



NEW YORK CITY DEPARTMENT OF  
HEALTH AND MENTAL HYGIENE  
Mary T. Bassett, MD, MPH  
*Commissioner*

## 2015 ALERT 42

### Surveillance for Acute Flaccid Myelitis

- In 2014, CDC detected an unusual increase in reports of acute flaccid myelitis (AFM) nationwide, and sporadic reports continue to be received.
- Report to the Health Department any patient with acute focal limb weakness and cerebrospinal fluid pleocytosis or a spinal cord lesion on MRI.
- The Health Department will arrange laboratory testing at the Centers for Disease and Prevention (CDC) to help identify the cause(s) of this syndrome.

**Please Share this Alert with All Primary Care, Family Medicine, Emergency Medicine, Internal Medicine, Pediatrics, Neurology, Infectious Disease, Laboratory Medicine, Pathology, Critical Care and Infection Control Staff in Your Facility**

November 4, 2015

Dear Colleagues,

In the summer and fall of 2014, the Centers for Disease Control and Prevention (CDC) noted an increase in reports of acute flaccid myelitis (AFM) among children. Concurrent with this increase, there was a national outbreak of enterovirus-D68 (EV-D68) causing primarily respiratory illness in children. Despite the proximity in timing of the EV-D68 outbreak and the increase in AFM reports, an etiology for the 2014 AFM cases has not been established. CDC has requested that state and local health departments conduct surveillance for AFM to better understand the etiology, risk factors, preventive measures, and potential therapies for this syndrome.

AFM is characterized by acute limb weakness and abnormalities of the spinal cord gray matter on magnetic resonance imaging (MRI). From August 2014 – July 2015, CDC received reports for 120 children in 34 states who developed AFM from August 2014 - July 2015. There were two reports from New York State, including one in New York City (NYC). Among the cases, the median age was 7 years and almost all were hospitalized. The typical presentation was a respiratory or febrile illness followed by acute onset of areflexic limb weakness. Most (about 75%) had cerebrospinal fluid notable for pleocytosis ( $>5$  white blood cells/mm<sup>3</sup>), often with elevated protein levels. Findings on MRI were largely restricted to abnormalities in the central gray matter of the spinal cord. About two-thirds of the children who have been observed after illness onset reported some improvement in symptoms (median observation period 19 days), while about one-third showed no improvement. Only two of the children have had a full recovery.

CDC tested many different clinical specimens from these cases over the past year, looking for a wide range of pathogens that can potentially cause AFM. Despite extensive testing, no pathogen was detected consistently in cerebrospinal fluid. Though EV-D68 was the virus most commonly identified in respiratory specimens, only 20% of patients had EV-D68 recovered from a respiratory specimen.

The NYC Health Department is partnering with the CDC and other states to prospectively conduct surveillance for AFM and prioritize sending clinical specimens to CDC. Therefore we request that healthcare providers report cases of AFM and collect specimens for testing at CDC, to better understand the frequency and potential cause(s) of this illness.

### Reporting criteria

We request healthcare providers report to the Health Department persons meeting the following criteria:

- Acute focal limb weakness in a person of any age, **with either**
  - MRI showing a spinal cord lesion largely restricted to gray matter and spanning one or more spinal segments, **OR**
  - CSF with pleocytosis (white blood cell count >5 cells/mm<sup>3</sup>, adjusting for presence of red blood cells by subtracting 1 white blood cell for every 500 red blood cells present).

### Specimen collection and laboratory testing

- Collect specimens as early as possible in the course of illness, ideally, on the first day of limb weakness onset. Early specimen collection offers the best chance to yield an etiology.
- Hospitals are asked to collect and send clinical specimens to the NYC Health Department for submission to CDC. Instructions regarding specimen collection and requested specimen volumes can be found at: <http://www.cdc.gov/ncird/investigation/viral/specimen-collection.html>
- The priority of specimens for testing at CDC is, in order of priority: CSF, serum, whole blood, nasopharyngeal/oropharyngeal swab, two stools (only if rule-out polio testing has not been performed).
  - For stool specimens, CDC recommends that healthcare providers rule out poliovirus infection in cases of acute flaccid paralysis that are clinically compatible with polio, including those with anterior myelitis. Recommendations for rule-out polio testing can be found at: <http://www.cdc.gov/polio/us/hcp.html>.
- Each specimen will need to be accompanied by two forms, linked below:
  - <http://www.nyc.gov/html/doh/downloads/pdf/labs/testing-services.pdf>
  - <http://www.cdc.gov/laboratory/specimen-submission/pdf/form-50-34.pdf>

**Please call the NYC Health Department’s Provider Access Line at 1-866-692-3641 to report any patient who meets the reporting criteria outlined above.** For more information please visit the following CDC websites:

Acute Flaccid Myelitis: <http://www.cdc.gov/ncird/investigation/viral/2014-15/index.html>

Enterovirus-D68: <http://www.cdc.gov/non-polio-enterovirus/about/EV-D68.html>

Sincerely,

*Don Weiss*

Don Weiss, MD, MPH  
Director of Surveillance  
Bureau of Communicable Disease

*Jennifer Rosen*

Jennifer Rosen, MD  
Director of Surveillance and Epidemiology  
Bureau of Immunization