information:

- CDC recommends diagnostic testing for adenovirus for acute hepatitis in children

- Nucleic acid amplification testing (NAAT, e.g., PCR) is preferred for **adenovirus detection** and recommended specimens are-
 - Respiratory specimens: nasopharyngeal swab, sputum, or bronchoalveolar lavage [BAL]
 - Stool or rectal swabs; Stool specimens are preferred over rectal swabs
 - EDTA whole blood or plasma; whole blood specimens are preferred over plasma
 - Fresh liver tissue
- If positive for adenovirus with clinical lab testing, please submit specimens to MDH-PHL for subtyping testing after consultation with MDH epidemiologist at 651-201-5414.
- If negative with clinical lab testing, please hold specimens at appropriate storage conditions until a further decision has been made after consultation with MDH epidemiologist.
 - Freeze (-20°C) stool, plasma, and swabs
 - Refrigerate (2-8°C) EDTA whole blood
- If adenovirus testing is unavailable at clinical laboratory, please contact MDH epidemiologist at 651-201-5414 for specimen submission guidelines.
 - Specimen sources acceptable for testing at MDH-PHL include:
 - Stool – preserved in Cary Blair or raw. Ship on ice packs.
 - Rectal swabs – should contain some fecal material from mucosa. Place swab into VTM or UTM. Ship on ice packs.
 - EDTA whole blood – ship on ice packs.
 - Nasopharyngeal or throat swab (in viral transport medium). Ship on ice packs.
 - Test results on submitted specimens will NOT be reported back to submitters.
- If a liver biopsy has already been performed as clinically indicated; or from native liver explant or autopsy, formalin-fixed, paraffin embedded (FFPE) liver tissue should be sent to MDH-PHL to be shipped to CDC.

Questions: Please contact:

MDH Epidemiologists, Health.hepatitis@state.mn.us or 651-201-5414

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THIS IS AN UPDATE FROM THE MINNESOTA DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY (MDH-PHL) AND THE MINNESOTA LABORATORY SYSTEM (MLS). THIS MESSAGE IS BEING SENT TO MLS LABORATORY CONTACTS SERVING MINNESOTA RESIDENTS. YOU ARE NOT REQUIRED TO REPLY TO THIS MESSAGE.

PLEASE FORWARD THIS TO ALL APPROPRIATE PERSONNEL WITHIN YOUR INSTITUTION AND HEALTH SYSTEM

THE CONTENT OF THIS MESSAGE IS INTENDED FOR PUBLIC HEALTH AND HEALTH CARE PERSONNEL AND RESPONSE PARTNERS WHO HAVE A NEED TO KNOW THE INFORMATION TO PERFORM THEIR DUTIES. IT IS FOR OFFICIAL USE ONLY. DO NOT DISTRIBUTE BEYOND THE INTENDED RECIPIENT GROUPS AS DESCRIBED IN THIS MESSAGE.

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<https://www.health.state.mn.us/diseases/idlab/mls/alerts.html>

To obtain this information in a different format, call: 651-201-5200.