

VHFs OUTBREAK CONTROL: Uganda Case Study

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by

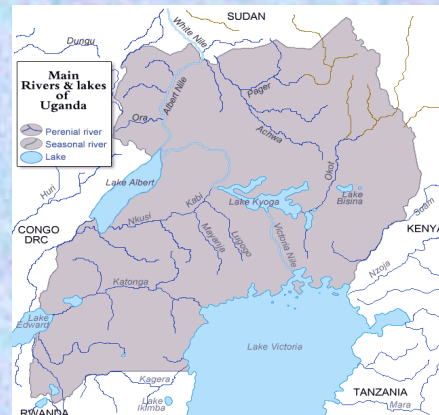
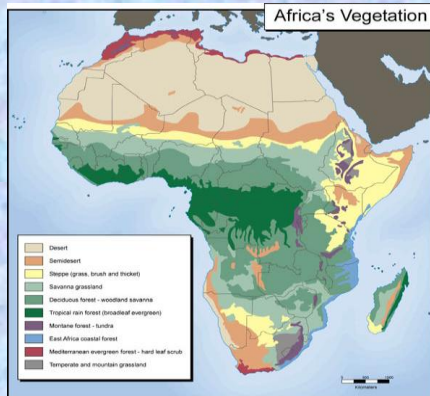
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Introduction

Uganda as pearl of Africa

- - Lying at equator / nice climate
- - Confluence of vegetation
- - Diverse flora and fauna
- - Many fresh water bodies
- - Biodiversity hotspot

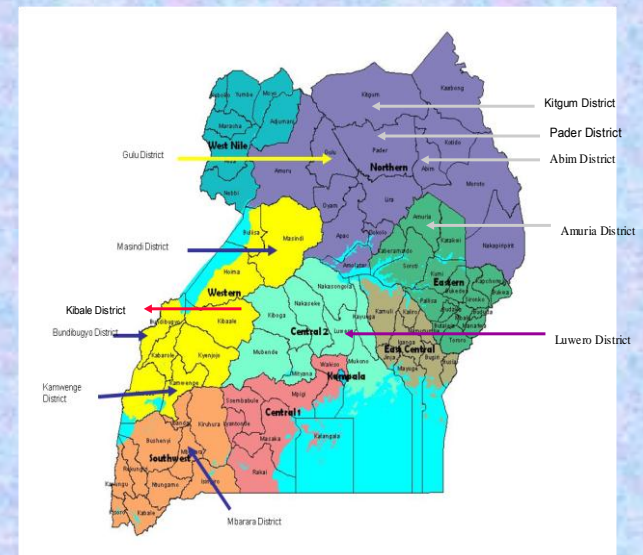


Introduction Cont'd

- What is good for people is also good for many other organisms.
- Thus Uganda has many organisms, which keep on jumping from animals to humans

➔ Many zoonotic diseases

- Most feared are the deadly Ebola and Marburg Virus Diseases
 - 5 EVD and 4 MVD outbreaks since 2000
 - 2 retrospective infections in tourists in 2007



Episodes EVD and MVD outbreaks in Uganda

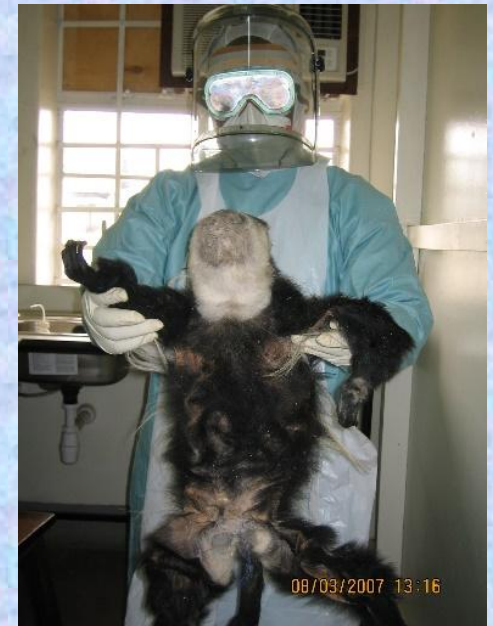
Year	Disease	Area	Total number of cases	Reference
October, 2000	Ebola VD (Sudan)	Gulu, Masindi and Mbarara districts (North, Western, Southern Uganda)	425	Okware, S. I., et al, 2002. Trop. Med. & Intern. Health. 7 (12): 1068 – 1075.
June, 2007	Marburg VD	Kamwenge, Ibanda districts (Western Uganda)	3	Adjemian J, et al., (2011). J Infect Dis. 2011 Nov; 204 Suppl 3:S796-9.
August, 2007	Ebola VD (Bundibugyo)	Bundibugyo district (Western Uganda)	131	Towner J.S, et al. PLoS Pathog 2008, 4(11):
September, 2007	Marburg VD	Kamwenge district (Western Uganda)	1	Adjemian J, et al., (2011). J Infect Dis. 2011 Nov; 204 Suppl 3:S796-9.
May, 2011	Ebola VD (Sudan)	Luwero district Central Uganda	1	Shoemaker T, et al. EID Journal, Dispatch, Vol. 18, No. 9, September 2012.
June, 2012	Ebola VD (Sudan)	Kibale district (Western Uganda)	43	Ministry of Health, Uganda; ProMed Mail
October, 2012	Marburg VF	Kabale, Kamwenge, Ibanda districts (Western Uganda)	14	Ministry of Health, Uganda; ProMed Mail
November, 2012	Ebola VD (Sudan)	Luwero district (Central Uganda)	7	Ministry of Health, Uganda; ProMed Mail
September, 2014	Marburg VD	Mpigi district (Central Uganda)	1	Ministry of Health, Uganda; ProMed Mail

Uganda VHF Surveillance: Objectives

- Improve reporting capability for endemic viral hemorrhagic fever cases
- Improve laboratory capacity in identification of viral pathogens
- Detect incident cases of suspect viral hemorrhagic fevers
- Report to the National level in a timely and complete manner
- Improve case investigation and outbreak response
- Integrate with existing surveillance systems so that forms, personnel and resources are used more efficiently and effectively
- Generate and improve the quality of information for decision making and disease control efforts

How have we managed to control the outbreaks quickly?

- **Active national multi-sectoral task force for coordination, including Police and Army plus development partners**
- **Trained Rapid response teams at district, regional and national levels – daily contact follow (21 days)**
- **Continued surveillance: Active and passive – all rumours investigated: rumour books at Health center II upwards**
- **Preparedness plans at district, regional and National levels/rapid response kits**



How have we managed to control the outbreaks quickly?

- National specimen referral system (DHI2 system)
- Good personnel training (PPE, Epidemiology, Lab, infection control, burial teams, etc.,)
- Sensitizing through Health education for the communities, opinion leaders, traditional healers, politician, religious leaders. (signs and symptoms and reporting immediately)
- Maintaining a High index of suspicion all the time
- Daily communication/avoid bad rumours



How have we managed to control the outbreaks quickly?

■ Availability of in country diagnostic capability

- Quick identification
- Ability to separate the sick for isolation
- Ability to identify those who are completely recovered for release



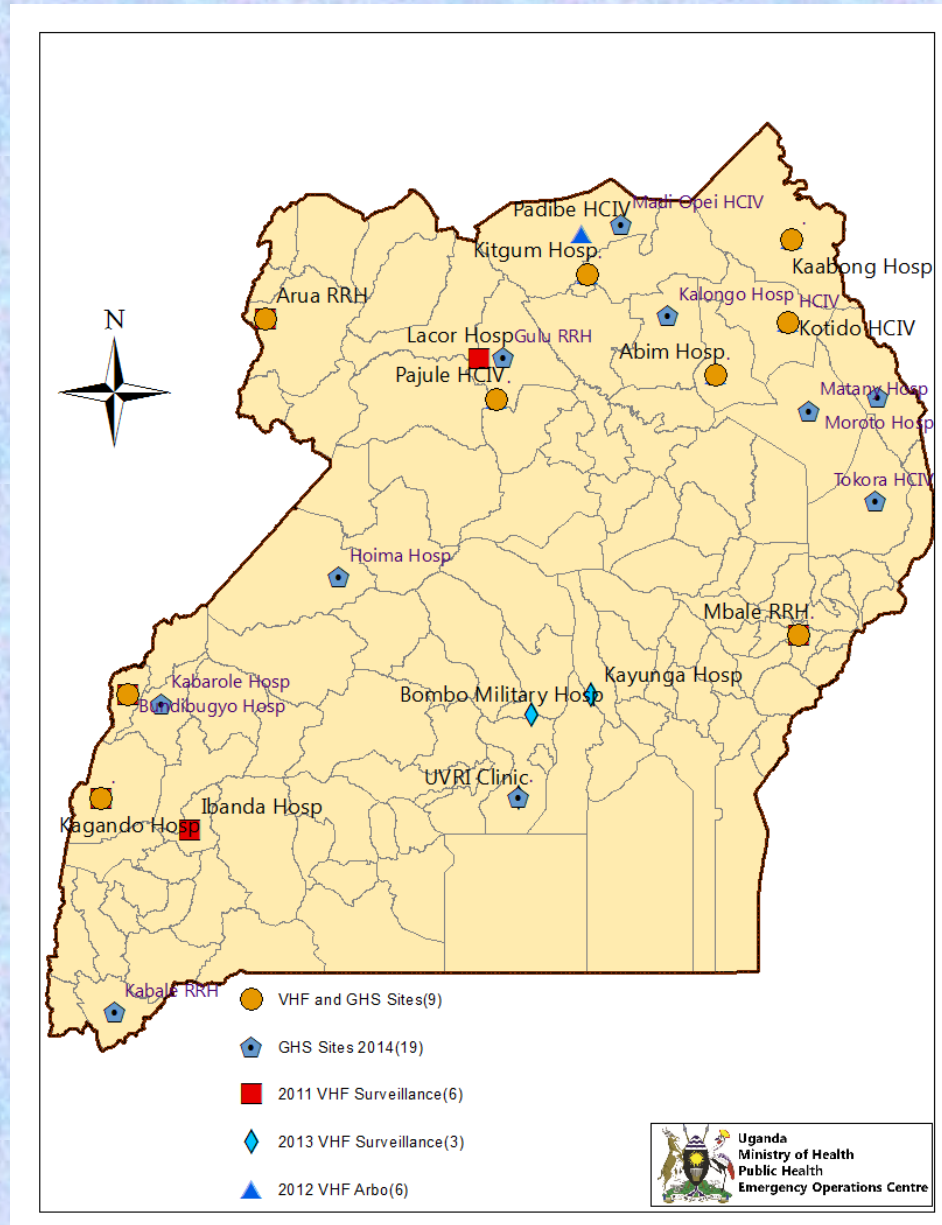
■ Political will



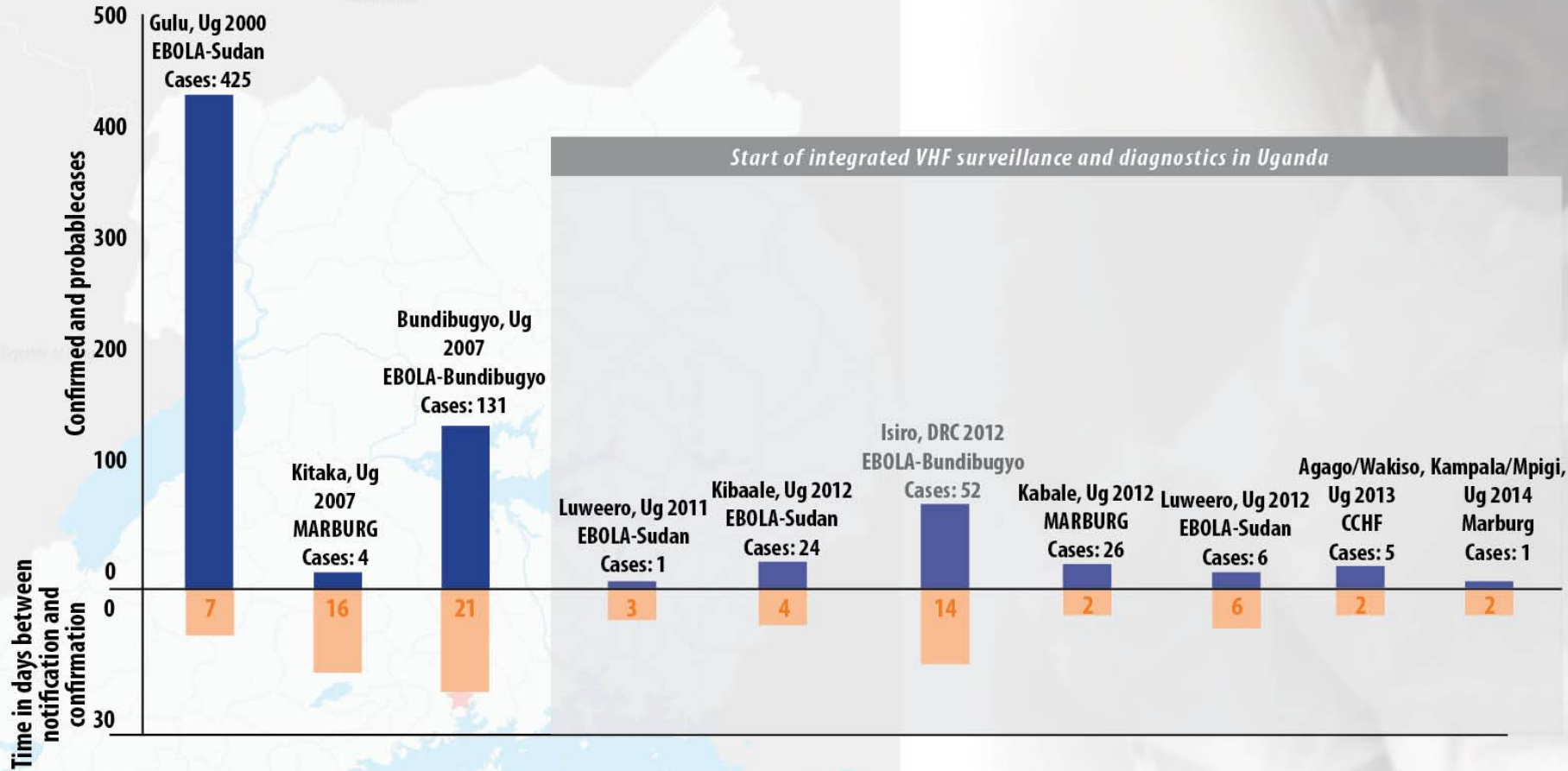
■ Regional and international assistance



2015 VHF Surveillance Sites



Pre- and post-implementation of enhanced VHF surveillance and diagnostics in Uganda, 2000-2014

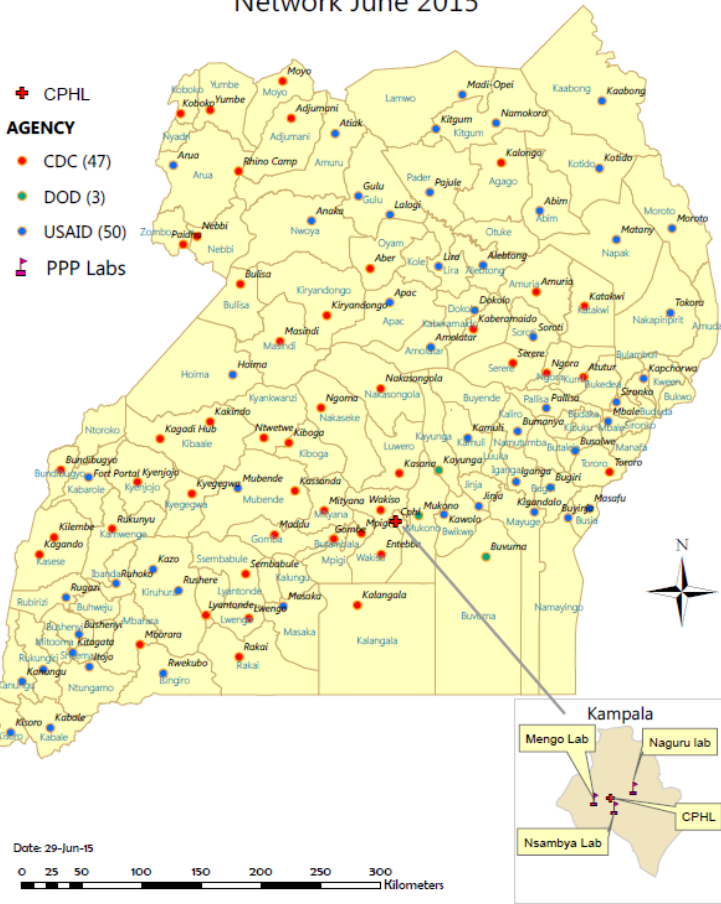


GHS - UVRI Laboratories

Prevent – Detect - Respond

National Specimen Referral and Transportation Network June 2015

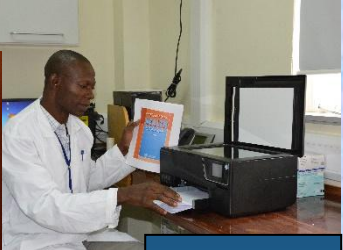
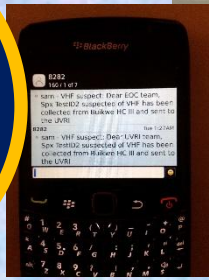
- AGENCY**
- CPHL (47)
 - DOD (3)
 - USAID (50)
 - PPP Labs



Nationwide Lab Network Including UVRI



Real-Time Reporting via DHIS-2



dhis2

Emergency Operations Centre



Uganda Ministry of Health Public Health Emergency Operations Centre



Acknowledgements

- Department of Arbovirology, Emerging and Re-Emerging Viral Infections
- UVRI
- MOH
- Sentinel site staff
- Sentinel site in-charges
- CDC Atlanta
- CDC Uganda
- WHO- County Office
- WHO AFRO
- USA DoD
- All collaborators, service providers and suppliers