As fall approaches, seasonal increases in the circulation of respiratory pathogens, including enteroviruses, is to be expected. Enterovirus D-68 (EV-D68) is believed to be the main enterovirus responsible for the increases in acute flaccid myelitis (AFM) cases observed during 2014, 2016, and 2018. This year the number of reported cases of AFM has remained relatively low.

As of September 5, 2023, CDC has received 27 reports of suspected AFM, with 8 confirmed cases in 8 states. However, in past years, increases in EV-D68 respiratory disease have preceded cases of AFM by about 2 weeks. Therefore, vigilance for possible increases in EV-D68 respiratory disease and AFM is important as we move into the fall season.

The identification of a paralytic polio case in an unvaccinated person in New York in 2022 reinforced the need to also consider polio in the differential diagnosis of patients with sudden onset of limb weakness.

5 years is the average age of patients with AFM

**SYMPTOMS:**
- Sudden arm or leg weakness
- Difficulty moving the eyes or drooping eyelids
- Facial droop or weakness
- Difficulty with swallowing or slurred speech

**PROBLEM:**

Recognizing AFM is challenging:

- AFM is rare, and there is no lab test available yet to diagnose patients.
- When clinicians recognize AFM early, they can quickly:
  - Get patients the best care, including treatment and rehabilitation.
  - Collect lab specimens like blood or CSF to better understand AFM and its causes.
  - Report suspected cases for prompt investigation and outbreak detection.
Clinicians: Timing is Key for AFM

Recognize AFM early
Be alert for onset of acute flaccid limb weakness and consider AFM on your differential diagnosis.

Collect specimens & then get MRI
Collect cerebrospinal fluid (CSF), serum, stool, and nasopharyngeal (NP) swab as soon as possible, and handle and store specimens properly.

Rapidly report to health department
If the MRI shows a spinal lesion with some gray matter involvement, alert the health department and send specimens and medical records.

Diagnosis & medical management
Refer to specialists, monitor for signs of worsening symptoms, hospitalize if indicated, and begin treatment and rehabilitation.

Putting Together the Pieces of AFM

**WHO**
Since 2018, 8 AFM cases have been identified in Alabama

**WHEN**
Increase in cases were seen in 2014, 2016 and 2018

**WHERE**
AFM cases have been identified in 49 states and D.C.

**WHAT**
CDC believes viruses, including enteroviruses, play a role in AFM

**Most AFM cases occur in late summer & early fall**

Clinicians should:
- Strongly suspect AFM in patients with acute flaccid limb weakness, especially after respiratory illness or fever, and between August and October.
- Hospitalize patients immediately, collect lab specimens, diagnose, and begin medical management.
- Alert the health department and send lab specimens and medical records.

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THE WAY FORWARD

**ADPH IS:**
- Working with CDC to collect medical information, MRI images, and specimens, and classify cases.
- Communicating information about AFM to clinicians and the public.

**CLINICIANS CAN:**
- Contact ADPH with any questions about AFM, including how to report cases and collect appropriate specimens.

**CDC IS:**
- Monitoring AFM trends and the clinical presentation.
- Researching possible risk factors.
- Conducting advanced lab testing and research to understand how viral infections may lead to AFM.
- Tracking long-term patient outcomes.

For more information contact:

Temitope Ajala, Epidemiologist at
Phone Number: 334.206.5628
Email Address: temitope.ajala@adph.state.al.us
Infectious Diseases & Outbreaks Division
The RSA Tower
201 Monroe Street
Montgomery, AL 36104
Acute Flaccid Myelitis (AFM) Reporting and Procedures

Guidance For Clinicians

1. Identify suspected case of AFM: patient with onset of acute flaccid limb weakness

2. Use the REPORT Card to notify Alabama Dept. Public Health (ADPH) of the suspect case

Specimen Collection
Collect specimens as close to onset of limb weakness as possible.

Patient Information
Copies of the following information should be uploaded to the REPORT Card:
- Patient Summary Form
- Admission and discharge notes
- Neurology & infectious disease consult notes
- MRI reports and images*
- Vaccination history
- Laboratory test results

3. ADPH surveillance team will compile patient information and send to CDC. Patient information is assessed by CDC’s AFM experts.

4. Following expert review, patient classification is given back to ADPH.
   Information is shared with clinician.

*If electronic copies of MRI images are not available, please send a disc copy

to: Attn: Temitope Ajala

Alabama Dept. of Public Health, Bureau of Communicable Disease
201 Monroe St., Suite 1450
Montgomery, AL 36104
### Specimen Type and Instructions

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Amount</th>
<th>Collection</th>
<th>Storage</th>
<th>Shipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Stool</td>
<td>≥1 gram (2 samples collected 24 hours apart)</td>
<td>Sterile container; rectal swabs are not acceptable</td>
<td>Freeze at -20°C</td>
<td>Ship on dry ice</td>
</tr>
<tr>
<td>Respiratory swabs</td>
<td>≥1mL (minimum amount of medium)</td>
<td>Place in viral transport medium</td>
<td>Freeze at -20°C</td>
<td>Ship on dry ice</td>
</tr>
<tr>
<td>Cerebrospinal fluid (CSF)</td>
<td>1mL (collect at same time or within 24 hrs of serum)</td>
<td>Spin and CSF removed to cryovial</td>
<td>Freeze at -20°C</td>
<td>Ship on dry ice</td>
</tr>
<tr>
<td>Serum</td>
<td>≥0.4mL (collect at same time or within 24 hours of CSF)</td>
<td>Collect in tiger/red top tube; spin and serum removed to sterile container</td>
<td>Freeze at -20°C</td>
<td>Ship on dry ice</td>
</tr>
</tbody>
</table>

### Post-Mortem Specimens

| Fresh-frozen tissue         | Representative sections from various organs | Place directly on dry ice or liquid nitrogen | Freeze at -70°C  | Ship frozen tissue in a sealable bag on dry ice |
| Formalin-fixed/paraffin-embedded tissue | Representative sections from various organs | Fix tissue in formalin for 3 days, then transfer to a container of 100% ethanol | Room temperature | Ship at room temperature with paraffin blocks in carriers to prevent breakage |

*Stool specimens should be collected within 14 days of symptom onset.

*Representative sections from various organs are requested, but particularly from brain/spinal cord (including gray and white matter), heart, lung, liver, kidney, and other organs as available.

Specimens should be collected as close to onset of limb weakness as possible.

Specimens should be shipped to:
Bureau of Clinical Laboratories, EID
204 Legends Court
Prattville, AL 36006-7893
For BCL Requisition Forms, visit: [https://www.alabamapublichealth.gov/bcl/assets/bclrequisitionform23.pdf](https://www.alabamapublichealth.gov/bcl/assets/bclrequisitionform23.pdf)
Questions, contact: Emerging Infectious Diseases (EID) (334) 260-3400