FORUM

IMPROVING PREPAREDNESS AND RESPONSE IN EMERGENCY

How to address publich health emergencies in limited resources regions?
How to respond to epidemics outbreaks and crisis?
Some lessons come from Uganda's experience, a country that has faced Ebola, malaria, tubercolsis and, more recently, COVID-19.

TEXT BY / JERRY ICTHO, GODFREY ESIRU, PETER LOCHORO / DOCTORS WITH AFRICA CUAMM
ALEXIA PASTORI / JUNIOR PROJECT OFFICER IN PUBLIC HEALTH

In Uganda, key health indicators remain below SDG targets: up to 1 in 28 children die before their first birthday, and 1 in 19 before age five[1]. Frequent outbreaks of infectious diseases contribute to these outcomes. The country faces **repeated threats** from both long-standing and emerging diseases – such as Ebola, yellow fever, Mpox, malaria, TB, HIV, COVID-19, measles, and cholera[2-3]. Uganda's open-door policy for refugees from neighboring countries adds to the burden, increasing population mobility and the risk of disease spread[4-5].
To address these challenges, Uganda adopted the National Multihazard Emergency Preparedness and Response Plan (NMEPRP) in 2019[6].
Since then, the country has responded effectively to multiple crises thanks to strong leadership and rapid implementation of key actions including risk communication, clinical care, logistics, laboratory diagnostics, surveillance, and community engagement – while maintaining essential health services. These efforts reflect the strength of Uganda's emergency health workforce, especially during the COVID-19 pandemic.

THE EXPERIENCE OF COVID-19

Between 2019 and 2022, COVID-19 revealed the need for a multidisciplinary and decentralized approach to public health emergencies[7]. In response, the Ministry of Health established a national Public Health Emergency Operations Center (PHEOC) and 17 regional centers supporting district taskforces. Built on the WHO framework, the PHEOCs helped coordinate outbreak responses, guide field operations, and align emergency planning[8].
Doctors with Africa CUAMM contributed to this structure, particularly in Karamoja, Lango, and West Nile, by strengthening preparedness and continuity of essential health services. With support from partners such as ELMA Foundation, UNICEF, the Global Fund, AICS, USAID, and WHO, CUAMM enhanced planning and coordination across district, sub-county, facility, and community levels. Activities included scaling up risk communication, social mobilization, and data use for mapping and targeting preparedness and response actions.

CUAMM'S ROLE IN RESPONDING TO PUBLIC HEALTH EMERGENCY

CUAMM provided technical support to district emergency task forces, supported risk assessments and hotspot mapping in all nine Karamoja districts, and bolstered community engagement to promote COVID-19 prevention measures, including vaccination. Supplies and equipment were distributed to 456 health workers in 76 health facilities, while 323 frontline workers (136 men, 187 women) received training on infection prevention, case management, and another 330 were trained on COVID-19 vaccination, supporting vaccination activities at all 76 sites. CUAMM also increased medical oxygen production and distribution in six hospitals and four Health Center IVs, addressing critical shortages during the pandemic.
Overall, 3,332 cases of COVID-19 were registered in Karamoja by March 2022, with 3278 (98.4%) recoveries and 54 (1.6%) cumulative deaths.

THE ROLE OF COMMUNITIES

In Karamoja, 1,125 Village Health Teams (VHTs) were trained on the COVID-19 Community Engagement Implementation Guidelines and Home-Based Care. VHTs played a vital role in mobilizing communities, addressing vaccine hesitancy, facilitating service linkage, and sharing feedback with providers. In coordination with District Health Teams, CUAMM identified 45 hotspot sub-counties and deployed 25 active VHTs per sub-county to form local COVID-19 taskforces.

During vaccination campaigns, VHTs used public address systems and megaphones to **raise awareness** on preventive measures and health-seeking behaviors. Alongside ongoing sensitization efforts by District Health Educators (DHEs), this contributed to a sharp increase in vaccine coverage among adults (18+), rising from 3.7% in July 2021 to 74.1% by March 2022. Vaccination sites increased from 45 to 76. CUAMM also supported community outreach with five motorcycles for communication activities in Karenga, Napak, Amudat, Nakapiripirit, and Kaabong, complementing other efforts led by UNICEF and

TABLE 1 / OVERALL UPTAKE OF COVID-19 VACCINATION MARCH 2021-MARCH 2022 AMONG ADULTS (DATA SOURCE HMIS REPORTS)

DISTRICT	TOTAL FIRST DOSE OF OTHER ANTIGENS	TOTAL SECOND DOSE VACCINATION	OVERALL UPTAKE AMONG TARGETED POPULATION MARCH 2021-MARCH 2022
ABIM	20,271	22,721	66.7%
AMUDAT	16,956	5,492	47.9%
KAABONG	21,954	10,809	86.9%
KARENGA	11,933	6,212	85.8%
KOTIDO	25,311	17,800	61.4%
MOROTO	22,221	13,410	82.6%
NABILATUK	18,719	10,185	80.2%
NAKAPIRIPIRIT	16,311	19,662	86.7%
NAPAK	25,897	25,395	82.8%
KARAMOJA	178,636	131,686	74.1%

the Ministry of Health. Despite progress, deep-rooted cultural beliefs remained a barrier to vaccine uptake in some areas. (**Table 1**).

LESSONS LEARNED FOR THE FUTURE

This experience highlighted several **good practices** for future emergency preparedness and response.
In Karamoja, district disaster response task forces – led by Resident District Commissioners – actively supervised activities and took part in review meetings, fostering local ownership of CUAMM-supported actions and encouraging advocacy for additional preparedness resources.
District local governments coordinated integrated planning and budgeting with partners, pooling staff, vehicles, and equipment and allocating them based on shared priorities and identified needs. CUAMM supported hotspot mapping using spatial and temporal data, including GPS and service utilization, to identify the most vulnerable areas.
These maps guided targeted responses, efficient resource use, contact tracing, and resilience-building in high-risk communities.
Capacity was strengthened through continuous training and orientation of both new and existing frontline health workers and VHTs, equipping them with practical skills, building confidence, and increasing motivation under challenging conditions.

NOTES

1 UBOS, Uganda Demographic and Health Survey 2022, Uganda Bureau of Statistics Kampala, Uganda.
2 Ashraf, S., et al., Emerging viruses are an underestimated cause of undiagnosed febrile illness in Uganda. International Journal of Infectious Diseases, 2023. 130: p. S17.
3 Mbonye, A.K. and M. Sekamatte, Disease outbreaks and reporting in Uganda. The Lancet, 2018. 392(10162): p. 2347-2348.
4 Bohnet, H. and C. Schmitz-Pranghe, Uganda: A role model for refugee integration? 2019.
5 Mylan, S., Key Considerations: Balancing Epidemic Preparedness and Response with Humanitarian Protection in Ugandan Refugee Settlements. 2024.
6 Ario, A.R., et al., The logic model for Uganda's health sector preparedness for public health threats and emergencies. Global health action, 2019. 12(1): p. 1664103.
7 Muhwezi, W.W., et al., The Performance of the COVID-19 District Task Forces in Uganda: Understanding the Dynamics and Functionality. 2020: ACODE.
8 Kayiwa, J., et al., Establishing a public health emergency operations center in an outbreak-prone country: lessons learned in Uganda, January 2014 to December 2021. Health security, 2022. 20(5): p. 394.