

Summary and Action Items

1. To provide information regarding identification and reporting of acute flaccid myelitis (AFM).
2. To ask providers and local health departments to remain vigilant in identifying cases of AFM.
3. To describe for providers available information about the polio case recently identified in New York.
4. To alert providers to consider poliomyelitis in unvaccinated persons or those who have recent international travel or exposure to international travelers.
5. To remind providers to ensure their patients are up to date on polio vaccinations.

Background

Acute flaccid myelitis (AFM) is an illness characterized by acute onset of flaccid limb weakness and magnetic resonance imaging (MRI) showing lesions in the gray matter of the spinal cord. AFM is referred to as non-poliomyelitis. Flaccid paralytic poliomyelitis and AFM have similar clinical presentations, but poliovirus has not been detected from any specimens from patients with AFM. AFM is caused by other viruses. Surveillance has shown that AFM cases generally peak in the months of September and October. A biennial pattern has been observed with a larger number of cases reported in 2014, 2016 and 2018, as compared to a smaller number of cases being reported in 2015, 2017, and 2019. In 2020, cases did not increase likely due to pandemic mitigation measures. Health officials are unsure what to expect in 2022. Public health partners and health care providers should be aware of the symptoms of AFM and the related resources to assist with identifying, reporting, and collecting specimens of suspected AFM cases at any time.

As of August 2, 2022, there have been 11 confirmed cases of AFM (non-poliomyelitis) in 2022 in the U.S. out of 21 reports of patients under investigation. There have been 689 confirmed cases in the U.S. since CDC began tracking AFM in August 2014. National data can be found on the CDC AFM [website](#). For 2022, two suspect cases have been reported. The cases are being reviewed by CDC and case classifications have not been determined yet. An additional suspect case reported this year with onset in 2021 was determined not to be AFM by CDC. Additional Illinois data can be found on the IDPH [website](#).

Although numerous pathogens (e.g., enteroviruses, West Nile virus, other flaviviruses, and adenoviruses) are known to cause AFM, CDC is interested in investigating all possible etiologies including those caused by the poliovirus. Reporting of these cases will help public health officials monitor increases in illness and improve understanding of potential causes, risk factors, and preventive measures or therapies. Clinicians are asked to report AFM cases to their [local health department](#). Additional information about AFM can be found on [CDC's website](#).

[In July 2022, the New York State Department of Health reported identification of a case of vaccine-derived paralytic poliomyelitis](#) in an immunocompetent adult with no related travel history who was unvaccinated. This is the first vaccine-derived poliomyelitis (VDPV) case in the U.S. since 2013. The last case of polio reported in Illinois occurred in 1988. VDPV was also found in [wastewater samples](#) in two New York counties. VDPV is a strain related to the weakened live poliovirus that is in oral polio vaccine (OPV). (OPV has not been used for vaccination in the U.S. since 2000 but is still administered in other parts of the world.) When the VDPV circulates in under- or unimmunized populations or replicates in an immunodeficient individual, the virus can revert to a form that can cause illness and paralysis.

Illinois Department of Public Health

Symptoms

Symptoms of AFM include:

- sudden onset of arm or leg weakness and loss of muscle tone and reflexes
- facial droop/weakness
- difficulty moving the eyes
- drooping eyelids
- difficulty swallowing or slurred speech

Numbness or tingling is rare in people with AFM, although some people have pain in their arms or legs. Some people with AFM may be unable to pass urine. The most severe symptom of AFM is respiratory failure that can happen when the muscles involved with breathing become weak. This can require urgent ventilator support. In very rare cases, it is possible that the process in the body that triggers AFM may also trigger other serious neurologic complications that could lead to death.

Poliomyelitis is caused by poliovirus, an enterovirus, and is highly infectious. It is transmitted by fecal-oral route, by indirect contact with infectious saliva or feces, or by contaminated sewage or water. Poliovirus disease typically peaks in summer months. Most poliomyelitis infections are asymptomatic. Approximately one out of four persons will develop mild, flu-like symptoms such as sore throat, fever, tiredness, nausea, headache, and stomach pain. Mild non-paralytic poliomyelitis symptoms usually resolve in two to five days. Approximately one to five percent of cases will develop non-paralytic meningitis; this usually resolves completely. Less than one percent of cases will develop paralysis. Adolescents and adults may have more fever and pain at onset, while children may have a biphasic presentation with prodromal symptoms that initially improve followed by more severe illness with fever, pain, and paralysis. Any recovery usually begins within one month. Between 25% to 40% of persons who contracted paralytic poliomyelitis in childhood may develop “post-polio syndrome” (PPS) 15 to 40 years later, characterized by muscle pain, exacerbation of existing weakness, and/or development of new paralysis or weakness. PPS is not infectious.

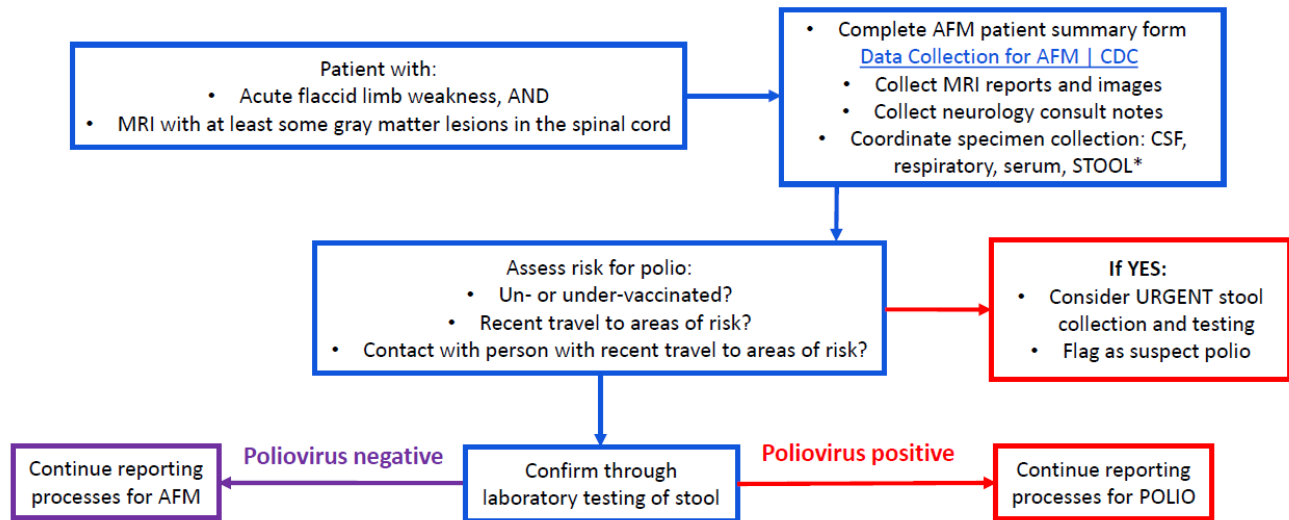
Poliomyelitis is vaccine preventable; inactivated polio vaccine is part of the [routine childhood immunization schedule](#) in the United States and is [recommended for adults](#) based on vaccination history and risk factors. Clinicians are encouraged to assess vaccination status on all patients and ensure polio vaccinations are complete.

Reporting and Follow-up

Suspected poliomyelitis cases should be reported to their [local health department](#), or to the IDPH Communicable Disease Control Section at 217-782-2016 immediately within three hours. The [suspected polio case worksheet](#) should be completed. Laboratories are required to report all positive poliovirus testing results and forward clinical materials to the IDPH state public health laboratory (SPHL) for confirmatory testing. Laboratories are also required to report any request for poliovirus testing as soon as possible, within three hours. Healthcare providers should work closely with their local and state health department when suspecting a poliomyelitis case.

Clinicians suspecting AFM (non-polio) in patients meeting the [suspect, probable or confirmed case definition](#) (irrespective of laboratory testing results) are asked to report these cases to their [local health department](#), or to the IDPH Communicable Disease Control Section at 217-782-2016. Clinicians should be on alert for identifying acute flaccid limb weakness and consider AFM on the differential diagnosis. Given the recent events in New York, it is also important to rule out polio when considering an AFM diagnosis in patients.

Reporting algorithm for AFM and polio



* 2 specimens taken at least 24 hours apart during the first 14 days after onset of limb weakness

Steps for reporting a case of AFM to public health:

- The clinician should ensure the case meets [case reporting criteria \(acute flaccid limb weakness, and MRI with at least some gray matter lesions in the spinal cord\)](#).
- When AFM is suspected in a patient, the clinician should report the suspected case of AFM to their [Local Health Departments \(LHD\)](#). The LHD (in consultation with IDPH) will review the information to make sure the case criteria for reporting are met.
- The LHD will then need to collect and send the following information to IDPH for submission to CDC for case review:
 - Completed patient summary form
 - MRI report
 - Neurology consult notes and images. There is now a cloud-based platform available that allows hospitals to upload images directly to CDC. The link will be provided to the hospital once a suspect case is reported. This will facilitate timely transmission of these images to CDC.
- Clinicians should coordinate with their local health department to ensure appropriate specimen collection: CSF, respiratory, serum, and stool. (Two specimens taken at least 24 hours apart within 14 days of onset of limb weakness.
- Assess for polio risk and vaccination status to ensure appropriate action is taken.
- Clinicians and/or infection control practitioners should also have access to enter reportable diseases into the Illinois National Electronic Disease Surveillance System (I-NEDSS). Those without access can report case information by fax or phone to their LHD and visit idphnet.illinois.gov to sign up for I-NEDSS.
- Local health departments should enter AFM cases into I-NEDSS as an ‘Acute Flaccid Myelitis’ case if the clinician/facility has not done so. LHDs are asked to assist in gathering data and specimens from reporting providers.
- After review and determination, CDC will relay the case classification information to IDPH and the LHD will communicate this information to the clinicians. ***Please note that clinical decisions should not be delayed or hinge upon the CDC case determination or test results as these are for surveillance purposes.***

AFM Case Follow-up:

- Additional follow-up of non-poliomyelitis AFM will occur at 60 days after the case’s onset. LHDs will reach out to providers or health care facilities, and they will be asked to submit the following:
 - Admission notes
 - Infectious disease and neurology consult notes
 - MRI reports
 - Laboratory testing results
 - Vaccine registry data
 - Discharge summary

Specimen Collection and Testing

Clinicians should consult with their local health department regarding laboratory testing of CSF, blood, serum, respiratory, and stool specimens for enteroviruses (including poliovirus), West Nile virus, and other known infectious etiologies. Specimens should be collected from patients suspected of having poliomyelitis/AFM as early as possible in the course of illness, preferably at the onset of limb weakness. Early specimen collection has the best chance to yield a diagnosis. Please refer to CDC guidance for the most up-to-date instructions on specific specimens that should be collected.

- [AFM specimen collection procedures](#)
- [Poliomyelitis specimen collection, storage, and shipment](#)

Specimen submission procedures:

- Specimen collection and shipment should be coordinated with your local health department for authorization.
- Once authorized, the LHD or IDPH will provide an authorization number. Specimens submitted for testing **must** be labeled with the authorization number.
- All available clinical specimens must be shipped in insulated containers to one of the IDPH laboratories using cold packs. Specific laboratory addresses are located on the IDPH test requisition form.
- Specimens shipped should have a tracking number and should be provided to the LHD once the specimens are shipped.
- Specimens will then be forwarded to CDC for testing.

The following forms **must** be completed and included with all specimen submissions:

- [IDPH Laboratory Test Requisition Form](#)
- [CDC AFM Patient Summary Form \(located at the bottom of this link\)](#)

In addition to CDC testing, clinicians are encouraged to pursue laboratory testing for diagnostic purposes at private or commercial laboratories.

Contact

IDPH CD Section 217-782-2016

Additional Resources

IDPH AFM Public Webpage	CDC Vital Signs Report
AFM Data Collection	CDC Specimen Collection Procedures
Information for Clinicians	FAQ’s for Healthcare Providers
AFM Case Definition	Job Aid for Clinicians
Patient Summary Form	Instructions for Completing the Patient Summary Form

CDC Polio Webpage	Polio Factsheet for Clinicians
CDC Laboratory Support Chapter, VPD Surveillance Manual	Poliomyelitis for Healthcare Providers

Target Audience

Local Health Departments, Hospital Emergency Departments, Infection Control Professionals, Infectious Disease Physicians, Pediatricians, Neurologists, and Family Practice Physicians.

Date Issued

September 7, 2022