Ethiopian Journal of Health and Biomedical Sciences

Online ISSN: 2790-3087

Editorial Open access

From Response to Resilience: Sustaining Vigilance after Ethiopia's first Marburg Virus Disease Outbreak

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EDITORIAL

The recent outbreak of Marburg virus disease (MVD) in southern Ethiopia marks a critical milestone in the country's public health history, confirming the persistent threat of filoviruses in the region (1). Reported by the Ministry of Health in November 2025, the outbreak centered in the Jinka, Malle, and Dasenech districts, resulting in 14 laboratory-confirmed cases and a high case fatality rate of 64.3%. On 26 January 2026, Ethiopia officially declared the end of the outbreak following two consecutive incubation periods (42 days) without new cases and completion of safe and dignified burial procedures for the last confirmed patient. During the response, approximately 3,800 laboratory tests were conducted, and 857 contacts were identified and monitored. Ethiopia has since entered a 90-day enhanced surveillance phase to ensure early detection of any resurgence (2,3). This outbreak, although successfully contained, confirms the presence of ecological and epidemiological conditions favorable for *filovirus* transmission and underscores the importance of sustained preparedness (4).

Marburg virus is an enveloped, filamentous, negative-sense, single-stranded RNA virus (5) belonging to the family *Filoviridae* and genus Marburgvirus. It causes severe viral hemorrhagic fever characterized by the abrupt onset of fever, headache, myalgia, and gastrointestinal symptoms, followed by hemorrhage, shock, and multi-organ dysfunction in severe cases (6–9). The incubation period ranges from 2 to 21 days. Fatal outcomes typically occur within 8–9 days after symptom onset due to systemic viral replication, immune dysregulation, vascular damage, and multi-organ failure (8–10).

MVD is a severe zoonotic viral hemorrhagic fever caused by the Marburg virus, primarily hosted by the Egyptian fruit bat (*Rousettus aegyptiacus*) (11-13). Transmission to humans occurs through exposure to bat-inhabited caves or direct contact with infected bodily fluids (6, 8). Since its first identification in 1967 in Germany (Marburg and Frankfurt) and Serbia (7-9), MVD outbreaks have occurred sporadically across Africa, including Angola, Uganda, Ghana, Tanzania, Rwanda, and Equatorial Guinea (6, 8). Previous outbreaks across Africa have demonstrated the high fatality of the disease, with case fatality rates (CFR) ranging from 20% to 90% (6–8, 14). Ethiopian outbreak (2025–2026) represents a documented expansion of filovirus risk zones, particularly in areas like the Omo Valley, where cave ecosystems support significant bat populations. With no licensed antivirals or vaccines currently available, management remains strictly supportive, making early diagnosis via RT-PCR and rapid isolation the only effective

Article History: Received: November 20, 2025 Revised: December 12, 2025 Accepted: December 20, 2025

Citation: Awoke D, Daniel M, Aschalew G. From Response to Resilience: Sustaining Vigilance after Ethiopia's first Marburg Virus Disease Outbreak. Ethiop J Health Biomed Sci. 2025; 15(2): 1-3. https://doi.org/10.20372/ejhbs.1188

tools for survival and containment (1, 15-17).

The successful response demonstrated Ethiopia's coordinated national capacity; however, the transition from reactive response to long-term resilience is essential. To mitigate the risk of future spillovers, Ethiopia must prioritize the decentralization of molecular diagnostic capacity to regional laboratories and establish ecological surveillance of bat reservoirs. Institutionalizing rapid response teams and strengthening cross-border collaboration under a One Health framework, integrating human, animal, and environmental health, will be vital.

Furthermore, regulatory preparedness for the emergency use of investigational therapeutics must be established to ensure rapid deployment during future resurgences. The 2025–2026 outbreak should serve as a catalyst for strengthening national health security. By sustaining vigilance and enhancing diagnostic and surveillance infrastructure, Ethiopia can ensure that this first encounter with MVD serves as a foundation for a more resilient public health future.

Competing Interest: The authors declare that they have no competing interests.

Funding: The authors received no specific funding for this work.

Acknowledgments: The authors would like to thank Bahir Dar University for the encouragement we received to do this work. We would also like to thank Dr. Tadesse Belayneh for his professional input and guidance.

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