

USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTAPS) PROGRAM

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Demonstration at the hand washing facility of Dr. Ambrosoli Memorial Hospital, Kalongo—Agago District, Northern Uganda. Credit: John Paul Waswa, Technical Advisor, MTaPS Uganda

EVD Preparedness Response in Southwestern Uganda

Technical Brief | October 2022 | Uganda

Background

Ebola viral disease (EVD) outbreaks in the Democratic Republic of Congo (DRC) continue to pose a great risk to Uganda, a neighboring country, as well as to the region at large.

On February 7, 2021, the World Health Organization (WHO) announced an [EVD outbreak in eastern DRC](#), specifically in North Kivu province. A total of 12 EVD cases were reported across 4 health zones in the province. The onset of symptoms was first reported between January 25 and February 26, 2021. Mortality from this outbreak was 50% (6 of the 12 cases). Of the 12 cases, 2 were health workers who contracted the

infection while caring for the index patient. Both health workers survived.

The EVD outbreak in North Kivu, which neighbors the southwestern districts of Uganda, highlighted an urgent need to strengthen the EVD preparedness activities in Uganda.

Following the outbreak, the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program initiated support to Uganda's Ministry of Health (MOH), local implementing partners (IP), and the district health teams in southwestern Uganda to strengthen local capacity in EVD preparedness.

MTaPS' support was fortuitous; DRC's Ministry of Health soon after announced that a new case of Ebola was detected on October 8, 2021. This time, the outbreak was in the health zone of Butsili in North Kivu Province.

Through the EVD preparedness activities, MTAps strengthened local capacity in infection prevention and control (IPC) and community engagement in the healthcare facilities and surrounding communities in southwestern Uganda. MTAps activities also supported EVD sample collection, developed EVD vaccine pharmaco-vigilance materials, and reviewed the national EVD response plan.

Problem Statement

The EVD outbreaks in eastern DRC in February and October 2021 put Uganda, particularly southwestern Uganda, at high risk of importation of the virus due to cross-border activities between the two countries. The outbreaks also came at a time when the global COVID-19 pandemic put special focus on the need to strengthen global health security activities.

There was a significant need in Uganda to strengthen the capacity of screening at points of entry (POE), build the knowledge and skills of healthcare workers (HCWs) on IPC of EVD, and assess the capacity to collect and handle EVD samples. It was also critical to build knowledge in this area, to refocus the district rapid response teams (DRRT) and provide training through practical EVD case simulation exercises. At the national level, a review of the national EVD preparedness work plan provided guidance and support to the regional and district activities.

Approach

MTaPS engaged the MOH through the Commissioner of Epidemics and Surveillance, who also oversees the public health emergency operation center. The activity implementation included the use of the Plan-Do-Study-Act (PDSA) cycle for identifying gaps using capacity-building approaches. MTAps discussed the planned activities and obtained a letter of introduction from the MOH. The MTAps team also met with the USAID comprehensive IP in the southwestern region (Regional Health Integration to Enhance Services in South-West Uganda [RHITES-SW]) to discuss the work plan,

methodology of implementation of the activities, and the support needed from RHITES-SW.

To initiate the activity at the sub-national level, introductory meetings were held with district health officers (DHO) and the district health teams in all 12 districts. In these meetings, the MTAps technical teams were introduced, and the planned activities to be carried out were discussed and agreed upon. The meetings were also used to identify the focal persons from the districts to support the activities, especially the district surveillance focal person and district laboratory focal person.

Working in close collaboration with the USAID RHITES-SW project, MTAps conducted a situational analysis of IPC adherence and standards at 12 POEs on the border of high-risk districts in southwestern Uganda using a standard WHO tool which was adapted by the MOH. The assessment also included four high-volume non-official border crossing points. The points of entry assessed included: Kasenyi, Katunguru, Kazinga, Rweshama, Ishasha, Kyeshero, Mwanjari, Muhama, Bunagana, Kyanika, Murungo and Katuna. MTAps shared the assessment report and results with the DHOs and RHITES-SW and discussed solutions to the challenges for improvement with the POE staff.



MTaPS trainer demonstrating PPE to members of the DRRT in Kabale District. Photo credit: Kamada Lwere (Makerere University, School of Medicine)

Additionally, MTaPS carried out a laboratory needs/capacity assessment towards EVD sample collection, transportation, and handling in laboratories in the region. The project later used the information from the laboratory needs assessment to train the district and health facility laboratory personnel on safe EVD sample collection, handling, and referral while adhering to IPC standards.

MTaPS also trained health workers on IPC for EVD at 40 healthcare facilities in the high-risk districts. The training focused on fundamental principles of IPC with a special focus on EVD. Topics such as standard precautions, transmission-based precautions, triage and screening, hand hygiene, cleaning and disinfection, and healthcare waste management were given special focus. The project leveraged the COVID-19 IPC mentorship undertaken by the USAID RHITES-SW project to assess the functionality of the healthcare facility IPC committees and leadership structures.

Additionally, MTaPS conducted refresher EVD simulation exercises and training for DRRTs in eight high-risk districts. The exercises aimed at building skills and knowledge of the DRRTs toward responding to potential EVD threats. MTaPS used standardized WHO materials to train DRRTs and HCWs.

Working with the MOH, the National Drug Authority (NDA), the Pharmaceutical Society, and Makerere University, MTaPS organized a three-day consultative workshop to develop a health worker handbook on EVD vaccine pharmacovigilance. The MTaPS team reviewed the existing materials on the adverse events following immunization (AEFI) reporting system for EVD vaccines and other vaccines. Areas of focus for this handbook include AEFI identification, notification, reporting, investigation, analysis, and causality assessment in accordance with the respective WHO guidance. The draft handbook has been shared with stakeholders and the Uganda National Expanded Program on Immunization (UNEPI) for review and input.

MTaPs collaborated with the MOH public health emergency operation center, different IPs, and the Centers for Disease Control to review and finalize the National EVD preparedness response plan in a five-day consultative workshop. The response plan focused on

the core pillars of the response, namely, surveillance, case management, IPC, laboratory, logistics, leadership, and governance, among others. A costed EVD preparedness plan was developed and shared with the MOH's senior management team for comments before dissemination.

Results

POE Assessment

A total of 12 border POEs were assessed for EVD preparedness, especially regarding the screening of travelers and adherence to set IPC standards. The average score of the POEs was 65% out of a possible 100%, indicating a need for capacity building (figure 1). The most common challenge was the lack of facilitation of the volunteer screeners and stock-outs of personal protective equipment (PPE). MTaPS engaged the DHOs and RHITES-SW to address these challenges and sought to engage other partners such as the Red Cross and WHO for additional support.

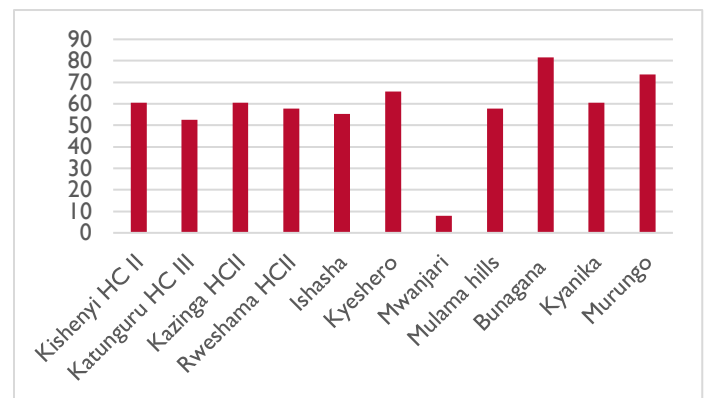


Figure 1. POE assessment scores in southwestern Uganda

EVD laboratory training and needs assessment

MTaPS' laboratory needs assessments in 32 laboratories in southwestern Uganda showed the laboratories scored well in sample collection (80%) and handling (85%). Sample transportation remains a challenge (50%), mainly because of the lack of transport means from the facility to the nearest laboratory hub. A total of 745 HCWs were trained in basic IPC principles and EVD sample collection, transportation, and handling techniques. The training leveraged knowledge gained from the IPC training by RHITE-SW for COVID-19. Among the 745 HCWs trained, 55% were female and 45% were male.



Training of HCWs on EVD preparedness at health center IV. Photo credit: Kamada Lwera (Makerere University, School of Medicine)

The project also undertook EVD simulation exercises for DRRTs and EVD refresher training in emergency response through practical simulation exercises in eight districts. A total of 56 HCWs received training through the simulations. The focus was on donning and removal of PPE, triage, screening of suspect and probable cases, sample collection, and case management principles.

Drafting the EVD vaccine pharmacovigilance pocket guide for health workers

MTaPS with the MOH, the NDA, and other partners developed learning materials for HCWs to improve their knowledge and understanding of the basic principles of pharmacovigilance for vaccines. The guide placed special emphasis on the EVD vaccine. The different areas developed included:

- general information on vaccines, uses, types, and why vaccines are important
- AEFI, how they are caused, types, expectations, and how to manage them
- reporting systems of vaccine-associated adverse events through the NDA and the MOH–UNEPI
- AEFI surveillance (figure 2)

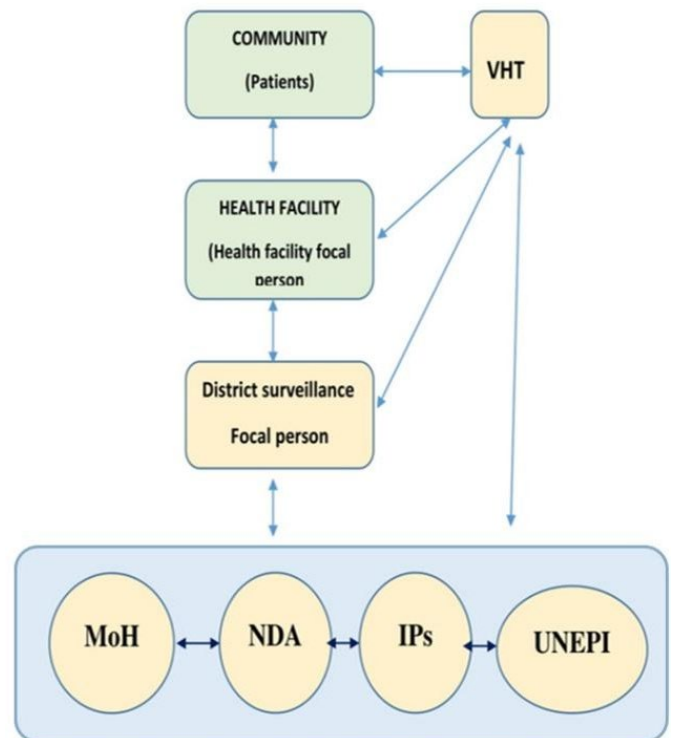


Figure 2. AEFI information flow (courtesy of NDA)

National EVD preparedness work plan development

The MTaPS team, in collaboration with the MOH and other partners, reviewed and refreshed the national



MOH official presenting on EVD surveillance during the review of the national EVD preparedness work plan. Photo credit: Sherie Tumwebaze, MTaPS Uganda

EVD preparedness plan. The preparedness plan focused on:

- background and current EVD status in DRC
- EVD risk and readiness risk classification
- EVD preparedness and response interventions, which consist of 12 pillars:
 - coordination and leadership
 - points of entry
 - surveillance laboratory case management, and safe and dignified burial
 - nutrition; water, sanitation, and hygiene (WASH); and IPC
 - risk communication, social mobilization, and community engagement
 - vaccination and operational research
 - logistics
 - strategic information, research, and innovation
 - ecological/anthropological studies or investigations
 - mental health and psychosocial support
 - budget summary
 - monitoring and evaluation (M&E)

The outcome of a subsequent meeting was a costed national EVD plan with an M&E plan. The plan was submitted to the emergency operation center for approval through the MOH EVD task force.



The Technical Working Group on Surveillance discusses pillar-related strategies and activities during the national EVD preparedness work plan. Photo credit: Sherie Tumwebaze, MTaPS Uganda

Lessons Learned

A number of lessons emerged from MTaPS' support to the Uganda MOH and partners in EVD preparedness:

- routine training and technical capacity building ensure that HCWs are equipped to respond to any potential EVD threats or cases
- regular updating of the EVD national preparedness work plan ensures that the MOH and other partners can effectively prepare and respond to potential outbreaks
- parallel and coordinated activities between MTaPS, regional partners, and countries can effectively respond and prepare for EVD outbreaks

Next Steps

Following our EVD preparedness response activities, MTaPS will continue working with the MOH and regional USAID partners to:

- help MOH strengthen routine border points of entry screening activities through coordinated efforts
- assist MOH improve the supply chain for PPE for HCWs in EVD high-risk districts
- enable MOH to conduct continuous IPC training and mentorships for all HCWs in EVD high-risk districts
- assist MOH to improve its communication mechanisms and with regional and district EVD task forces and implementing partners

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About USAID MTaPS:

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.



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