On 11th January 2023, the Ministry of Health (MOH) in Uganda with support from World Health Organization (WHO) officially declared the end of Ebola outbreak after 42 incubation period with no new cases. It was a milestone event for Uganda having confirmed Ebola virus disease on 20th September 2022 and eradicating it within 69 days!

At the end of the outbreak, the country recorded a total of 164 cases (142 confirmed and 22 probable), 55 confirmed deaths and 87 recovered patients.

As a way forward, MOH and WHO priority is to support the survivors' programme, enhance surveillance activities and leverage on response measures to ensure that there are no more cases. The following report highlights WHO's intervention to support the country’s response.

SitReps by the Ministry of Health with support from WHO - https://bit.ly/3TzkVZU
In-kind Support as of 08th February 2023

- Heavy duty gloves and boots: 3,869
- Scrub Suits Pairs: 1,284
- Surgical and examination Glove boxes: 833,100
- Patient beds with Drip stands: 13
- Gowns and Reusable Aprons: 39,180
- Face shield, goggles and Caps: 18,300
- EVD kits: 08
- Coverall: 12,500
- Masks: 266,100
- Alcohol handrubs and dispensers: 30
- Beds and Mattresses with PVC Cover: 93
- Infra-red thermometers: 772
- Digital thermometers: 1,300
- EVD lab test kits: 3,840
- Alcohol handrub 1L: 3,754
- Generators: 05
- Oxygen Concentrators: 13
- Pulse Oxymeters: 53
- Glucometer Strips: 400
- Glucometers: 119
- Incinerators: 10
- Tents: 122
- Admission/Discharge packages: 1,760
- Spray pumps: 70
- 45 kgs Chlorine Powder(KG): 7,440
- Generators: 05
- Oxygen Concentrators: 13
- Pulse Oxymeters: 53
- Glucometer Strips: 400
- Glucometers: 119
- Incinerators: 10
- Tents: 122
- Admission/Discharge packages: 1,760
- Spray pumps: 70
- 45 kgs Chlorine Powder(KG): 7,440
- Community Audio Towers contracted: 10
- IEC materials: 578,000
- Vans/Hired Cars: 128
- IT equipment: 73
- Stationeries: 665
- Plastic chairs: 50
- Biohazard bags: 5,250
- WHO staff Deployed or Repurposed: 260
- MOH Staff supported by WHO: 92
Key Highlights as of 08th February 2023

Coordination and Resource Mobilization

- The Incident Management Systems at MOH and WHO were operationalized.
- Co-chaired and strengthened the National and District Task Forces.
- Provided overall technical monitoring of the response.
- Technical and strategic advisory was provided to the Strategic Committee, National and District Task Forces and the technical pillars.
- Provided technical support in conducting risk assessments to inform the response.
- Provided support on strategic planning and implementation of the National Response Plan.
- Developed and managed the 4Ws Matrix and Resource Tracking Tools to improve coordination, track expenditures and highlight achievements.
- Led the mobilization, allocation, tracking and reporting on resources.
- 93 joint (MOH & WHO) situation reports have been published and disseminated.
- Organized regular high-level advocacy, coordination and partnerships and accountability meetings with stakeholders. These included 31 Health Development Partners Group, 27 Donors, 06 UN agencies, 56 NGOs and Implementing Partners.
- Coordinated the Implementing Partners and created platforms for information sharing to ensure they are mobilized to support the response.
- High-level field visits and monitoring missions have been organized for different stakeholders to monitor the response, assess the needs at sub-national and health facility levels, engage with the community and stand by health workers at the frontlines.
- Established offices in Mubende, Kassanda, Jinja, and Masaka for better coordination.
- Established an Ecological study team to determine environmental risk factors in Madudu and Kiruma sub-counties in Mubende district.
- 27 technical officers were deployed to support coordination of the response.
- 189 local leaders, RRT, DHT, DTF and district leadership trained on EVD response.
- WHO Ministry of Health deployment supported 42 epidemiologists, 120 Rapid Response responders, 3,111 contact tracers trained and facilitated 861 Ministry of Health Staff with relevant allowances as part of the surge support.
- WHO mobilized 26.4 million US dollars from WHO Contingency Emergency Fund, USAID, Norway, DG ECHO, UK AID, CERF, NOVO NORDISK FOUNDATION, Irish Aid, Republic of Korea and UNDP.
- Preparations ongoing for the EVD After-Action Review to evaluate the country’s performance during the response. This will be conducted between 08 and 16 February.
- The development of the Post-Ebola Recovery Plan supported, reviewed and endorsed by partners.

Surveillance and Laboratory

- 72 experts including 42 senior epidemiologists deployed to support contact listing, case-investigations, and enhanced active case search.
- 120 Rapid Response Team (RRT) members deployed in Mubende, Kassanda and surrounding affected districts.
- EVD alert management system was established in Mubende, Kassanda, Kampala, Masaka and Jinja, and 1,198 suspected cases evacuated from communities.
- Alert management system improved through the facilitation of 40 call takers and field investigators; provision of fuel to 05 vehicles and 05 ambulances in Kampala Metropolitan, Mubende and Kassanda.
- 3,111 Contact tracers and 731 Village Health Teams (VHTs) trained in contact tracing and follow-up; and 4,356 health workers trained in health facility surveillance, contact tracing, Go data, alert reporting, and biosafety/biosecurity.
- 240 contact tracers oriented on surveillance.
- Training materials on biological sample management, biosafety and biosecurity developed.
- 03 disease outbreak news published on the WHO website.
- Rapid risk assessments on EVD were conducted and finalized by the three levels of the organization (WHO country, regional and Headquarters levels).
- Fuel, airtime, data and facilitation fees provided to surveillance teams in all affected districts to enable daily response activities.
- 11 super-users from MoH, WHO and UNICEF trained to improve the use of the Go Data tool in reporting suspected and confirmed cases; 2,273 Go Data users trained and facilitated to support the roll-out of the tool for contact tracing in Mubende, Kassanda, Masaka, Kampala Metropolitan Area, and Jinja.
23 epidemiologists trained from Kampala Metropolitan Area on EVD surveillance and outbreak response.

- MoH supported to update and disseminate the EVD case definition.
- 300 cartridges of Chemistry panel tests (Piccolo), 1500 Viral RNA extraction kits, and 4320 Ebola PCR tests procured to support testing.
- 2000 laboratory and health personnel trained to support sample collection and testing.
- The development of active case search strategy supported.
- Health workers and VHTs in Kampala Metropolitan Area were trained and 144 surveillance officers facilitated to conduct active case search.
- 06 epidemiologists deployed in Mubende and 03 investigation team members in Kassanda to support alert verification. Daily per diem, risk allowance and airtime were provided.
- 08 quarantine facilities for high-risk contacts supported through initial assessment, admission package, hire of full board accommodation, psychosocial support, clothes, airtime and daily monitoring.
- Contact tracing activities were operationalized in all the affected districts through the hiring of 54 vehicles and fueling of districts/division vehicles.
- 180 phones for contact tracers procured and dispatched to Mubende, Kassanda and Kampala for Go data.
- 126,532 copies of surveillance tools, including case definitions, case investigation forms, contact tracing forms, contact listing forms printed and distributed.
- The coordination of the risk mapping exercise for the EVD outbreak supported.

**Case Management**

05 Ebola treatment units (ETU) have been established in Mubende Regional Referral Hospital (RRH) (01), Entebbe (01), Kaweru (01), Mulago (01) and Kalwana (01). 01 ETU was renovated.

- 06 Isolation Units have been established in Madudu, Mulago, Kiruddu, Masaka, Jinja and Entebbe.
- 563 health workers, district health teams, and health leaders have been oriented on early case identification and management.
- 08 Case Management Experts, 01 Emergency Physician and 01 Case Management Coordinator were deployed to support case management at the ETUs and Isolation Units.
- 06 Case Management Experts, 04 IPC specialists, 04 Clinical Officers and Doctors, 06 Nurses, 03 Mental Health and Psychosocial Support Providers and a Senior Duo Trained Emergency and Critical Care Nurse deployed to strengthen the management of cases in Mubende ETU, conduct IPC mentorship in health facilities, provide psychosocial support and provide care, bedside mentorship, and training respectively.
- Linkages between the Alerts management team and EMS Ambulance teams strengthened to create an integrated system that ensures alerts are evacuated in a timely, well-coordinated way and that the ETU and Emergency Departments are pre-notified before any evacuation through the Emergency Physician Deployment.
- Provided technical guidance towards formation of a consultative forum for Ebola Survivors’ program and follow-up program monitoring tools and patient care at the Survivor’s clinic that opened on 9/11/2022.
- 02 washing machines procured and installed at the Mubende RRH ETU.
- The establishment, stocking, and ongoing operationalization of a UN Staff Wellness Clinic supported in Mubende.
- 81 safe burials and swab collection were conducted by the safe and Dignified Burial (SDB) teams.
- 04 WHO national and international Case Management Consultants provided clinical support and mentorship in Entebbe ETU.
- 12 Viral Hemorrhagic Fever (VHF) kits, 200 admissions, 250 discharge packages and assorted medical supplies & equipment procured and distributed.
- 115 Ambulance Drivers and Assistants trained on safety measures, IPC, roles and responsibilities, and equipping and maintaining ambulances. 09 Ambulance Operators facilitated in Kampala Metropolitan area.
- 12 tents provided to the isolation centers in Masaka (05), Kampala Metropolitan Area (03), Jinja (03) and Mubende (01).
- 178 patients including confirmed cases in the ETU and probable cases in emergency and quarantine centres received psychosocial support.
- 05 power generators provided to ETUs and Isolation Centers in Mubende (KVA 250), Madudu (KVA 100), Mulago ETU (KVA 200) and 02 to Mulago (45 KVA).
Infection Prevention and Control (IPC)

- 3899 health workers from isolation facilities, ETUs, and non-ETUs in the 09 Ebola-affected districts were given technical support.
- 1709 healthcare workers in ETU isolation facilities and non-ETU facilities received on-job IPC mentorship.
- 10 IPC members deployed to support the capacity building of health workers.
- Triage systems established in health facilities in Kampala, Naguru, and Entebbe.
- Patient flow and standard operating procedures (SOPs) as well as disease transmission-based precautions were established in each ward of health facilities.
- Completed IPC assessments for 10 health facilities in Nakawa and Makindye divisions and oriented 128 health workers and 34 VHTs on basic IPC in the EVD context.
- National IPC readiness and response strategy, national IPC partner mapping, and gap analysis developed.
- 468 isolation, ETUs, and Non-ETUs facilities completed IPC assessment for Entebbe ETU and Mulago isolation unit, and on-the-job technical supervision were provided.
- Supported the development of the strategy for IPC Ebola readiness and response involving three main areas namely the ETU, Non-ETU, and the community.
- 3529 health workers received IPC EVD training and webinars, including 1587 VHTs and community volunteers, 392 teachers and 114 hotel staff.
- 84 burial attendants trained on IPC measures Safe and Dignified Burial.
- IPC sub-pillars provided technical support in setting up the ETU in Mubende, and in putting in place mitigation measures, hand hygiene stations, and waste disposal areas.
- Technical support was provided to MOH in the development of the following tools: core Ebola IPC SOPs; a harmonized IPC training package and modules; and to improve IPC data capture and indicator tracking for the response.
- Supported data collection for IPC scorecard analysis and dashboard development.
- Technical support was provided for ring-IPC activation in Masaka, Kampala, and Wakiso.
- Support provided to initiate IPC response in Jinja (training for staff, completion of IPC assessment, and 32 ring IPC, provision of IPC supplies to 216 health facilities, and development of isolation unit).

Risk Communication and Community Engagement (RCCE)

- RCCE structures established in all 19 sub-counties of the Mubende district.
- 1,426,000 copies of Information Education and Communication (IEC) materials such as factsheets and community case definition posters in four different languages were developed and disseminated in English, Luganda, Runyoro, and Kiswahili.
- 450 Journalists trained on EVD reporting.
- 8261 community and religious leaders, village health teams, and community health volunteers oriented and engaged to create community awareness of Ebola.
- 07 days accelerated campaign conducted to raise awareness on Ebola in Kampala.
- 100 district leaders were deployed to support community mobilization.
- 760,078 persons from 1056 villages in hot spot districts including Kampala, Mubende, Kassanda, Masaka, Rubaga, and Jinja reached with Ebola messages during community dialogues.
- Sensitized 764,814 people including 760,078 church members in hot spot districts, 1,180 students, teachers and parents, 3220 boda boda riders, 180 saloons, and 156 commercial sex workers. And reached 150 hotels/restaurants, 384 drug shops and clinics with EVD messages.
- 40 District Health Educators and Communication officers from districts neighboring Mubende were trained on EVD risk communication and community engagement.
- 10 megaphones procured and delivered to Kiruma, 02 mobile audio systems hired and deployed in each of Jinja, Masaka, and Kassanda districts where community sensitization was improved.
- 05 RRT officers, 06 MoH officers supported and deployed to conduct RCCE activities in the affected districts.
- 18,900 announcements, 26,595 spot messages, and 320 radio talk show aired on 14 radio stations.
- 13 mobile vans supported for a period ranging between 7 days to two months in Mubende, Kassanda, Kampala, Masaka, Jinja, and Masaka.
- 126,680 households reached in the hot spot districts with a total of 760,078 individuals.
- 60 community radio towers engaged in the 6 hot spot districts.
- **8,343** individuals were trained/ mentored/ orientated on IPC.
- **1,018** health facilities and **2,050** health workers provided with on-the-job IPC mentorship.
- **324** IPC ring kits were procured and disseminated, and **32** IPC rings were activated.
- **329** Health facilities received IPC IEC materials and supplies.
- **09** ETUs/isolation units received IPC technical support and supplies.
- **30** hygienists were trained and deployed to Mubende ETU.

**Research**

- **5256** doses of three investigational products received from three investigators.
- The vaccine trial officially was launched on **08 December 2022**. The process had started however due to the end of the outbreak, and no existing patients and active contacts at that time, the vaccine trials could not be conducted. The Ebola “ring vaccination” cluster-randomized trial is co-sponsored by MoH-WHO & led by Makerere University Lung Institute.
- **09** International and national WHO staff deployed to support the ring vaccination.
- A needs assessment conducted (HR, Supplies, Vehicles, etc.) and budget developed.
- Good Clinical Practice, Protocol training agenda, training materials and SOPs developed and implemented.
- The study base (Mubende) and the study backup base identified in Kampala.
- Renovation of the central trial base in Kampala and Mubende completed.
- An Ultra cold chain (UCC) installed, tested and made fully functioning in Kampala.
- ARKTEKs (UCC mobile) equipment and supplies for mobile research teams procured and dispatched.
- **02** trial bases furnished and made operational in Mubende within the DHO office block and central level at Mulago hospital.
- **07** investigation teams each with **14** researchers trained by experts from Makerere Lung Institute.
- The development of therapeutics trial protocol supported, and the independent committee members brought together to discuss the protocol.
- Readiness assessment at **330** health facilities and within communities in the EVD affected districts conducted.
- The implementation of the 4th round of Pulse Survey supported nationally with special focus on districts affected by EVD.

**PRSEAH**

- Pre-deployment briefings on Prevention of Sexual Exploitation, Abuse, and Harassment (PRSEAH) conducted for personnel involved in the EVD response (MoH, WHO and partners) and PRSEAH pocketbooks/PSEA passports were provided.
- PRSEAH committees were set-up and **02** PRSEAH focal points appointed in all affected districts.
- SEAH Risk assessments conducted in affected districts and risk mitigation measures put in place.
- **2055** people (**1035** females and **1020** males) oriented on PRSEAH including church members, health workers, district stakeholders, vaccine study team, prison service officers, and community leaders in affected districts.
- **5000** PRSEAH pocketbooks/PRESA passports, were distributed to support awareness raising on PRSEA in the affected districts, in addition to **80** pull up banners (Code of conduct, Dos & Don’ts), **80** A3 wall hangings (Do’s and Don’ts posters), **5000** laminated Do’s and Don’ts posters, **200** PRSEAH branded Mugs, **400** water bottles, **1000** wrist bands, **400** Caps and **1000** t-shirts.
- **30** talk shows on local radio stations on reporting SEAH were conducted in Mubende and Kagadi districts.
Summary of Key challenges

- The delay in detecting the disease from onset.
- The mobility and poor data capture at health facilities led to challenges in contact tracing in some of the districts. WHO ensured that active case search was ongoing to support detection at the facility and community levels.
- Shortage of trained technical experts in certain technical areas.
- Weak IPC measures at Health facilities which resulted in health workers’ infection.
- Lack of understanding of the risks of the disease by communities and adherence to some cultural practices contributed to further spreading of the disease.

Recommendations

- Strengthening the surveillance system at the national level is key in early detection of any disease outbreak.
- Improved human resources for health to diversify the capacity at national level.
- Allocate sufficient funding and resources to strengthen IPC at facility and community levels.
- Continued support to risk communication and community engagement activities is important to improve community awareness and disease early detection.

Acknowledgement

Sincere acknowledgement to all development partners who have generously provided resources through WHO to support the Ebola Response in Uganda.