Atypical Hand, Foot, and Mouth Disease Circulating

**Current Situation**

Atypical hand, foot, and mouth disease (HFMD) caused by coxsackievirus A6 (CAV-6) has been circulating in California and Nevada, including nearby Washoe County (Reno). No outbreaks have been reported to the health departments in the Eastern Sierra. The most common cause of HFMD in the United States is coxsackievirus A16 (CAV-16). HFMD is a common viral illness caused by enteroviruses that predominantly affects children under the age of five years. Signs and symptoms of atypical HFMD (CAV-6) include:

- Rash is more extensive, often involving entire extremities, face, buttocks, and sometimes trunk (over half of patients have >10% of body surface affected)
- More widespread skin disease and in particular spread to areas of previous skin disease or skin damage (e.g., atopic dermatitis, sunburn, irritant dermatitis)
- Facial skin lesions often more extensive than with typical HFMD
- Some have widespread papules
- Larger blisters, sometimes hemorrhagic, often intraoral lesions on tongue
- Onychomadesis (nail shedding) and/or peeling of skin, either at the same time, or several weeks later
- Many patients have sick family or schoolmates, including adults, with wide variation of presentation
- Cases have been misdiagnosed as eczema herpeticum, atypical Kawasaki, impetigo, varicella
- As of July 10th, no deaths or serious long-term sequelae
- When hospitalized, it is typically for pain control, fluid management, or concerns/treatment of other possible diagnoses.

**Laboratory Testing**

We would be interested in testing specimens from patients who are hospitalized, are from outbreak settings, or have neurological symptoms. The best samples for acute illness are throat and lesion swabs (ideally BOTH). The sooner after onset the sample is collected (within 48-72 hours of onset), the greater the probability of obtaining a viral isolate. Submittal and case report forms (including instructions on collecting specimens) can be found at: [http://www.cdph.ca.gov/programs/vrdl/Pages/CurrentVRDLSpecimenSubmittalforms.aspx](http://www.cdph.ca.gov/programs/vrdl/Pages/CurrentVRDLSpecimenSubmittalforms.aspx) under “Enterovirus”. Since this virus doesn’t grow well in standard viral culture media, and PCR cannot differentiate between CVA6 and other enteroviruses, specimens will be sent from
the San Bernardino Public Health Laboratory to the California Department of Public Health (CDPH), Viral and Rickettsial Disease Laboratory (VRDL) in Richmond for final identification. Specimens from 2-4 patients are requested to confirm any suspected outbreaks. For patients with neurological symptoms, a full set of specimens (including CSF) is requested.

**Infection Control**

Individuals will be most infectious during the first week of illness, but enterovirus can persist in stool for several weeks.

**Exclusion from childcare/school:**

- Until diarrhea and/or vomiting has stopped
- Absence of fever
- All lesions have scabbed over
- No new lesions have appeared for 2 days
- The infant/child is well enough to participate in routine activities
- For mild, cold-like symptoms: none

**Prevention and control (when disease has been documented):**

- Cover nose and mouth with a tissue when sneezing and coughing or cough/sneeze into your sleeve.
- Dispose of used tissues.
- Avoid close contact such as kissing, hugging, or sharing eating utensils or cups with people with HFMD.
- Wash hands thoroughly with soap and running water after using the toilet, changing diapers, touching nasal secretions, and before preparing or eating food.
- Thorough hand washing is the best way to prevent the spread of communicable diseases. Staff should closely monitor hand washing of all children after children have used the bathroom or have been diapered.
- Clean and disinfect diapering area and potty chairs after each use and bathroom toilets, sinks, and toys at least daily and when soiled. Clean and sanitize mouthed toys, objects, and surfaces at least daily and when soiled. After washing items with soap and water, then disinfect them with a solution of 2 tablespoons of bleach and 4 cups of water (or $\frac{1}{2}$ cup of bleach mixed with 1 gallon water).

**Reporting to the health department**

Report suspected outbreaks of HFMD to us within one working day. Reporting of sporadic cases is not required.

**Additional Note:**

Cambodia is currently experiencing an epidemic of severe HFMD caused by enterovirus-71 (EV-71). This is not the same strain of enterovirus that is currently circulating in California.