PENNSYLVANIA DEPARTMENT OF HEALTH
2024 – PAHAN –777-10-23- ADV
Staying Vigilant for Acute Flaccid Myelitis (AFM)

Pennsylvania Department of Health

DATE:	10/23/2024
TO:	Health Alert Network
FROM:	Debra L. Bogen, MD, FAAP, Secretary of Health
SUBJECT:	Staying Vigilant for Acute Flaccid Myelitis (AFM)
DISTRIBUTION:	Statewide
LOCATION:	Statewide
STREET ADDRESS:	n/a
COUNTY:	n/a
MUNICIPALITY:	n/a
ZIP CODE:	n/a
This transmission is a "Health Advisory" which provides important information for a specific incident or situation and may not require immediate action.	

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL**; EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS**: PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY

Summary

- Acute Flaccid Myelitis (AFM) is a rare and serious paralytic disease that mainly affects children.
- AFM can be caused by viruses, including enteroviruses (EV), flaviviruses (West Nile virus, Japanese encephalitis virus), herpesviruses, and adenoviruses.
- The PA Department of Health (DOH) is concerned about an increase in detection of Enterovirus which may also result in increases in AFM.
- Providers should consider a diagnosis of AFM in patients with acute flaccid limb weakness, especially 1-2 weeks after respiratory or gastrointestinal illness with fever.
- Providers should also consider polio in the differential diagnosis of patients with sudden onset of limb weakness, especially if the patient is incompletely vaccinated and has traveled to a polio endemic area.
- The DOH urges providers to immediately report suspected cases of AFM and polio to their local public health department or the DOH at 877-PA-HEALTH (877-724-3258).

Background

Acute flaccid myelitis (AFM) is a rare, rapidly progressing neurologic condition in which the patient develops sudden onset limb weakness typically after a respiratory or gastrointestinal illness with fever. 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.

Epidemiology

AFM cases typically have followed a seasonal pattern spiking between August and October due to seasonal increases in the circulation of respiratory pathogens, including enteroviruses. EV-

D68 has been the most common virus detected in specimens from for AFM cases. Nationwide cases of AFM have occurred year-round with annual increases in 2014, 2016, and 2018. According to the CDC, as of October 1, 2024 there have been 14 confirmed cases in 2024; one of these cases was in Pennsylvania.

Pennsylvania Surveillance Monitoring

Wastewater monitoring at treatment plants in central, eastern, and western Pennsylvania has shown a recent increase in EV-D68 concentrations. Additionally, the National Respiratory and Enteric Virus Surveillance System (NREVSS) and virologic testing by the Department of Health's Bureau of Laboratories reveal a rise in enterovirus activity, including EV-D68. These trends suggest a broader increase in enterovirus circulation across Pennsylvania, reflecting a similar pattern observed nationally.

Clinical Presentation of AFM

- AFM typically affects children with a mean age of onset of 5 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 before the 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 of AFM can lead 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.
        - Assess the patient's ability to protect the airway.
        - Check for autonomic dysfunction such as blood pressure lability and thermodynamic instability.

- Diagnostic Studies:
    - 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.
    - 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 sent to the PA Bureau of Laboratories (BOL) to forward to CDC for surveillance testing.
            - Providers should call the local health department or the DOH Bureau of Epidemiology (717-787-3350) for guidance regarding specimen collection.
            - Any questions regarding specimen shipping and documentation should be directed to the 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
        - Detects spinal cord lesions with prominent gray matter involvement.

Consider polio in patients with polio-like symptoms, especially if the patient:

- Is unvaccinated or incompletely vaccinated against polio.
    - See updated CDC guidance regarding polio vaccine given outside of the USA.
- Recently traveled abroad to a place where polio still occurs.
- Was exposed to a person who recently traveled to one of these areas.

It is important for providers to quickly identify possible cases of polio and to make sure that all patients are up to date with the polio vaccine.

Reporting of suspected cases of AFM and Polio

- Suspected cases of AFM and polio should be immediately reported to the local health department or the Pennsylvania Department of Health
    - The provider should call the local health department or the DOH at 877-PA-HEALTH (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
    - AFM physician consult and support portal: https://wearesrna.org/living-with-myelitis/resources/afm-physician-support-portal/

DOH reminds providers to immediately report suspected cases of AFM and polio to local public health authorities or to DOH at 877-PA-HEALTH (877-724-3258).

Individuals interested in receiving future PA-HANs can register here.

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 October 23, 2024, but may be modified in the future.