



Letter to the Editor

Lessons from Tanzania's Marburg Outbreak Control: Implications for Regional Preparedness in Africa and the Eastern Mediterranean

Patrick Ashinze^{1*}, Innocent Shu Bonu², Mayokun Nathaniel Alabi³, and Lukman Abiodun Musa⁴

¹Department of Medicine, Faculty of Clinical Sciences, University of Ilorin Teaching Hospital, Ilorin, Nigeria

²Department of Surgery, African Health Science University, Kigali, Rwanda

³Department of Veterinary Health, Faculty of Veterinary Science, University of Ilorin, Ilorin, Nigeria

⁴Emergency Department, Aberdeen Royal Infirmary, Foresterhill, Aberdeen, Scotland

Dear Editor,

We write to highlight a significant development in global health: the World Health Organization (WHO) Tanzania declared on March 13, 2025 that the Marburg virus disease (MVD) outbreak in Tanzania has ended, following 42 days without new cases since the last negative PCR test of the sole confirmed case on February 1, 2025 [1]. This achievement, resulting from Tanzania's first documented Marburg outbreak, highlights the critical importance of swift, coordinated action and provides timely insights for nations grappling with viral hemorrhagic fevers (VHFs).

The outbreak, which lasted 11 weeks from late December 2024 to March 2025, was declared on January 20, 2025. As of March 12, 2025, the Ministry of Health reported two confirmed and eight probable cases from the Biharamulo district in the Kagera region. All 10 cases resulted in death (case fatality ratio 100%), including eight individuals who passed away before the outbreak was confirmed. [1, 2].

Tanzania's success stemmed from three evidence-backed pillars [1, 2]:

1. Preparedness: Pre-outbreak investments in surveillance allowed for early detection, particularly of the Angola strain, a highly virulent serotype. Emergency isolation units were activated within the first few days of the reported cases, and frontline workers were trained in infection prevention and control (IPC). Real-time genomic data shared through the Africa CDC enhanced regional alerts.
2. Equity: Diagnostic access was prioritized, and therapeutics were distributed according to a needs-based protocol, preventing stockouts.
3. Solidarity: Cross-sector collaboration with the WHO, Africa CDC, and non-governmental organizations like Doctors Without Borders accelerated resource mobilization through cross-border screenings, effectively preventing regional spread.

Corresponding Author: Patrick Ashinze; email: patrickashinze@yahoo.com

Received: 19 March 2025

Accepted: 11 May 2025

Published: 30 June 2025

Production and Hosting by KnE Publishing

© Patrick Ashinze et al. This article is distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use and redistribution provided that the original author and source are credited.

Editor-in-Chief:

Prof. Nazik Elmalaika Obaid
Seid Ahmed Husain, MD, M.Sc,
MHPE, PhD.

OPEN ACCESS

While Tanzania's outcome exemplifies effective outbreak control, systemic gaps persist in other regions. Countries facing Ebola or Lassa fever still grapple with vaccine inequity, as only 30% of high-risk African populations have access to Marburg trial vaccines [3], and they also suffer from underfunded surge capacities.

For instance, Sudan's 2024 preparedness gap analysis for Sudan Virus (SUDV), a filovirus similar to the Marburg virus, revealed critical shortages in IPC training and laboratory capacity [4]. Meanwhile, Uganda's 2023 surveillance report on VHFs noted delays in cross-border data sharing [5]. Political delays in declaring outbreaks persist as a barrier, costing lives.

Tanzania's model—prioritizing localized action within global partnerships—must galvanize change. We urge stakeholders to:

- Increase funding for health infrastructure in at-risk areas.
- Accelerate technology transfer for diagnostics and vaccines.
- Establish community-led surveillance networks to counter misinformation.

The conclusion of Tanzania's outbreak stands as a testament to what is achievable and serves as a reminder of the work ahead. Other neighboring African and eastern Mediterranean countries facing challenges in surveillance and disease management must take initiative, modeling their efforts after Tanzania's and implementing proactive measures to prevent the spread of disease. Let this success inspire a renewed commitment to health equity and resilience worldwide.

Declarations

Acknowledgments

The authors would like to acknowledge The Lind League, Nigeria, for providing invaluable resources to kickstart, culminate, and leverage this research project while also enhancing our capacities.

Ethical Considerations

This letter to the Editor analyzes publicly available data; no ethical approval was required.

Competing Interests

None.

Availability of Data and Material

Not applicable.

Funding

Not applicable.

Abbreviations and Symbols

MVD: Marburg virus disease

VHF: Viral hemorrhagic fever

IPC: Infection prevention and control

SUDV: Sudan virus

References

- [1] World Health Organization. (2025, March 13). *Tanzania declares end of Marburg virus disease outbreak*. <https://www.afro.who.int/countries/united-republic-of-tanzania/news/tanzania-declares-end-marburg-virus-disease-outbreak>

- [2] Reuters. (2025, March 12). *WHO welcomes end of Marburg virus outbreak in Tanzania*. <https://www.reuters.com/business/healthcare-pharmaceuticals/who-welcomes-end-marburg-virus-outbreak-tanzania-2025-03-13/>
- [3] Elebesunu, E. E., Effiong, F. B., Asika, M. O., Fadele, P. K., Onyeogalu, F. A., Okafor, C. A., & Scott, G. Y. Combating the zoonotic trio of Ebola virus disease, Lassa fever, and COVID-19 in Nigeria: A retrospection of the challenges and lessons. *Annals of Medicine & Surgery*, *85*(8), 3955–3959. <https://doi.org/10.1097/MS9.0000000000001038>
- [4] Tiemessen, M. M., Solforosi, L., Dekking, L., Czapska-Casey, D., Serroyen, J., Sullivan, N. J., Volkmann, A., Pau, M. G., Callendret, B., Schuitemaker, H., Luhn, K., Zahn, R., & Roozendaal, R. (2022). Protection against Marburg virus and Sudan virus in NHP by an adenovector-based trivalent vaccine regimen is correlated to humoral immune response levels. *Vaccines*, *10*(8), 1263. <https://doi.org/10.3390/vaccines10081263>
- [5] Balinandi, S., Mulei, S., Whitmer, S., Nyakarahuka, L., Cossaboom, C. M., Shedroff, E., Morales-Betoulle, M., Krapinunaya, I., Tumusiime, A., Kyondo, J., Baluku, J., Namanya, D., Torach, C. R., Mutesi, J., Kiconco, J., Pimundu, G., Muyigi, T., Rowland, J., Nsawotebba, A.,... Klena, J. D. (2024). Crimean-Congo hemorrhagic fever cases diagnosed during an outbreak of Sudan virus disease in Uganda, 2022-23. *PLoS Neglected Tropical Diseases*, *18*(10), e0012595. <https://doi.org/10.1371/journal.pntd.0012595>