World Health Organization
Tanzania

RESPONSE TO MARBURG VIRUS DISEASE OUTBREAK IN TANZANIA – 2025

UNICEFTZ

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Statement by WHO Country Representative

The successful containment and conclusion of the Marburg Virus Disease outbreak in Tanzania stands as a powerful example of national leadership, international solidarity, and the strength of coordinated public health action.

I would like to express my sincere appreciation to Her Excellency President Samia Suluhu Hassan, whose decisive leadership and unwavering commitment to the health and safety of Tanzanians guided the country through a complex and high-risk health emergency. Her support enabled a whole-of-government response that prioritized rapid containment, community trust, and clear communication.

We are also deeply grateful to Dr. Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization, for his prompt engagement and the global solidarity shown under his leadership. WHO's technical guidance, on-the-ground presence, and coordination with partners were instrumental in supporting the government's response from the earliest stages of the outbreak.

The response effort—led by the Ministry of Health and supported by national and international partners—was swift, science-based, and deeply collaborative. It not only helped stop the transmission of a deadly virus but also strengthened Tanzania's capacity to manage future public health emergencies.

As we document the impact of this outbreak and the efforts to contain it, we must recognize the bravery of frontline health workers, the vigilance of communities, and the shared commitment across sectors that made this outcome possible.

WHO and its partners stand firmly with Tanzania. We are proud to walk alongside the government and people in advancing health security, resilience, and sustainable development.

Together, we are not only overcoming this outbreak—we are shaping a healthier, safer future for generations to come.

Dr. Charles Sagoe - Moses

Abbreviations

Abbreviation	Expansion
3TLC	Three level Teleconference
4WS	What, Where, Who and Why
AFRICA CDC	Africa Centres for Disease Control and Prevention
ANC	Antenatal care
CFE	Contingency fund for Emergency
CFR	Case fatality Rate
CHWS	Community health workers
CMO	Chief Medical Officer
DC	District Council
DG	Director General
DON	Disease outbreak News
ECSA-HC	East, Central and Southern Africa Health Community
EIS	Event Information Site
EMT	Emergency medical team
ERF	Emergency Response Framework
FAQS	Frequently asked questions
FCDO	The Foreign and Commonwealth Office
FP	Family planning

Abbreviation	Expansion
GAVI	Global Alliance for Vaccines and Immunization
HCWS	Healthcare workers
H.E	Her Excellency
HFS	Health facilities
IHR	International Health Regulation
ICT	Information and Communication Technology
IEC	Information, Education, and Communication
IMST	Incident management system team
IMS	Incident Management System
IOM	International Organization for Migration
IPC	Infection Prevention and Control
KAP	Knowledge, Attitude and Practice
MARV	Marburg Virus
MC	Municipal Council
MHPSS	Mental health and Psychosocial support
MOH	Ministry Of Health
MTU	Medical Treatment Unit

Abbreviation	Expansion
MVD	Marburg Virus Disease
NPHL	National Public Health Laboratory
NTF	National Task Force
OPD	Outpatient Department
PHEOC	Public Health Emergency Operation Centre
POE	Point of Entry
PPE	Personal Protective Equipment
PRSEA	Prevention of and Response to Sexual Exploitation and Abuse
PS	Performance Standards
RCCE	Risk Communication and Community Engagement
RING	Recognise , Identify, Notify, Give support
RRA	Rapid Risk Assessment
RRT	Rapid Response Team
SBC	Social and Behaviour Change

Abbreviation	Expansion
SDB	Safe and Dignified Burial
SOP	Standard Operating Procedure
UNCT	United Nations Country Team
UNICEF	United Nations International Children's Emergency Fund
US CDC	United States Centers for Disease Control and Prevention
USD	United States of America Dollar
USS	Ultrasound
VHF	Viral Hemorrhagic Fever
WASH	Water Sanitation and Hygiene
WCO	World Health Organization Country Office
WHO	World Health Organization
WHO AFRO	WHO Africa Region
WHO HQ	WHO Headquarters
WR	WHO Representative

Executive Summary

In January 2025, Tanzania experienced a Marburg Virus Disease (MVD) outbreak in Katerera Village, Biharamulo District, Kagera Region. The outbreak resulted in **2 confirmed cases and 8 probable cases**, all of whom died, marking a **100% case fatality rate**. The government activated the response at level 3 which is the highest. In collaboration with the World Health Organization (WHO) and partners emergency response mechanisms were swiftly activated to contain the outbreak.

The outbreak was officially declared on **January 20, 2025** by H.E the President of United Republic of Tanzania in presence of the Director General of the World Health Organization in Dodoma Capital City. The collaborative robust response strategy centred around surveillance, case management, infection prevention and control, risk communication, and cross-border coordination. Intensive contact tracing efforts were conducted on **281 contacts**, with **272 closely monitored**, all completing a 21-day follow-up without developing symptoms. Active case finding and mortality surveillance resulted in over **1,491 alerts investigated and 106 tested negative for MVD.**

Key achievements include:

- High level engagement and commitment by the Government of United Republic of Tanzania (URT) and WHO that involved H.E the President of URT and WHO Director General on response to MVD and other public health threats.
- Establishment of a **Marburg Treatment Unit (MTU)** at Biharamulo District Hospital.
- Zero infection among healthcare workers due to strict infection prevention measures.
- Deployment of **17 WHO experts** from the 3 levels and 275 government responder to respond to the outbreak in Kagera region.
- Capacity building of over **1,800 community leaders**, 1138 Community Health Workers and **1,100 Health Workers** (CHWs) on surveillance, Case Management, IPC, and risk communication.
- **Mental Health and Psychosocial Support (MHPSS)** services provided to 376 clients, aiding community reintegration.
- Strengthened cross-border surveillance with Uganda and Burundi and screening **417,148 travelers**.
- Integration of PSEAH interventions in the response actions at the field level

Challenges faced included, delay in outbreak declaration and involvement of WHO and partners, coordination difficulties, funding gaps, and limited transparency in epidemiological data sharing. Despite these, the response minimized broader societal disruption and maintained essential health services. The outbreak was declared over on **March 13, 2025 by the Hon. Minister of health**. Key lessons learned emphasize the importance of early partner engagement, community health worker involvement and continuous risk communication.

1. Introduction

1.1 Overview of Marburg Virus Disease

Marburg virus disease (MVD) is a severe disease caused by the Marburg Virus (MARV) of the Orthomarburgvirus *marburgense* species, a member of the Filoviridae family which also includes the Ebola virus. Though caused by different viruses, Ebola and Marburg diseases are clinically similar. Both diseases are rare but have the capacity to cause outbreaks with high fatality rates.

The first documented cases of MVD occurred in 1967 after two simultaneous outbreaks in Marburg and Frankfurt in Germany, and in Belgrade, Serbia. These outbreaks were associated with laboratory work using African green monkeys (*Cercopithecus aethiops*) imported from Uganda. Subsequently, outbreaks and sporadic cases have been reported in Angola, the Democratic Republic of the Congo, Equatorial Guinea, Ghana, Guinea, Kenya, South Africa (in a person with recent travel history to Zimbabwe), Tanzania and Uganda. The latest known outbreaks occurred in Tanzania in 2023 and in Rwanda in September 2024.

Table: Chronology of major Marburg virus disease outbreaks

Year	Country	Cases	Deaths	Case fatality rate
2024	Rwanda	66	15	23%
2023	Tanzania	9	6	67%
2023	Equatorial Guinea	40	35	88%
2022	Ghana	3	2	67%
2021	Guinea	1	1	100%
2017	Uganda	3	3	100%
2014	Uganda	1	1	100%
2012	Uganda	15	4	27%
2008	Netherland (ex-Uganda)	1	1	100%
2008	United States of America (ex-Uganda)	1	0	0%
2007	Uganda	4	2	50%
2005	Angola	374	329	88%
1998 to 2000	Democratic Republic of the Congo	154	128	83%
1987	Kenya	1	1	100%
1980	Kenya	2	1	50%
1975	South Africa	3	1	33%
1967	Yugoslavia	2	0	0%
1967	Germany	29	7	24%

Initially, human MVD infection resulted from prolonged exposure to mines or caves inhabited by Rousettus fruit bat colonies. Once introduced in the human population, MARV spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids. Healthcare workers have frequently been infected while treating patients with MVD. Burial ceremonies that involve direct contact with the body of the deceased can also contribute to the transmission of Marburg virus. Notably, people cannot transmit the disease before they have symptoms and remain infectious as long as their blood contains the virus.

The incubation period (interval from infection to onset of symptoms) varies from 2 to 21 days. From day 5 of the disease, patients may develop hemorrhagic manifestations, including fresh blood in vomitus and feces, and bleeding from the nose, gums and vagina. Bleeding at venipuncture sites (where intravenous access is obtained to give fluids or obtain blood samples) can also be observed. Involvement of the central nervous system can result in confusion, irritability and aggression. Orchitis (inflammation of one or both testicles) has been reported occasionally in the late phase of disease. In fatal cases, death occurs most often between 8 and 9 days after symptom onset, usually preceded by severe blood loss and shock. Early intensive supportive care improves survival. Currently there are no vaccines or antiviral treatments approved for MVD.

WHO aims to prevent MVD outbreaks by maintaining surveillance for MVD disease and supporting at-risk countries to develop preparedness plans. When an outbreak is detected WHO responds by supporting surveillance, community engagement, case management, laboratory services, infection prevention and control, logistical support and training and assistance with safe burial practices.

1.2 Purpose of the report

This report is compiled by World Health Organization Country Office (WCO) in Tanzania at the end of the outbreak to provide a comprehensive account of the WHO support to the MVD public health emergency response in the country. It will also serve to document the response experience at the country office and provide a future reference point to response details.

1.3 Brief description of the emergency

The Marburg Virus Disease (MVD) outbreak in Biharamulo District, Kagera Region, was a severe and rapidly evolving public outbreak that posed a significant threat to both the affected population and the healthcare system. The outbreak was officially announced by the H.E the President of URT on January 20, 2025, following the confirmation of one case within the district. The virus, known for its high fatality rate and person-to-person transmission, led to 2 confirmed cases and 8 probable cases all of whom succumbed to the disease, resulting in a 100% case fatality rate.

A total of 281 contacts were identified & listed with 272 contacts closely monitored for a 21-day follow-up period, ensuring early detection of any secondary cases

The outbreak primarily affected Biharamulo District, where the confirmed cases were reported. Given the nature of Marburg virus transmission—through direct contact with bodily fluids and contaminated surfaces—intensive public health interventions were immediately activated. A total of 281 contacts were identified & listed with 272 contacts closely monitored for a 21-day follow-up period, ensuring early detection of any secondary cases. Fortunately, all contacts successfully graduated from follow-up on February 10, 2025, without developing symptoms, indicating that the containment efforts were effective. Alerts detection and verification was intensified resulting to total of 1491 alerts reported with 108 classified as suspect and out of them 106 were negative for MVD.

The outbreak reached a critical turning point with the death of the last confirmed

case on January 28, 2025. This marked the beginning of the official 42-day countdown period, during which surveillance and community engagement efforts were intensified to detect any potential new cases. No additional infections were reported during this period, leading to the formal declaration of the end of the outbreak on March 13, 2025.

1.4 Strategic priorities of the WHO Response Plan

Overall objective of the WHO MVD response plan was to ensure that prioritized and evidence-based response actions are undertaken to address the impact, contain the outbreak and prevent the spread of the Marburg Virus Disease (MVD) in Tanzania.

The priorities of the WHO response plan focused on enhanced surveillance, infection prevention, provision of appropriate care to affected patients and communities, resource mobilization, and response coordination at all levels. By leveraging lessons from past outbreaks and collaborative efforts with existing partners to safeguard public health and mitigate the impact of MVD outbreaks in Tanzania

Specific objectives of the WHO response were to:

1. Strengthen multi-sectoral coordination mechanisms, advocacy and resource mobilization for Marburg Viral Disease response at all levels
2. Inform and engage communities to promote awareness of risk factors and protective measures
3. Strengthen MVD case detection, reporting, investigation, and contact tracing
4. Strengthen surveillance at points of entry to prevent the spreading of MVD in and outside the country
5. Strengthen laboratory systems and diagnostics for diagnosis and confirmation of MVD cases
6. Strengthen IPC and WASH capacity for prevention and control of MVD infections in health facilities and the community at large
7. Strengthen isolation, management, and care for MVD-suspected and confirmed patients in health facilities and at treatment centers
8. Strengthen mental health and psychosocial well-being for patients, survivals and families
9. Facilitate availability of emergency supplies, operational support, and logistics
10. Strengthen capacity for provision and monitoring of essential health services during the outbreak and recovery phases of the MVD outbreak
11. Facilitate the country to adopt and implement recommended strategies for MVD vaccination.

2. Outbreak Overview

2.1 Summary of the event

The MVD outbreak in Tanzania was declared by the government of United Republic of Tanzania on 20th January 2025. The outbreak was detected in Katerera village Ruziba ward Biharamulo district following deaths of 8 close family members and laboratory confirmation of 2 cases from the same village. The cluster of deaths was then noted to have happened since December 2024.

The following are key events that took place throughout the entire response which were reported to and/or involved WHO;

10 Jan 2025

- Rumours of deaths due to unknown illness in Katerera village
- National Rapid Response Team (RRT) deployed to investigate

11 Jan 2025

- First 3LTC convened
- Drafted Event Information Site (EIS) shared with MOH

13 Jan 2025

- 2nd 3LTC convened and approved CFE USD 50,000 to support response
- WHO publishes suspected MVD outbreak on Event Information Site

15 Jan 2025

- Suspected MVD outbreak published in WHO Disease Outbreak News (DON)
- 3rd 3LTC convened, CFE USD 50,000 transferred to WHO country office
- WHO IMST developed

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16 Jan 2025

- WCO finalized RRA in collaboration with WHO AFRO & HQ
- WCO Response Plan developed

17 Jan 2025

- WCO received info on WHO DG visit to meet H.E. President Samia Suluhu Hassan

19 Jan 2025

- WHO DG arrives in Dar es Salaam, Tanzania

20 Jan 2025

- WHO DG meets the President in Dodoma
- WHO DG approves CFE USD 3 million
- President declares MVD outbreak (2 confirmed cases)

21 Jan 2025

- 3LTC Grading Call assigned the event Grade 2
- WCO IMST activated, Incident Manager from WHO AFRO assigned
- WHO DG meets UNCT & development partners

22 Jan 2025

- Official CFE request submitted, USD 950,000 transferred to WCO

23 Jan 2025

- WHO deploys staff to Kagera
- WHO Incident Manager & CMO visit in Kagera
- First National Task Force (NTF) Meeting chaired by CMO and Co-chaired by WHO Representative (WR)
- First WHO MVD internal situation report published

24 Jan 2025

- National MVD Response Plan shared with all partners

28 Jan 2025

- Deputy Minister of Health & WR visited Biharamulo
- Two VHF kits handled to Deputy Minister by WR
- Last MVD case dies

29 Jan 2025

- 42-Day Countdown Begins

7 Feb 2025

- Sequencing results presented in 3rd National Task Force meeting
- Marburg Supply Dashboard launched

6 Mar 2025

- Request for second CFE allocation (USD 220,000) submitted
- USD 200,000 transferred to WCO

13 Mar 2025

- Publication of 2nd Disease Outbreak News (DON)
- Minister of Health officially declares end of MVD outbreak

2.2 Key public health impacts

The Marburg Virus Disease (MVD) outbreak in Kagera, Biharamulo District was devastating, with 8 probable and 2 confirmed cases—all of whom sadly lost their lives. The response was swift, with 281 contacts identified and 272 closely monitored for 21 days, all of whom successfully completed the monitoring period without developing symptoms, marking a critical milestone in containment efforts.

Beyond the numbers, the outbreak left a deep impact. Families not only lost loved ones but also faced fear, stigma, and isolation.

Beyond the numbers, the outbreak left a deep impact. Families not only lost loved ones but also faced fear, stigma, and isolation. Burial traditions had to change for safety reasons, making it even harder for grieving families to find closure. Communities were on edge, worried about who might be next. Quarantine measures and movement restrictions disrupted daily life—businesses slowed down, school children were affected, and social interactions came to a standstill.

The health system also felt the weight of the outbreak. Healthcare workers were at high risk due to prolonged exposure, and the reallocation of medical resources affected routine healthcare services, including maternal and child health programs. The crisis also exacerbated mental health challenges, with anxiety, grief, and psychological distress affecting families, frontline workers, and the broader community.

On the economic side, the effects were undeniable. Families who depended on daily income struggled, especially those who lost breadwinners. Trade and agriculture were disrupted, making it even harder for some households to make ends meet.

However, enhanced community engagement, strengthened surveillance systems, and rapid response efforts played a crucial role in managing and eventually declaring the outbreak over. The lessons learned from this outbreak will be instrumental in improving preparedness and response strategies for future public health emergencies.

3. Response Actions

3.1 Response strategy

The World Health Organization (WHO) Marburg Virus Disease (MVD) response strategy in Tanzania was a comprehensive and evidence-based approach aimed at rapidly containing the outbreak and preventing further spread. Following the official declaration of the outbreak on January 20, 2025, WHO activated its Incident Management System (IMS) and mobilized resources and technical expertise to support the Tanzanian government.

The response strategy prioritized enhanced surveillance, rapid case detection and contact tracing, infection prevention and control (IPC), RCCE, and cross-border collaboration. WHO deployed 17 experts, trained thousands of healthcare workers and community leaders, and supported the establishment of a dedicated Marburg Treatment Unit (MTU) at Biharamulo District Hospital. The organization also played a crucial role in resource mobilization, partner coordination, and community engagement. Mental health and psychosocial support (MHPSS) services were integrated into the response to address the emotional toll on affected communities.

Importantly, WHO also reinforced the prevention of and response to sexual exploitation and abuse (PRSEA) as a core component of its emergency operations. Awareness sessions were conducted among responders and community members to promote understanding of SEA risks and reporting mechanisms. Reporting channels were communicated to ensure that any allegations were addressed promptly, transparently, and in line with WHO's zero-tolerance policy.

3.2 Activation of the Incident Management System (IMS)

A rapid risk assessment was conducted on 16 January that determined the risk to be high at national and regional levels, primarily due to the high case fatality rate (CFR), delays in outbreak declaration, and significant mobility in the affected region. The global risk was assessed as low. Following the declaration of MVD outbreak in Tanzania on 20th January 2025 and in accordance with the WHO Emergency Response Framework, a teleconference grading call was convened on 21 January 2025, involving the WHO Country Office Tanzania and the neighboring countries, the WHO AFRO, and WHO HQ. The three levels critically reviewed the Marburg outbreak to determine the level of operational support required. The event was eventually graded as Grade 2 public health emergency event based on the scale, urgency, complexity, capacity and risk of failure to deliver effectively and at scale. The WHO IMST was activated on 21 January 2025 and the first deployment to field was on 23rd Jan 2025. An Incident Manager from AFRO was deployed to lead the response and additional technical support from HQ and AFRO was deployed based on prevailing needs on the ground. The National MOH Incident Management System was activated on 21 January 2025 to coordinate the response to the event and a national task force was activated, and meetings were held weekly. At the sub-national level, daily coordination meetings were held in Biharamulo Kagera Region.

The key IMS functions are listed in Annex 7.1 below.

3.3 Achievements by IMS functions

The effectiveness of the Incident Management System (IMS) is measured by its ability to coordinate and deliver timely and efficient emergency response efforts. This section outlines the key accomplishments of each IMS function across pillars of response, showcasing successful interventions that have strengthened emergency response, and recovery.

3.3.1 Response coordination, Partner Coordination and Resource mobilization

3.3.1.1 Response coordination and leadership

- In collaboration with other partners, WHO successfully advocated for declaration of outbreak and access to support MVD response interventions. The team organized for the WHO DG and other high-level leadership to meet H.E the President of United Republic of Tanzania thus leading to declaration of the outbreak.
- Successfully coordinated WHO's overall support to the emergency response, ensuring efficient management of WHO human resources, funds, and supplies.
- WHO deployed 17 experts to Biharamulo District who provided onsite technical support and jointly worked with government responders and other partners in areas of case management, infection prevention and control, WASH, RCCE, MHPSS, OSL, response and partner coordination, epidemiological surveillance, laboratory, and resource mobilization.
- WHO supported development guidelines, standard operating procedures, and technical tools. Conducting operational research, assessments, and capacity building for responders.
- Supported the government to lead the and coordinate the response through Incident Management System. Convened daily field coordination meetings at Biharamulo, weekly MVD National Task Force, joint government and partners technical pillar meetings and the Emergency Preparedness and Response partners meetings . These platforms have been used for coordination, information sharing, decision making and advocacy.
- Supported the development and review of National and WHO Country Office (WCO) MVD response plans, ensuring alignment with outbreak dynamics and response needs.
- Successfully implemented, updated and tracked ERF indicators, strengthening data-driven decision-making in response efforts.
- Facilitated the deployment of emergency response teams, including case management, IPC, surveillance and laboratory experts, and risk communication personnel, to enhance outbreak containment efforts.

- Played a key role in resource mobilization efforts, including the development of funding proposals, such as those submitted to GAVI and FCDO, securing financial support for outbreak response activities
- Developed and disseminated 49 daily WHO MVD internal situation reports, ensuring timely information sharing and informed decision-making within WHO.
- Consistently shared the Ministry of Health's daily MVD situation reports with WHO and partners, enhancing transparency and coordination across stakeholders.
- Contributed to media and website communication efforts by supporting the development of informative materials and stories, increasing public awareness and engagement.
- Supported in development and dissemination of advocacy products; talking points, speeches etc.
- Supported the government to conduct MVD and Sudan Virus Disease readiness assessment for 8 regions in Tanzania; 3 contingency plans (Zanzibar, Kigoma and Mwanza) were developed as a result.
- Developed and presented key MVD updates in high-level meetings, providing insights on epidemiological data, challenges, advocacy needs, and resource status to support informed decision-making.
- Supported the government to organize several high-level visits to Biharamulo District by government and partner leadership.
- Supported the government to organize end of outbreak declaration ceremony on 13th March 2025 that was attended by government and partners.

3.1.1.2 Partner coordination & Resource Mobilization

- Efficiently coordinated response activities for the 11 partners that were based in Biharamulo district thus ensuring clarity of roles, and responsibilities.
- Provided technical and strategic advice on issues related to partner coordination, ensuring a consistent operational approach that is guided on information and sharing of roles and responsibilities for maximum impact of available resources.
- Operationalized regular partner coordination meetings at National and sub-national level (Biharamulo command post) to monitor progress and address emerging challenges. The platforms included partners meeting in Biharamulo, Interpillar, and Operational Emergency Preparedness and Response partners meetings at National level.
- Supported the government to develop and utilize the partner and resource mapping tool that clearly highlighted the 4Ws. The mapped Resources (funding, supplies and human resources) were streamlined based on identified needs, avoiding duplication of efforts.

- Supported the government in development of a comprehensive partner bulletin that show cased partners response achievements, gaps and plans for the upcoming weeks.
- Coordinated partners to develop a harmonized and integrated training package covering several response pillars.
- Supported partners and government to consolidate and harmonize payment of responders thus preventing duplications
- Coordinated partners in tracking donation of supplies using the supplies tracking tool/dashboard board developed by WHO for efficient management of response supplies.
- Organized partner advocacy team to meet head of surveillance pillar; these visits lead to implementation of alert desk management, mortality surveillance and improvement in information provided in the daily coordination meeting and sitreps.
- As part of advocacy and resource mobilization efforts the WCO engaged with several development partners including donors which included the Delegation of European Union in Tanzania, the Foreign and Commonwealth Office (FCDO), GAVI, the Vaccine Alliance, Global Affairs Canada and the embassies of Ireland, and Belgium. As part of these efforts, WHO was able to secure additional funds worth US$ 1,250,000 from FCDO ($250,000) and GAVI ($1,000,000) to supplement the MVD response.

3.3.2 Epidemiology and Health Information

- Publication of IHR EIS and first disease outbreak news (DON) before and after outbreak declaration.
- Supported assessments, pillar implementation plan, training materials, and other key products to inform the response.
- Provided strategic guidance on epidemiological interpretation, surveillance and contact tracing, A total of 272 contacts followed up and completed 21 days of follow up

- Provided technical support on SOPs and guidelines including MVD surveillance SOP, mortality surveillance SOP.
- Provided support for ad hoc activities to address identified gaps in the response, including prioritizing surveillance efforts based on outbreak phases and available budgets
- Supported development of integrated training package for orientation of Community Health Workers on event-based surveillance
- Capacitated 1138 Community Health Workers from three districts (Biharamulo, Bukoba DC and Bukoba MC) on event-based surveillance and reporting using electronic systems (mobile phones)
- Supported capacity-building efforts for epidemiology, surveillance, active case search, mortality surveillance, and contact tracing. A total of 300 healthcare workers (HCWs) from various health facilities were trained on surveillance systems and tools to enhance active case search at the facility level. Additionally, 35 healthcare workers from the National Call Center were trained on alert management
- A total 73,782 households visited, equivalent to 84% of targeted households at Biharamulo district for community case search and total of 719 alerts reported from community
- Supported MOH in revising the case definition to enhance its sensitivity to detect MVD cases
- Supported the development of the MVD surveillance workplan and budget in collaboration with the Ministry of Health.
- Participated in discussions and proposed research, which include epidemiological studies to identify source and risk factors for MVD in Kagera region
- Participating in inter-pillar and inter-partner meetings to discuss cross-cutting activities and issues.
- Provided technical support in developing the active case search protocol and conducted active case search in 42 health facilities across Biharamulo District, identifying 498 alerts for further investigation
- Supported orientation of traditional healers and community leaders on detection and reporting alerts of MVD/VHF, a total of 374 healers oriented from Biharamulo
- Supported the establishment of alert management desks for managing the alerts, including training staffs from National Call Centre on alert management
- Printing and dissemination of surveillance tools, which include standard case definitions. 8,000 copies of standard case definition printed and disseminated to health facilities.
- Provided the technical support on mortality review to identify any missed death as part of active case search, a total of 28 deaths (15 from community and 13 from health facilities) identified and investigated

3.3.3 Laboratory

- Supported MOH through MPHL to coordinate laboratory partners efforts, regular MVD laboratory pillar meetings were conducted in collaboration with Africa CDC, US-CDC, and the EAC project under NPHL leadership to facilitate the coordination of outbreak response activities.
- Supported the NPHL with testing kits, reagents, and consumables for MVD testing.
- Trained 100 laboratory scientists from eight high-risk regions (Mwanza, Kagera, Kigoma, Geita, Dodoma, Arusha, Dar es Salaam, and Kilimanjaro) on MVD proper sample collection, packaging and transportation
- In collaboration with US-CDC, 8 national-level facilitators were oriented on WHO MVD training packages for sample management.
- Supported the development of the MVD testing algorithm.

3.3.4 Points of Entry

- Provided WHO guidance on the considerations for border health and points of entry for filo virus disease outbreaks, which summarizes relevant legal provisions and technical advice from WHO concerning border health and PoE for filovirus disease outbreaks
- Supported monitoring of entry and exit screening and as of 12 March 2025, a total of 417,148 travelers screened through exit screening and a total 21 alerts identified in the points of entry
- Provided WHO technical advice to public health authorities on the implementation of evidence-informed and risk-based health measures; on the strengthening of detection, reporting, and management capacities at PoEs and across borders; and travel advice.
- Provided technical support on SOPs and guidelines as per request, SOP for entry and exit screening at land points of entry,
- In collaboration with ECSA – HC, supported cross border collaboration with Burundi and Uganda through Cross-border meetings with Burundi, and Uganda respectively involving a total of 137 government officials from both countries and partners including, UNICEF, IOM, Africa CDC, US CDC, Red Cross. A joint action plan to strengthen cross-border surveillance was developed.
- Supported updating of point of entry contingency plans, and provided mentorship to border committees on detecting and reporting public health events using the RING approach, through simulation exercises and demonstration of the PoE digital screening tool
- Conducted PoE assessments at three one-stop border points between Tanzania, Burundi, Rwanda, and Uganda, shared results and challenges with cross-border management teams for improvements
- Enhanced exit screening through the deployment of 12 walkthrough thermo-scanners and 50 handheld thermo-scanners in the strategic points of entry

3.3.5 Case management

- Supported the clinical management of both suspected and confirmed cases.
- Twice-daily clinical care and ward rounds (8:30 AM and 5:00 PM) were conducted to ensure optimal patient management, timely treatment adjustments, and enhance healthcare worker coordination.
- Provided technical support to MTU staff during CME sessions held three times a week (Mon, Wed, Fri), covering key emergency and critical care topics such as hypoglycemia management, MVD co-infections, and sepsis
- Supported the redesign of Biharamulo District Hospital into a dedicated MTU with separate zones for suspected and confirmed cases, enhancing patient care, IPC, and biosecurity measures
- Improved critical care capacity at MTU through setting up of the 2 critical care beds. Placement of cardiac monitors, emergency crash cart containing emergency drugs, and portable USS, which facilitated improved supportive care to the critically ill patients.
- Forecasted Medical supplies, equipment and medication to support 20 patients for 40 days (about 1 and a half months).
- Set-up of screening and temporal isolation units at 4 HFs with low WHO Rapid Assessment Scores on capacity for early disease identification and isolation
- Conducted drills involving 68 healthcare workers from Kagera, Kigoma, Geita, and Mwanza regions focusing on standard procedures, infection prevention and control (IPC), donning and doffing, and patient management in the Biharamulo MTU setting
- Facilitated a confidence-building session where a healthcare worker survivor shared his experience with current MTU staff
- Facilitated the deployment of the critical care specialist and nurse to the MTU team, to enhance capacities for clinical care to the critically ill patients.
- Convened weekly pillar meetings with MOH and partners to monitor pillar response and readiness interventions.
- With collaboration from stakeholders and under the leadership of MoH, the team has management to document the activities on the transformation of Katoke Health Facility into Biharamulo Marburg Treatment unit meeting the biosafety standards for treatment of MVD. The paper has been submitted to a peer reviewed journal undergoing review.
- Updated the Survivor Guide for Marburg and Ebola virus, 2025, to provide post-recovery guidelines, support community reintegration, and reduce stigma, long-term health risks, and outbreak recurrence

3.3.6 Infection Prevention and Control (IPC)/WASH and SDB

- Donated essential supplies, including PPE kits to the MTU and high-risk health facilities to support infection prevention and control (IPC) efforts, ensuring the continuous availability of high-quality PPE and promoting its proper use among healthcare workers. Additionally, donated chemicals, cleaning materials, and hygiene supplies to enhance disinfection, decontamination, and hand hygiene operations. High-tech medical equipment was also provided to the MTU and other key health facilities in Biharamulo district to support hospital operations and improve patient care during the response
- Supervised decontamination and disinfection at MVD high risk locations (i.e. treatment unit, PHEOC, guest houses holding contacts, 2 ambulances etc.)
- Conducted refresher trainings to 1844 (1143 physical and 701 virtual) healthcare providers on IPC to ensure compliance with IPC measures.
- Supervised the Safe and Dignified burial of 7 suspected and 2 confirmed cases and Training and orientation session to eighty-four (84) members of burial teams from Muleba DC, Ngara DC, Bukoba DC, and Biharamulo DC in Kagera region.
- Supported establishment of twenty (20) screening and holding units in high regions of Geita and Mwanza. Additionally, sixty-four (64) healthcare provider received onsite orientation for enhancing screening and isolation of patients with suspected highly infectious diseases
- Supported Health care waste collection, movements and disposal at the MTU and other at-risk health facilities.
- Conducted onsite IPC supervision to the MTU teams to strengthen compliance efforts and Conducted IPC adherence assessments in 42 high-risk health facilities in Biharamulo DC to identify and address the existing gaps.
- Disseminated 1600 IPC SOPs and guidelines to Health facilities in Kagera region.
- Orientation on optimized care and IPC for MVD to 30 healthcare providers from Kigoma and Mwanza regions.
- Supported the decommissioning of the Katoke Marburg treatment unit to ensure safe and systematic closure of the facility after outbreak for restoration of its original state ready for use.

3.3.7 Risk Communication and Community Engagement

- Daily check-in and weekly pillar meetings were activated facilitating joint planning, reporting and resource mobilization. A resource mobilization tool was developed and shared with all partners supporting RCCE.

- A training package was developed with standardized MVD messages including frequently asked questions. These tools were used to orient more than 1,818 key people such as faith leaders, Call Centre operators, members of the local media, community health workers, women's groups, traditional healers, teachers, motorists, and local authorities to promote MVD prevention in Biharamulo, Bukoba DC and MC in Kagera region.
- About 11 local radio stations were engaged in additional to national radios and TVs to broadcast preventive measures and testimonials countering rumors and misinformation. Additionally, live media interviews and digital campaigns were organized.
- Multiple tools and methods were deployed including Chatbot, U-Report, national health hotline, social anthropological survey and community polling/KAP survey as well as media monitoring through Ipsos to gather community insights.
- Awareness and sensitization sessions were conducted through churches and mosques as well as community meetings at public places, household and school visits by community health workers in addition to Public Address system. The work of CHWs has been vital fostering community engagement through one-on-one approach via household and school visits reaching a total of 73,782 (84%) out of 87,733 targeted households and 107 (73.7%) out of 145 targeted schools at Biharamulo district as of 12th of March 2025.
- IEC and SBC materials were developed and disseminated through multimedia channels. These materials were adapted based on the community insights collected.

3.3.8 Mental Health and Psychosocial Support Services

- Activated daily check-in meetings which facilitated joint planning, review and reporting as well as resource mobilization
- Developed tools for psychological needs assessment and counseling treatment plan
- 16 mental health and psychosocial experts were oriented to conduct psychological needs assessment as well as filling in the counseling treatment plan for clients with severe mental health challenges
- About 1,487 community health workers, traditional healers, and faith leaders were oriented on psychological first aid, self-care and stigma prevention to extend basic MHPSS related services to people in need.
- About 280 clients from the isolation and treatment centers and 110 health workers, community members affected by the outbreak have received MHPSS services.
- Links and referral mechanisms were established between mental health specialists, general health care providers and other services for further clinical care as well as socio-economic support.
- Follow-up and monitoring visits were conducted to mental health and psychosocial support clients to assess progress and provide required support.

- Activated community support systems that facilitated to sustain Mental Health and Psychosocial Support services during and beyond response

3.3.9 Operational Support and Logistics

3.3.9.1 Logistics

- Developed the Tanzania Marburg Supply Dashboard, to help the Ministry of Health identify supply gaps, monitor supply requirements against partner donations, and track donation orders and distributions to avoid duplication
- WHO co-led regular logistic coordination meetings between MoH and partners including Africa CDC, UNICEF, WFP, Save the Children, MSF.
- Coordinated with the Ministry of Health to monitor available stock, collaborated with partners to quantify contributions against gaps, and followed up on partner supply updates
- Coordinated shipments including green light, import permit, custom clearance processing and delivery to the beneficiary.
- WHO developed and oriented Biharamulo Health Centre store on warehouse tracking tool to support the center with monitoring stock movement.

3.3.9.2 Procurement

- Supported and coordinated with the MoH on estimation of re-order levels.
- Coordinated with WHO hubs and HQ to secure timely delivery of available supplies.
- Locally procured and followed up timely delivery of supplies and equipment available in the local market.
- Coordinated with WHO hubs and HQ for international procurements of the supplies and equipment not available in the local market.
- Developed the procurement tracking tool for monitoring procurement status and actual costs for reporting and decision-making purposes.
- A total of $ 9,956.72 worth furniture and $ 9,829.8 worth ICT equipment procured for Biharamulo Public Health Emergency Operation Centre (PHEOC).
- A total of $ 7,189.14 worth ICT and internet and $ 48,496 worth medical supplies and equipment procured for Biharamulo Marburg Treatment Unit (MTU).
- A total of $ 25,567.97 worth PPEs procured to support the response.

- A total of $ 53,787.74 worth laboratory supplies procured for Kabyaile laboratory.
- Services worth $ 18,282.74 including documentation for WHO and donor visibility and printing guidelines procured to support the response.
- Goods and services worth $41,784.14 including laptops, internet, vehicle hire, and general office expenses procured to support WHO staff deployed in Kagera for the response.

3.3.9.3 Travel and fleet management

- A total of $ 35,656 worth of fuel supplied to support the response.
- A total of $ 1,200 paid for WHO vehicle maintenance to support the response.
- A total of $ 14,957 paid for flight tickets to support the response.

3.3.10 Research

- Participated and provided guidance during research pillar meeting where research topics were being discussed.
- Serological survey protocol was approved by the National Health Research Ethics Committee and Africa CDC will provide funds for conducting the study.
- *A vaccine trial:* A phase 1/2/3 study to evaluate the safety, tolerability, immunogenicity, and efficacy of vaccine candidates against (Filoviruses) disease in healthy individuals at risk of (Filoviruses) disease is in the process of review by national health research ethics committee.
- WHO HQ is committed to support the Marburg vaccine trial by providing funds, equipment's and vaccines

3.3.11 Continuity of essential health services

- Conducted mini assessment of continuation of essential health services focusing on maternal and child health including immunization despite having no stand-alone pillar
- Several pillars addressed some aspects of essential health services while responding to outbreaks (case management, IPC and surveillance)
- Gavi agreed to support WHO with $ 1 million to support activities to revitalize immunization services, surveillance and community engagement.
- Participated in outreach and mobile vaccination services which included other maternal and child health services (FP, ANC)

3.4 Response Outcomes

This section outlines the key outcomes of the response activities implemented during the outbreak. It provides an overview of the effectiveness and impact of various interventions, highlighting the achievements across pillars of response. The response outcomes reflect the collaborative efforts of health authorities, partners, and communities.

3.4.1 Coordination

- *Outbreak Declaration and Advocacy:* Advocated for the MVD outbreak declaration, securing critical support through high-level engagement with the President of Tanzania.
- Coordinated Emergency Response that ensured involvement of stakeholders from key government sectors and institutions, development partners, and donors at national and field level.
- Strengthened national Coordination and Leadership for response that enabled consistent operationalization of coordination platforms under MOH leadership, enhancing decision-making and information sharing.
- Resource Mobilization and Financial Support: Secured financial support for the response through successful funding proposals to GAVI and FCDO.
- Enhanced Public Awareness and engagement through provision of daily situation reports and communication materials, improving transparency and collaboration.

3.4.2 Epidemiology and Health Information

- Enhanced capacity of Community Health Workers and Heath Care workers, that facilitated active case search and mortality surveillance, increased the detection and reporting of alerts
- Community Health Workers as part of contact tracing team managed to follow up all 272 listed contacts

3.4.3 Laboratory

- Capacity building: The response enhanced laboratory preparedness for future outbreaks in neighbouring regions and Kagera.
- Enhanced detection and verification: A continuous laboratory supply chain aids in identifying cases and controlling the outbreak.
- Data Contribution: Genomic sequencing data enhanced our understanding of the outbreak's epidemiology and patterns of viral transmission.

3.4.4 Points of Entry

- Enhanced screening in points of entry and ground crossings managed to identify alerts through the response
- Enhanced cross border collaboration to prevent cross border transmission

3.4.5 Case management

- Surge Capacity establishment and capacity building: Surge capacity was established through targeted trainings, drills, and mentorship, ensuring healthcare workers capacity to deliver high-quality, optimized care for Filovirus Disease patients.
- Sustained access to medical supplies, commodities, and equipment for MVD clinical management to cater for 20 patients over 40 days to maintain continuity of care.
- Redesigned Biharamulo District Hospital into a dedicated MTU with separate zones for suspected and confirmed cases, enhancing patient care, IPC, and biosecurity measures

3.4.6 Infection Prevention and Control (IPC)/WASH and SDB

- Improved HCW Performance and Protection with the proper use of high-quality PPE, ensuring strict adherence to IPC measures, and preventing infection among HCWs.
- Enhanced Infection Prevention and Control in MTU and other health facilities in Biharamulo equipped with essential WASH and IPC materials, ensuring proper disinfection, decontamination, and safe working spaces, leading to improved patient and staff safety.
- Increased Healthcare workers Capacity: Over 1,844 healthcare workers 84 burial team members were oriented on MVD IPC measures, boosting their ability to identify and mitigate potential risks..
- Improved Screening and Isolation Capacity in Biharamulo and Geita and Mwanza regions, improved their capacity to screen and isolate suspected cases of highly infectious diseases, with 64 healthcare workers trained on screening and isolation procedures.
- Effective Waste Management: Healthcare waste management practices were successfully implemented, preventing environmental contamination, while WASH and IPC gaps were swiftly addressed through daily assessments.


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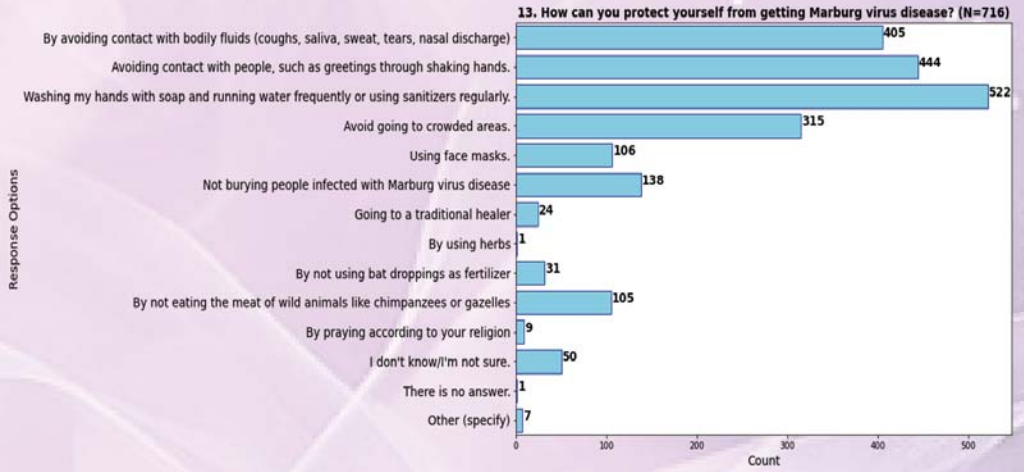
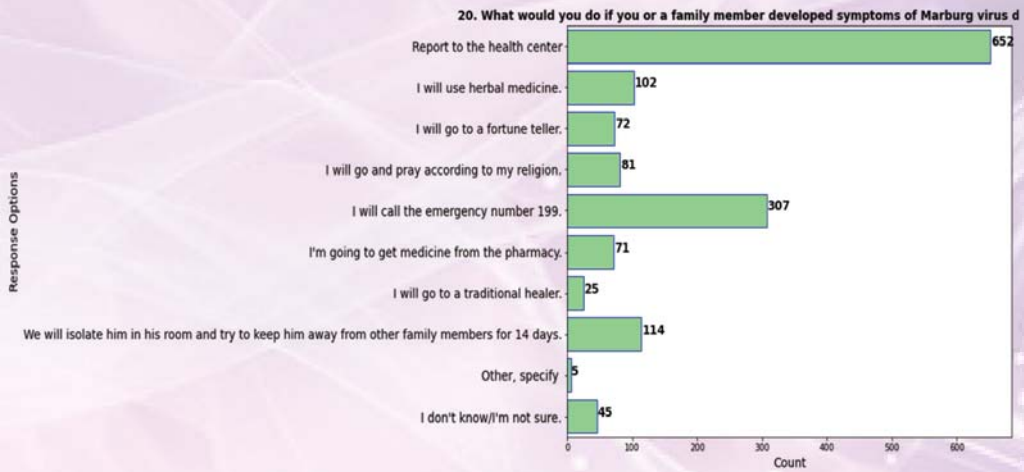
3.4.7 Risk Communication and Community Engagement

- Effective community engagement systems and structures that sustain awareness creation and community sensitizations through orientation of 1,818 members of various community groups and networks such as women's groups, local media, faith leaders, traditional healers, and others.
- Real-time monitoring and analysis of community feedback and concerns through multiple social and community listening tools (both online and offline) such as Afya Call Centre, media monitoring, U-report, social anthropological surveys, chatbot, on-ground social interaction that facilitated timely collection and analysis of community feedback and concerns. For instance, during the first two weeks of the response, a closer look of 344 respondents in Kagera through chatbot, revealed that nearly 6 in 10 (58%) had heard of Marburg virus, while 4 in 10 (41%) were either unaware or uncertain, indicating the need for continued awareness efforts.

  Through community polling, knowledge of self-prevention was observed to increase with majority of respondents mentioning washing hands, followed by avoiding contact with people such as through hand shaking as well as avoiding contact with bodily fluids such as coughs, saliva, sweat, tears, and nasal discharge.
- Decreased trends of rumors and misinformation among the community members. Through community polling, while asking what the community members would do if a family developed Marburg symptoms, majority of respondents mentioned report to the nearest health facility followed by calling national health hotline (199)





3.4.8 Mental Health and Psychosocial Support

- Effective community support systems were established and activated facilitating a total of 376 MHPSS clients fully re-integrated back to their communities leaving only 14 under follow-up as of 12th of March 2025. The community support systems will continue to sustain provision of related support services to clients.
- Strong linkages and referral systems activated between communities and service providers facilitating continued support services to identified clients

3.4.9 Operational Support and Logistics

- Non-duplication of efforts resulted from regular partner coordination and implementation of the supply tracking dashboard.
- Timely delivery of goods and services required for the response resulted from close collaboration with WHO hubs, HQ and reliable local suppliers from the pre-qualified list and long-term agreements.

3.4.10 Research

- Support payment for ethical clearance and expedite the availability of import permit for MVD vaccine
- Supported the conduct of anthropological study by providing funds jointly with other partners

3.4.11 Continuity of essential health services

- Disruption of health services was very minimal and more near the epicenter of the outbreak. One hospital was converted to be a treatment for MVD and some health workers became contacts and had to be put in a quarantine
- Case management and IPC pillar provided supplies and equipment to health facilities and hence ensuring continuity of OPD services.
- WHO and UNICEF have raised resources to support revitalization of routine immunization and provision of ICT equipment's respectively

4. Response Performance Standards

4.1 Evaluation of response against the ERF performance standards

Overall, compliance with the WHO Emergency Response Framework (ERF) Performance Standards (PS) reached 90%, demonstrating strong alignment with the framework's requirements. Out of the 28 PS monitored, 19 were completed within the expected timeframe, 7 were not applicable to the WCO, and only 2 were not completed, reflecting effective coordination and timely implementation of key response actions

4.2 Summary of Key Performance Indicators (KPIs) as per the response plan

Monitoring of key performance indicators (KPIs) was conducted to track progress, measure results, and ensure accountability throughout the response. The KPIs reflect performance across critical response areas such as coordination, Surveillance, resource mobilization among others. The summary of performance is presented in the table below.

SN	INDICATOR	Percentage / Number
1.	Percentage of regions with VHF contingency plans	**12** (3/26)
2.	Percentage of regions with functional EOCs	**69** (18/26)
3.	Percentage of resource mobilization against requirements	**42** (USD 1.25M/3.00M)
4.	Total no of international and in-country deployments	7 international and 17 in country
5.	Percentage of regional cross-border surveillance meetings held	**67** (2/3)
6.	Percentage of regions with functional event-based surveillance	**53.8%** (14/26)
7.	Percentage investigated death with swab taken	**40%** (10/28)
8.	Percentage of alerts investigated within 24 hours of alert notification.	**100%**
9.	Percentage of passengers from affected countries screened on exit.	**100%**
10.	Average laboratory confirmation turnaround time	**24** hrs.
11.	Percentage of suspected MVD cases detected and reported within 48 hours	**100%**
12.	Percentage of received samples that were tested.	**100%** (108/108)
13.	Case fatality ratio for all confirmed cases admitted into Treatment Units	**100%** (2/2)
14.	Case fatality ratio for all suspect cases admitted into Isolation and Treatment Units	**1.02** (1/98)
15.	Number of equipped and operational designated treatment centers in Kagera region	**1**
16.	Percentage of regions with standardized treatment protocols	**100%** (26/26)
17.	Healthcare worker infection rate	**0%**
18.	Percentage of regions with functional feedback mechanisms	**100%** through Afya Call Centre accessible nationwide
19.	Percentage of at-risk communities reached with accurate information on MVD disease outbreaks.	**84%** (73782/87733 through household visits)
20.	Percentage stock out of PPE	0%






5. Operational Challenges and Lessons Learned

5.1 Key challenges faced during the response:

The response faced several challenges that impacted the timely implementation and effectiveness of key interventions. These challenges ranged from operational, logistical, and resource constraints to coordination and technical capacity gaps. A summary of the key challenges encountered during the response is presented below

- Lack of involvement of partners and donors during the initial stages of the response may have led to underfunding of response since partners and donors were involved late and minimal information shared to be used in resource mobilization.
- Inadequate funding to cover and sustain all proposed response activities based on the National MVD plan (incentives, fuel, vehicles, supplies, IEC materials, public address, airtime, WASH and IPC materials etc.)

- Delays in the payment of responders due to uncoordinated deployment at initial stages before partners and WHO involvement
- Minimal activities under research, vaccination
- Stigma remains a barrier to routine interactions with community members returning from isolation /quarantine centers.
- Delayed access to the red zone, especially when there was a confirmed MVD case in the Marburg treatment unit
- Lack of information regarding certain patient details has hindered the ability to conduct clinical reviews, which are essential for guiding improvements in the provision of optimal patient care.
- Manual reporting tool for CHWs compounded with limitations and inefficiencies in data management and monitoring of public awareness interventions
- Low levels of Screening at lower Health Facilities posing a high risk for Disease Transmission
- The source of the outbreak and transmission chain is unknown, and line-list of confirmed and probable case was not shared, limiting well-adequate response and preventing future outbreaks
- Sitrep missing important information such as case details, transmission chain, geospatial data.
- Low number of alerts reported during initial response, however the case definition was very sensitive and high, malaria endemicity, potential for MVD cases could be missed out
- Mortality surveillance was inadequately implemented in the early stages of the outbreak and involved only the Biharamulo district; potentially some cases may be missed out in other districts in the country
- Lack of guidance on testing strategy in the challenging setting with high prevalence of febrile illness
- The case definition was not adapted with the changing realities considering other causes of febrile illness
- Limited visibility on field epidemiological activities for example, case investigations including contact listing conducted by the ministry, WHO epi team was not directly involved
- Missing guidelines on inpatient screening, which could potentially lead to missed hospital-acquired VHF infection.
- Delay in sharing genomic sequencing data
- Failure to deploy a mobile laboratory at the nearest location, since the Kabyaile mobile laboratory was 195 km away from the MTU

5.2 Lessons learned for future emergencies

The response provided valuable insights and practical experiences that can inform and strengthen future emergency preparedness, response, and recovery efforts. Lessons learned highlight what worked well and areas requiring improvement to enhance the effectiveness and efficiency of similar operations in the future. These lessons are summarized below;

- Establishment of clear command structure from onset of response will ensure decisions are made effectively based on data in the field.
- Involvement of partners and donors at the beginning of a response and prompt sharing of information will promote effective resource mobilization by partners and donors.
- Involvement of community health workers and capacitating them through orientation and tools yield good outcomes of surveillance response interventions
- Use of standard MVD orientation package and FAQs facilitated clear messaging around MVD prevention across different community groups and the general public.
- Orientation of different community groups and networks such as faith leaders, women's groups, media, traditional healers, and community health workers using standard orientation package has facilitated wide dissemination of MVD prevention messages as well as clearing rumors and misinformation among different segments of community members
- Adapting and innovating existing health facility structures into a strategically designed Marburg Treatment Unit (MTU) layout enhanced patient care delivery while meeting required biosecurity and infection prevention standards
- Use of real-time social and community listening tools and mechanisms has facilitated quick adaptation of the response strategies and approaches.

External Communications Impact and Partnerships

External Communication and Visibility

The Marburg outbreak in Tanzania marked a turning point for the country's external emergency communications strategy. The response showcased the government and partners' commitment to transparency, accuracy, and proactive engagement at both national and global levels.

6. Conclusion and Recommendations

6.1 Summary of outcomes

The response efforts made significant strides in mitigating the impact of the emergency and protecting public health. Key interventions, including surveillance, Risk communication and community engagement, resource mobilization, and enhanced coordination, and infection prevention and control contributed to the containment of the outbreak. The deployment of experts, provision of technical support, and strengthening of clinical care systems were essential in managing the crisis effectively. Despite the challenges faced, the overall response demonstrated resilience and effective use of available resources, enabling rapid action in high-priority areas. The impact of these efforts was also seen in the improvement of healthcare infrastructure, capacity building for frontline workers, and the strengthening of surveillance and communication systems.

These outcomes helped safeguard public health, mitigate further spread, and ensure the efficient management of resources during the emergency. The successful coordination between WHO, the Government of Tanzania, and partners played a crucial role in achieving these results and ensuring that key health interventions reached those in need.

6.2 Recommendations for continued recovery and preparedness efforts

Based on the response experience and lessons learned, several recommendations have been developed to guide continued recovery efforts and strengthen future emergency preparedness and response capacities. These actionable recommendations aim to enhance coordination, improve technical and operational readiness, and ensure a more effective response to future public health emergencies

- Continue high-level advocacy for transparency and access to information.
- Continue high-level advocacy for retrospective detailed epidemiological investigation.
- Support data analysis and revision of situation reports to be more informative for effective decision making.
- Resource mobilization for additional funding to cover and sustain MVD and Sudan Virus Disease readiness and response and recovery activities.

- Intensify surveillance activities in Biharamulo and neighboring districts and regions.
- Enhance community awareness through targeted risk communication.
- Endorsement of the survivor guide which entails the survivor program to meet the needs of affected community.
- Continue the Mental Health and Psychosocial support to affected communities.
- Engage local leaders to promote acceptance and reduce discrimination.
- Strengthen cross-border collaboration and surveillance activities.
- Support continuous Improvements in IPC measures in lower-level facilities
- Continuous Team Building of HCWs – to build well capacitated clinical teams through Simulation Exercises – and consideration for establishment of National EMT/ well equipped to respond to any emergency
- Support advance Research ethical approvals for therapeutic and vaccine trials for future responses
- Prioritize the mortality surveillance at early stages of outbreak and expand the scope
- Expand the scope of active case search to cover all identified risk areas
- WHO to provide guidance and guidelines for surveillance in the areas with high febrile illness
- Prioritize early rollout and training of case definition in health care facilities, including for patients.

7. Annex

7.1 IMS organogram or list of persons assigned to the IMS and functions:

MVD Outbreak Tanzania
National level IMST

Field IMST
Kagera Region

7.2 MVD partners with physical presence in Biharamulo district

MVD Partiner Coordination in Biharamulo District

7.3 Budget of the response

No	Area of Intervention	Budget (USD)
1.	Coordination, Reource Mobilization and External Cisibility Actions	355,000
2.	Risk Communication and Community engagement	287,500
3.	Surveillance, epidemiological investigation and contact tracing	290,000
4.	Points of Entry	274,000
5.	Laboratories and diagnostics	230,000
6.	Infection prevention & control & water sanitation and hygiene	300,000
7.	Case Management	200,000
8.	Mental Health and Psychosocial Support	115,000
9.	Operational support and Logistics	590,000
10.	Continuity of Essential Health Services	50,000
11.	Vaccination and Research	50,000
12.	Operational support	200,000
Sub Total		3,391,500
PSC (7%)		237,405
Total USD		3,628,905

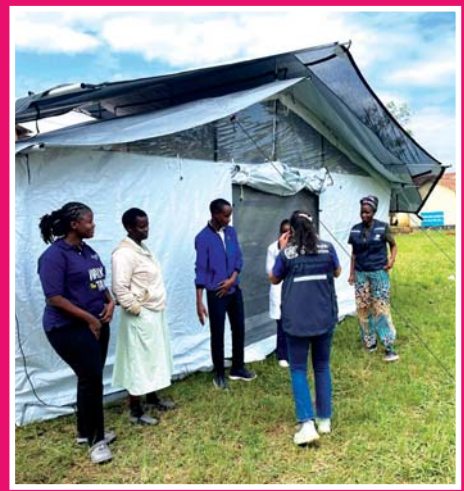
7.4 Action Photos

Community sensitizations ongoing at Ruziba ward, Katerera village, Bihamulo district, Kagera region, Feb 2025

Counseling sessions at Ruziba ward, Biharamulo district, Kagera region, Feb-March 2025

Simulation (Drill) exercises at the Biharamuro Marburg treatment unit

Orientation of health care providers on screening at the established screening and temporal holding units at the Lukaragata HC and Kitechwembogo dispensary



Final improved layout of the MTU design

Participants of cross border meeting between Tanzania and Burundi and Tanzania and Uganda

Review of the survivor program guide for MVD, held in Biharamuro - Kagera region

Partnership and Funding

The response to the Marburg Virus Disease outbreak in Tanzania was significantly bolstered by timely and strategic partnerships. The support received went beyond funding — it enabled real-time decision-making, capacity strengthening, and innovation in public health communications.

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