

Guidance Regarding Rapid Identification of Acute Flaccid Myelitis

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TO:	Health Alert Network
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SUBJECT:	Guidance Regarding Rapid Identification of Acute Flaccid Myelitis
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This transmission is a “Health Advisory”: provides important information for a specific incident or situation; may require immediate action.

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Summary

- The Pennsylvania Department of Health (DOH) urges healthcare providers to strongly consider acute flaccid myelitis (AFM) in patients with acute flaccid limb weakness, especially 1-2 weeks after respiratory or gastrointestinal illness with fever.
- There is concern that there may be increased cases of AFM in the fall and early winter of 2022 because both of the typical biennial pattern and an [increase in circulation](#) of enterovirus D68 (EV-D68) which has been associated with AFM in the past.
- Suspected cases of AFM should be immediately reported to the local health department or the PA Department of Health (PA DOH) by calling 1-877-PA-HEALTH (1-877-724-3258).

Background

Acute flaccid myelitis (AFM) is a rare, rapidly progressing neurologic condition in which the patient develops sudden onset limb weakness. Its [infectious causes](#) include non-polio enteroviruses (EV-D68, EV-A71, and coxsackievirus A16), flaviviruses (West Nile virus, Japanese encephalitis virus), herpesviruses, and adenoviruses. In susceptible hosts the viral infection invades and destroys the anterior horn cells in the spinal cord leading to a flaccid paralysis of affected limbs and can, in severe cases, lead to respiratory failure. It is important to identify cases of AFM early so that medical support and interventions can be

initiated quickly. AFM is similar to poliovirus in clinical presentation. Further guidance regarding suspected poliovirus infection is discussed separately in [PA HAN 660](#).

Epidemiology

In the United States, cases of AFM peak in the fall in a biennial pattern with peaks of cases occurring in 2014, 2016, 2018 and to a lesser degree 2020. The lower case counts in 2020 likely represent the impact of COVID-19 mitigation practices that decreased the circulation of all viruses in the United States. There is concern that there may be increased cases of AFM in the fall and early winter of 2022 because both of the typical biennial pattern and an [increase in circulation](#) of enterovirus D68 (EV-D68) which has been associated with AFM in the past.

According to the [CDC](#), as of October 19, 2022, there have been 25 confirmed cases of AFM in 15 states in 2022. There have been no confirmed cases reported in Pennsylvania.

Clinical Presentation

- The majority of AFM patients are children with the mean age being 5.8 years old. However, adults can also be affected with the age range of patients being 0-81 years old
- Most patients have a febrile illness (respiratory and/or GI symptoms) 1-2 weeks prior to onset of AFM
- Onset of AFM is rapid within a few hours to days
 - Patient presents with loss of muscle tone and reflexes in the affected limbs
 - Limb weakness is more proximal than distal
- Cranial nerve abnormalities can be present:
 - Facial or eyelid droop
 - Difficulty swallowing or speaking
 - Hoarse or weak cry
- Patients may also have any of the following:
 - Stiff neck
 - Headache
 - Pain in the affected limb
 - Numbness or tingling of the affected limb

Severe cases can progress to respiratory failure and serious neurologic complications. Early recognition of AFM, immediate hospitalization, and initiation of medical interventions are critical to prevent morbidity and mortality.

Evaluation of suspected cases of AFM

- [Initial evaluation:](#)
 - Medical history:
 - Focus on any illnesses in the last 4 weeks
 - History of difficulty walking, holding head up, difficulty swallowing
 - History of headache or extremity, neck, shoulder, and/or back pain
 - Bowel or bladder changes, particularly constipation
 - Medical exam:
 - Complete neurological exam focusing on muscle tone, reflexes, muscle strength, and a thorough cranial nerve exam
 - Asses the patient's ability to protect the airway
 - Check for autonomic dysfunction such as blood pressure lability and thermodynamic instability

- [Diagnostic Studies:](#)
 - CSF, serum, stool, and respiratory samples (nasopharyngeal (NP)/oropharyngeal (OP) swabs)
 - CDC has [specific guidance regarding specimen collection](#)
 - Obtain two stool samples collected at least 24 hours apart, both collected as early in the illness as possible and ideally within 14 days of illness onset
 - CSF, respiratory (NP/OP), serum, and stool specimens should be also sent to CDC for surveillance testing
 - Providers should call the local health department or the PA DOH Bureau of Epidemiology (717-787-3350) for guidance regarding specimen collection
 - Any questions regarding specimen shipping and documentation should be directed towards the PA Bureau of Laboratories (BOL) (610-280-3464). If approved, further instructions on specimen submission will be provided. BOL will not accept specimens without prior consultation and approval
 - MRI of the spine and brain with and without contrast
 - Looking for spinal cord lesions with prominent gray matter involvement

Rapid specimen collection increases the chance of pathogen detection. Specific testing for AFM should be done in consultation with a neurologist and infectious disease specialists and should be preferably performed on the first day of muscle weakness.

Reporting of suspected cases of AFM

- Suspected cases of AFM should be immediately reported to the local health department or the PA Department of Health
 - The provider should call the local health department or the PA DOH at 1-877-PA-HEALTH (1-877-724-3258)
 - The provider should complete the [AFM Patient Summary Form](#)
 - The AFM coordinator will collect the [AFM Patient Summary Form](#) and will help coordinate the necessary lab work and submission of any supporting documentation, including the MRI results, to the CDC

If you have any questions, please call the local health department or the PA DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of November 2, 2022 but may be modified in the future. We will continue to post updated information regarding the most common questions about this subject.