

# Hand, Foot and Mouth Disease (Enteroviruses) Risk Assessment & Mitigation Strategies

Considerations for Crowded Settings (such as Emergency Shelters or Refugee Camps)

## HFMD Transmission

[Hand, foot and mouth disease \(HFMD\)](#) is a [non-polio enterovirus-related illness](#) that spreads easily through direct contact, respiratory droplets, and contact with contaminated surfaces and objects.

- The most common viruses that cause HFMD are coxsackievirus A16 (CV-A16), coxsackievirus A6 (CV-A6), and enterovirus A71 (EV-A71).
- Respiratory transmission is generally limited to 7 days or less (that is, during the symptomatic period) and long-term control focuses on control of contact and fomite transmission.
- Incubation period is 3-6 days, symptomatic period usually lasts 7-10 days, and post-symptomatic stool shedding of virus can continue for weeks.
- Illness is typically self-limited. Consider pain relief for children who might not be drinking due to painful mouth blisters and ensure good hydration, particularly in infants.

[Symptoms and Diagnosis of Hand, Foot, and Mouth Disease](#)  
[| CDC](#)



## Isolation and Quarantine Recommendations

Typical isolation and quarantine recommendations are generally not feasible given that shedding of the virus can persist for weeks, and there is unrecognized asymptomatic disease and shedding in some people.

- Also, prioritization of isolation and quarantine spaces for other diseases such as measles, COVID-19, and influenza is critical.
- Cohorting families during the first week of illness in separate barracks can be an option if the outbreak worsens. However, if families have to mix with the general population for meals and bathroom use, this option might not be helpful.



**Centers for Disease Control  
and Prevention**  
National Center for Immunization and  
Respiratory Diseases

## Infection Prevention and Control Strategies

- 1) Increase access to handwashing by providing handwashing stations (appropriate sizes for both children and adults) at the entrance to barracks and other key places (such as a dining hall or food tent, see below).
- 2) Identify specific moments when handwashing should be done (before entering barracks, before entering food halls or dining tents, after using the restroom), and implement universal handwashing for these activities. For example, use signs to indicate that handwashing should be performed during these activities.
- 3) Provide individual pocket-sized dispensers of alcohol-based hand sanitizer, which may be helpful as long as adults are able to control access to them and kept them out of reach of children.
- 4) In the medical area, we recommend routine hand hygiene practices using soap and water or an alcohol-based hand rub (ABHR), and Contact Precautions for symptomatic incontinent/diapered children. Healthcare personnel should always have access to gloves and EPA List G agents for cleaning surfaces in the medical area.
- 5) If supplies of cleaning agents for surfaces are limited, it is prudent to prioritize them to families with ill children. Parents of infants could be instructed to clean surfaces after each diaper change and on a regular basis for continent children.
- 6) In barracks with known outbreak of HFMD, it is recommended to increase the frequency of cleaning the restrooms. A thorough twice-a-day cleaning protocol should be sufficient if each cleaning is performed adequately.
- 7) Cleaning agents from EPA list G should be used. If household bleach is being used in the restrooms, it would be important to make sure it is being mixed appropriately and discarded at the end of each day/shift.
- 8) Consider assigning an IPC-trained individual to monitor practices in real time.

## Resources

- EPA fact sheet: [Six Steps for Safe & Effective Disinfectant Use | US EPA](#)
- EPA list of G agents: <https://www.epa.gov/system/files/documents/2021-07/2021-06-22-list-g.pdf>
  - The best way to search this list is using the EPA number.
  - Make sure the surfaces stay wet for the appropriate amount of time.
  - If possible, toys and equipment (like the soccer balls) should be dedicated to an area rather than moved between areas; consider more frequent cleaning of this equipment (at a minimum daily or twice a day).
  - If toys may come in contact with a child's mouth, rinse with tap water after cleaning to remove any chemical residue. Store chemicals out of the reach of children.