MARCH 2024

ACUTE FLACCID MYELITIS (AFM) QUICKSHEET

Kentucky Public Health
Prevent. Promote. Protect.

SYMPTOMS

Characterized by:

- Sudden limb weakness
- Loss of muscle tone and reflexes
- Some may also experience:
  - Facial droop/weakness
  - Difficulty moving the eyes
  - Drooping eyelids
  - Difficulty with swallowing or slurred speech
  - Numbness/tingling (rare, though some may experience pain in arms/legs)
  - Inability to pass urine
- Severe symptoms are:
  - Body temperature and blood pressure instability
  - Respiratory failure

*The symptoms of acute flaccid myelitis can look similar to those of the viral disease polio and Guillain-Barre syndrome. Review of clinical history and preceding illness is important in differentiating.

CONTROL MEASURES

Control measures will depend on the causative agent; however, proper hand hygiene will help in controlling spread. Standard precautions in healthcare facilities should be implemented.

EXCLUSION

Anyone with a fever should be excluded from work or school until 24 hours have passed fever-free without the use of an anti-fever medication. Anyone with diarrhea should be excluded from work or school until 24 hours have passed diarrhea-free without the use of an anti-diarrheal medication. If the etiology is determined, there may be additional exclusion criteria that apply.

INFECTIOUS AGENT

May be caused by a variety of factors, including several viruses:

- Enteroviruses (such as EV-D68 & EV-A71)
- West Nile Virus (WNV) and viruses in the same family as WNV, specifically Japanese encephalitis virus and South Louis encephalitis viruses, and
- Adenoviruses

Goal of surveillance is to identify the etiology

DIFFERENTIAL*

- Polio
- Transverse Myelitis
- Guillain-Barre syndrome

TRANSMISSION

Dependent on infectious agent

INCUBATION PERIOD

Dependent on infectious agent

KENTUCKY ACUTE FLACCID MYELIITS OCCURRENCE

MMWR Year	2015	2016	2017	2018	2019	2020	2021	2022
Confirmed Case Count	0	0	1	1	0	0	0	1

KENTUCKY DEPARTMENT OF PUBLIC HEALTH
ON CALL PHONE: (888) 9REPORT
IMMUNIZATION BRANCH: (502) 564-4478

ACUTE FLACCID MYELITIS QUICKSHEET

CASE DEFINITIONS

CLINICAL CRITERIA

- An illness with onset of acute flaccid* weakness of one or more limbs, **AND**
- Absence of a clear alternative diagnosis attributable to a nationally notifiable condition**

* Low muscle tone, limp, hanging loosely, not spastic or contracted.

** Cases with a clear alternative diagnosis attributable to a nationally notifiable condition (NNC) should be reported only once using the event code for the NNC to avoid duplicate reporting.

SUSPECT CASE

- Meets clinical criteria with supportive laboratory/imaging evidence, **AND**
- Available information is insufficient to classify case as probable or confirmed.

PROBABLE CASE

- Meets clinical criteria with presumptive laboratory/imaging evidence.

CONFIRMED CASE

- Meets clinical criteria with confirmatory laboratory/imaging evidence, **OR**
- Meets other classification criteria.

LABORATORY CRITERIA

Confirmatory laboratory/imaging evidence:

- MRI showing spinal cord lesion with predominant gray matter involvement† and spanning one or more vertebral segments, **AND**
- Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities.

Presumptive laboratory/imaging evidence:

- MRI showing spinal cord lesion where gray matter involvement† is present but predominance cannot be determined, **AND**
- Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities.

Supportive laboratory/imaging evidence:

- MRI showing a spinal cord lesion in at least some gray matter† and spanning one or more vertebral segments, **AND**
- Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities.

† Terms in the spinal cord MRI report such as “affecting gray matter,” “affecting the anterior horn or anterior horn cells,” “affecting the central cord,” “anterior myelitis,” or “poliomyelitis” would all be consistent with this terminology.

OTHER CRITERIA

- Autopsy findings that include histopathologic evidence of inflammation largely involving the anterior horn of the spinal cord spanning one or more vertebral segments, **AND**
- Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities, **AND**
- Absence of a clear alternative diagnosis attributable to a nationally notifiable condition.**

** Cases with a clear alternative diagnosis attributable to a nationally notifiable condition (NNC) should be reported only once using the event code for the NNC to avoid duplicate reporting.

*To provide consistency in case classification, review of case information and assignment of final case classification for all suspected AFM cases will be done by experts in national AFM surveillance.

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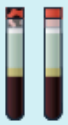
CASE INVESTIGATION

1. HEALTHCARE PROVIDERS
    a. Identify patient under investigation for acute flaccid myelitis (AFM); patient with:
        i. onset of acute flaccid limb weakness
        ii. an MRI showing spinal cord lesions in at least some gray matter
    b. Review vaccination status, rule out polio, collect exposure history
2. CONTACT HEALTH DEPARTMENT
    a. Coordinate the submission of specimens and information, including copies of:
        i. Neurology consult notes
        ii. MRI images and report
        iii. Collect CSF, whole stool, respiratory, and serum specimens. Collect specimens as close to the onset of limb weakness as possible and store as directed (freeze as soon as possible after collection) (*Full battery of testing needed for identifying the etiology*)
3. HEALTH DEPARTMENTS
    a. Health department completes the AFM Patient Summary Form, compiles medical records, and sends information to CDC.
    b. Coordinate with State Lab
        i. Confirm shipping and documentation:
            1. Specimens should be shipped overnight to arrive at CDC Tuesday through Friday
            2. Specimen submission form should be completed for each specimen submitted
            3. Prior to shipping, contact CDC lab: AFMLab@cdc.gov

*After a neurology expert panel reviews the information CDC sends case classification to the health department. Health department notifies the treating healthcare provider. Healthcare providers should not wait to receive the case classification to give a clinical diagnosis or to initiate treatment.

SAMPLE	AMOUNT	TUBE TYPE	PROCESSING	STORAGE	SHIPPING
CSF	0.15 mL, 0.5-2 mL preferred (collect at same time or within 24hrs of serum if feasible)	Cryovial 	Spun and CSF removed to cryovial	Freeze at ≤-20°C	Frozen on dry ice.
Respiratory Nasopharyngeal (NP)/Oropharangeal (OP) swab	0.5 mL, 1 mL preferred (minimum amount)	N/A 	Store in vial transport medium	Freeze at ≤-20°C	Frozen on dry ice.
Serum	0.5 mL, 1 mL preferred (collect at same time or within 24hrs of CSF if feasible)	Tiger/red top for collection; separate tube for shipping 	Spun and serum aliquot removed to separate tube	Freeze at ≤-20°C	Frozen on dry ice.
Stool	1 gram, 10 – 20 grams preferred (2 samples collected 24hrs apart)	Sterile container 	N/A	Freeze at ≤-20°C	Frozen on dry ice. Rectal swabs should not be sent in place of stool.

Please, always include whole stool specimens to help identify pathogens and rule out poliovirus.