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Increase in Reports of Suspected Acute Flaccid Myelitis Cases—2016

Request for continued vigilance for case recognition and reporting

Background

Acute flaccid myelitis (AFM) is a condition that affects the spinal cord, and which can be caused by a variety of viruses, including enteroviruses. AFM is characterized by a sudden weakness in one or more arms or legs, along with loss of muscle tone and decreased or absent reflexes. Numbness or other physical symptoms are rare, although some patients may have pain in their arms or legs. In some cases, dysfunction of the nerves controlling the head and neck, resulting in such features as facial weakness, difficulty swallowing, or drooping of the eyes, may accompany the limb weakness.

Surveillance for AFM has been conducted in California since 2012 and nationally since 2015. CDC received an increased number of reports of suspected AFM from May through July 2016; this increase is notable when compared to the same period in 2015. Clinicians are encouraged to maintain vigilance for cases of AFM among all age groups and to report cases of AFM to the patient's local health jurisdiction. Reporting of cases will help the California Department of Health (CDPH) and CDC monitor the occurrence of AFM and better understand factors possibly associated with this illness.

Current situation

National: From January 1, 2016 through July 31, 2016, CDC received 49 reports of suspected AFM in persons from 22 U.S. states; 27 met the Council of State and Territorial Epidemiologists (CSTE) case definition for confirmed AFM and 4 were classified as probable. During the same period in 2015, CDC received 8 reports of suspected AFM, of which 5 were classified as confirmed. Among the 27 confirmed cases reported in 2016, median age was 5 years (range, 5 months – 18 years). Dates of onset for confirmed cases ranged from January 19 through July 23, 2016; 74% (20/27) had onset of limb weakness after May 1, 2016. Pleocytosis was present in 85% (23/27) of confirmed AFM cases with a median CSF cell count of 46/mm³ (range, 6–1460/mm³). To date, no single pathogen has been consistently detected in CSF, respiratory specimens, stool, or blood at either CDC or state laboratories.

California: From January 1, 2016 through September 30, 2016, 24 AFM cases (15 confirmed, 9 probable) were reported to CDPH. Among these cases tested to date, 6 had an enterovirus detected, 4 of which were EV-D68. EV-D68 has been hypothesized as the cause of the recent increase in U.S. AFM cases.



Action Steps

- **CASE REPORTING:** Clinicians should report suspect cases of AFM, irrespective of laboratory results suggestive of infection with a particular pathogen, to the patient's local health jurisdiction using the AFM Patient Case Summary Form. Copies of spinal cord and brain MRI reports, and lumbar puncture results, should be provided along with the patient case summary form. For each reported case, local health jurisdictions will consult with CDPH to determine appropriate next steps for evaluation and testing.
- **LABORATORY TESTING:** If testing at CDPH is recommended, clinicians will be asked to submit the following full set of specimens collected from patients suspected of having AFM as early as possible in the course of illness (preferably on the day of onset of limb weakness). The specimens should be accompanied by the completed [General Purpose Specimen Submittal Form](#) and submitted to the CDPH Viral and Rickettsial Diseases Laboratory (VRDL):

The following specimens should be collected:

- CSF
- Serum
- Stool
- Nasopharyngeal aspirate, wash, or swab (with lower respiratory tract specimen if indicated)
- Oropharyngeal swab

Please note: Collection of stool is required for AFM surveillance. Two stool specimens should be collected at least 24 hours apart early during the course of illness to rule out poliovirus infection

[Information to help clinicians and public health officials manage care of persons with AFM](#) that meet CDC's case definition was posted in 2014 and can be found at:
<http://www.cdc.gov/acute-flaccid-myelitis/downloads/acute-flaccid-myelitis.pdf>

For more information

- AFM surveillance:
[CDC AFM web page](http://www.cdc.gov/acute-flaccid-myelitis/afm-surveillance.html): <http://www.cdc.gov/acute-flaccid-myelitis/afm-surveillance.html>
[CDPH AFM web page](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Acute-Flaccid-Myelitis.aspx): <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Acute-Flaccid-Myelitis.aspx>
- [AFM specimen collection](http://www.cdc.gov/acute-flaccid-myelitis/hcp/instructions.html): <http://www.cdc.gov/acute-flaccid-myelitis/hcp/instructions.html>
- The CSTE standardized case definition for AFM is:

Case Classification

- **Confirmed:**
 - ✓ An illness with onset of acute focal limb weakness AND
 - ✓ MRI showing spinal cord lesion largely restricted to gray matter* and spanning one or more spinal segments

- o **Probable:**
 - ✓ An illness with onset of acute focal limb weakness AND
 - ✓ CSF showing pleocytosis (white blood cell count >5 cells/mm³)
- o Terms in the spinal cord MRI report such as “affecting mostly gray matter,” “affecting the anterior horn or anterior horn cells,” “affecting the central cord,” “anterior myelitis,” or “poliomyelitis” would all be consistent with this terminology. If still unsure if this criterion is met, consider consulting a neurologist or radiologist directly. See [CSTE case definition](http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2015PS/2015PSFinal/15-ID-01.pdf): <http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2015PS/2015PSFinal/15-ID-01.pdf>
- [Resources and references for AFM](https://www.cdc.gov/acute-flaccid-myelitis/references.html): <https://www.cdc.gov/acute-flaccid-myelitis/references.html>