# Acute Flaccid Myelitis (AFM)

*AFM is a Class A Disease and must be reported to the state within 24 hours*

## Epidemiology

Acute flaccid myelitis (AFM) is a serious neurologic condition that affects the central nervous system (CNS), specifically the spinal cord, and results in the sudden onset of weakness in the limb(s). Surveillance of AFM began in 2014 in the United States. The cause of AFM is unknown, but has been associated with non-polio and polio enteroviruses, West Nile Virus (WNV), and other viral infections. Current studies are associating the global resurgence of AFM with the non-polio enterovirus DV-D68. AFM is uncommon and worldwide, cases have seen similar trends in cases like the United States. There have been biennial spikes in cases in the years of 2014, 2016, and 2018, mostly during the months of August through November. A similar increase was projected for 2020, but was not seen, likely as a result of the COVID-19 pandemic. The number of AFM cases has remained low since 2018, including during 2022, when an increase in EV-D68 respiratory disease was observed.

The clinical presentation of AFM can begin with either systemic or neurologic symptoms. Symptoms may include a respiratory illness, fever, pain or numbness in the limb(s), headache, back/neck pain, difficulty talking or swallowing, neck/ facial weakness, and gait difficulty; these symptoms are not always present. Neurologic symptoms of AFM include acute focal limb weakness, loss of muscle tone, and sudden loss of reflexes. A history of respiratory illnesses frequently precedes neurological symptoms by one to four weeks. The most severe symptoms are respiratory failure and/or serious neurological complications.

AFM is a subset syndrome of acute flaccid paralysis (AFP), a clinical syndrome with rapid muscle weakness or paralysis caused by infectious and noninfectious means. Disorders that are included in AFP are Guillain-Barré (GBS), toxic neuropathy, and muscle disorders.

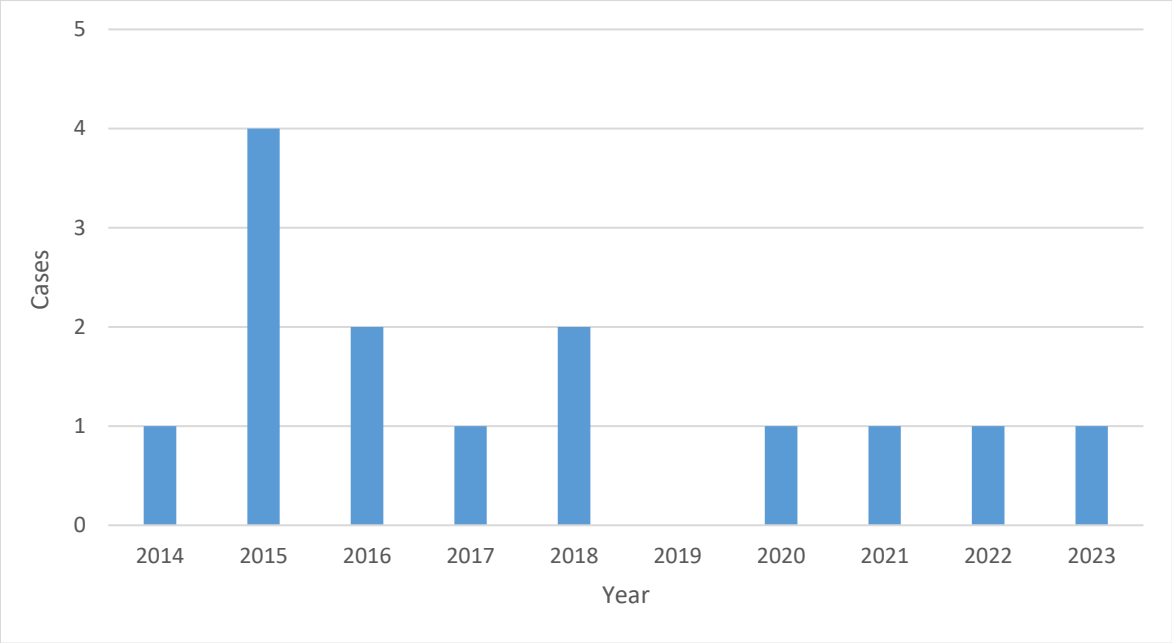
Since national surveillance began in 2014, there have been 745 confirmed AFM cases reported to the Centers for Disease Control and Prevention (CDC) in the United States. The highest annual case count was seen in 2018, with 238 confirmed AFM cases reported from 42 states. Most cases are in children, making up 90% of the total cases, with the average age being five years.

## AFM Surveillance

When a healthcare provider suspects an AFM case, they should contact the Louisiana Department of Health (LDH). The healthcare provider will need to collect relevant clinical information, cerebrospinal fluid (CSF), blood, stool, and respiratory specimens, and magnetic resonance imaging (MRI) for the patient under investigation, for further consultation with the CDC.

## AFM in Louisiana

Figure 1. Acute flaccid myelitis cases in Louisiana by year, 2014-2023.



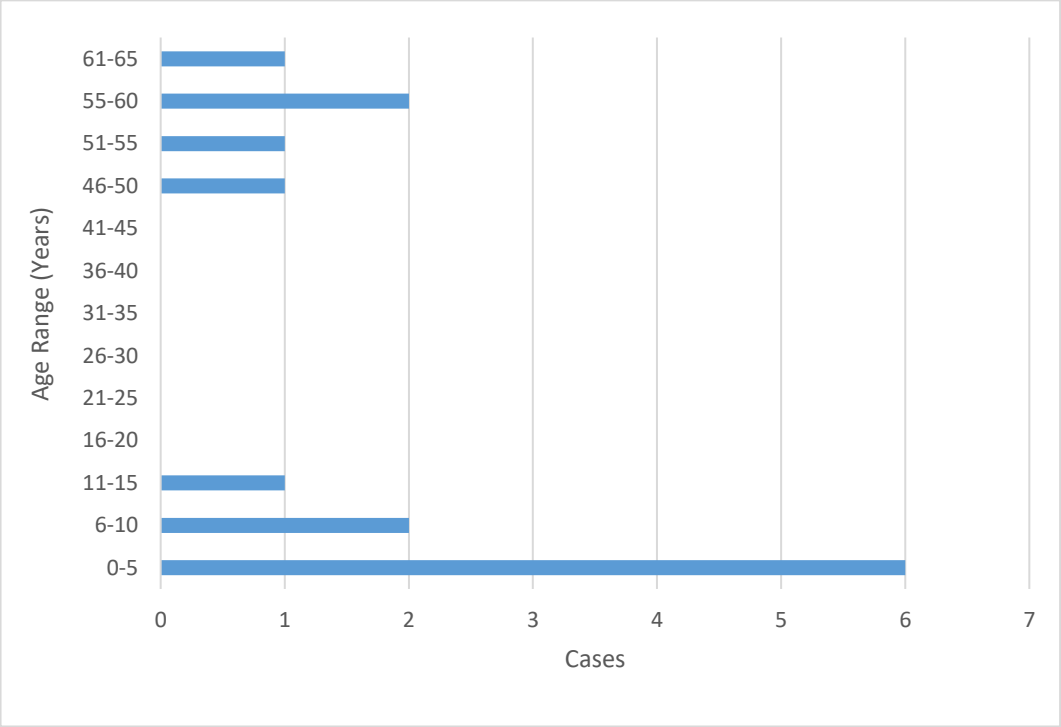

A total of 14 probable and confirmed AFM cases have been reported in Louisiana from 2014 to 2023. The maximum number of cases reported was in 2015 with four cases.

Table 1. Acute flaccid myelitis cases by parish, Louisiana, 2014-2023.

| Parish | Number of Cases |
|---|---|
| Calcasieu | 1 |
| Iberville | 1 |
| Jefferson | 3 |
| Lafourche | 3 |
| Livingston | 1 |
| Ouachita | 3 |
| Saint Martin | 1 |
| Saint Tammany | 1 |

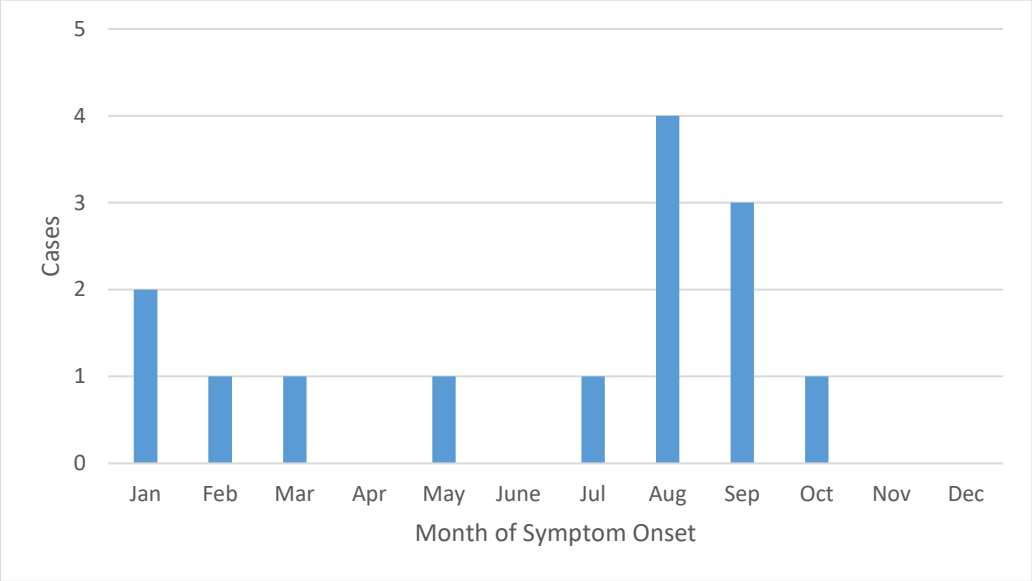
AFM cases have been reported from a total of eight parishes. Three parishes have reported more than one case (Jefferson, Lafourche, and Ouachita).

Figure 2. Age distribution of acute flaccid myelitis cases, Louisiana, 2014-2023




The age range of AFM cases reported in Louisiana spans 6 months to 61 years old. Cases have mainly been in children and those above 40-years-old. When differentiating by gender, 7 cases have been in males and 7 cases have been in females.

Figure 3. Acute flaccid myelitis cases by month of symptom onset, Louisiana 2014-2023.




Cases of AFM in Louisiana have typically been reported more often at the end of summer, peaking in August, with cases being seen into October. This is consistent with national and international trends.