



UTAH DEPARTMENT OF
HEALTH

Acute Flaccid Myelitis (AFM)

Summary

During fall 2014, the U.S. Centers for Disease Control and Prevention (CDC) received an increased number of reports of acute flaccid myelitis (AFM) among children. The apparent increase in AFM cases in 2014 coincided with a national outbreak of severe respiratory illness among children caused by enterovirus-D68 (EV-D68), which resulted in an increased number of children hospitalized. However, despite this close association in timing between the EV-D68 outbreak and the increase in AFM cases, an etiology for the 2014 AFM cases was not determined.

As of July 2015, CDC had verified reports of 120 children in 34 states who developed AFM that met the outbreak case definition for children. The median age of the children was about 7 years and almost all children were hospitalized. Most children presented with acute onset of areflexic limb weakness, usually following a respiratory or febrile illness, and about 75% of children had cerebrospinal fluid (CSF) with pleocytosis (CSF white blood cell count >5 cells/mm³), often with elevated CSF protein levels. Cases were also characterized by distinctive abnormalities on spinal MRI, where pathologic changes were largely restricted to the central gray matter of the spinal cord. The findings strongly suggested an infectious (viral) process involving the spinal cord that produces a clinical illness similar to that caused by poliovirus.

Many different biological specimens were collected from patients to test for various pathogens that can result in this syndrome. Although EV-D68 was the virus most commonly identified in respiratory specimens, $<20\%$ of AFM patients had EV-D68 identified from a respiratory specimen. Furthermore, despite extensive testing, no pathogen was consistently detected in patients' CSF. Therefore, continued vigilance and testing of specimens is needed to help to help clarify a cause and determine the frequency of AFM. The case definition for AFM was updated to include individuals of all ages (available at: <http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2015PS/2015PSFinal/15-ID-01.pdf>). AFM is currently being reviewed for inclusion in Utah's Communicable Disease Rule for mandatory reporting. It is anticipated that the revised Rule will be in effect in January 2016.

How to report a case of suspected AFM

The CDC is re-emphasizing the importance of continued vigilance by clinicians for cases of AFM among all age groups, irrespective of enterovirus status. As of August 1, 2015, a patient must meet the CSTE clinical criteria to be considered either a confirmed or probable case of acute flaccid myelitis. To be considered as a confirmed case, a patient who had an MRI performed must meet the following criteria: Acute onset of focal limb weakness, AND an MRI showing a spinal cord lesion (largely restricted to gray matter and spanning one or more spinal segments). To be considered as a probable case, a patient who did not have an MRI performed must meet the following criteria: Acute onset of focal limb weakness, AND cerebrospinal fluid (CSF) with pleocytosis (white blood cell count >5 cells/mm³, adjusting for presence of red blood cells by subtracting 1 white blood cell for every 500 red blood cells present). Patients without an MRI performed can (at most) be classified as a probable case.

Reporting of cases will help states and the CDC monitor potential increases in this illness and better understand potential causes, risk factors, and preventive measures or therapies. The CDC advises

clinicians to continue reporting cases of AFM to the local health department (LHD) in the county where the person resides or the Utah Department of Health (UDOH).

Patient summary forms (available at: <http://www.cdc.gov/ncird/investigation/viral/2014-15/health-departments.html>) should be completed for cases classified as confirmed or probable and sent securely to UDOH. Clinicians treating patients meeting the AFM "probable" or "confirmed" case definition should consult with either the local or state health department about clinical specimen testing at the CDC for enteroviruses, West Nile virus, and other known infectious etiologies. Samples that should be retained for further testing include cerebrospinal fluid (CSF), blood (serum and whole blood), nasopharyngeal/oropharyngeal samples, AND stool specimens.

Contact your Local Health Department

Bear River	http://www.brhd.org/	435-792-6500
Central	http://www.centralutahpublichealth.com/	435-896-5451
Davis	http://www.daviscountyutah.gov/health/default.cfm	801-525-5000
Salt Lake	http://www.slcohealth.org/	385-468-4100
San Juan	http://www.sanjuancounty.org/	435-459-1151
Southeastern	http://www.seuhealth.com/	435-637-3671
Southwest	http://www.swuhealth.org/	435-986-2540
Summit	http://www.summitcountyhealth.org/	435-333-1500
Tooele	http://tooelehealth.org/	435-277-2300
TriCounty	http://www.tricountyhealth.com/	435-247-1177
Utah	http://www.utahcountyonline.org/Dept2/Health/index.asp	801-851-7000
Wasatch	http://www.wasatchcountyhd.org/	435-654-2700
Weber Morgan	http://www.webermorganhealth.org/	801-399-7100

CDC Resources

AFM Investigation and Clinical Information- (<http://www.cdc.gov/ncird/investigation/viral/2014-15/>)

This website from the CDC's National Center for Immunization and Respiratory Diseases provides a summary of AFM findings, discusses AFM surveillance activities, and links to information for clinicians.

Reporting

Reports can be made directly to an individual's LHD (see list below) or the UDOH Bureau of Epidemiology by:

- Secure fax: 801-538-9923
- Secure email: epi@utah.gov
- Phone: 1-888-EPI-UTAH (888-374-8824)

Additional Information or Questions

Please contact:

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