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It's Not Polio! Acute Flaccid Myelitis — United States, August 2014 – October 2016

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Background: Acute flaccid myelitis (AFM) is a serious but rare condition characterized by sudden onset of limb weakness or paralysis. In August 2014, reports of this mysterious polio-like illness occurring concurrently with outbreaks of severe respiratory illness caused by enterovirus D68 prompted establishment of surveillance under a standardized case definition. After a decrease in 2015, AFM cases increased during 2016 raising concerns of a resurgence. We compared clinical and laboratory profiles of cases in 2014 and in 2016.

Methods: Confirmed cases were defined as acute flaccid limb weakness and spinal cord gray matter lesions on magnetic resonance imaging (MRI). Cases >21 years of age were excluded because of changes in case definition in 2015. Clinical and laboratory characteristics of cases from August – December 2014 and January – October 2016 were compared using Wilcoxon rank sum and Fisher's exact test.

Results: A total of 311 confirmed AFM cases have been reported: 120, 21, and 96 cases for August – December 2014, 2015, and January – October 2016, respectively. Cases in 2016 had a lower median age (5 vs 7 years; $p < 0.001$), were more likely to present with altered mental status (AMS) (26% vs 11%; $p = 0.01$), have more than two limbs affected (48% vs 32%; $p = 0.02$), and require mechanical ventilation (33% vs 20%; $p = 0.04$) compared to cases in 2014. Despite extensive testing since 2014, no consistent etiology has been identified to date.

Conclusions: AFM cases in 2016 tended to be younger and had more severe clinical presentations compared to those in 2014. Continued surveillance and reporting of suspected AFM cases remain critical to further understand and characterize this disease. Testing protocols have shifted to explore both infectious and non-infectious causes.