

Foot and Mouth Disease

Last update: 2025-06-16

Key facts

- Foot and Mouth Disease (FMD) is a highly contagious viral disease that affects cloven-hoofed animals such as cattle, pigs, sheep, goats, and various wildlife species.
- The disease does not affect humans but is important due to its socioeconomic impact particularly on farmers, households and communities who depend on such livestock animals for food, nutrition and livelihoods
- It is caused by the Foot and Mouth Disease Virus (FMDV), which has seven distinct serotypes and numerous subtypes which complicates control and vaccination efforts.
- The disease is not considered a major threat to human health, though humans can become infected in rare cases by close contact with infected animals or contaminated products.
- FMD can cause severe economic losses due to reduced livestock productivity, trade restrictions, and the cost of control measures.

Transmission

- Direct contact between infected and susceptible animals through saliva, mucus, milk, faeces, and other bodily fluids of infected animals.
- Breathing in droplets from infected animals.
- Contact with contaminated equipment, clothing, vehicles, and feed
- Ingesting contaminated animal products when fed to other animals

Most Vulnerable to Contracting the Disease

- All cloven-hoofed animals are vulnerable, especially cattle and pigs
- Livestock in regions where FMD is endemic



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Signs in animals

- High fever
- Painful blisters in the mouth, on the tongue, feet, and teats
- Lameness
- Drooling
- Reluctance to move due to pain in the feet.
- Reduced milk production in dairy animals,
- Weight loss
- Abortion in pregnant animals.
- Death is generally low in adult animals, but young animals can die from possible heart inflammation.

What can you do to prevent and control an epidemic?

Monitoring the community and identifying sick people

- Identify and isolate sick animals before they spread the disease to others
 - Observe animals for with clinical signs such as; blisters, ulcers, and lesions on the mouth, tongue, feet, or teats
 - Assist in documenting suspected cases and keeping records for tracking purposes
 - Help veterinarians by observing high-risk areas like shared grazing spaces, water sources, or markets where animals from different farms may interact

Treatment and management

- Refer severely ill animals to animal health facilities
- Support isolation efforts by:
 - Assist animal health authorities in setting up temporary barriers or fences to create isolation zones for infected animals
 - Educate farmers on how to transport animals to quarantine areas and ensure that no contact occurs between sick and healthy animals during movement
 - In severe outbreaks, assist veterinarians and staff in the humane euthanasia of infected animals and help with proper disposal methods, such as incineration or burial



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Appropriate sanitation and waste management

- Promote recommended environmental hygiene and cleaning practices
 - Clean and disinfect surfaces that are touched frequently and dirty items,
 - Set up and maintain boot baths at entrances to animal areas and ensure the disinfectant solutions are fresh and properly mixed
 - Ensure that manure, bedding, and other organic waste from isolation areas are regularly removed and disposed of according to biosecurity standards
 - Safe disposal of waste products from infected animals, such as manure, bedding, and carcasses, by transporting them to designated disposal sites
 - Implement other control measures, such as setting traps or securing storage areas, to minimize contact between wildlife and livestock
- Promote use of appropriate biosecurity measures
- Encourage limited farm access to visitors and non-farm personnel
- Support use of protective clothing when moving around in farms to avoid carrying the virus from one location to another
- Support education of farmers on the importance of appropriate biosecurity measures

Food and water hygiene and safety

- Ensure and support access to safe, clean drinking water
 - Encourage the separation of drinking areas for sick and animals to prevent cross-contamination
 - Encourage farmers to prevent mixing of animals from different herds at public drinking spaces or water holes.

Social mobilization and health promotion

- Find out the specific advice being given by animal health and other relevant authorities
- Model following this advice and inform community members of current health practice advice
- Offer support and encouragement to follow the advice
 - Try to gain understanding about if and why health practice advice is not being followed
 - With the guidance of your supervisor and health authorities, work with communities to overcome barriers to following health advice and recommended practices

Immunization in animals

- Support routine and mass vaccination campaigns
 - Best practices are to vaccinate at an early age (4 months old for cattle, 2 months for pigs) with a booster dose given a month later. This would confer immunity for the maximum duration of one year (FAO).
 - In regions with known seasonal pattern for FMD, encourage the commencement of vaccination procedures three months prior to known high-risk periods



Mapping and community assessment

- Make a map of the community.
- Mark the following information on the map:
 - What species of animals have fallen sick with FMD?
 - How many animals have fallen sick with FMD? Where?
 - How many animals have died? Where? When?
 - Who and where are the vulnerable animals?
 - Where are the local animal health facilities and services?
 - Where do animals get their drinking water?
- Record the following information on the back of the map:
 - When did animals start to fall sick with FMD?
 - What species of animals are typically being reared in the affected community?
 - How many animals are being reared in the affected community?
 - o Do people do anything to treat their water?
 - Do people know how to treat water?
 - How do they do it?
 - What sanitation facilities are available?
 - Do people use them?
 - What biosecurity measures are available?
 - Are most farms fenced?
 - What other biosecurity measures do they have?
 - What are the community's habits, practices and beliefs about caring for and feeding sick animals?
 - Is a social mobilization or animal health promotion programme in place?
 - Which sources do people use/trust the most for information?
 - Are there rumours or misinformation about FMD? What are the rumours?
 - Can people identify the signs and symptoms of dehydration in animals?

Other resources

- Food and Agriculture Organization of the United Nations; Foot and Mouth Disease (n.d.)
- Food and Agriculture Organization of the United Nations; <u>Foot and mouth disease vaccination and post-vaccination monitoring</u> (2016)
- The Centre for Food Security and Public Health; Foot and Mouth Disease. (2015)



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- World Organisation for Animal Health (WOAH); Foot and Mouth Disease. (2009)
- World Organisation for Animal Health (WOAH); Foot and Mouth Disease (n.d.)

