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Division of Disease Control

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Health Advisory

Acute Flaccid Myelitis: Clinical Reminder and Reporting Requirements

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SUMMARY POINTS

- An increased number of acute flaccid myelitis (AFM) cases have been reported to the Philadelphia Department of Public Health (PDPH) in 2016
- Healthcare providers should report any suspect cases of AFM to PDPH by calling 215-685-6742
- Cerebrospinal fluid (CSF), blood, stool, and respiratory specimens should be collected as close to illness onset as possible for laboratory testing. PDPH can facilitate testing of clinical specimens.

In recent weeks PDPH, has received an increased number of reports of suspected acute flaccid myelitis (AFM), consistent with a national increase noted by the Centers for Disease Control and Prevention (CDC) which began in May 2016. While no single pathogen has been regularly identified in patient specimens, clinical findings suggest a viral process affecting the spinal cord, producing a polio-like illness. To better understand AFM, PDPH requests clinicians report all suspect cases, regardless of etiology.

Background: From January 1, 2016 – July 31, 2016, CDC received 27 confirmed and four probable reports of AFM. 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 cerebrospinal fluid (CSF) cell count of 46/mm^3 (range, 6-1460/mm^3). To date, no single pathogen has been consistently detected in CSF, respiratory specimens, stool, or blood at public health laboratories. In 2016, PDPH has received six AFM reports from area healthcare providers; two of which were confirmed and four are pending review by CDC. While no etiology has been identified as the cause of these illnesses, four of six patients had at least one specimen test positive for enterovirus.

Clinical Syndrome & Diagnostic Testing: Patients with AFM typically present with acute flaccid paralysis of one or more limbs (often asymmetric) and cranial nerve weakness following a febrile illness. Limb weakness can progress rapidly with maximal weakness occurring between a few hours and days from symptom onset. Cranial nerve involvement can manifest as facial weakness, paralysis of the eye muscles, and difficulty speaking or swallowing. Spinal lesions identified by MRI are largely restricted to the grey matter of the cord and do not appear to affect the white matter, although lesions can span anterior and posterior segments of the spinal cord, distinguishing AFM from other central nervous system disorders such as Guillain-Barrè syndrome and transverse myelitis. Laboratory analyses of CSF demonstrate moderate pleocytosis, normal to mildly elevated protein levels, and glucose levels within normal range in the majority of cases. These findings have led medical experts to suggest that AFM is likely due to a neuroinvasive infectious disease.

Clinicians should collect specimens 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 following specimens should be collected (in order of priority): CSF; whole blood; serum; stool; nasopharyngeal specimens. Upon notification, PDPH will facilitate testing of specimens for viral pathogens at public health reference laboratories.

Reporting Guidelines: Patients who have acute onset of focal limb weakness AND 1) an MRI showing a spinal cord lesion largely restricted to gray matter and spanning one or more spinal segments OR 2) CSF with pleocytosis with no other apparent cause should be reported to PDPH's Division of Disease Control at 215-685-6742. Clinicians are reminded that, in addition to AFM, encephalitis or meningitis regardless of etiology, Guillain-Barrè syndrome, West Nile virus and other arboviral infections, Lyme disease, and varicella and herpes zoster are also reportable to PDPH. For more information on the diagnosis and clinical management of AFM, please visit https://hip.phila.gov/DiseaseControlGuidance/DiseasesConditions/AFM.