## Acute Flaccid Myelitis (AFM) Case Determination Standard Operating Procedure

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| **I.** | **Background** | AFM is a type of acute flaccid paralysis characterized by an acute or sub-acute onset of flaccid limb weakness, sometimes accompanied by cranial nerve dysfunction (such as facial drooping or difficulty speaking). In most cases, distinctive lesions primarily in the gray matter of the spinal cord are seen on neuroimaging. CDC has been actively investigating suspected AFM cases, testing specimens, and reviewing neurologic findings in order to monitor the incidence of AFM since August 2014, when there was an apparent increase in patients with this illness. Through the establishment of standardized surveillance for AFM, CDC is working closely with health departments and health professionals to increase awareness, information sharing, and lab testing to better understand the occurrence, risk factors, and possible causes of AFM. |
| **II.** | **Purpose** | This document outlines the procedures for classifying a suspected case of AFM. Suspected AFM cases are investigated to determine whether they should be classified as confirmed, probable, or not a case. |
| **III.** | **2017 CSTE Case definition** | **Clinical Criteria**<br>An illness with onset of acute flaccid limb weakness<br><br>**Laboratory Criteria**<br>• Confirmatory Laboratory Evidence: a magnetic resonance image (MRI) showing spinal cord lesion largely restricted to gray matter*† and spanning one or more vertebral segments<br>• Supportive Laboratory Evidence: cerebrospinal fluid (CSF) with pleocytosis (white blood cell count >5 cells/mm3)<br><br>**Case Classification**<br>**Confirmed:**<br>• Clinically compatible case AND<br>• Confirmatory laboratory evidence: MRI showing spinal cord lesion largely restricted to gray matter*† and spanning one or more spinal segments<br><br>**Probable:**<br>• Clinically compatible case AND<br>• Supportive laboratory evidence: CSF showing pleocytosis (white blood cell count >5 cells / mm3)<br><br>** Spinal cord lesions may not be present on initial MRI; a negative or normal MRI performed within the first 72 hours after onset of limb weakness does not rule out AFM. MRI studies performed 72 hours or more after onset should also be reviewed if available.*<br>*† 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.*<br><br>**Comment**<br>To provide consistency in case classification, review of case information and assignment of final case classification for all suspected AFM cases will be done by experts in national AFM surveillance. This is similar to the review required for final classification of paralytic polio cases. |

| IV. | Procedures | |
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| | a. Hospital | 1. Clinician suspects AFM in a patient with acute onset of flaccid weakness. Any person that meets the clinical criteria for AFM should be considered a suspected AFM case and information sent to CDC through the health department.<br>2. Clinician contacts local or state health department<br>3. Clinician collects appropriate samples (CSF, blood, serum, stool, respiratory) https://www.cdc.gov/acute-flaccid-myelitis/hcp/specimens.html |
| | b. Public Health | 1. Discusses case with clinician and ensures patient meets clinical criteria<br>2. Fills out CDC AFM case report form (CRF) with clinician<br>3. Alerts CDC of suspected case of AFM through CDC's Limb Weakness Inbox (limbweakness@cdc.gov)<br>4. Obtains and coordinates secure submission of clinical notes (admission history and physical, neurology and infectious disease consult notes, and discharge summary)<br>5. Obtains and coordinates secure submission of MRI report and images from clinician (see annex for secure online upload of MRI images)<br>6. Coordinates shipping samples to CDC AFM Laboratory<br>7. Conducts a 60-day follow-up with confirmed and probable cases |
| | c. CDC | 1. CDC AFM Medical Officer reviews patient CRF, clinical notes, and MRI reports to summarize the patient's clinical information and identify missing data elements.<br>2. Results of the review are then sent to neurology experts in AFM, supported by CDC and composed of neurologists specializing in spinal cord diseases from academic centers and CDC, for evaluation of MRI images and review of clinical notes.<br>3. AFM Neurology Experts classify cases according to the AFM case definitions (confirmed, probable, not a case, or additional data are needed) if the case does not have any other apparent cause (e.g., transverse myelitis).<br>4. If additional data are needed to make a case classification, CDC may request more information from the health department. CDC may also request to speak with the clinician or health department if there are clinical questions to help clarify the case classification.<br>5. More complicated cases are reviewed by multiple AFM Neurology Experts to determine a final classification.<br>6. CDC AFM surveillance team communicates final case classifications back to health departments for dissemination to clinicians, patients, and families. |
| **V.** | **Monthly timeline for CDC review*** | |
| | Week 1 | CDC AFM Medical Officer reviews all cases from previous month |
| | Week 2 | Case reviews sent to AFM Neurology Experts for further review |
| | Week 3 | AFM Neurology Experts complete review and returns case classifications to CDC AFM surveillance team |
| | Week 4 | 1. CDC AFM team meets to review final case classifications<br>2. Final case classifications are reported back to the health departments by CDC AFM surveillance team<br><br>***This timeline is subject to change if classification review requires** |

| | | additional information or discussion |
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| **VI.** | **Annex** | • Link to CSTE AFM Position Statement 17-ID-01: http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFin al/17-ID-01.pdf<br><br>• Link to CSTE Polio Position Statement: http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/PS/09-ID-53.pdf<br><br>• Case report form: https://www.cdc.gov/acute-flaccid-myelitis/downloads/patient-summary-form.pdf<br><br>• Specimen collection guide: https://www.cdc.gov/acute-flaccid-myelitis/downloads/job-aid-for-clinicians.pdf<br><br>• Laboratory specimen submission: https://www.cdc.gov/acute-flaccid-myelitis/hcp/instructions.html<br><br>• MRI image upload using secure FileZilla website:<br>o https://filezilla-project.org/ (select "Download FileZilla Client")<br>o Once downloaded, open FileZilla:<br>o Go to File > Site Manager > New Site, enter in 'cdc dvd_eb ftp'<br>o In host window enter: eftp.cdc.gov<br>o In Port enter: 22<br>o For Protocol select: SFTP - SSH File Transfer Protocol<br>o Logon Type: Normal<br>o User: DVD_EB_SXFTP_XX ("XX" is the 2 letter abbreviation for the state needing access)<br>o Password: Enter password provided by phone. |