



Is Uganda ready for its next outbreak?:

Getting ahead of the next epidemic

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Introduction

Uganda has faced several outbreaks every year including; Malaria, Measles, Cholera, Ebola Virus Disease, Marburg Virus Disease, Crimean Congo Haemorrhagic Fever, Yellow Fever, and Rift Valley Fever among others. In 2019 alone, the Emergency Operations Center was activated for response to 12 public health emergencies. Currently Uganda remains on high alert and heightened preparedness for Ebola Virus disease (EVD) that is an ongoing propagated EVD outbreak in Democratic Republic of Congo where 3,444 cases and 2,264 deaths were reported as of 25 Feb 2020 and Corona Virus Disease - 2019 (COVID-19) which is rapidly spreading to various countries in the World from China. As of 29 Feb 2020, 85, 403 cases and 2,924 deaths of COVID – 19 in 54 countries were reported.

Uganda is vulnerable and prone to epidemics due to several reasons; 1) Increased human interaction with forests, caves, and animals due to economic and other activities. 2) Geographic location in filo virus, meningitis, and yellow fever zones, 3) Effects of climate change – heavy rains and flooding 4) Conflicts and population displacement in the Great Lakes region. 5) Increased international movement of people particularly refugees across Uganda's borders.

Capacities built from Experiences and Lessons learned from out- break response and preparedness to outbreaks.

Uganda has established functional coordination structure that is multi-sectorial and multidisciplinary known as the National task force on epidemics preparedness and response that meets regularly. The same structure is mirrored at district level. The Public Health Emergency Operations Centre (PHEOC) is in place, activated during response to emergencies to coordinate the government response, receive, analyse, disseminate, and monitor incident information. The



National and district rapid response teams including field epidemiologists have been trained and remain on standby to respond to epidemics once notified.

In 2000, Uganda adopted the Integrated Disease Surveillance and Response Strategy (IDSR). The IDSR is the framework Uganda uses for response to Public Health Emergencies.

Laboratory capacities are in place to confirm all priority diseases at the National reference laboratories; Uganda Virus Research Institute (UVRI), and Uganda National Health Laboratories Services (UNHLS).

The Uganda Virus Research Institute mandate is to conduct scientific investigations/research, surveillance and diagnostics pertaining to viral and other communicable diseases in order to contribute to knowledge, policy, and practice. The UVRI houses the following national and international reference and specialised testing laboratories: 1) the national and regional reference centre for vector borne viral diseases; 2) the national influenza Centre (World Health Organization (WHO) influenza collaborating laboratory); 3) the national diagnostic laboratory for highly infectious viral infections; 4) the Africa WHO yellow fever reference laboratory; 5) the national HIV reference and quality assurance laboratory; 6) the national and regional reference laboratory for HIV drug resistance, 7) WHO Measles and Rubella Regional Reference laboratory and 8) WHO Inter-country Polio laboratory. The Uganda National Health Laboratories Services provides stewardship for National Health Laboratory Network to guide the prevention of disease and promotion of health in Uganda through early detection of the disease in order to achieve overall sustainable development. The UNHLS houses HIV Viral Load, HIV Early Infant, Hepatitis B, Sickle cell, Microbiology, Histopathology, Molecular, and Malaria diagnosis laboratories and a Biorepository.

The functions of UNHLS are to 1) develop policies, guidelines and standards for Health Laboratory and diagnostic services in Uganda, 2) provide leadership and governance for health laboratory and diagnostic services in the country, 3) build capacity and strengthen systems and structures for health laboratory and diagnostic services delivery at all levels of healthcare system, 4) provide quality reference laboratory and diagnostic services for clinical care, public health and



research 5) build effective and sustainable National Health Laboratory and diagnostic quality management systems.

A national laboratory sample transportation system is in place for shipping of samples to the reference laboratories. Isolation facilities have been set up in selected health facilities for quick isolation and management of infectious patients.

Risk communication strategies are in place using the village health teams, print, radio, and social media.



Figure 1: Timeline showing the increase in frequency of outbreaks in Uganda, 2017 – March 2020

Uganda has recently conducted a country wide mass Measles/ Rubella campaign to contain Measles/Rubella outbreaks. Plans are underway to conduct reactive mass vaccination against yellow fever in districts where outbreaks have been reported. Plans are also underway to apply for inclusion of yellow fever vaccine in Uganda’s routine immunization schedule.



Conclusion

Despite efforts in place to prevent, quickly detect, and respond to outbreaks, Uganda remains at risk of disease outbreaks due to the sustained human to animal interaction, climate change, urbanization, food insecurity, culture and free movement across borders. Outbreaks pose an economic hazard to our country which has a fragile health system. Building resilient systems and financing out- break management is crucial to our country meeting Sustainable Development Goals.