EBOLA OUTBREAK CONFERENCE

Theme: Strengthening Response and Preparedness in Ebola Outbreak, Uganda 2025

Date: 13th March 2025
Blended Venue:
Online: Zoom call
Prepared By: CONFERENCE ORGANIZING COMMITTEE
IDEA FELLOWSHIP PROGRAM

EXECUTIVE SUMMARY

The IDEA Fellowship Program at Busitema University convened a global conference to address critical gaps in Ebola Virus Disease (EVD) preparedness and response. Experts discussed the need to rename EVD to reduce stigma and improve global health strategies, highlighting the impact of disease nomenclature on public perception and policies.

Key Themes:

- Impact of disease nomenclature on public perception and policies.
- Strengthening surveillance, diagnostics, and data tracking.
- Role of technology in epidemic preparedness.
- Community engagement and stigma reduction.
- Investment in research, vaccine development, and clinical trials.

Strengthening surveillance, diagnostics, and data tracking was emphasized, with Uganda's recent outbreak serving as an example of improved outbreak response. The role of technology in epidemic preparedness was underscored, advocating for mobile health tools, GIS mapping, and digital monitoring systems. Community engagement was identified as key to combating stigma and enhancing public trust. Participants stressed the importance of sustained investment in research, vaccine development, and clinical trials to improve future outbreak management. The conference concluded with a call for global collaboration, endorsing the establishment of the Global Viral Haemorrhagic Fever Research Network (GLOVIRN) to facilitate knowledge exchange and coordinated outbreak response strategies. These recommendations provide a strategic roadmap for advancing global preparedness against Ebola and other emerging infectious diseases.

Akello Sarah Rachael
Chairperson, Organizing Committee

Prof Peter Olupot-Olupot
IDEA Conference Patron

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ACKNOWLEDGMENT

The IDEA Fellowship Program extends its deepest gratitude to all stakeholders who contributed to the success of this conference. We sincerely appreciate the invaluable insights shared by global health experts, policymakers, researchers, IDEA fellows, IDEA Consortium partners and frontline healthcare practitioners. Special thanks go to Professor Peter Olupot-Olupot for his leadership and to Busitema University for hosting this critical dialogue. We also recognize the European & Developing Countries Clinical Trials Partnership (EDCTP) and the Ministry of Health, Uganda, for their contributions to this conference. Lastly, we commend the dedication of the local organizing committee, particularly IDEA Fellow Sarah Racheal Akello, whose efforts ensured a seamless and impactful conference.

LIST OF ABBREVIATIONS

EDCTP – European & Developing Countries Clinical Trials Partnership

EVD – Ebola Virus Disease

FHF – Filoviral Hemorrhagic Fever

GLOVIRN – Global Viral Haemorrhagic Fever Research Network

IDEA – Infectious Disease Epidemiology & Biostatiscs in Africa

MCRI – Mbale Clinical Research Institute

MERS – Middle East Respiratory Syndrome

MoH – Ministry of Health

Mpox – Monkeypox

SVHF – Severe Viral Hemorrhagic Fever

SSA – Sub-Saharan Africa

WHO – World Health Organization

LIST OF FIGURES

1.0 Background

Uganda has experienced recurrent Ebola outbreaks, with the 2025 resurgence underscoring the persistent threat of zoonotic spillovers and gaps in epidemic preparedness (Ministry of Health, 2025; WHO, 2025). The outbreak has placed immense pressure on healthcare systems, revealing critical challenges in surveillance, diagnostics, and community engagement. Strengthening early warning systems and cross-border coordination is essential to mitigating future outbreaks (CDC, 2025).

The Annual Conference on Emerging and Re-Emerging Infectious Diseases in Africa (ACERIA) convenes researchers, policymakers, and public health practitioners to advance evidence-based strategies for outbreak response. In light of the ongoing crisis, this year's discussions focused on integrating genomic surveillance, enhancing vaccine deployment, revisiting nomenclature of the Ebola virus and mortality surveillance to strengthen epidemic control efforts. By fostering interdisciplinary collaboration and knowledge exchange, the conference aimed to inform policy and strengthen Africa's resilience against future public health threats.

1.1 Main Objective

To enhance Uganda's epidemic preparedness and response capacity by fostering research, innovation, and multisectoral collaboration in the wake of the 2025 Ebola outbreak.

1.2 CONFERENCE PROGRAM

TIME (PM)	SESSION	RESPONSIBLE
12:00 – 12:05	Arrival, registration & opening prayer	Akello Sarah Rachael
12:06 – 12:10	Welcome Address by IDEA Patron	Professor. Peter Olupot-Olupot
12:11 – 12:20	Nomenclature of Ebola	Professor Peter Olupot-Olupot
12:21 – 12:35	Remarks on Ebola outbreak	Dr. Kyobe and Dr. Atek
12:35 – 02:21	**SESSION 1-MODERATOR**	**PROF. DUNCAN BANKS**
12:36 – 12:40	Official Opening of the Conference	Dr. Olaro Charles -Director General
12:41 – 12:55	Diagnostics	
12:56 – 01:10	Ebola: risk factors and transmission	Professor Paul R. Hunter
01:11 – 01:40	Surveillance: Outbreak detection and response	Dr. Bwire Godfrey & Dr. Okiror William
01:41 – 01:55	Quarantine intervention in Ebola Response	Dr. Mulongo Muhamed
01:56 – 02:20	Q & A	All
02:21 – 02:30	**Health Break**	**All**
02:31 – 05:00	**SESSION 2-MODERATOR**	**PROF. SOPHINA**
02:31 – 02:45	Current & potential areas for Clinical Trial	Prof. Pauline Byakika
02:46 – 02:55	Remarks on Capacity building Policy View	Professor Waako Paul
02:56 – 03:25	Presentation on capacity building	Dr. Alex Ario & Dr. Nyirendar Thomas
03:26 – 03:40	Partner coordination & Engagement	Dr. Ocero Andrew
03:41 – 03:55	Policy review and recommendations	Prof. Okware Samuel
03:56 – 04:40	Panel Discussion & Q&A	All
04:41 – 05:00	**Closing Remarks & Networking**	**Professor. Peter Olupot-Olupot**

1.3 CONFERENCE SESSION 1

1.3.1 Opening Remarks

Peter Olupot-Olupot (IDEA fellowship program Patron and Professor of Clinical Epidemiology, Busitema University) opened the 2025 Conference on the Ebola Outbreak by inviting the chairperson to lead an opening prayer. He then welcomed distinguished guests, esteemed speakers, and panelists, emphasizing the significance of the conference, themed "Strengthening Response and Preparedness in Ebola Outbreaks. He highlighted that the gathering came at a critical time as Uganda faced a new outbreak, underscoring the importance of drawing lessons from past

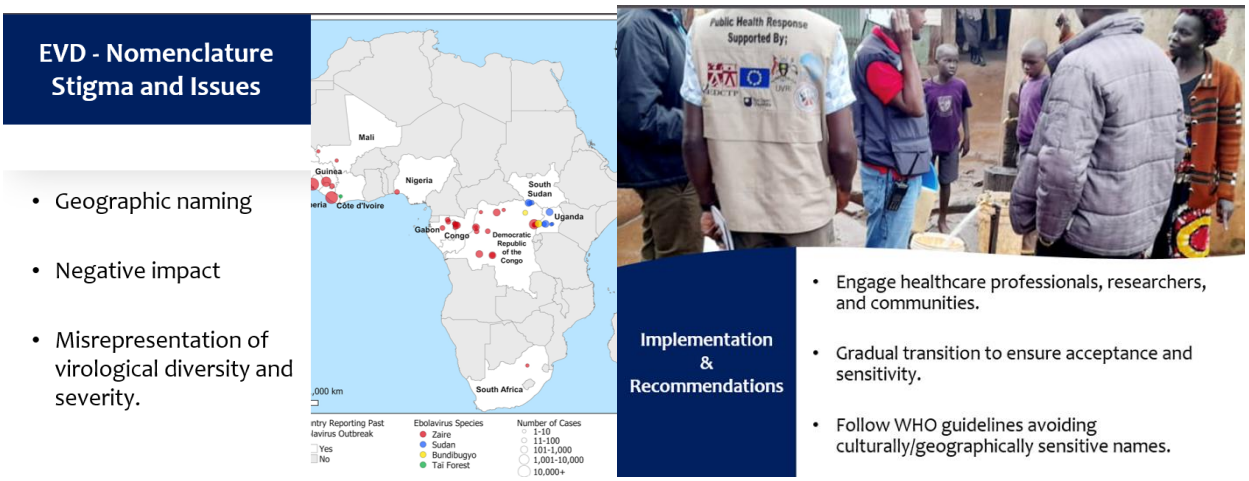
epidemics, including the 2014–2016 West African outbreak. He stressed the need for robust preparedness and response mechanisms, outlining key discussion areas such as surveillance, quarantine interventions, clinical trials, policy reviews, and capacity building.

Professor Olupot expressed gratitude to key partners, including the European and Developing Countries Clinical Trials Partnership (EDCTP), the European Union, Busitema University, and Mbale Clinical Research Institute, for their unwavering support in organizing the conference.

He urged participants to engage in meaningful discussions, foster innovative partnerships, and develop actionable strategies to enhance global health security. He officially welcomed everyone and expressed anticipation for productive deliberations throughout the conference.

1.3.2 Nomenclature of Ebola by Prof Peter Olupot -Olupot.

Professor Peter Olupot-Olupot's presentation focused on renaming Ebola Virus Disease (EVD) to reduce stigma and improve scientific accuracy. He highlighted the historical outbreaks, including Uganda's seven outbreaks since 2000, and emphasized how geographic-based naming misrepresents virological diversity and fuels stigma. Drawing from WHO's precedent in renaming diseases, he proposed neutral terms like Filoviral Hemorrhagic Fever (FHF) or Severe Viral Hemorrhagic Fever (SVHF) and suggested systematic renaming of Ebola strains. He recommended engaging healthcare professionals, researchers, and communities in the transition process while ensuring alignment with WHO guidelines. Ultimately, he called for a shift towards neutral, science-based nomenclature to enhance public health communication and response. See **Figure 1**.



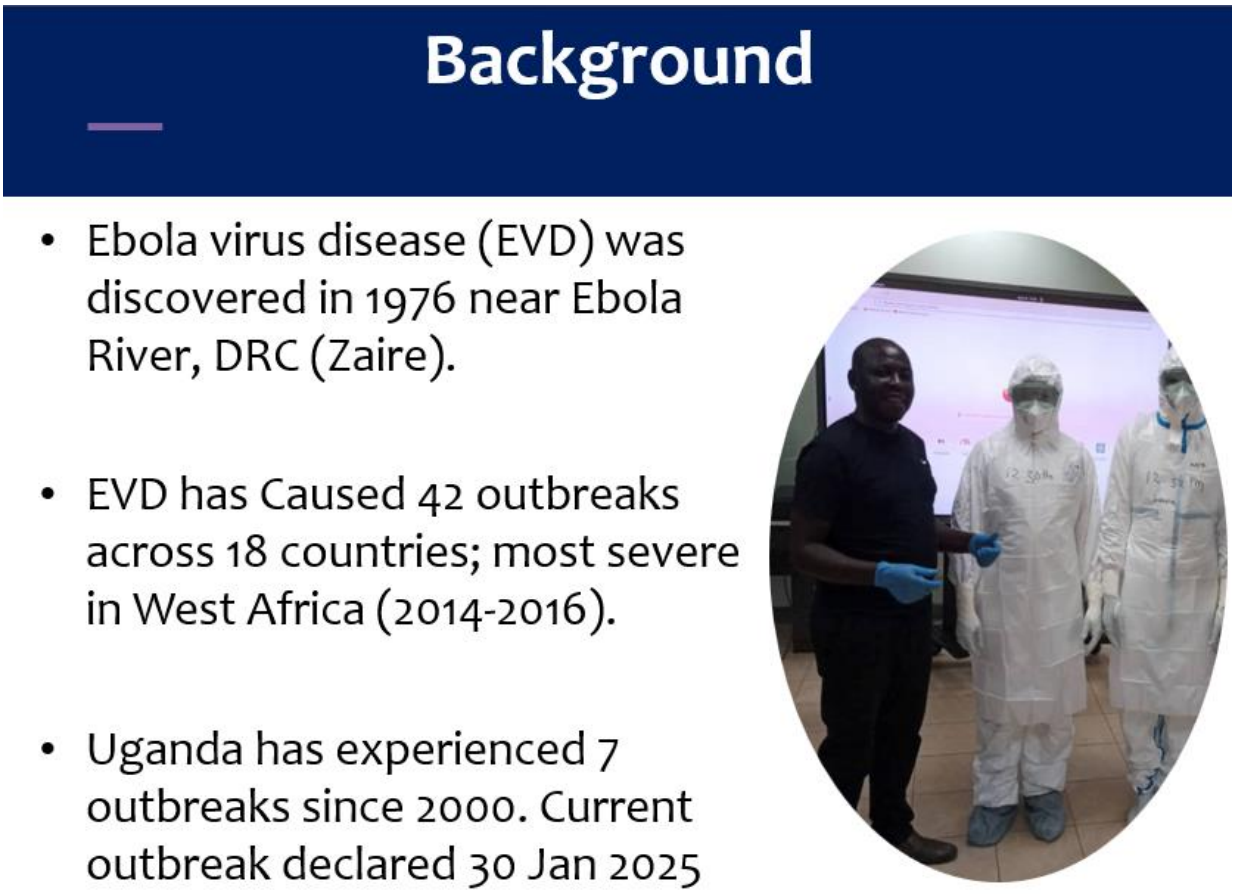


Figure 1: Highlight the key tenets of Professor Peter Olupot- Olupot presentation.

Session 1: Moderated by Prof Duncan Banks (IDEA program collaborator and Prof at the Open University, UK)

Professor Peter Olupot-Olupot acknowledged the presence of attendees and introduced the next speakers, Dr. Kyobe and Dr. Atek, to provide remarks on the ongoing Ebola outbreak. But in the interest of time, he proceeded with the program and officially handed over the floor to Professor Duncan Banks, a collaborator on the IDEA Fellowship Program from the Open University in Milton Keynes, London. He highlighted Professor Banks' contributions to capacity building in Uganda, particularly in addressing emerging and re-emerging infectious diseases. Professor Banks then introduced himself, emphasizing his role as a co-investigator on the funded IDEA Fellowship Program. As the moderator for Session One, he reminded speakers to keep to their allotted time and instructed participants to mute their microphones when not speaking. He then invited Dr. Charles Olaro to officially open the conference.

1.3.3 Official Opening of the Conference, Dr Charles Olaro

In his opening remarks, Dr. Charles Olaro expressed his appreciation for the efforts put into understanding and responding to outbreaks, particularly emerging infectious diseases like Ebola. He highlighted the ongoing Ebola outbreak, which was declared on January 30, 2025, and emphasized that it had spread through several cities, including Kampala and Jinja, which posed significant risks of amplification. Dr. Olaro discussed the challenges faced by health workers, stressing the importance of proper knowledge, skills, and attitudes in managing outbreaks, particularly the role of screening and standard precautions. He underscored the need for effective response strategies, including genomic sequencing and contact identification, to prevent further transmission. He also addressed the private health facilities' need for improved infection prevention and control (IPC) practices. Dr. Olaro shared optimism about containing the outbreak and outlined the revised risk categorization for affected districts, emphasizing preparedness and the importance of learning from each outbreak. He concluded by encouraging continued research, particularly in animal surveillance, and stressed the need for a better understanding of diseases like Ebola Sudan, which remains largely under-researched.

1.3.4 Ebola risk factors and transmission, Professor Hunter

Professor Hunter's presentation focused on the key risk factors and transmission dynamics of Ebola, with a particular emphasis on understanding transmission in community settings and among healthcare workers. He highlighted the historical context of Ebola outbreaks since 1976, noting that the number of outbreaks had not drastically changed over time but there was a rise in large-scale outbreaks, particularly in West Africa and the DRC.

He shared findings from a systematic review of risk factors for Ebola transmission, revealing that certain activities like direct contact with patients, caring for ill individuals, and funeral rituals significantly increased the risk of infection. However, other activities such as frequent markets or early-stage illness contact presented minimal risk. Notably, the risk was found to be lower in household contacts who had no direct contact with Ebola patients, with more substantial risk for those providing care.

Hunter also discussed a more recent 2022 study that reinforced the significance of care provision in increasing the risk of Ebola and pointed out that the risk increased when a patient died in the

household. He referenced findings from a Ugandan study that emphasized the importance of defining contact levels (no contact, minimal contact, direct contact) to better understand the risks.

Finally, Hunter emphasized the role of vaccines in transforming the landscape of Ebola prevention, stating that vaccines, when administered before or even after exposure, significantly reduce the risk of infection and death. He concluded by calling attention to the need for continued public health campaigns, especially in areas without access to vaccines. See **Figure 2**

Migamba et al. BMC Infectious Diseases (2024) 24:543
https://doi.org/10.1186/s12879-024-09439-1

BMC Infectious Diseases

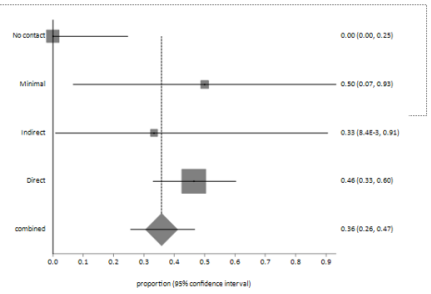
RESEARCH Open Access

Individual and household risk factors for Ebola disease among household contacts in Mubende and Kassanda districts, Uganda, 2022

Stella M. Migamba[1*], Denis-Luc Ardiet[2], Richard Migisha[1], Hildah T. Nansikombi[1], Brian Agaba[1], Helen Nelly Naiga[1], Mercy Wanyana[1], Jane Frances Zalwango[1], Immaculate Atuhaire[1], Peter Chris Kawungezi[1], Marie Goretti Zalwango[1], Brenda Simbwa[1], Daniel Kadobera[1], Alex R. Ario[1] and Julie R. Harris[3]

Table 4 SUDV positivity by level of contact among household members of primary case-patients in Mubende and Kassanda districts, Uganda, 2022 ($n = 76$). Interaction levels represent the maximum degree of interaction between the household member and primary case-patient

Interaction category	Total (col %)	SUDV + (row %)
	n (%)	*n* (%)
No contact	13 (17)	0 (0)
Minimal contact	4 (5)	2 (50)
Indirect contact	3 (4)	1 (33)
Direct contact	56 (74)	26 (46)



Non-combinability of studies
Cochran Q = 16.887422 (df = 3) P = 0.0007
Fisher's exact test (No v Direct) Two-sided P = 0.0009

Other risk factors
aged ≥ 18 years (aRR_{adj}=1.9, 95% CI: 1.01–3.7)
handwashing facility (aRRadj=0.52, 95% CI: 0.31–0.88)

Even in those patients who contact Ebola, prior vaccine reduces death

Case fatality risk among individuals vaccinated with rVSVΔG-ZEBOV-GP: a retrospective cohort analysis of patients with confirmed Ebola virus disease in the Democratic Republic of the Congo

Rebecca M Coulborn, Mathieu Bastard, Nicolas Peyraud, Etienne Gignoux, Francisco Luquero, Bérengère Guai, Stephane Hans Bateyi-Mustafa, Elisabeth Mukamba Musenga, Steve Ahuka-Mundeke

Vaccine status	Adjusted RR	95% CI	P value
Not vaccinated	1.0		Ref
Vaccinated ≤2 days before symptom onset	0.56	0.36 – 0.82	0.0046
Vaccinated 3–9 days before symptom onset	0.44	0.29 – 0.65	0.0001
Vaccinated ≥10 days before symptom onset	0.40	0.21 – 0.69	0.0022

The incubation period for Ebola is 2 to 21 days, with an average of 8 to 10 days.

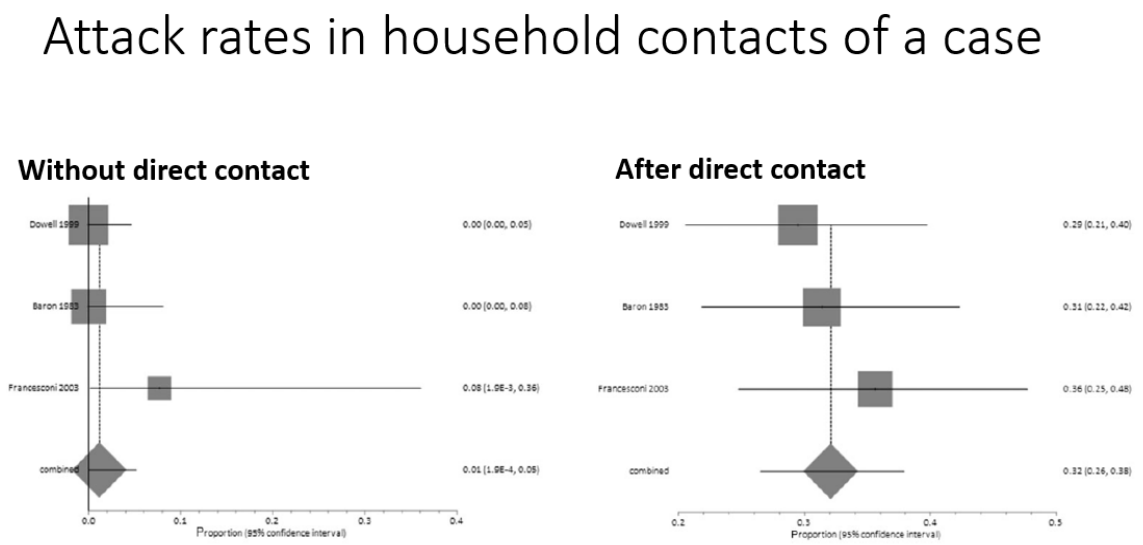


Figure 2: Snapshots of sessions on Ebola's risk factors and transmission by prof Hunter

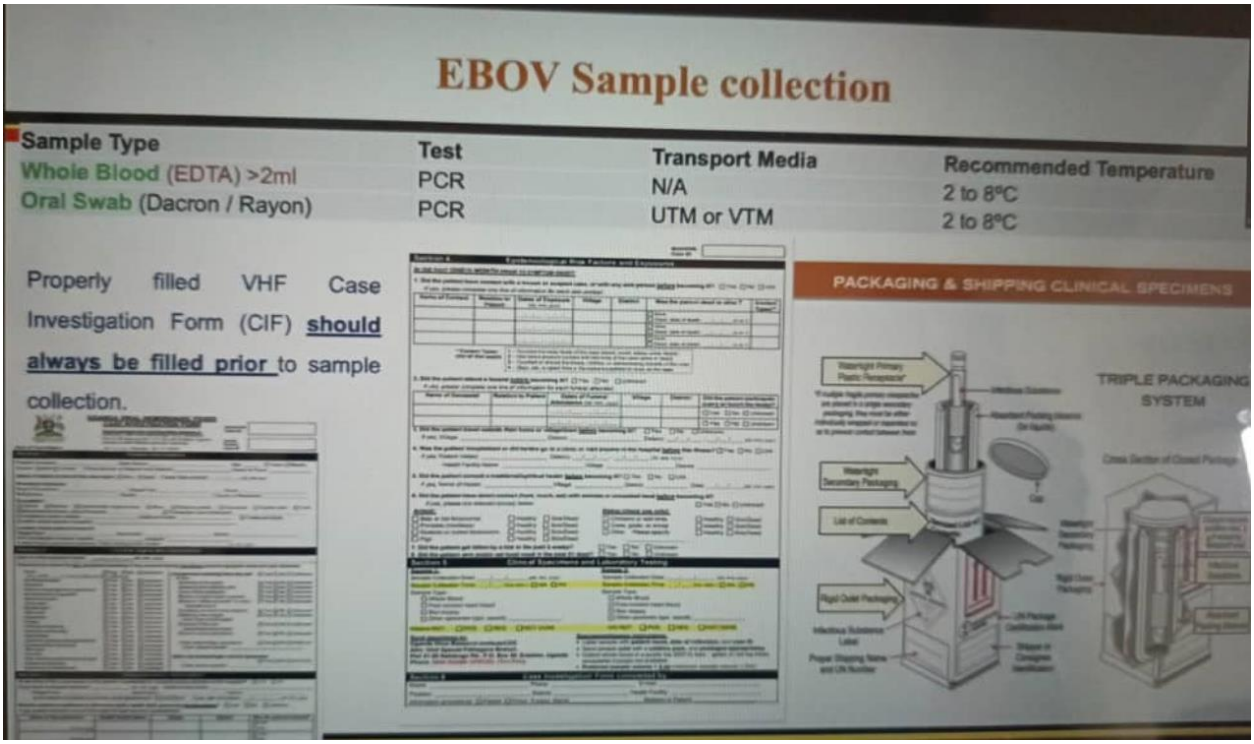
1.3.5 Laboratory diagnostics, Dr Andrew Otiba

Dr. Otiba's presentation focused on the critical role of diagnostics in managing viral hemorrhagic fevers (VHFs) in Uganda, emphasizing laboratory testing as an essential tool in outbreak response.

The presentation highlighted Uganda's diagnostic efforts for viral hemorrhagic fevers (VHFs) like Ebola, emphasizing the role of laboratory testing in controlling outbreaks. Uganda faces frequent outbreaks of VHFs, with eight identified viruses posing significant threats. Breaking the transmission chain through early diagnosis and timely isolation and treatment is essential. National laboratory guidelines, such as the 2023 emergency preparedness plan, help coordinate efforts to strengthen response capacities. The country has significantly improved testing capabilities, including rapid diagnostics within 24 hours of receiving samples and using comprehensive panels to differentiate between various diseases like Ebola and Rift Valley fever.

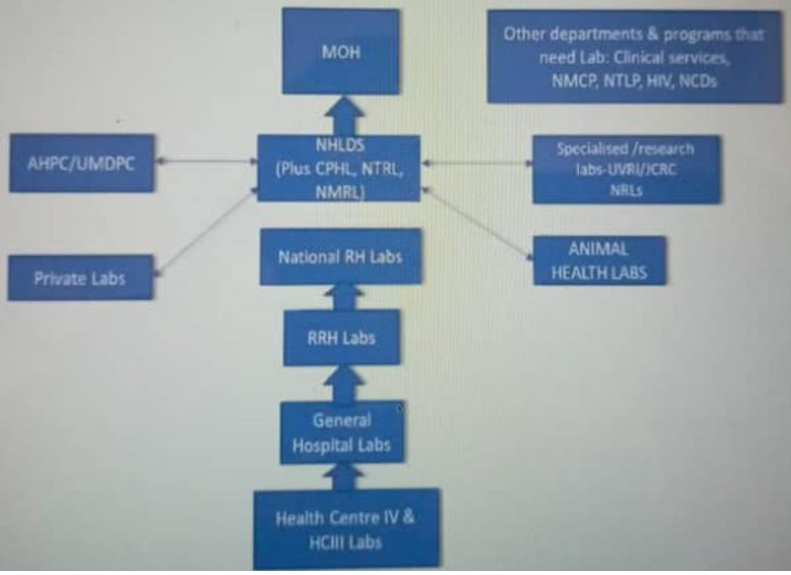
Mobile laboratories have been developed to ensure quick response even in remote areas, and Uganda's advancements in genomic sequencing are instrumental in tracking disease evolution and guiding vaccine development, as seen in the 2023 Ebola outbreak. Proper sample collection, packaging, and transportation remain critical, with emphasis on maintaining sample integrity for accurate results. Uganda also employs wastewater surveillance, monitoring for pathogens in

mortuaries, which enhances early outbreak detection. Continuous training and the development of a national laboratory program are strengthening Uganda's laboratory expertise, and international collaboration helps spread valuable experiences to other nations facing similar challenges. See **Figure 3**

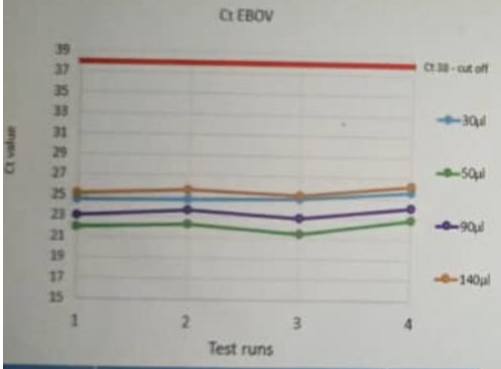


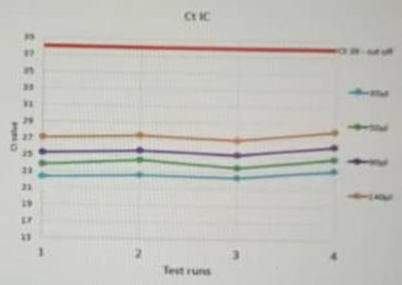
Uganda's Human Health Laboratory Department (MoH)

Headed by the Commissioner Health Services- NHLDS



Index case: Parallel testing and sample dilution effects, key for heavily hemolyzed samples





Sample volumes	Test run 1	2	3	4	Mean
30µl	-35%	-35%	-35%	-33%	-34%
50µl	-42%	-41%	-44%	-40%	-42%
90µl	-39%	-38%	-40%	-37%	-38%
140µl	-34%	-33%	-34%	-31%	-33%

Sample volumes	Test runs 1	2	3	4	Mean
30µl	0.41132	0.40447	-0.41	0.38553	-40%
50µl	0.37342	0.35605	0.37737	0.34763	-36%
90µl	0.33605	0.32553	0.33737	0.31026	-33%
140µl	0.28763	0.27816	0.29158	0.26184	-28%

- Parallel testing, 4 times for dilutions: 140µl, 90µl, 50µl and 30µl. 50 µL yielded the lowest Ct values for EBOV target, while the 30 µL sample for the IC target.
- There is impact of sample dilution on diagnostic sensitivity, hence the need for optimised preparation protocols to balance inhibitor dilution while preserving viral load for accurate molecular diagnostics.

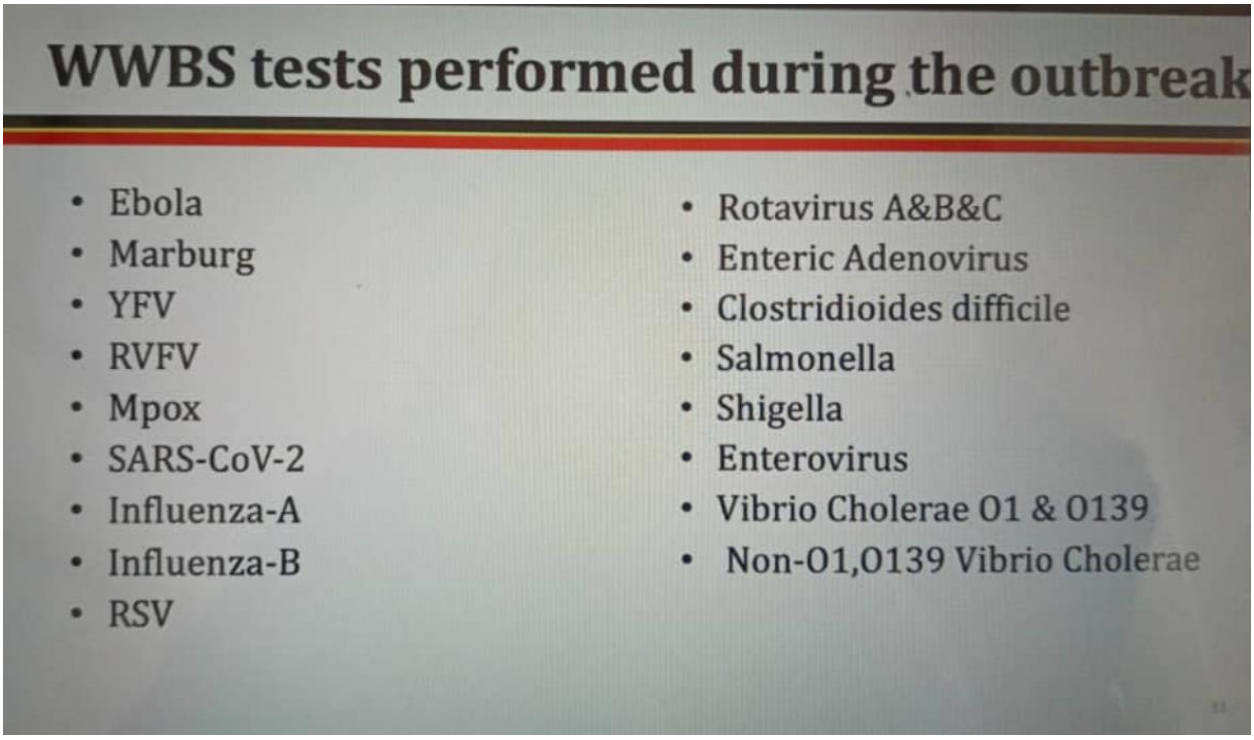


Figure 3: Laboratory Diagnostics by Dr. Andrew Otiba

1.3.6 Surveillance, outbreak detection and response

The session on surveillance, outbreak detection, and response was presented by Dr. William Okiror and Dr. Godfrey Bwiire.

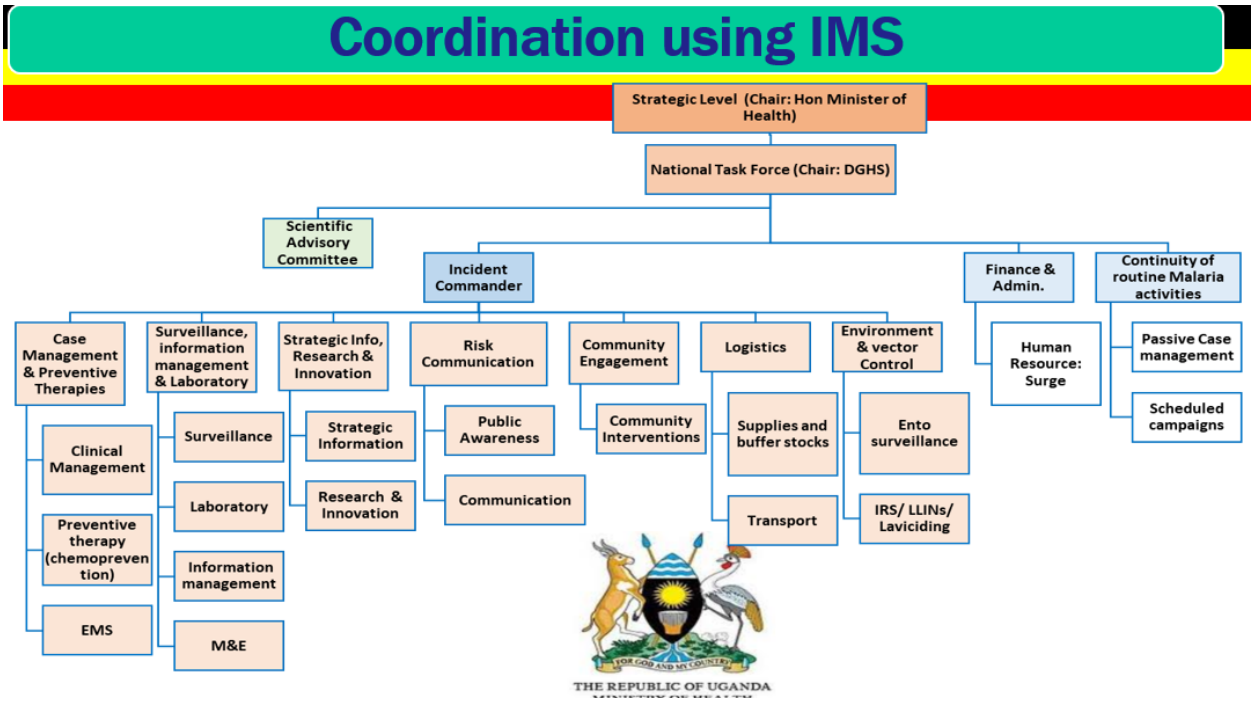
1.3.6.1 Dr Okirior Presentation

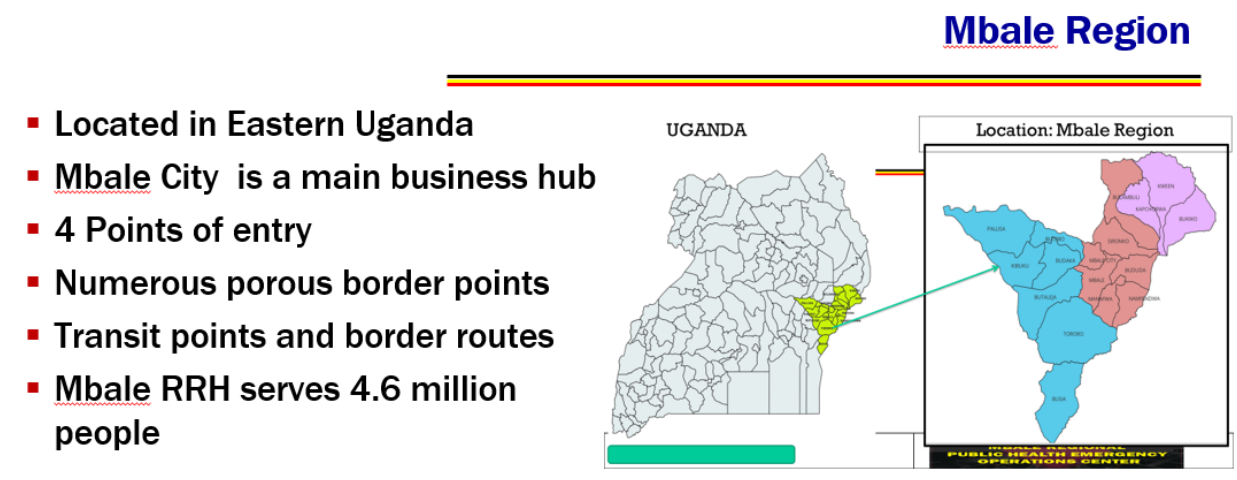
Dr. Okiror's presentation focused on the response to the Ebola outbreak in the Bali region, Uganda, which is a key transit area with porous borders and a population of 4.6 million. The Ebola outbreak response in Mbale was managed through a well-established incident management structure that coordinated various response pillars, each led by an overarching pillar lead.

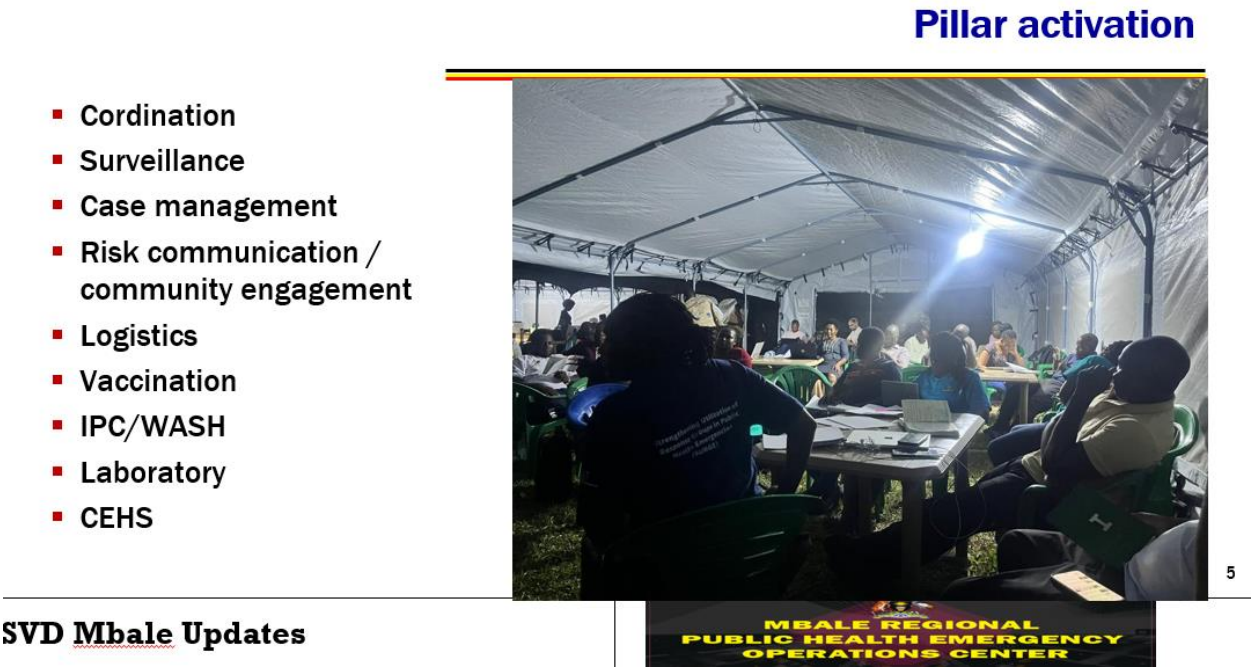
Key response pillars such as coordination, case management, surveillance, community engagement, infection prevention and control/water sanitation and hygiene,laboratory, and vaccination were activated. Coordination was led by incident commander and chaired by the Resident City Commissioner as the head of the task force.

. Despite the challenges, essential health services continued, and the region avoided a full lockdown. Dr. Godfrey Bwiire later discussed surveillance, emphasizing early detection through alert management, case investigations, and community involvement to ensure effective outbreak management. Both presentations highlighted the importance of a coordinated, multi-layered

approach to handling public health emergencies, community engagement, and logistical support. See **Figure 4**







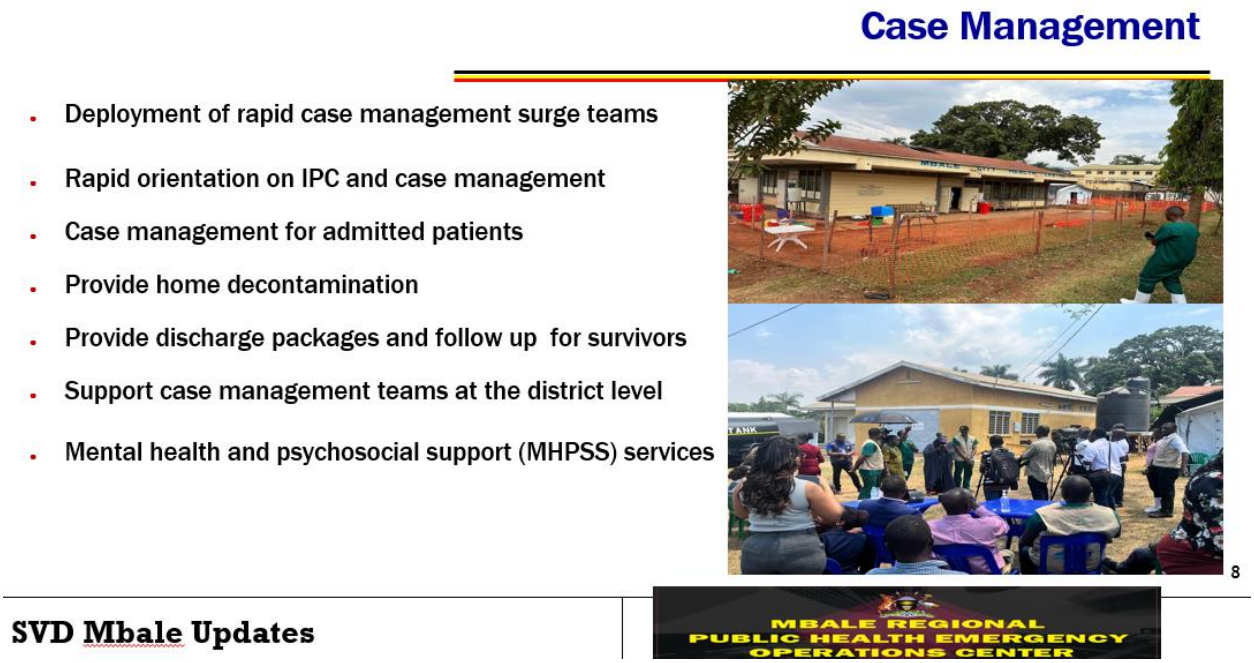


Figure 4: Response strategy for Ebola in Mbale by Epi Fellow William Okiror

1.3.6.2 Surveillance Strategies for Ebola Virus Disease by Dr. Godfrey Bwire

Dr. Godfrey Bwire's presentation provided a comprehensive overview of the critical components of Ebola Virus Disease (EVD) surveillance in Uganda, emphasizing a multi-tiered approach

integrating community-based, event-based, and indicator-based surveillance to enhance early detection and outbreak control.

Effective EVD surveillance necessitates a robust alert management system, which involves systematic collection, verification, and response to potential cases. Alerts originate from community-generated signals, which must be validated by trained health personnel before being classified as actionable public health threats. He underscored that a functional alert management system requires a well-informed public, trained rapid response teams (RRTs), and an integrated communication infrastructure. Digital tools, such as Open Data Kit (ODK) applications, are instrumental in optimizing case reporting and response efficiency.

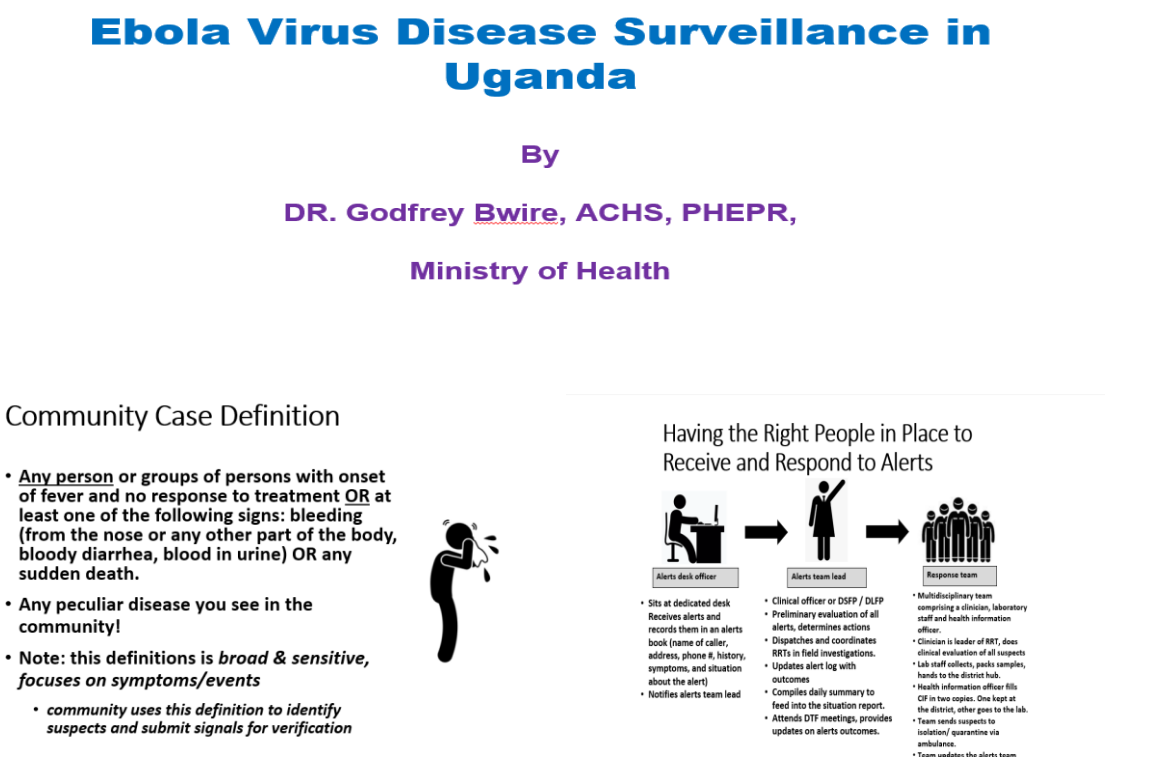
Case investigation and contact tracing are essential pillars of outbreak containment. The primary objective of case investigation is to delineate transmission chains by identifying the index case, mapping potential exposure events, and determining high-risk contacts. Contact tracing, a cornerstone of outbreak response, involves systematic follow-up of exposed individuals for 21 days post-exposure to identify secondary cases early. The prioritization of contacts is critical, with heightened focus on high-risk individuals such as household members, caregivers, and healthcare workers who may have been exposed without adequate personal protective equipment (PPE).

Dr. Bwire further highlighted the role of community-based disease surveillance (CBS) as an active, continuous process involving community structures, including village health teams (VHTs), local government leaders, and religious and cultural institutions. CBS operates through two complementary mechanisms: indicator-based surveillance (routine health facility reporting) and event-based surveillance (real-time reporting of unusual health events via mobile communication). The decentralization of surveillance through CBS ensures that emerging health threats are rapidly detected and escalated to national response teams.

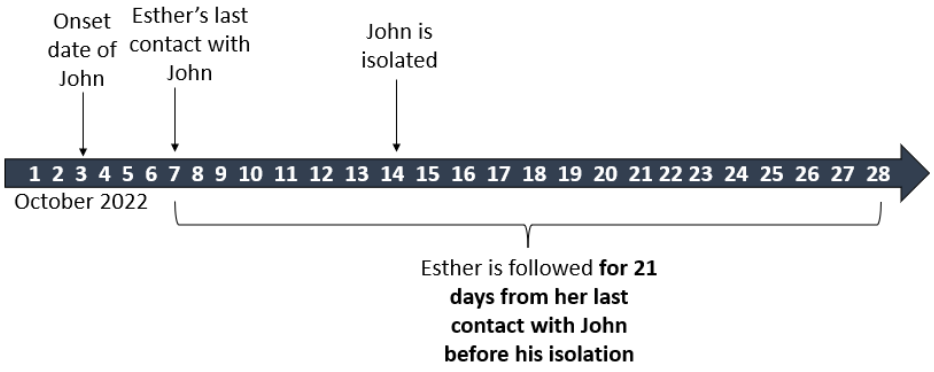
Mortality surveillance is critical for understanding the epidemiology of EVD-related deaths. Dr. Bwire emphasized that all-cause mortality surveillance, both at the health facility and community level, provides key epidemiological insights, facilitating early detection of undiagnosed EVD cases. Uganda's surveillance strategy includes systematic postmortem sample collection for non-trauma deaths in high-risk districts, ensuring data-driven response planning.

Finally, he addressed the role of point-of-entry (PoE) surveillance in mitigating transnational disease spread. In accordance with the International Health Regulations (IHR, 2005), Uganda has implemented stringent border health measures, including systematic screening of travelers, isolation and referral protocols for suspected cases, and cross-border collaboration with neighboring countries. The integration of PoE surveillance with national electronic surveillance platforms strengthens Uganda's ability to rapidly detect and contain imported infections.

Dr. Bwire's presentation underscored that an effective surveillance system for EVD necessitates a multisectoral, community-driven, and data-informed approach, integrating real-time event detection, systematic case investigation, and rigorous mortality and border surveillance. Strengthening these components is paramount in achieving early outbreak containment and minimizing morbidity and mortality associated with EVD in Uganda and beyond. See **Figure 5**.



Contacts are followed for 21 days from their *last contact with case-patient*

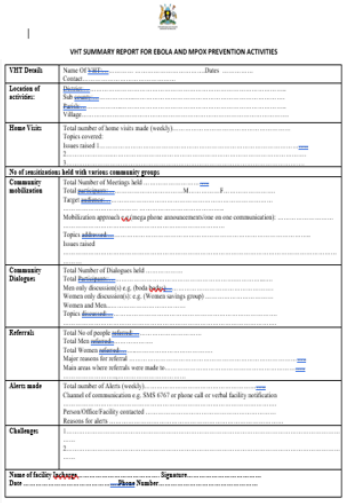


***Date of last contact is Day 0**

25

Roles of VHTs and Supervisors in CBS

- **Detection of EVD-Conduct home visits**
  - Use Community Case Definition
  - CBS hand book
- **Notification and Reporting-Alerts**
  - 6767
  - Phone Calls
- **Support Response**
  - Community Mobilization
  - Referrals
  - Community Dialogue
  - Active Case Search



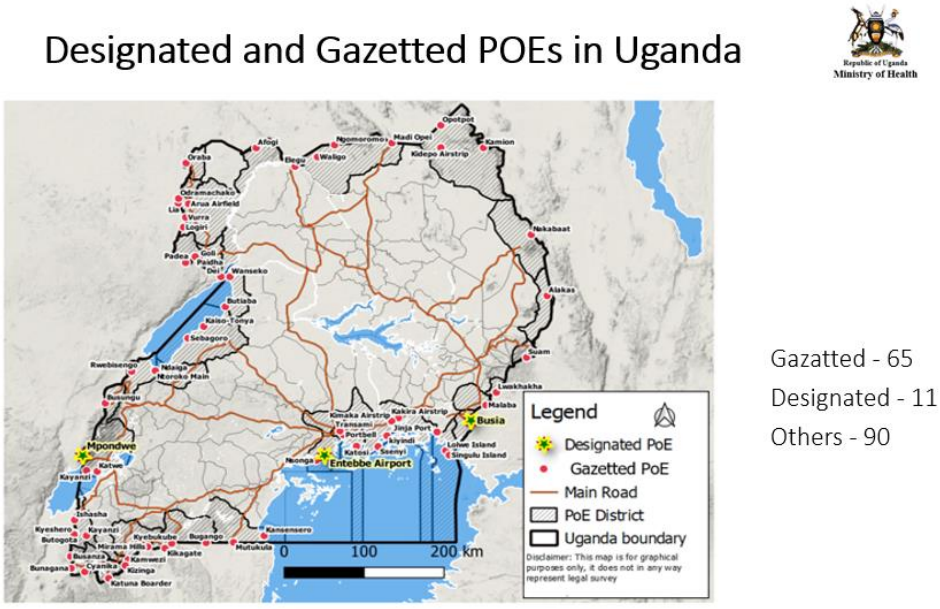


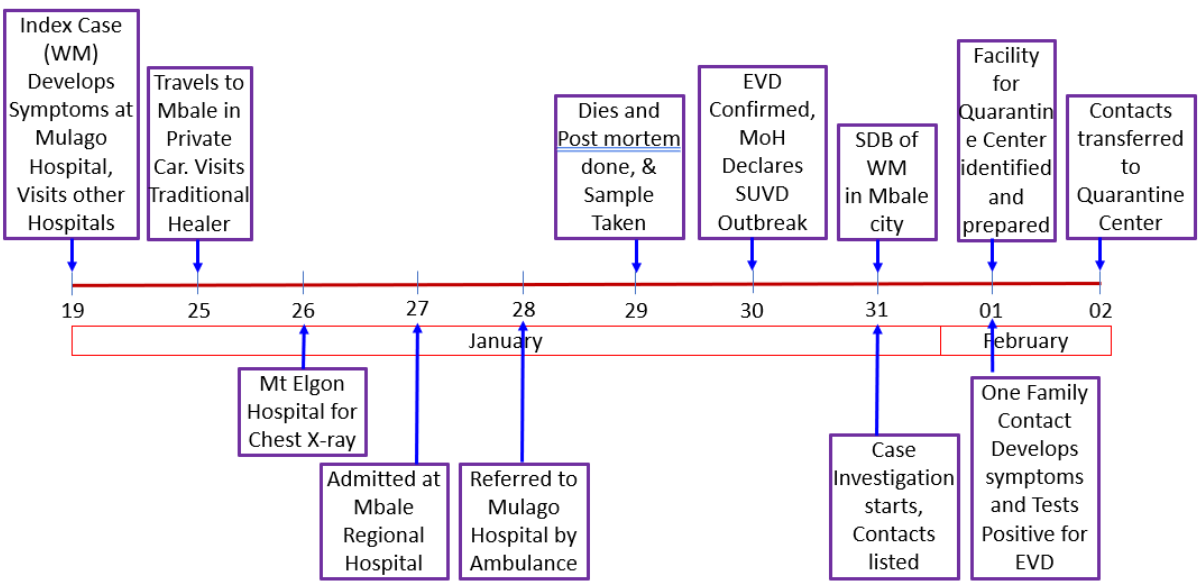
Figure 1: Designated and Gazetted Points of Entry in Uganda

Figure 5: Ebola surveillance strategies by Dr. Godfrey Bwire

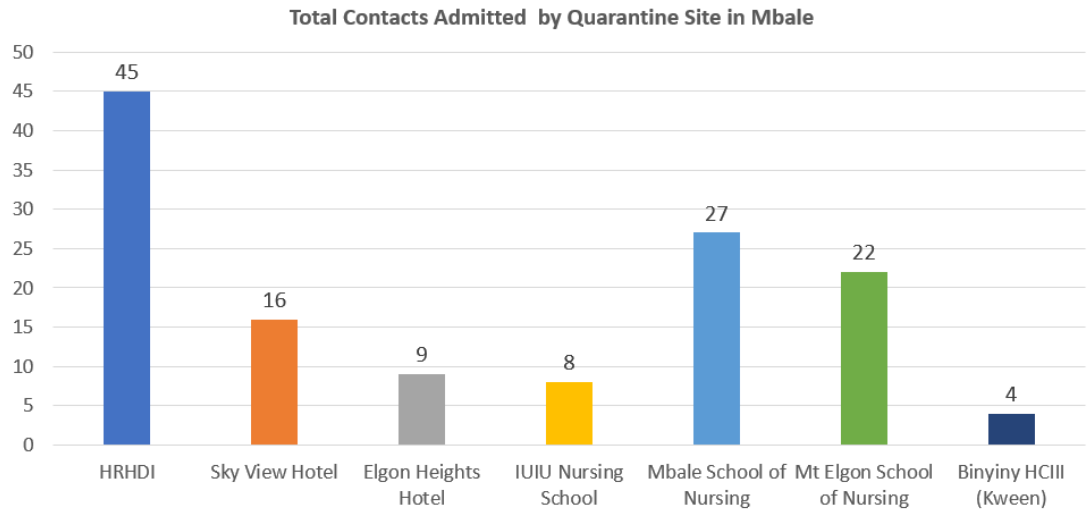
1.3.7 Session on quarantine by Dr. Mohammed Mulongo

Dr. Mohammed Mulongo's presentation focused on quarantine interventions during the ongoing Ebola outbreak in Mbale. He highlighted key actions taken from the detection of the first case in late January through the establishment of quarantine centers. A total of 394 contacts were identified, with 135 considered high-risk and quarantined across seven sites, including hospitals, hostels, and schools. Interventions included daily health monitoring, provision of medical care for comorbidities, psychosocial support, and vaccination with both the Ebola Zaire and Sudan trial vaccines. The response was notable for its low transmission rate, with only one positive case among the contacts. Lessons learned included the success of quarantine in reducing transmission, improved contact tracing, and the need for better infrastructure to accommodate all contacts. Dr. Mulongo also emphasized the importance of efficient quarantine management and further investment in infrastructure for future outbreaks. See **Figure 6**.

Ebola Outbreak in Mbale, 2025



Contacts Quarantined by Site (Total 129/135)



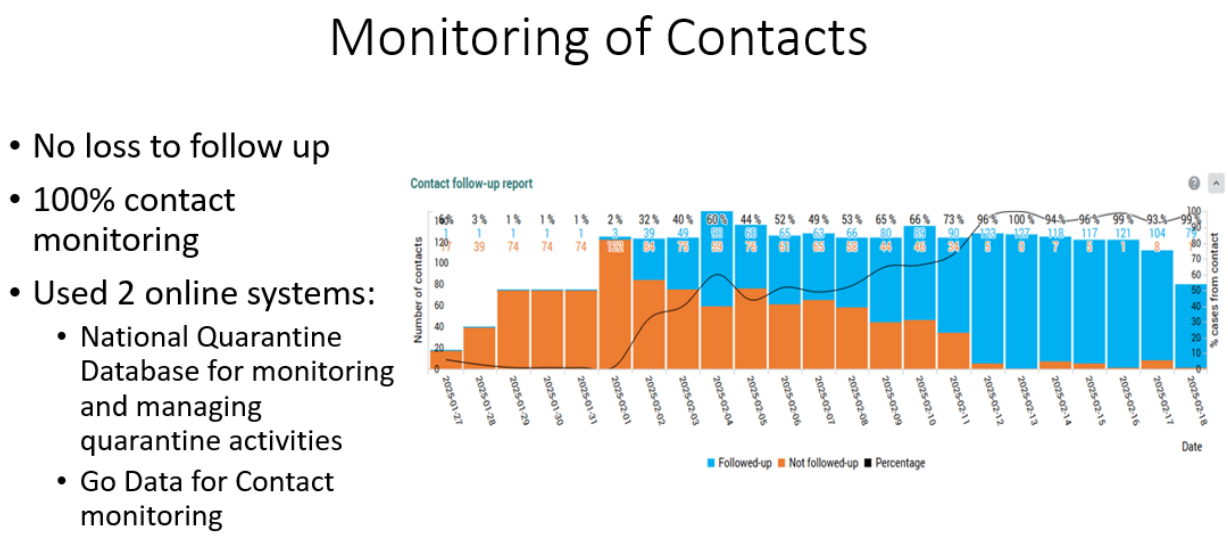


Figure 6: Quarantine Intervention in Ebola Response by Dr Mulongo Muhamed

2.0 CONFERENCE SESSION 2

The afternoon session, moderated by Prof. Sophina Bira, began after a brief 10 minutes. Prof. Bira acknowledged the participants' contributions and emphasized the importance of continued

participation in the conference and the valuable knowledge being shared. She highlighted the upcoming focus on clinical trials, capacity building, and coordination, which were central themes of the next presentations. The session featured five key presenters, followed by a panel discussion. Prof. Bira then invited Professor Pauline Byakika to present on clinical trials, marking the start of the session's presentations.

2.1 Professor Pauline Byakika on Current & potential Areas for Clinical Trial

Professor Pauline Byakika's presentation discussed the challenges and innovations in conducting clinical trials during outbreaks, specifically focusing on Ebola. She highlighted the importance of adhering to standard research guidelines and ethics, including protocol review, human research subject protection, and risk-benefit analysis. She outlined the regulatory framework involving entities like the National Drug Authority, the World Health Organization, and European Medicine Agencies.

The presentation also discussed the complexity of setting up clinical trials during outbreaks due to uncertainties, such as an unknown study population, which makes it challenging to determine eligibility and recruit participants. She emphasized the necessity of developing protocols in outbreak settings, which can be difficult due to time constraints. The need for clinical trial insurance, community sensitization, informed consent, and addressing community concerns about trial participation, especially with a highly infectious disease like Ebola, were also major points.

Additional challenges included assembling a qualified team, ensuring compliance with good clinical practices (GCP), securing investigational products, and ensuring proper data management and documentation. She provided an overview of current clinical trials in Uganda, focusing on a vaccine trial aimed at the Sudan Ebola virus, which includes a ring vaccination strategy targeting contacts of confirmed Ebola cases. Another clinical trial, evaluating potential Ebola treatments, is also planned, with participants randomized to receive either remdesivir, monoclonal antibody MP 134, or a combination of both.

Byakika stressed the importance of comprehensive preparation, including logistics for vaccine distribution, monitoring participant safety, and managing data, to ensure the success of clinical trials in outbreak settings. See **Figure 7**.

Advancing Clinical Trials in Ebola Response: Innovation, Challenges Future Direction

Professor Pauline Byakika-Kbwika
Vice Chancellor,
Mbarara University of Science and Technology

Setting up an RCT; Study Product

- Import and Procurement
- Availability
- SOP on handling & storage
- Pharmacy space, conditions
- Dosage, preparation and administration
- Accountability procedures
- Concomitant medications
- Storage facilities and security
- Dispensing, transport, and administration
- Disposition of unused study product

8

Clinical Trials in Ebola Response in Uganda

Solidarity Against Ebola

SOLIDARITY TRIALS CORE Protocol

Solidarity against Ebola 'TOKOMEZA Ebola'

Working together to find a vaccine against Ebola in Uganda

World Health Organization

R&DBlueprint
Powering research to prevent epidemics

Solidarity Trial Vaccines – PPT V2.0 ENG (26 June 2022)

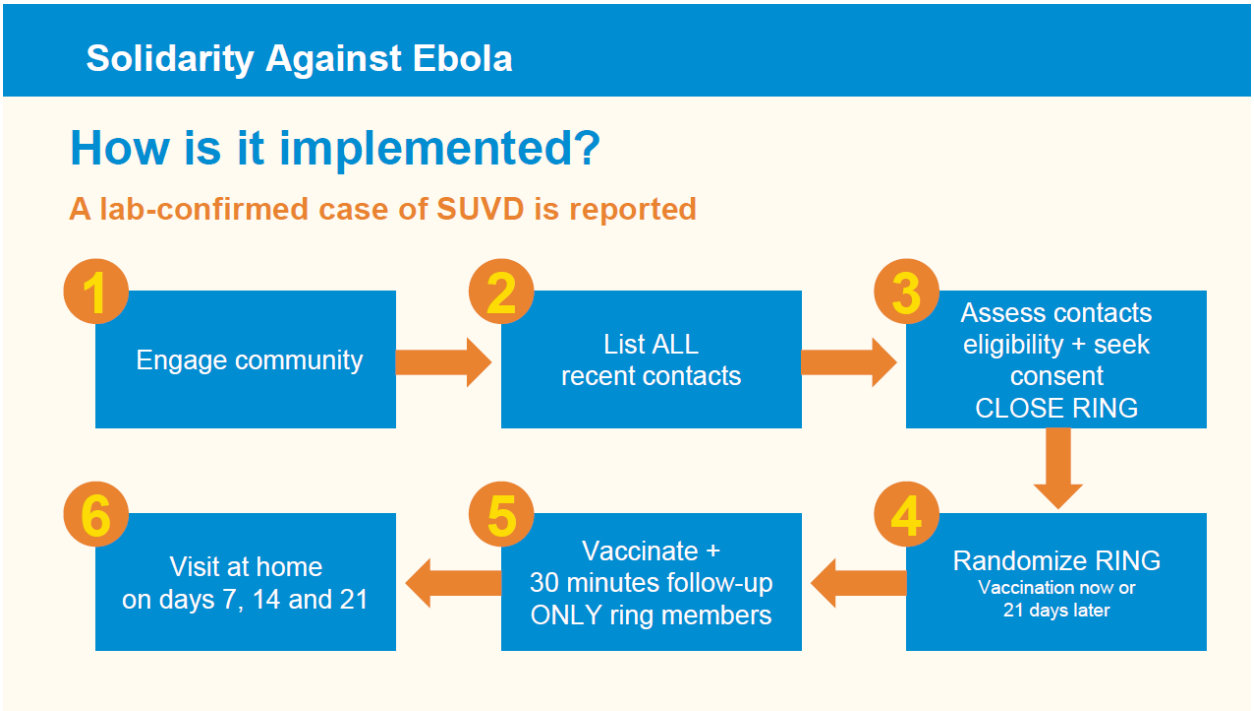


Figure 7: Current & potential areas for Clinical Trial BY Pauline Byakika

2.2 Prof Paul Waako remarks on capacity building in Africa

Professor Paul Waako's presentation focused on the ongoing challenges of infectious diseases in Africa, particularly with emerging and reemerging infections, which demand significant resources for response efforts. He highlighted the role of his university in fostering capacity building in epidemiology through the creation of Uganda's first master's program in epidemiology, known as the Idea Fellowship. This program, designed with a field-oriented approach, equips graduates with essential skills in surveillance, disease detection, outbreak management, and research.

Key achievements of the program include the training of 17 fellows, contributing to enhanced epidemic preparedness and response capabilities. The program also aims to address critical gaps in human capital, such as disease management, outbreak preparedness, and data management.

However, several barriers to effective capacity building were identified, including limited diagnostic capacity, insufficient collaboration, infrastructure deficiencies, and resource constraints. Professor Wako emphasized the need for more flexible and regionally focused training models, such as hybrid training options that accommodate professionals continuing with their jobs. He concluded with recommendations for expanding the program, strengthening institutional collaborations, and scaling up the program to benefit broader regions of sub-Saharan Africa. He also advocated enhanced policy advocacy and global health initiatives through continued capacity building. Furthermore, he expressed gratitude for the support received from partners like the DCT, European Union, and other stakeholders involved in the program's inception and growth. See **Figure 8**.

Capacity Building for Emerging and Re-Emerging Infectious Diseases in SSA

Policy View: Insights from the IDEA Fellowship Program

Professor Paul J. Waako
MBChB, MSc, PhD, FUNAS

Vice Chancellor
Busitema University

Background & Introduction

- Emerging/re-emerging infectious diseases pose significant health risks in SSA.
- IDEA Fellowship: Uganda's first master's-level epidemiology program.
- Collaboration led by Busitema University.

IDEA Fellowship Survey Findings: Training Needs

High demand for training in:

- Zoonotic Disease Management (64.4%)
- Outbreak Preparedness (64.9%)
- Data Management (59.4%)

Training for capacity building on response to infectious disease outbreaks is key

Conclusions & Next Steps

- IDEA Fellowship effectively addresses training gaps
- Long-term sustainability requires expanded partnerships
- Future scaling plans for broader SSA participation
- Enhance global health security through capacity building

Figure 8: Remarks on Capacity Building Policy View by Prof Paul Waako

2.3 Capacity building

2.3.1 Presentation by Dr. Nyirenda Thomas (EDCTP)

Dr. Nyirenda's presentation on capacity building emphasized the need for a strategic approach to developing clinical research capacity in Africa. He highlighted the significant gap in the number of researchers per million population between low-income countries and developed nations, which impacts the availability of role models and mentors for aspiring scientists. He shared his personal journey from Malawi to his work with EDCTP (European and Developing Countries Clinical Trials Partnership), illustrating the importance of mentorship and long-term career planning in research.

Dr. Nyirenda introduced EDCTP's fellowship programs, which aim to bridge these gaps by providing structured career paths for researchers in Africa. The programs begin with master's level fellowships and progress to clinical research and development fellowships, with opportunities for mentorship and small research projects. Over 400 fellows are part of the EDCTP fellowship portal, which helps foster collaboration and networking among researchers.

However, challenges remain, including gender disparities in fellowship participation and the need for multilingual collaboration. Dr. Ario emphasized the importance of overcoming language barriers to enhance cross-border cooperation. He also addressed funding concerns, urging a strategic approach to ensure that the limited resources available are used effectively.

Dr. Nyirenda concluded by reaffirming the importance of strategic planning in research career development and the need for continued partnership and support to build sustainable research capacity in Africa. He commended Uganda for its successful use of funding and strong partnerships within the EDCTP program. See **Figure 9**.

Opportunities and challenges of building clinical research capacities in Africa

Dr Thomas Nyirenda,
Head of Africa Office(EDCTP)

EDCTP
European & Developing Countries Clinical Trials Partnership

Hon Senior Lecturer, Department of Global Health, University of Stellenbosch

Horizon 2020

EDCTP Fellowship schemes

CLINICAL RESEARCH AND DEVELOPMENT FELLOWSHIP

Objective: to support researchers and key members of clinical trial research teams from low- and middle-income countries to acquire specific skills in clinical trials research through placements in pharmaceutical companies, CROs, clinical or academic affiliated research organisations and PDPs.

Target individuals:
- Post-graduate (MSc or PhD) or medical graduate with clinical and/or research experience in infectious diseases
- Post-graduate or medical graduate degree within 15 years of submission of the application
- Researcher or clinical staff member employed for the last 12 months in an organisation with a registered legal entity in sub-Saharan Africa.

Funding level: 100% of eligible costs

Max. funding: €100,000

EDCTP-AREF PREPARATORY FELLOWSHIP

Objective: to enhance the competitiveness of up-and-coming post-doctoral African scientists and clinicians aspiring to win international/regional/national fellowships or grant support through short-term placements at a host organisation in EU Member States, in countries associated to Horizon 2020 or in sub-Saharan Africa which will be contracted by the home organisation to host the fellow.

Target individuals:
- Post-doctoral scientists
- Individuals who have been awarded their doctorate within three years before submission deadline
- PhD students or MDs who have been active researchers for up to three years following award of their doctorate
- Resident of, or willing to relocate to, a sub-Saharan African country

Funding level: 100% of eligible costs

Max. funding: €70,000

* Joint call by EDCTP and the Africa Research Excellence Fund (AREF).

CAREER DEVELOPMENT FELLOWSHIP

Objective: to support junior to mid-career researchers to train and develop their clinical research skills. The objectives are to promote career development and retention of postdoctoral researchers and postgraduate medical researchers in the research field and in sub-Saharan Africa; and to equip the fellows with the ability to establish themselves as independent researchers and with the skills to initiate and manage their own research at host organisations in sub-Saharan Africa.

Target individuals:
- Resident of, or willing to relocate to, a sub-Saharan African country
- A graduate in a subject relevant to the EDCTP2 programme, with a PhD and up to five years' relevant postdoctoral research experience, or a medical doctor with up to five years' research experience
- At least one publication in an international peer-reviewed journal

Funding level: 100% of eligible costs

Max. funding: €150,000

SENIOR FELLOWSHIPS

Objective: to support capacity development of potential African research leaders using the train-the-trainer model and to mentor junior researchers with hands-on training linked to clinical trials activities in sub-Saharan Africa.

Target individuals:
- Resident of, or willing to relocate to, a sub-Saharan African country
- A graduate in a subject relevant to the EDCTP2 programme, with a PhD and a minimum of five years' relevant research experience after the doctorate, or a medical doctor with a post-graduate qualification in a subject relevant to the EDCTP2 programme, and a minimum of five years' research experience after the post-graduate qualification
- A minimum of 5 first-author publications in international peer-reviewer journals

Funding level: 100% of eligible costs

Max. funding: €500,000.

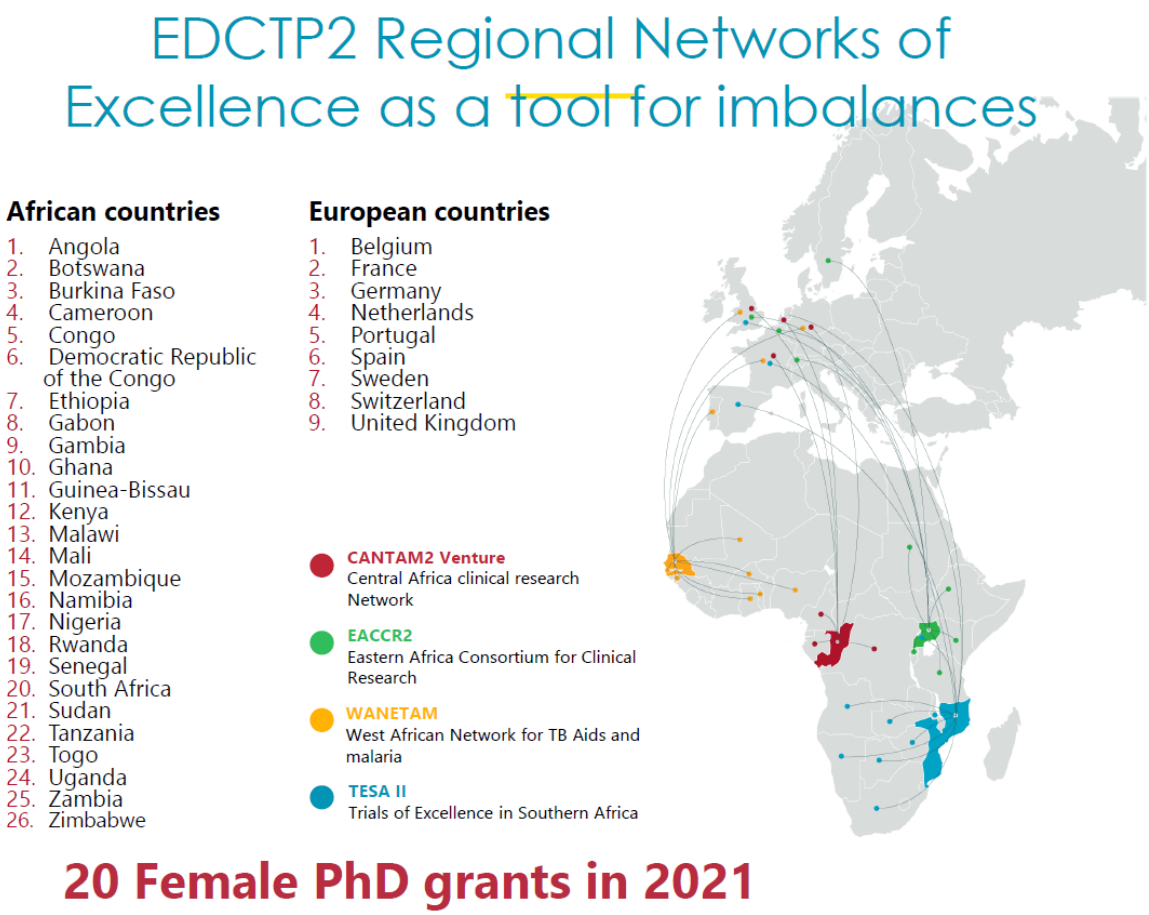


Figure 9: Presentation by Dr. Nyirenda Thomas, Head of Africa Office (EDCTP)

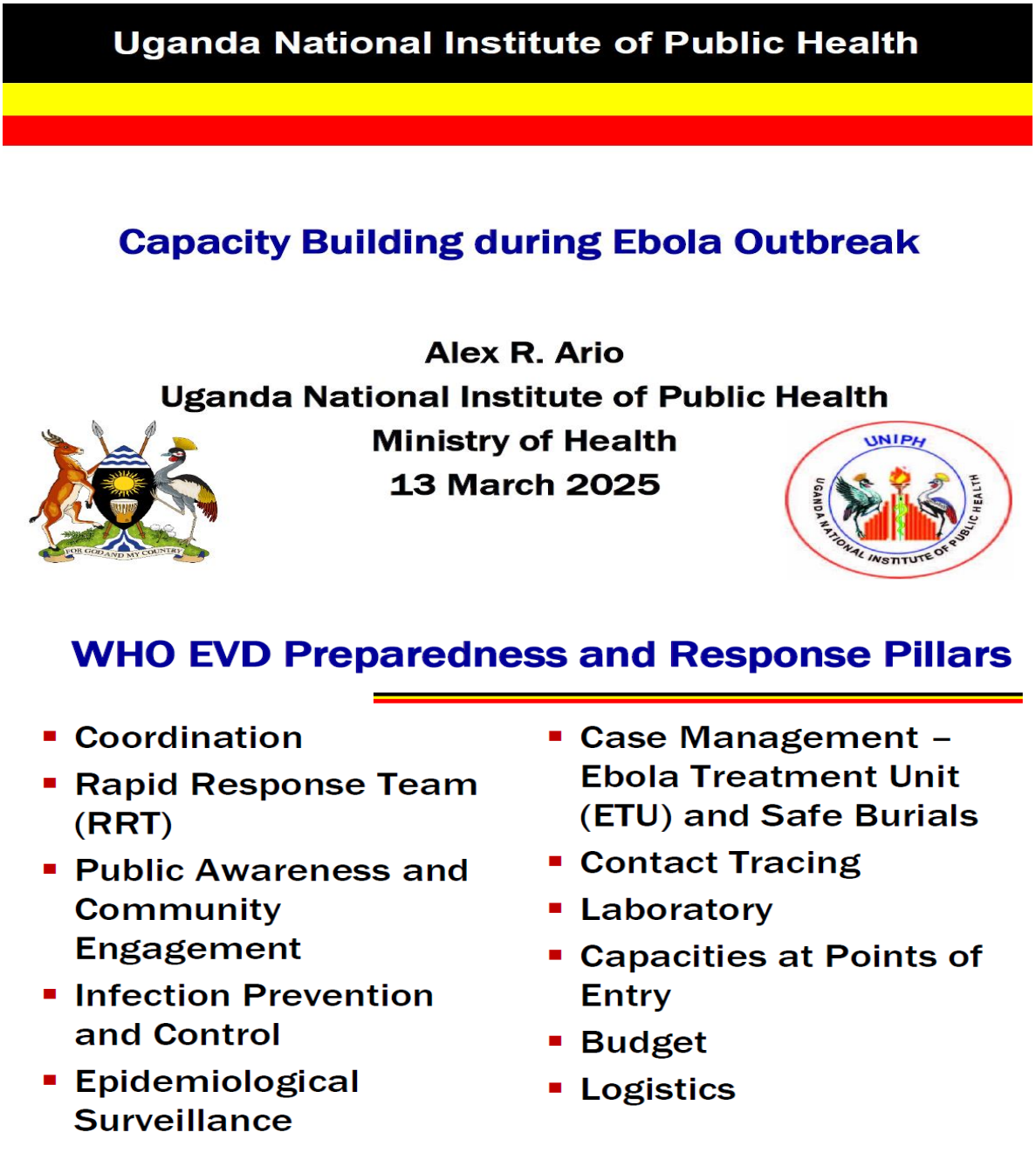
2.3.2 Presentation by Dr Alex Ario

Dr. Alex Ario's presentation emphasizes the importance of capacity building during public health emergencies, particularly during outbreaks such as Ebola. He outlines Uganda's comprehensive capacity-building programs, such as the Field Epidemiology Training Program (FETP), which includes frontline, intermediate, and advanced levels that train health workers at various tiers. These programs provide crucial skills in surveillance, response, and management during outbreaks.

Dr. Ario focuses on the reorientation and updating of health workers with new guidelines and innovations, rather than basic training. The emphasis is on understanding the response structure, coordination, rapid response teams, infection control, case management, and risk communication. He stresses the importance of well-trained personnel who can effectively lead and manage the

response to outbreaks, ensuring that health workers and the community adhere to the correct protocols.

In conclusion, Dr. Ario highlights how building capacity in various response pillars enhances the ability to detect, contain, and reduce the spread of diseases like Ebola, contributing to a resilient health system that can manage future outbreaks effectively. See **Figure 10**.



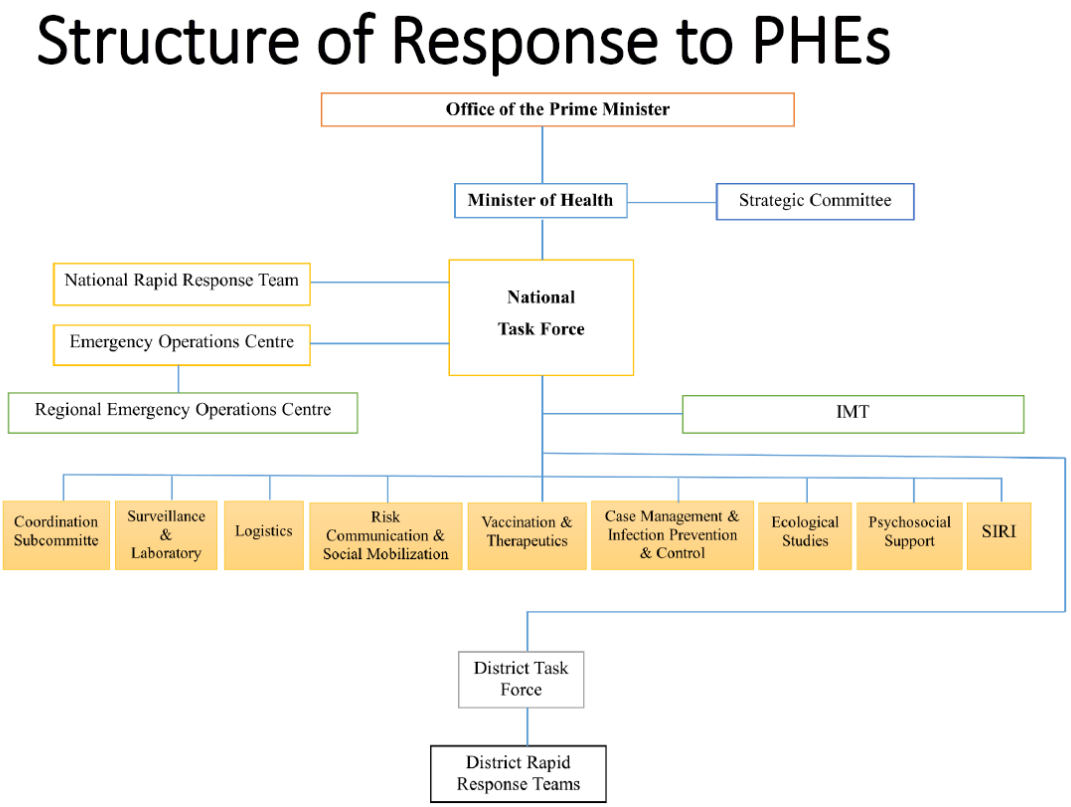


Figure 10: Presentation on capacity building by Dr. Alex Riolexius Ario (UNIPH)

2.4 Partner coordination & Engagement by Dr Andrew Ocero

Dr. Andrew provided an overview of Uganda's Ebola response, highlighting the importance of partner coordination and resource mobilization. He explained that Uganda has faced multiple Ebola outbreaks, with significant improvements in controlling transmission and reducing deaths, especially in 2022. The focus has been on long-term health infrastructure, capacity building, and community engagement. He stressed the need for coordinated efforts across various stakeholders, including government agencies, international partners, and NGOs, to effectively manage the Ebola outbreak.

Dr. Andrew shared historical examples of Ebola outbreaks, including the West African outbreak and the cholera crisis in Haiti, which demonstrated the consequences of uncoordinated responses. He then outlined the current coordination mechanisms in Uganda, including the role of a national task force and various international organizations that support the response. The presentation also touched on funding gaps, with a current 77% funding shortfall, which impacts on the response efforts. He concluded by emphasizing the need for strong, government-led coordination to avoid duplication and ensure effective use of resources.

Uganda's Ebola response is enhanced by coordinated efforts from various partners, but funding remains a significant challenge, with a large resource gap. Lessons learned emphasize the importance of maintaining transparency and accountability in the response, alongside engaging communities to improve the effectiveness of donor-funded interventions. He concluded by suggesting improvements in coordination and ensuring continued alignment with national response plans to build donor confidence. See **Figure 11**.

Partner Coordination and Engagement for the Ebola Response in Uganda

USAID UGANDA HEALTH ACTIVITY

"Ebola Outbreak Conference 2025: Strengthening Response and Preparedness in Ebola Outbreaks"

Dr Andrew Ocero PhD

Date: 13th March 2025

Uganda Ebola Coordination Mechanisms

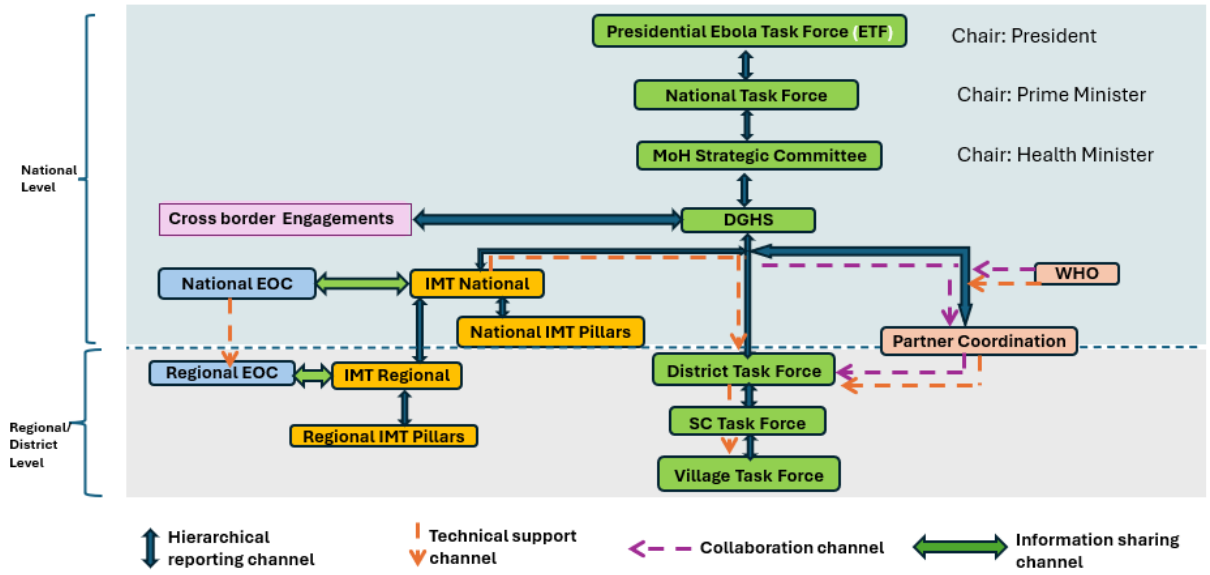


Figure 11: Partner coordination & Engagement by Dr Andrew Ocero

2.5 Policy review and recommendations by Professor Sam Okware

Professor Samuel Okware, the Director-General of the Ugandan National Health Research Organization, shared valuable insights on health policy formulation and the management of Ebola outbreaks in Uganda. He emphasized the organization's key role in overseeing health research, ensuring ethical standards, and intervening when necessary to protect the public from unethical research practices, especially in crisis situations like Ebola. Drawing from his experience managing both HIV and Ebola outbreaks in Uganda, he discussed the similarities between the two diseases, particularly during times when no treatments were available.

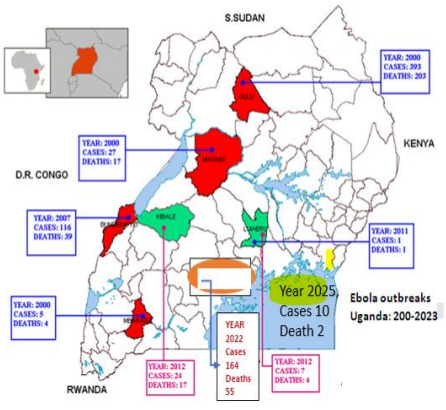
In terms of disease management, Professor Okware advocated for a holistic, multi-faceted approach that goes beyond biological factors to incorporate social, mental, and spiritual aspects of patient care. He stressed that policies for managing outbreaks must consider community engagement, education, and isolation. In the case of Ebola, he explained the persistence of the virus in recovered individuals, the risk of transmission through bodily fluids, and the role of practices like bush meat consumption in fueling outbreaks. Understanding these dynamics is crucial for the effective development of policies to control the spread.

A key lesson in containing Ebola, according to Professor Okware, was the importance of community mobilization. Involving local leaders and ensuring ownership at the community level were essential for successful containment. He also highlighted the challenges posed by undetected asymptomatic infections, which increased the risk of spread, and the complications arising from misdiagnosis due to symptoms similar to those of other diseases.

While discussing the challenges in outbreak management, Professor Okware pointed to delays in case detection and isolation at the community level as significant barriers. However, improvements in digital technologies, logistics, and coordination between the Ministry of Health and local communities have enhanced the response. He recommended integrating digital technologies into future emergency responses, ensuring sufficient human resource management, and securing funding for future outbreaks.

In conclusion, Professor Okware emphasized the need for a "whole government, whole community" approach to health crises, where the national government, local authorities, and the community work together in response and containment efforts. This collaborative approach is key to building resilience and ensuring effective management of future outbreaks. See **Figure 12.**

Ebola cases by year and district, Uganda, 2000-2025



Policy and strategies

- LEADERSHIP
- ONE JOINT NATIONAL PLAN
- ONE IMPLEMENTATION STRATEGY
- ONE MONITORING POLICY PLAN
- COMMUNITY ENGAGEMENT AND MOBILISATION
- All Ministries, Departments, Agencies interlined at all levels: Village -GOU

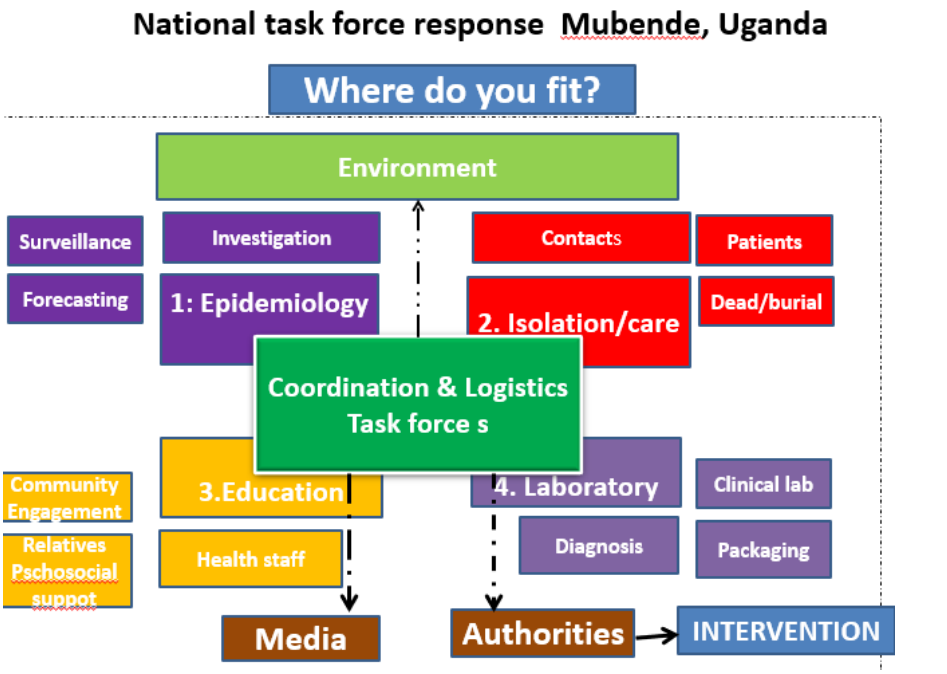


Figure 12: Policy review and recommendations by Prof Samuel Okware

3.0 Consensus and Action Points

3.1 Adopting New Terminology for Ebola

There was a strong consensus on the need to transition from geographically linked disease names to scientifically accurate and stigma-free terminology. Experts advocated renaming Ebola Virus Disease (EVD) to Filoviral Hemorrhagic Fever (FHF) or Severe Viral Hemorrhagic Fever (SVHF) to align with international classification standards and mitigate the stigma associated with the disease's geographic origins. This recommendation follows the precedent set by renaming Monkeypox to Mpox, demonstrating the potential for improved public perception and response.

3.2 Improving Surveillance Systems

Participants underscored the critical need for strengthening real-time surveillance systems, especially in rural and high-risk regions. Lessons learned from past outbreaks emphasized the importance of advanced early-warning frameworks, rapid diagnostics, and improved outbreak response coordination. The low mortality and infectivity rates in the current 2025 outbreak were attributed to Uganda's strengthened surveillance and preparedness, which was highlighted as a model for other regions.

3.3 Building Community Engagement

Effective outbreak response requires active community participation. Experts stressed the need to combat misinformation and stigma by engaging local communities through targeted awareness campaigns. The stigma associated with Ebola has historically led to delays in outbreak response, resistance to containment measures, and fear-driven behaviors that exacerbate disease spread. A rebranding strategy coupled with community education was recommended to enhance public trust and compliance with preventive measures.

3.4 Technology and Innovation

The conference highlighted the importance of digital health technologies in epidemic response. The adoption of GIS mapping, mobile health systems, and real-time data tracking was recommended to enhance outbreak monitoring and facilitate rapid interventions. Uganda's experience demonstrated how integrating these technologies into existing surveillance frameworks significantly improves disease control efforts.

3.5 Global Research Collaboration

To ensure sustained knowledge-sharing and a unified response to future Ebola outbreaks, the establishment of the Global Viral Haemorrhagic Fever Research Network (GLOVIRN) was endorsed. This network will foster international collaboration, enabling researchers, public health officials, and policymakers to share data, coordinate outbreak response strategies, and advance the development of improved diagnostics and treatment options.

4.0 Closing Remarks

Professor Olupot-Olupot concluded the session by emphasizing that adopting stigma-free, precise disease terminology is a crucial step toward improving global outbreak responses. He recommended a gradual and structured transition to the new terms to ensure widespread acceptance among policymakers, healthcare practitioners, and affected communities. Additionally, he called for stronger collaborations between local health systems, researchers, and international partners to enhance preparedness and response strategies for future outbreaks. He also reiterated the importance of GLOVIRN in fostering a global approach to combating viral haemorrhagic fevers, ensuring sustained scientific progress and improved epidemic response coordination.

5.0 Summary of Conference Highlights

The conference brought together leading experts to discuss advancements in Ebola outbreak response, surveillance mechanisms, and the impact of stigma on disease control. Discussions reinforced the need for a multifaceted, evidence-based approach to epidemic management, focusing on the intersection of scientific research, policy reform, and community engagement.

Key themes included:

- The reclassification of Ebola to eliminate stigmatization and align with international best practices.
- The role of technology in enhancing surveillance, contact tracing, and outbreak detection.
- The need for stronger collaboration between global and local public health agencies to improve response coordination and resource mobilization.

- The establishment of GLOVIRN as a critical platform for ongoing research, data sharing, and collaborative outbreak response.

6.0 Implications for Future Research and Policy

6.1 Policy Development

There is an urgent need to develop policies that not only improve disease control but also address the stigma associated with disease names. A phased approach to renaming Ebola should be implemented alongside targeted public health messaging to ensure successful adoption.

6.2 Research Priorities

Future research should focus on:

- The genetic diversity of viral strains and its implications for disease progression and treatment.
- The development of enhanced surveillance tools for rapid outbreak detection.
- Community-based interventions to reduce stigma and encourage participation in outbreak prevention efforts.
- The long-term social and economic impacts of stigma on disease response and public health strategies.

6.3 Collaborative Efforts

Strengthening partnerships among local governments, international health bodies, and community leaders is essential to building resilient health systems capable of responding effectively to emerging infectious diseases. The launch of GLOVIRN will be instrumental in fostering these collaborations, ensuring that research findings are swiftly translated into policy actions and outbreak response strategies.

7.0 Recommendations

To effectively combat future outbreaks of Ebola Virus Disease (EVD) and other viral hemorrhagic fevers, a multi-faceted approach is necessary. Based on the discussions and deliberations of this conference, the panelists propose a series of recommendations categorized into immediate, medium-term, and long-term actions to enhance outbreak response, improve surveillance, and reduce stigma associated with the disease.

Immediate Actions

- Rename Ebola Virus Disease (EVD) to Filoviral Hemorrhagic Fever (FHF) or Severe Viral Hemorrhagic Fever (SVHF) to reflect scientific accuracy and minimize stigma.
- Strengthen public health campaigns to educate communities on disease transmission, prevention strategies, and the importance of addressing misinformation and stigma.

Medium-term Actions

- Invest in surveillance infrastructure, including rapid diagnostic tools and community-based reporting, to facilitate early outbreak detection and containment.
- Implement GIS mapping, mobile health technologies, and real-time data systems to improve outbreak tracking and enhance response coordination.

Long-term Actions

- Fully support and operationalize the Global Viral Haemorrhagic Fever Research Network (GLOVIRN) to enable sustained knowledge exchange, joint outbreak preparedness, and improved international response coordination.

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