Will acute flaccid myelitis resurge in 2021? What pediatricians need to know
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Acute flaccid myelitis (AFM) continues to be an uncommon but serious cause of sudden onset weakness and paralysis in U.S. children. AFM is characterized by flaccid weakness in one or more limbs and distinct abnormalities of spinal cord gray matter on MRI.

Since symptoms can progress quickly to respiratory failure and require urgent medical intervention, pediatricians play a critical role in the recognition and hospitalization of AFM patients.

No drugs or biologics have been approved by the Food and Drug Administration to treat or prevent AFM. Consultation with experts, such as infectious diseases and neurology specialists, remains essential for optimal medical management.

Etiology

Enteroviruses (EV), particularly EV-D68, have emerged as the likely etiology responsible for AFM outbreaks that occurred in an every-other-year pattern in 2014, 2016 and 2018. Epidemiologic and laboratory data gathered through the Centers for Disease Control and Prevention's (CDC's) national AFM surveillance system show a close temporal association between AFM outbreaks and EV-D68 circulation.


In 2020, the expected increase in AFM did not occur. Nonpharmaceutical interventions, such as masks and social distancing, likely prevented respiratory viruses like EV-D68 from circulating widely and likely kept AFM cases in 2020 consistent with the low baseline rate seen in non-outbreak years.

Research on AFM

Despite the absence of an AFM increase in 2020, the CDC continues to prioritize research on this severe neurologic condition that strikes otherwise healthy children following a mild respiratory illness. Fundamental questions remain, such as why AFM mostly affects young children (median age is 5 years), what host factors influence the development of AFM after a viral illness and the role of the immune system and inflammation in disease progression. Two studies are gathering data to help answer these questions.

The National Institutes of Health AFM Natural History Study is enrolling children with suspected AFM and their household contacts at 35 U.S. hospitals to collect clinical data and biological specimens. The AFM Biorepository also is collecting biological specimens from patients at additional hospitals through a contract with GDIT/McKing Consulting Corp. to enhance specimen collection efforts.

Banking specimens from patients with suspected AFM will assist with future research into pathogenesis. Only with a clear understanding of the pathophysiology of AFM can targeted diagnostics, treatments and preventive measures be developed.

Approach to care

Most children with AFM spend weeks to months hospitalized and in rehabilitation facilities. Few patients
progress to a full recovery, and most will have persistent weakness. Early rehabilitation during the initial hospitalization and after discharge has been shown to improve functional outcomes, and improvements can be seen for years after the initial illness (Melicosta ME, et al. *J Pediatr Rehabil Med*. 2019;12:245-253).

Children with AFM require a multidisciplinary approach to care in areas such as home health care/equipment, school, nutrition, mental health and family support/resources. Pediatricians can act as a medical home for children and families living with AFM by working with subspecialty colleagues to advocate and plan for long-term needs, even prior to discharge.

**New ICD-10-CM code**

A new *International Classification of Diseases, Tenth Revision, Clinical Modification* (ICD-10-CM) code for AFM, G04.82, will be available beginning in October. The development of this code was the result of collaboration among parents of children with AFM, pediatricians and public health experts.

The code will help pediatricians better support the clinical management of their patients and secure insurance coverage for recommended rehabilitation services. Using this new code also will contribute to a better understanding of associated illness costs and outcomes, improve disease characterization and assist public health experts to describe national incidence trends.

**Raising awareness**

AFM is an important public health priority, and national surveillance for new cases is ongoing. The COVID-19 pandemic has left uncertainties about the timing of another AFM outbreak.

The CDC continues to raise awareness of AFM among pediatricians, particularly front-line pediatricians in emergency departments and urgent care settings who may be the first to see an affected patient.

The CDC is promoting resources pediatricians need to care for patients and families with AFM, emphasizing the importance of early recognition and hospitalization of patients (see resources).

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**Resources**

- A six-part PediaLink learning session on AFM is being offered by the AAP in collaboration with the CDC.
- [CDC AFM webpage](#)
- [Information for clinicians on AFM](#)
- [Information for parents of children with AFM](#)
- [AFM Physician Consult and Support Portal](#)