

Hand, Foot, and Mouth Disease (HFMD)

Reporting and Public Health Guidance

Overview

Hand, Foot, and Mouth Disease (HFMD) is caused by viruses belonging to the *Enterovirus* genus. *Coxsackievirus A16* is the most common cause of HFMD in the United States, but more than 20 types of enteroviruses have been associated with the illness. HFMD is a common illness that usually affects infants and children younger than 5 years old, but cases in older children and adults can occur. While typically mild and self-limiting, HFMD can spread quickly in childcare and school environments through close contact, shared items, and contaminated surfaces. Outbreaks of HFMD typically occur during summer and autumn months.

Clusters and outbreaks in early education settings often require a coordinated response between schools, childcare centers, and local health departments.

HFMD Information

- **Transmission:** Exposure to the virus can occur in several ways, including:
 - Through inhalation of respiratory droplets (saliva, sputum, nasal mucous) from drooling, talking, coughing or sneezing from an infected person
 - Direct contact with fluid from vesicles (blisters) and stool of infected persons.
 - Touching contaminated surfaces or objects, which can remain contaminated for long periods of time, then touching the eyes, nose or mouth without performing hand hygiene.
 - HFMD is not transmitted to or from pets or other animals.
- **Incubation Period:** 3 to 6 days
- **Communicability:** An infected person is most contagious for one week after symptom onset although the virus can shed for several weeks in the stool after respiratory symptoms resolve. Respiratory droplet shedding is usually limited to one week or less. Virus can survive on physical objects and surfaces for several hours.
- **Symptoms:** HFMD usually starts with a fever (100.4°F or greater), poor appetite, malaise, and sore throat. Painful sores develop in the mouth beginning as small red spots that blister and can cause painful swallowing as disease progresses. Cases may also experience a skin rash that develops as flat or raised red spots, sometimes with blisters. The rash may appear on the palms of the hands and soles of the feet, but may appear on the knees, elbows, buttocks, or genital area. Cases are usually reported in young children with outbreaks occurring in childcare centers and schools. Infection in older children and adults is often asymptomatic. In rare cases, HFMD can lead to complications including aseptic meningitis, encephalitis, and myocarditis.

- **Treatment:** There are no antivirals for treatment of HFMD. Supportive care is recommended. Most cases recover within 7-10 days without medical treatment.

Surveillance and Reporting

HFMD is not a reportable condition for individual cases; however, outbreaks or clusters should be reported promptly. Several Texas Laws and Texas Administrative Code, Health & Safety Code, Chapters 81, 84, and 87 require specific information regarding outbreaks of communicable diseases to be provided to public health. Outbreaks of HFMD are usually benign and self-limited; however, please contact the Texas Department of State Health Services (DSHS) Emerging and Acute Infectious Disease Unit (EAIDU) if more serious illness occurs, complications are reported, or in the event of an outbreak.

Definition of an outbreak: Any number of HFMD cases above baseline of usual case activity at the same facility would constitute an outbreak.

Please report any outbreaks of HFMD to DSHS Invasive and Respiratory Infectious Disease (IRID) team and send completed Respiratory Disease Outbreak Summary Forms to IRID@dshs.texas.gov.

- Report Form:
<https://www.dshs.texas.gov/sites/default/files/IDCU/investigation/forms/RespOutbreakFillable.pdf>
- Line List/Contact Tracing Form (if necessary):
<https://www.dshs.texas.gov/sites/default/files/IDCU/investigation/forms/RespContactTracking.pdf>

Prevention in Childcare Center and School Settings

- **Hand hygiene:** Wash hands often with soap and water for at least 20 seconds, especially after changing diapers, using the toilet, using a tissue to cover coughs and sneezes, and before and after caring for someone who is sick.
- **Surface Cleaning:** Increase frequency of cleaning and disinfecting frequently touched surfaces and soiled items, including toys and playmats. Make sure the disinfectant being used by the facility is registered with the U.S. Environmental Protection Agency (EPA) as a detergent-disinfectant or a hospital grade disinfectant effective against enteroviruses.
- **Change Contaminated Fabrics:** Contaminated clothing, sheets, or mats should be changed as soon as possible. While handling contaminated fabrics, disposable gloves should be worn and followed with proper hand hygiene.
- **Respiratory Etiquette:** Facilities should teach children and caregivers to cover mouths and noses when coughing or sneezing with disposable tissue followed by hand washing.
- **Limit Contact:** Discourage sharing eating utensils or cups and avoid contact with saliva and respiratory secretions.
- **Stay Home When Sick:** Exclude children and staff with fevers until 24-hours fever-free without the use of fever suppressing medication. Exclude children with open blisters or uncontrollable drooling.

- **Communication:** It is recommended that the school or childcare center notify parents and staff when there is a case in the facility. Facilities are required to notify their local health department when there are more cases than baseline in the same classroom.

Contact DSHS

Please contact the DSHS Emerging and Acute Infectious Disease Unit (EAIDU) Invasive and Respiratory Infectious Disease (IRID) team at IRID@dshs.texas.gov for questions or to report an outbreak of HFMD.

Resources & References

- CDC- Hand, Foot, and Mouth Disease (HFMD): <https://www.cdc.gov/hand-foot-mouth/about/index.html>
- CDC- HFMD Symptoms and Complications: <https://www.cdc.gov/hand-foot-mouth/signs-symptoms/index.html>
- CDC- HFMD Causes and How it Spreads: <https://www.cdc.gov/hand-foot-mouth/signs-symptoms/index.html>
- Texas Notifiable Conditions: <https://www.dshs.texas.gov/notifiable-conditions>
- Texas Respiratory Disease Outbreak Report Form: <https://www.dshs.texas.gov/sites/default/files/IDCU/investigation/forms/RespOutbreakFillable.pdf>
- Texas Respiratory Disease Outbreak Line List/Contact Tracing Form (if necessary): <https://www.dshs.texas.gov/sites/default/files/IDCU/investigation/forms/RespContactTracking.pdf>



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