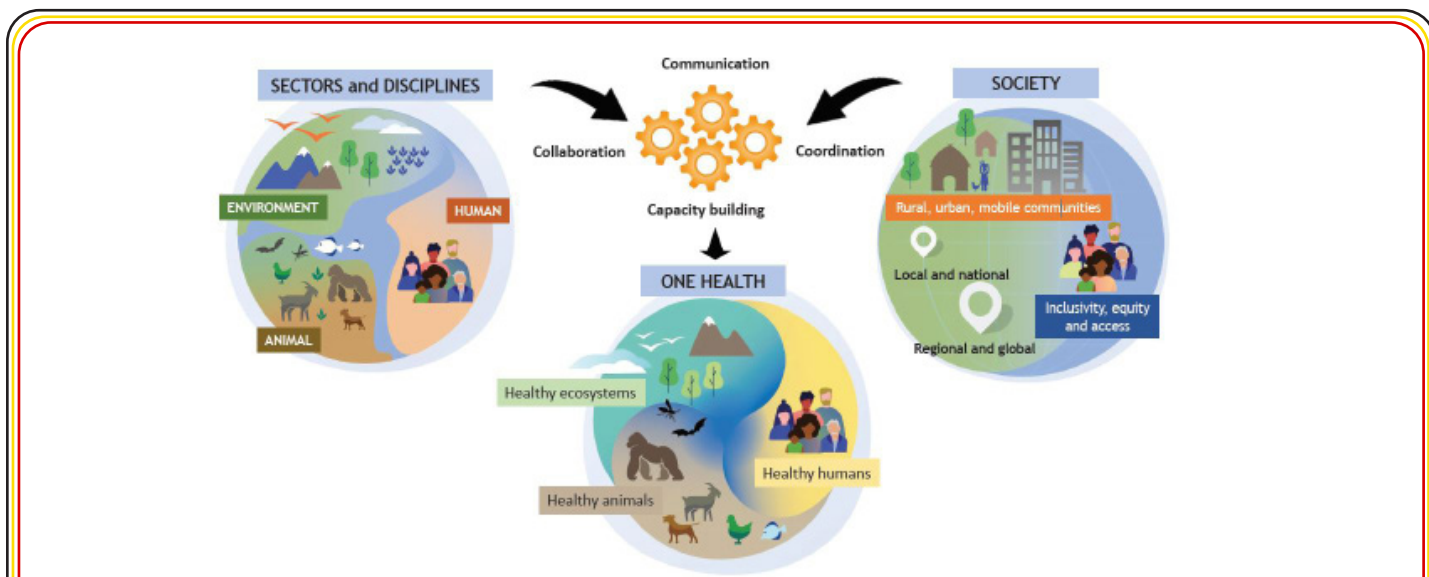


# Uganda One Health Epidemiological Bulletin

Volume 1, Issue 3, March - June, 2022



## In this Issue:

- OIE Rebrands
- Field Epidemiology Training
- Rift Valley Fever Outbreaks
- Uganda at GHS Conference
- Anthrax Outbreaks
- Ongoing Activities

## Dear Reader,

We are pleased to introduce to you the third Issue of the Uganda One Health Epidemiological Bulletin. The bulletin is a product of the Ministries of Water and Environment (MWE), Health (MoH), Agriculture, Animal Industry and Fisheries (MAAIF), and Uganda Wildlife Authority (UWA) under the National One Health Platform (NOHP) umbrella.

This bulletin aims to inform One Health (OH) practitioners at district, national, and global levels on interventions undertaken in detecting, preventing and responding to OH events in Uganda.

We hope you enjoy reading this Issue,

John Makombo  
FOR EXECUTIVE DIRECTOR, UWA / CHAIR NOHP

## EDITORIAL TEAM

- » **Musa Ssekamatte**, Senior Epidemiologist, NOHP
- » **Dr Patrick Atimmedi**, OH Focal Person, UWA
- » **Betty Mbolanyi**, OH Focal Person, MWE
- » **Dr Robert Mwebe**, OH Focal Person, MAAIF
- » **Dr David Muwanguzi**, OH Focal Person, MoH
- » **Maureen Nabatanzi**, Surveillance Officer, IDI
- » **Dr Josephine Namayanja**, Epidemiologist, PHFP-MoH
- » **Dr Immaculate Nabukenya**, Project Manager, IDI

## Contacts

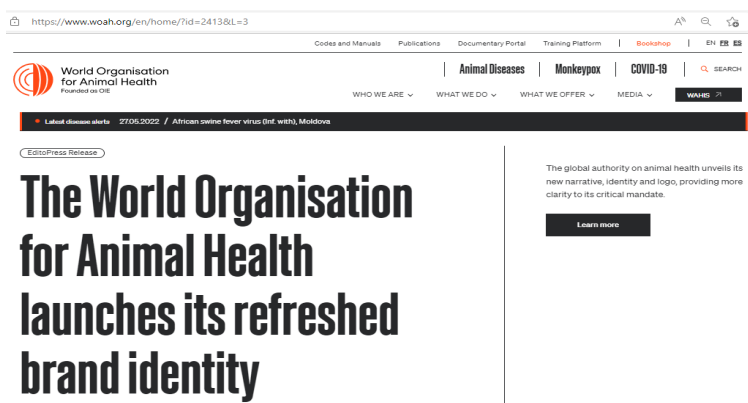
- ✉ [mnabatanzi@idi.co.ug](mailto:mnabatanzi@idi.co.ug) | [musasekamatte@gmail.com](mailto:musasekamatte@gmail.com)
- 🐦 @UgOneHealth

## Office International des Epizooties (OIE) Rebrands to World Organisation for Animal Health (WOAH)

Editor

The Office International des Epizooties (OIE) has changed its identity to World Organisation for Animal Health (WOAH). Started in 1924, the intergovernment organization coordinates, supports and promotes animal disease control. The organization rebranded with a new identity and logo to provide more clarity to its critical mandate to improve animal health worldwide.

The vision of WOAH is to help create a future in which humans and animals benefit and support each other, for a healthier, more sustainable world. WOAH has a robust information repository on its website <https://www.woah.org/en/home/>



WOAH website

## Uganda at the Global Health Security Conference 2022

Editor

The Global Health Security Conference (GHSC) was held in Singapore between 28 June – 1 July 2022. It brought together 850 delegates from over 78 countries. These included practitioners, leaders, scholars, policy makers, scientists and implementers in the global health security arena. Participants presented achievements, research, lessons learnt and recommendations in implementing health security initiatives in their countries.

Uganda was represented by the Honorable Minister for Health, Director General of Health Services, Director of the National Institute for Public Health, the COVID-19 Incident Commander and Manager of the Public Health Emergency Operations Centre. Also present were representatives from U.S. Centres for Diseases Control and Prevention, USAID, U.S. Embassy, Infectious Diseases Institute Global Health Security Department and other researchers.

Uganda shared her experiences and lessons learnt in health security interventions and got perspectives from other countries. The Minister for Health expressed Uganda's commitment to multi-lateral collaboration in future Global Health Security initiatives.



The Honorable Minister for Health with some of Uganda's delegates



## Launch of the One Health Research Initiative on Epidemics (COHRIE) Project

National One Health Platform

A collaborative One Health Research Initiative on Epidemics (COHRIE) project has been launched by the Uganda Virus Research Institute, National One Health Platform, Ministry of Agriculture Animal Industries and Fisheries and Uganda Wildlife Authority with support from the University of Southern California. This project will focus on surveillance, control and prevention of neglected zoonotic diseases in Uganda. The initial cases study will focus on Rift Valley Fever (RVF), Crimean-Congo Hemorrhagic Fever (CCHF) and Brucellosis at the human-animal-wildlife interface in diverse agricultural systems. The overall objective of the project is to improve understanding and control of RVF, CCHF and Brucellosis using enhanced surveillance systems and a One Health approach at the human-animal-wildlife interface.

## Capacity Building for Ministry of Gender and District Community Development Officers on One Health and Health Security

Editor

The National One Health Platform in collaboration with the Tackling Deadly Diseases in Africa Program



Ministry of Gender and District Officials at the workshop

(TDDAP) convened a workshop to build capacity among Ministry of Gender and District Community Development Officers (CDOs) on One Health (OH) and Health Security.

This builds on on-going efforts to build advocacy and sensitize leaders in Government and Partners on OH and health security. The target stakeholders include: Office of the President, Office of the Prime Minister, Ministries, District Local Government, Cooperate Social Organizations, Non-Government Organizations, Development and Implementation Partners and Ambassadors.

The meeting held in July 2022 at Colline Hotel, Mukono District aimed to:

- Train Ministry of Gender officials and District Community Development Officers on One Health
- Promote networking for improved multi-sectoral coordination for One Health and Health security

Political Engagement, Gender and Social Inclusion (GESI) in health security interventions contribute to their success. Engaging politicians contributes to catalyzing the technical officers to achieve targets by creating an enabling environment. This enabling environment supports multi-sectoral involvement in implementation and better accountability.

In turn, increasing knowledge on OH and health security among political and social leaders empowers them to make informed political or strategic decisions and contributes to establishment of sustainability and budgetary commitment to interventions.

These engagements also seek to improve gender, equity, social inclusion among vulnerable groups in OH and health security activities.



# Building a Resilient Public Health Workforce: Uganda Graduates the First Field Epidemiology Training Program Intermediate Cohort

Doreen N. Gonahasa<sup>1</sup>, Sandra Nabatanzi<sup>2</sup>, Julie Harris<sup>2</sup>

<sup>1</sup>Resident Advisor FETP-Intermediate, Uganda Public Health Fellowship Program, Ministry of Health, Kampala, Uganda

<sup>2</sup>U.S. Centers for Disease Control and Prevention, Kampala, Uganda

## Introduction

In order to effectively prevent, detect, and respond to public health emergencies in a timely manner, health workers across all levels of the public health system need to be equipped with the right set of skills and competencies. The U.S. Centers for Disease Control and Prevention (CDC) describes field epidemiology as investigations initiated to guide interventions to lessen or prevent illness or death in response to public health emergencies. Given the frequent occurrence of public health threats, field epidemiology is becoming more relevant in public health. The World Health Organization set a target for countries to have at least one trained field epidemiologist per 200,000 population. Uganda still falls well below this target (of at least 225 field epidemiologists).

## Field Epidemiology in Uganda

Field Epidemiology Training Program (FETP) is a supervised, on-the-job, competency-based training and service (workforce development) program to improve field epidemiology capacity. Since 2015, Uganda has implemented the CDC-funded FETP pyramid model comprising of advanced (at national) and frontline (at district) levels.

On 31 August 2021, Uganda officially launched the FETP-Intermediate (at regional level). The pioneer cohort of the program comprised data managers, monitoring and evaluation specialists, medical officers, and community health specialists from Fort Portal, Kabale, Naguru, Entebbe Regional Referral Hospitals (RRH) and Ministry of Health headquarters.

Over 9 months, FETP-Intermediate builds trainees' competencies in surveillance, data analysis and interpretation, outbreak investigation, scientific communication, and mentorship. Training involves residential trainings interspersed with on-job field projects during which participants return to workstations and conduct job-relevant projects to concretize what they have learned.

## FETP-Intermediate Cohort 1

On 31 March 2022, at the Mansion Hotel in Jinja District, the first FETP-Intermediate cohort in Uganda graduated 17 members. During the event, graduates shared part of the work they had done during the training period and their experiences with the audience. The event was attended by officials from the Ministry of Health, the Regional Referral Hospitals where the graduates work, African Field Epidemiology Network (AFENET), the Makerere University Monitoring and Evaluation Technical Support (METS) Program, the Uganda National Institute of Public Health and was officiated by Her Excellency the United States Ambassador to Uganda. Delegates congratulated graduates and challenged them to utilize the competencies gained to address key public health concerns.



The Cohort representative, Dr. Solomon Mulinzi from Fort Portal RRH receives his certificate from HE Natalie Brown, the United States Ambassador to Uganda



# Outbreaks of Anthrax in Madi Okollo and Bududa Districts

Editor

## Introduction

Anthrax is a zoonotic disease caused by *Bacillus anthracis*. Animals get infected when they come into contact with or ingest bacteria spores in their environment. Humans commonly get infected when they handle or eat infected animals or their products. Suspected animal cases develop high fever, muscle tremors with sudden collapse or death. Depending on the mode of exposure, humans may develop cutaneous, gastrointestinal or pulmonary forms. In the cutaneous form, suspected cases develop skin lesion, the gastrointestinal form is characterized with abdominal distress while case-patients with pulmonary form develop acute respiratory illness. Uganda experiences multiple anthrax outbreaks in animals and humans, commonly in cattle keeping communities. In this issue, we report two outbreaks in Madi Okollo and Bududa Districts.

## Anthrax in Madi Okollo District

Between 28 January and 6 February 2022, three cows suddenly died in Payonga Village, Pawor Sub-County. On 2 February, the index human case and cow owner skinned and sold the carcass to community members. After developing lesions on his left thumb, the index case reported the death of his animal to the District Assistant Animal Husbandry Officer and subsequently tested positive for anthrax. Two cows died in an adjacent kraal to the one that gave rise to the index case. The carcasses were handled and sold by community members, none of whom tested positive for anthrax.

## Response in Madi Okollo

The MoH deployed a team from the Uganda Public Health Fellowship Program to support the District to investigate the exposures associated with transmission and recommended evidence-based interventions. The District Health and Veterinary Officers identified resources and partners for the response.

A national response team conducted house to house active search for case-patients and line listed 21 community members who'd been exposed to the dead cows. 90% (19/21) had eaten its meat. 67% (14/21) could describe one or more symptoms of human anthrax. All 21 community members line listed expressed willingness to vaccinate their animals but 81% (17/21) were against disposing of carcasses. The team conducted house-to-house sensitization on anthrax in the affected village and trained Village Health Teams on reporting alerts.

During an environmental assessment, left-over carcass meat and abandoned dry skin was identified in the communal grazing ground; carcass samples tested positive for anthrax. A communal water point for wild animals from Ajai game reserve serves domestic animals and humans.



During the response, the Ministry of Health Public Health Fellowship Program Team identified left over carcass meat prepared by the affected community, Madi Okollo District



## Anthrax in Bududa District

On 28 April 2022, a 43-year-old male skinned a cow carcass that had died of an unknown illness in Nalwanza Subcounty. The beef was taken to markets in Bulukyeke-Kihoro Town, Bududa District. On 2 May 2022, he developed fever, general body weakness, swollen arm, cough and a stomach upset; he went to Bunamono Health Centre for treatment. Case-patients 2, 3, 4 and 5 were males who worked alongside the index case in skinning and transporting the carcass; some ate the meat, at times with their families.

On 13 May, the District Veterinary Officer (DVO) received notification from the Animal Husbandry Officer about sudden death of animals and some residents showing signs of cutaneous Anthrax signs after eating meat of the carcasses in Bunasatmi Subcounty. The DVO notified the District Surveillance Focal Person and District Health Officer who in turn informed the Ministry of Health.

On 15 May, a 70-year-old male died in Bumalakara Village after developing shortness of breath; his burial was supervised by the District Health Team. Case counts as of 13 June 2022:

- Humans: 5 confirmed cases, 10 suspected cases, 1 death
- Cattle: 14 suspected cases, 28 deaths

As of 13 June 2022, the Anthrax outbreak in Bududa District had spread to neighbouring districts and had affected 28 animals, 15 human cases (1 death). The following districts are affected: Namisindwa (9 animal deaths), Manafwa (9 animal deaths) and Kween (5 animal deaths and 1 human death).

## Response in Bududa

On 16 May, a District Task Force was held to discuss the event and by 19 May, a District Rapid Response Team had verified an anthrax outbreak. During a National Task Force meeting, developed contingency and district response plans were discussed to guide the response. suspected outbreak.

The Mbale Regional Emergency Operations Centre (MREOC) coordinated Mbale and Bududa DVOs, DHTs to establish the number of people and animals affected. Eleven (11) human samples were collected and sent to UVRI; 5 tested positive while 6 tested negative. 4 samples were collected from animal carcasses. Bududa conducted a vaccination campaign reaching 536 animals in affected communities. The animals at risk in the district are: 80,000 cattle, 39,000 goats and 5,000 sheep. Identified case-patients were managed at home with antibiotics.

The MREOC and Bududa DRRT sensitized Parish Chiefs and health care workers. A public address system sponsored by Rhites E conducted community sensitization for 3 days and 4 radio talk shows were held. Local residents were mobilized to safely dispose of and bury carcass under the supervision of the District Health Team.

Three inter district meetings between Manafwa, Namisindwa and Bududa were held to discuss the risk of cross district infections.

On 7 June, the Commissioner Animal Health, MAAIF issued restrictions on livestock movement, slaughter and trade of products in Bududa District.



An animal vaccination campaign was conducted in Bududa District



## Gaps identified in Anthrax response

- Madi Okollo has not vaccinated animals since 2018
- There are no Information Education and Communication materials for anthrax risk communication
- The Village Health Teams didn't report the dead animal as an alert
- Affected communities in both districts continued to eat sick animals that had died even after they became aware of the threat of anthrax

## Recommendations

1. MoH and MAAIF should support Madi Okollo, Bududa and other high-risk districts to design and implement OH interventions for anthrax including reporting, vaccination, safe handling of suspected anthrax animal carcasses and management of suspected human cases.
2. Robust risk communication is needed to address communities' behaviour towards slaughtering, trading and eating sick animals that died suddenly.
3. In May 2022, the MoH and MAAIF collaborated to develop a costed national anthrax contingency plan. The plan includes Uganda's risk calendar and hotspots for anthrax. The aim of the plan is to define preparedness and response activities for different scales of anthrax events to mitigate their impact on animal and human populations.

## Acknowledgements

- Dr Opolot John, Integrated Epidemiology, Surveillance and Public Health Emergencies Department, Ministry of Health
- Herbert Isabirye Kirya, Mbale Regional Emergency Operations Centre
- Andrew Kwiri, Uganda Public Health Fellowship Program, MoH

- Ministry of Agriculture Animal Industries and Fisheries
- Madi Okollo District Local Government
- Arua Regional Emergency Operations Centre
- Mbale Regional Emergency Operations Centre
- National Task Force
- Infectious Diseases Institute
- U.S. Centres for Disease Control and Prevention

## Outbreaks of Rift Valley Fever in Kagadi and Mbarara Districts

Editor

### Introduction

Rift Valley Fever (RVF) is a zoonotic infectious viral disease transmitted by infected mosquitoes; in humans, transmission is mainly by direct contact with a sick or dead animal or its products. Infected livestock may develop fever, abortions of unknown causes in pregnant animals and can result in sudden death especially among young animals. Suspected human cases present with acute febrile illness that fails to respond to antibiotics and antimalarials, body aches, vomiting and or bleeding from body orifices or jaundice. Uganda experiences RVF outbreaks among animals and humans annually; in this issue, we highlight two that occurred during January and April 2022.

### RVF in Kagadi

On 10 January 2022, Kagadi District Health Team reported an outbreak of RVF involving 2 confirmed cases (1 death) with a history of working on a cattle farm in Kagadi District where they dressed and shared an aborted foetus. Both cases were managed at Kagadi Hospital, one died on 10 January 2022. In total, there were 8 suspected animal cases; observed as cows aborting.

Human: 1 confirmed case, 35 suspected cases; 1 death  
Animal: 8 suspected cases



## RVF response in Kagadi

A coordination mechanism comprising of veterinary, human health and education officers was composed. Veterinary Officers ensured safe disposal of dead animals. Surveillance interventions included line listing, preparation of situation reports for the National Task Force and collection of 35 samples were collected from suspected cases and sent to Uganda Virus Research Institute. Baylor Uganda provided an isolation tent at Kagadi Hospital and printed Information Education and Communication materials which were used in sensitizing the community on RVF. RVF public awareness was incorporated into COVID-19 radio messages.

## RVF in Mbarara

On 27 April 2022, a 30-year-old male farm manager in Kashare Subcounty, Mbarara District developed severe symptoms of fever, shivers and vomiting. At a clinic in Bwizibwera Town council, he was treated for severe malaria but did not improve. On 8 May 2022, following referral to Mbarara Regional Referral Hospital, Doctors suspected a viral hemorrhagic fever when they observed bleeding from body orifices. The case-patient died on 10 May and his blood sample tested positive for RVF by PCR on 12 May.

Human: 1 confirmed case, 1 death

Animal: 61 suspected cases

## RVF response in Mbarara

District Task Force meetings attended by the District One Health Team planned interventions.

A surveillance team investigated the outbreak including line listing of family members and workmates who'd reported similar symptoms as suspected cases. The affected farm reported abortions in animals and an increase in the mosquito population. Mosquitoes are the vectors of RVF virus.

61 animal (45 cattle, 16 goats) samples were collected for serological investigations.

## Gaps identified in RVF response

- In both districts, response was not comprehensive to include an entomological investigation and mass community sensitization on RVF.
- There were delays in laboratory confirmation of animal and human samples sent to Uganda Virus Research Institute.
- Kagadi Hospital did not have the required isolation and other resources to manage cases.

## Recommendations

1. The MoH and MAAIF should sensitize communities to avoid handling and promptly report abortion or sudden deaths of unknown causes in animals since this is a proxy for suspected RVF in animals and potential exposure for humans.
2. District One Health Teams should be supported with adequate resources to mount effective response to RVF outbreaks.
3. The MoH is planning to conduct an After-Action Review of the RVF in Kagadi District; the aim will be to assess the response in terms of what went well, identify areas for improvement and make recommendations for future events.

## Acknowledgements

- National Task Force
- Kagadi District Local Government
- Mbarara District Local Government
- Infectious Diseases Institute
- MOH
- MAAIF





### One Health Coordination Strategy

A 2021 Regulatory Impact Assessment (RIA) for a One Health Policy recommended strengthening coordination and institutional capacities. Therefore, in May 2022, the National One Health Platform initiated the process of developing a coordination strategy for One Health in Uganda. The development is being supported by the Infectious Diseases Institute and guided by Policy Analysts from Office of the President, and Office of the Prime Minister.

### One Health Event-Based Surveillance

The Africa Centres for Disease Control and Prevention (Africa CDC) is supporting Member States to strengthen Event-Based Surveillance applying One Health. In March 2022, stakeholders from the human, animal, water and environment sectors were invited for a workshop to share information on event-based surveillance systems in use. This was followed by development of surveillance data flow charts and development of training materials. Africa CDC has proposed an electronic event management system based on DHIS2 for Uganda to coordinate events across human, animal and environment sectors.

### Laboratory Assessment Tool for Zoonoses Diagnostic Capacity

The Infectious Diseases Institute has developed a tool to assess laboratories in Ministry of Health (MoH), Ministry of Agriculture Animal Industry and Fisheries (MAAIF), Uganda Wild Life Authority (UWA) and the private sector for zoonotic diseases diagnostic capacity. Application of this One Health tool can indicate strengths and gaps of laboratories at all tiers and support crafting interventions for strengthening testing of zoonoses within the laboratory network. In addition, its use can provide information for timely laboratory based diagnostics to increase efficiency in the referral system.

### Development of Sample Transportation and Referral Guidelines for Animal Samples

Uganda has a robust human sample referral and transportation system housed within the National Health Laboratory and Diagnostic Services (NHLDS), MoH. However, there is still need to ensure seamless referral and transportation of samples from all One Health sectors. The Infectious Diseases Institute is in the process of developing guidelines for MAAIF to allow for an understanding of the needs, systems, structures, roles and responsibility and implementation mechanisms for animal samples.

