Acute Neurologic Illness with Focal Limb Weakness of Unknown Etiology in Children

September 29, 2014

Dear Colleague:

On September 26, 2014, the Centers for Disease Control and Prevention (CDC) announced via a CDC Health Advisory that they are working with the Colorado Department of Public Health and Environment and Children’s Hospital Colorado to investigate a cluster of nine pediatric patients hospitalized with acute neurological illness of undetermined etiology.

The illnesses have occurred since August 1, 2014 and are coincident with an increase of respiratory illnesses among children. Among the common clinical findings in these children were acute focal limb weakness and specific findings on magnetic resonance imaging (MRI) of the spinal cord consisting of non-enhancing lesions largely restricted to the gray matter. Also, nasopharyngeal specimens tested positive for rhinovirus/enterovirus in six of eight patients that were tested. Of the six positive specimens, four were typed as enterovirus D68 (EV-D68) and two are still pending. The possible linkage of this cluster in Colorado to the larger United States EV-D68 outbreak is part of the ongoing epidemiologic investigation.

The purpose of the CDC health advisory was to provide awareness of this neurologic syndrome under investigation, with the aim of determining if children with similar clinical and radiographic findings are being cared for in other geographic areas. CDC is working with the states to characterize the epidemiology and etiology of such cases.

As you know, Virginia is one of 40 states that have confirmed the presence of EV-D68 via laboratory testing. To date, all the reported clinical presentations of laboratory-confirmed EV-D68 illness in Virginia have been respiratory in nature.

VDH is interested in knowing about any children presenting with a similar neurologic illness in Virginia. Patients that meet the following case definition should be reported immediately to your local health department (www.vdh.virginia.gov/LHD/index.htm):

Patients ≤ 21 years of age with

1) Acute onset of focal limb weakness occurring on or after August 1, 2014; AND

2) An MRI showing a spinal cord lesion largely restricted to gray matter.
Your local health department will consult with the clinician about laboratory testing of stool, respiratory, and cerebrospinal fluid specimens for enteroviruses, West Nile virus, and other known infectious etiologies from a patient meeting this case definition.

The CDC Health Advisory, including more detail on the clinical presentation and laboratory results found in these patients, can be found here: [http://emergency.cdc.gov/HAN/han00370.asp](http://emergency.cdc.gov/HAN/han00370.asp)

As always, thank you for your important role in identifying emerging public health issues and in working with clinical and public health colleagues to investigate such illnesses, while providing care for your patients and their families.

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