

ESCMID Emerging Infections Subcommittee (EIS) summary

Emergence of Marburg Virus Disease in Ethiopia: Epidemiological Shift in East Africa

Content

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1 Executive Summary

On 14 November 2025, Ethiopia confirmed its first outbreak of Marburg virus disease (MVD) in the South Omo Zone, Southern Ethiopia. This outbreak represents a significant epidemiological shift: Ethiopia has never previously reported MVD. Genetic sequencing suggests the strain is closely related to East African lineages, pointing to a regional reservoir.

Laboratory testing identified Marburg virus in samples from a cluster of suspected haemorrhagic fever cases. To date, 10 cases have been reported, including 5 fatalities (CFR 50%), two among healthcare workers, highlighting the risk of nosocomial transmission. A total of 57 suspected cases have been investigated, including 4 in the past 24 hours.

Events included:

- **05 Nov 2025:** Initial suspected cases reported in South Omo Zone
- **14 Nov 2025:** Ethiopia confirms first Marburg virus outbreak
- **15 Nov 2025:** Africa CDC issues official statement
- **16 Nov 2025:** WHO deploys emergency response teams
- **23 Nov 2025:** last update

Characteristics of this outbreak as it stands:

- **Geographic expansion:** First occurrence in Ethiopia, adding to the widening geographic range observed in recent years.
- **Index case:** no data yet about risk activities or travel history.
- **Ecological considerations:** The suspected reservoir, *Rousettus aegyptiacus* (Nile flying fox), is a cave-dwelling bat species with relatively limited movement compared to other migratory fruit bats, which may favour localised spillover events rather than long-distance spread. These bats are confirmed hosts of Marburg virus; however, direct bat-to-human transmission has never been conclusively demonstrated. Current understanding suggests that initial spillover scenarios remain hypothetical and could involve indirect exposure, such as hunting, handling, or environmental contamination, or direct contact.
- **Healthcare vulnerability:** Two healthcare workers among fatalities underscore infection prevention challenges.
- **Regional risk:** High population mobility and porous borders increase the potential for spread.

Implications: Enhanced One Health surveillance, infection prevention and control (IPC) in healthcare settings, and cross-border coordination are urgently needed

2 References and Data Sources

- WHO: [Ethiopia confirms first outbreak of Marburg virus disease](#)
- Africa CDC: [Statement on confirmed Marburg virus disease in Ethiopia](#)
- CDC: [Clinical Overview of Marburg Virus Disease](#)
- WHO Fact Sheet: [Marburg virus disease](#)
- Ethiopian Public Health Institute: <https://www.facebook.com/EPHIET/>

3 Basics of MVD and Historical Outbreaks

Pathogen: Marburg virus (family *Filoviridae*), closely related to Ebola virus.

Reservoir: Fruit bats (*Rousettus aegyptiacus*, Nile flying fox), cave-dwelling species.

Transmission:

- **Primary:** Zoonotic: direct contact with infected bats or their secretions in caves/mines.
- **Secondary:** Human-to-human via body fluids, contaminated surfaces, and medical equipment.
- **High-risk settings:** Healthcare facilities without adequate IPC measures.

Incubation Period: 2–21 days.

Clinical Features:

- **Early:** Sudden onset fever, severe headache, malaise, myalgia.
- **Progression:** Nausea, vomiting, diarrhea, abdominal pain, rash.
- **Severe:** Hemorrhagic signs, multi-organ failure, shock, neurological symptoms.

Case Fatality Rate (CFR): Average ~50% (range 24–88%).

Treatment: No licensed vaccine or antiviral therapy. **Management:** Supportive care (fluid/electrolyte balance, organ support).

Table 1. Major previous outbreaks of Marburg virus disease

Year	Country	Region	Cases	Deaths	CFR
1967	Germany & Yugoslavia	Marburg, Frankfurt, Belgrade	31	7	23%
1975	South Africa	Johannesburg (ex-Zimbabwe)	3	1	33%
1980	Kenya	Kitum Cave, Mount Elgon	2	1	50%
1987	Kenya	Kitum Cave	1	1	100%
1998–2000	DR Congo	Durba/Watsa	154	128	83%
2004–2005	Angola	Uíge Province	252	227	90%
2007	Uganda	Kamwenge District	4	1	25%
2012	Uganda	Kabale, Ibanda, Mbarara	15	4	27%
2017	Uganda	Kween District	4	3	75%
2021	Guinea	Guéckédou	1	1	100%
2022	Ghana	Ashanti Region	3	2	67%
2023	Equatorial Guinea	Kie-Ntem, Littoral, Centro Sur	39	35	>90%
2023	Tanzania	Kagera Region	9	6	67%
2024	Rwanda	Kigali	66	15	24%
2025	Tanzania	Kagera	N/A	10	N/A

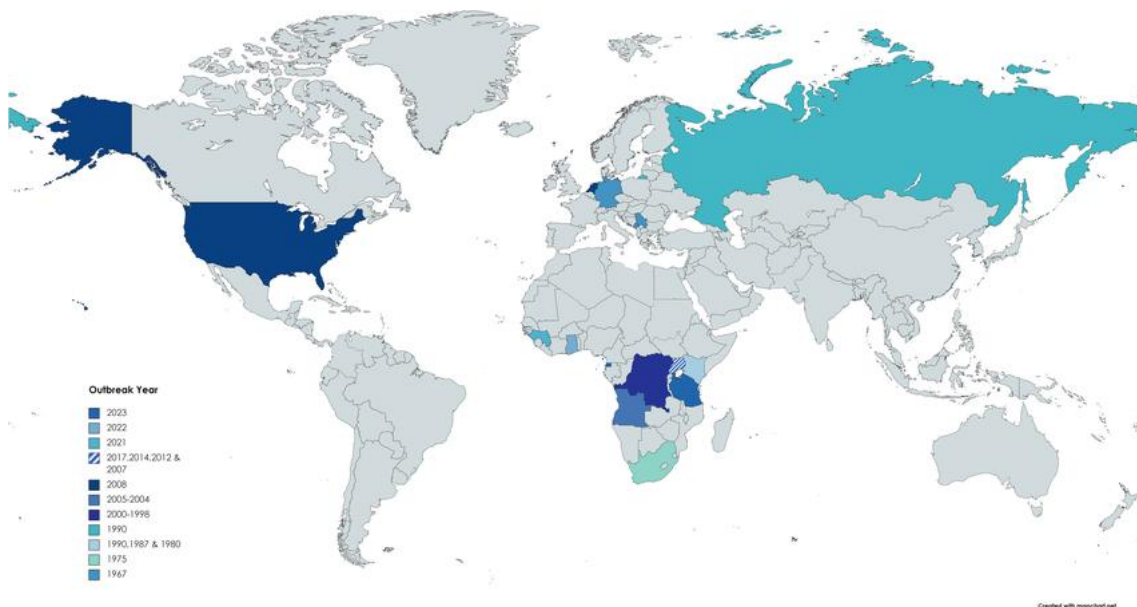


Figure 1: Alla D, Paruchuri SSH, Tiwari A, Alla SSM, Pillai RT, Bandakadi SKR, Pradeep A, Shah DJ, Sabiroğlu M, Chavda S, Biziyaremye P. The mortality, modes of infection, diagnostic tests, and treatments of Marburg virus disease: A systematic review. *Health Sci Rep.* 2023 Aug 31;6(9):e1545. doi: 10.1002/hsr2.1545. PMID: 37662539; PMCID: PMC10471912.