

**Presentation from Johns Hopkins University
Department of International Health**

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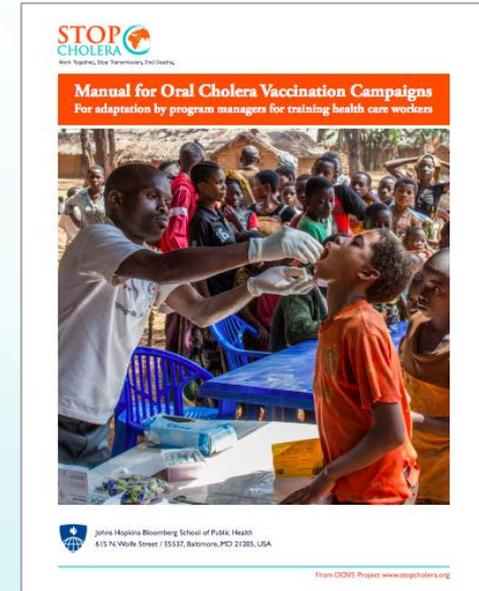
Overall goals of the DOVE Project

- Promote the effective use of OCV as part of an overall integrated cholera control program.
- Providing technical support to countries* including help with national plans
- Cholera toolkit
 - www.Stopcholera.org
- Hotspot mapping
- M&E
- Laboratory strengthening and Tech Transfer
- Operations research

Supported by BMGF with additional support from NIAID and Path

*Cameroon, Uganda, Malawi, Tanzania, Kenya, Zambia, South Sudan, Nepal

- **StopCholera Toolkit: Available in English, Arabic & French**
 - *Cholera Basics*
 - *Oral Cholera Vaccine (OCV) Basics*
 - *Tools for Deciding Whether to Use OCV*
 - *Manual for OCV Campaigns (Print and PDF)*
- **Blog**
- **Field Stories**
- **Interactive Map**
- **OCV Photo Exhibit at UNC Water and Health Conference**
- **Planned: Video on OCV implementation in Uganda**
- **Planned: Coordinate with WASH WG to distribute IEC materials during OCV campaigns**



Dose Interval Studies

Zambia CIDRZ & Cameroon MA Sante

- Comparing serum responses when 2nd dose is 2 weeks vs 6 or 12 months
- Tech transfer of serum assays to Zambia and Cameroon
- Constraints to overcome
 - Purchased vaccine
 - International shipment of strains
 - Tech transfer and validation of assays
 - Logistics for serum collection



<https://spark.adobe.com/page/d3YkYOF57fusN/>



Work Together. Stop Transmission. End Deaths.

Tech Transfer and Capacity Development

- PCR training from dried fecal specimens on filter paper from remote areas.
- Uganda, Kenya, Zambia, Tanzania, Nepal
- GCP Training in Zambia / Cameroon
- Vibriocidal serology in Zambia and Cameroon



John Mwaba / vibriocidal assay in Lusaka

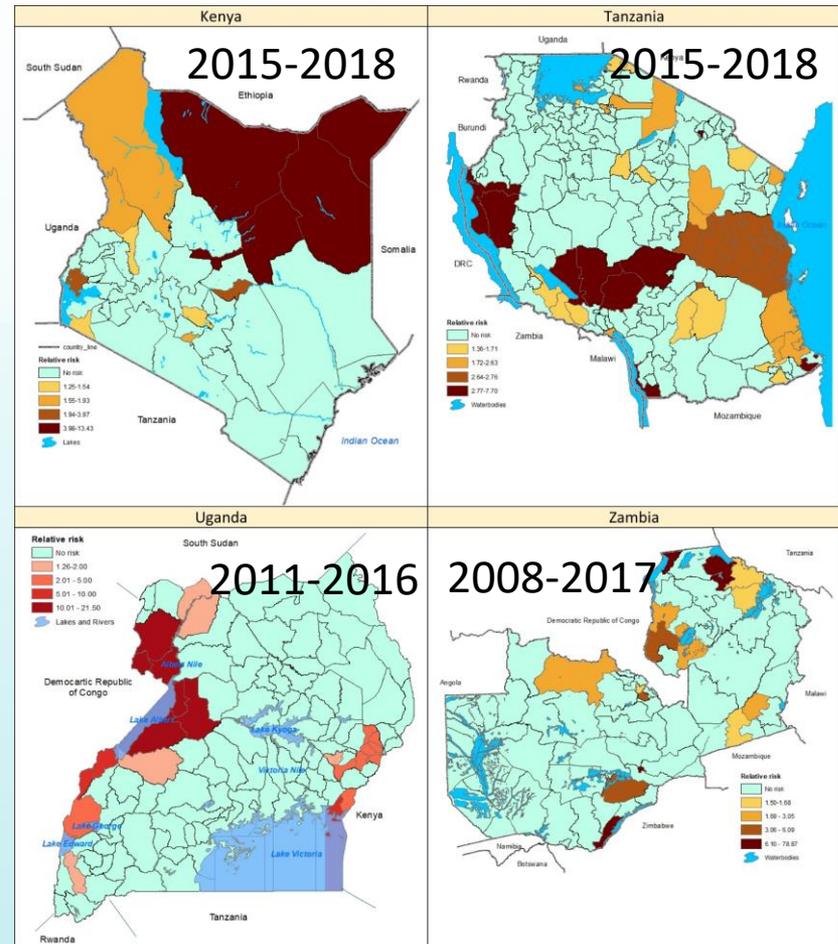


Francis Ongole / PCR in Kampala

- Validation of dried serum spots (DSS) and dried blood spots (DBS) – appropriate for collection in remote areas

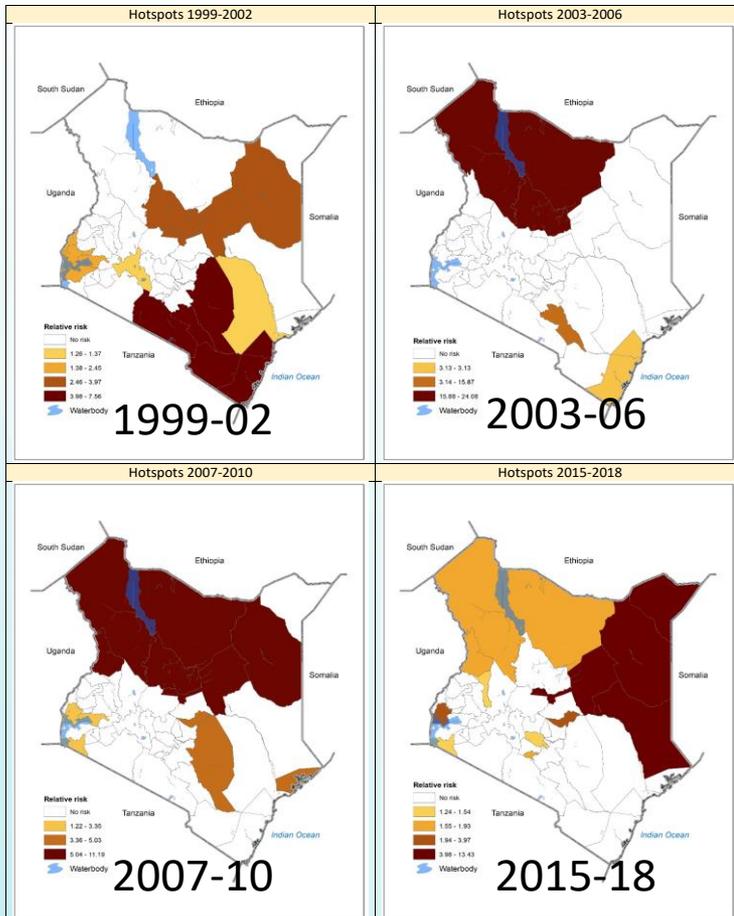
Identifying hotspots in four African countries

- Collaborating with Kenya, Tanzania, Uganda, Zambia to identify high risk districts (data from MoH)
- Hotspots may be large and scattered.
- Hotspots are country specific based on RR
- Identifying hotspot sub-districts
- Population size in hotspots?



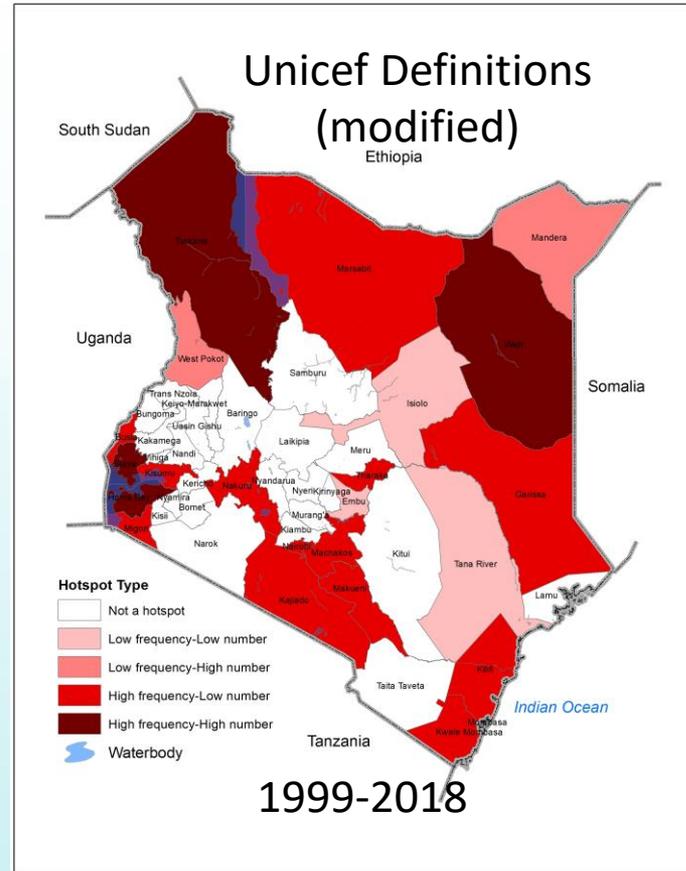
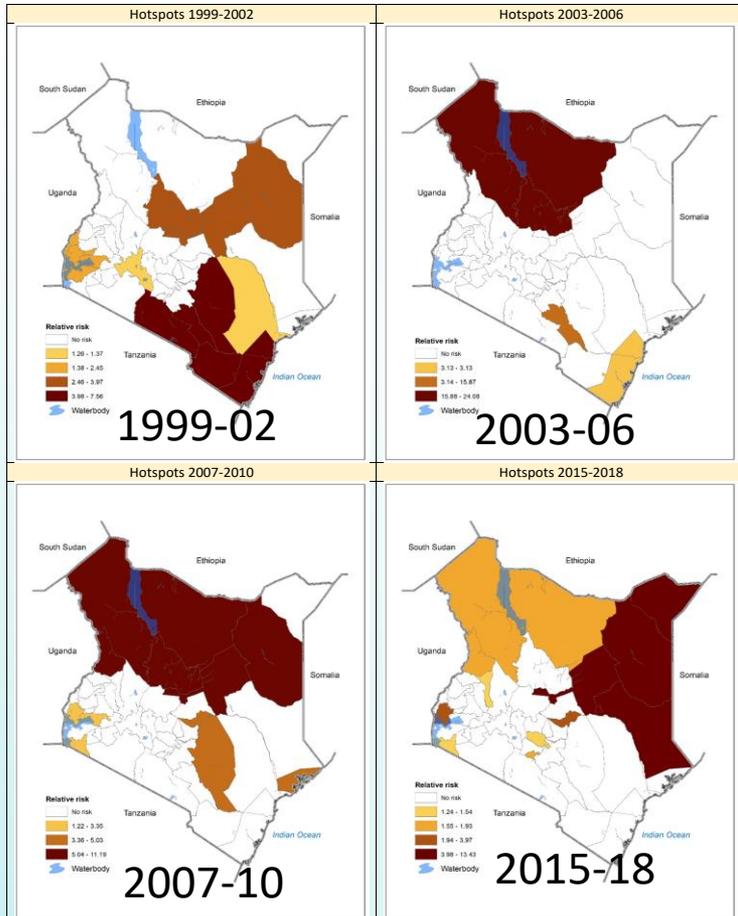
Identifying hotspots in four African countries

	Kenya	Uganda	Tanzania	Zambia	Total
Population (millions)	47.8	34.6	47.7	13.1	143.3
# Districts	47	112	184	72	415
Period Studied	15-18	11-16	15-18	08-17	
# cases (thousands)	24.7	11.0	29.1	35.0	99.7
#hotspot districts	13	22	59	16	110
Population in districts with RR>2 (millions)	3.1	5.4	12.1	3.1	23.7



- Are hotspot areas consistent over time?
- How do different methods compare?
- What is the size of the populations at high risk?

Cholera in Kenya 1999-2018



Frequency: Low= 3-4/12 years; high= >4/12 years

Number: Low: 50-149; High = >149

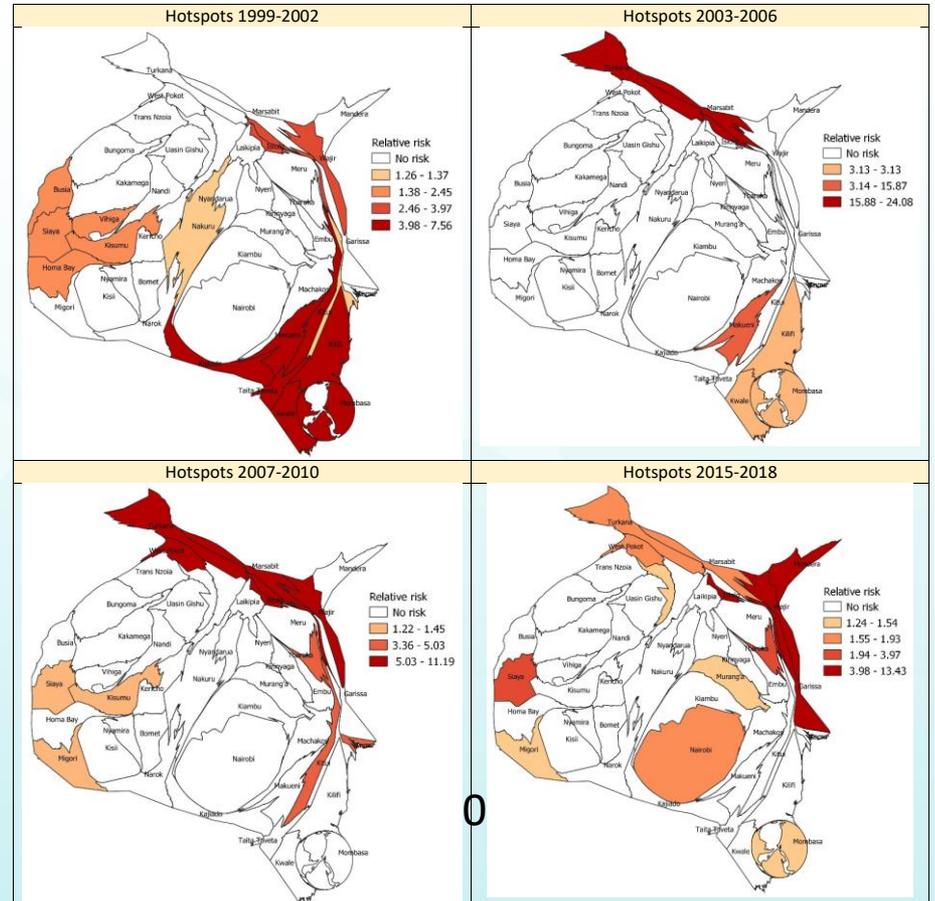
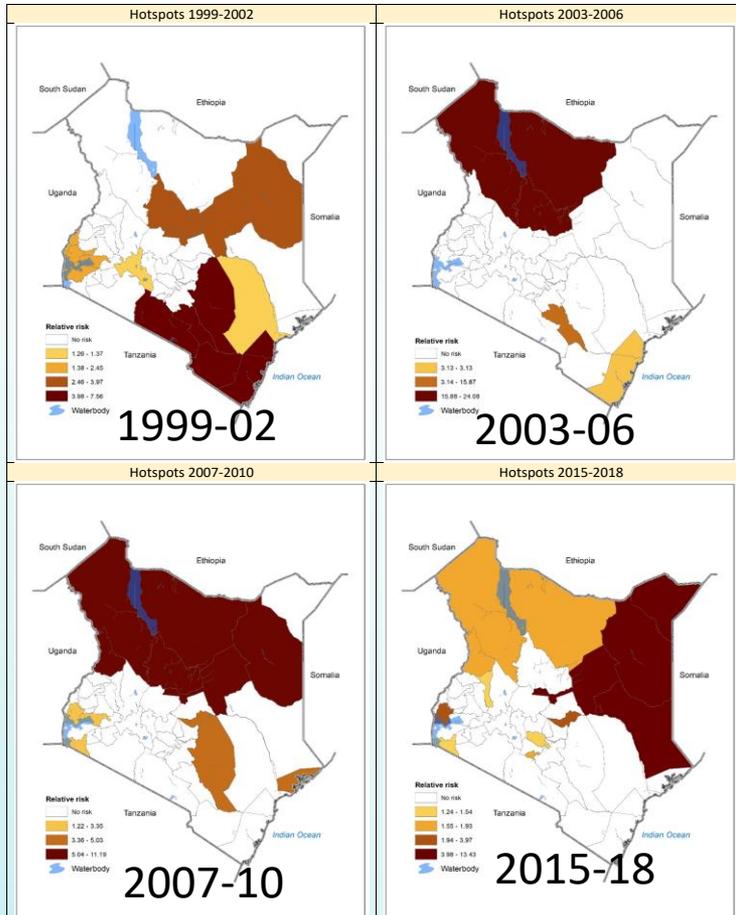
Low Frequency-low number

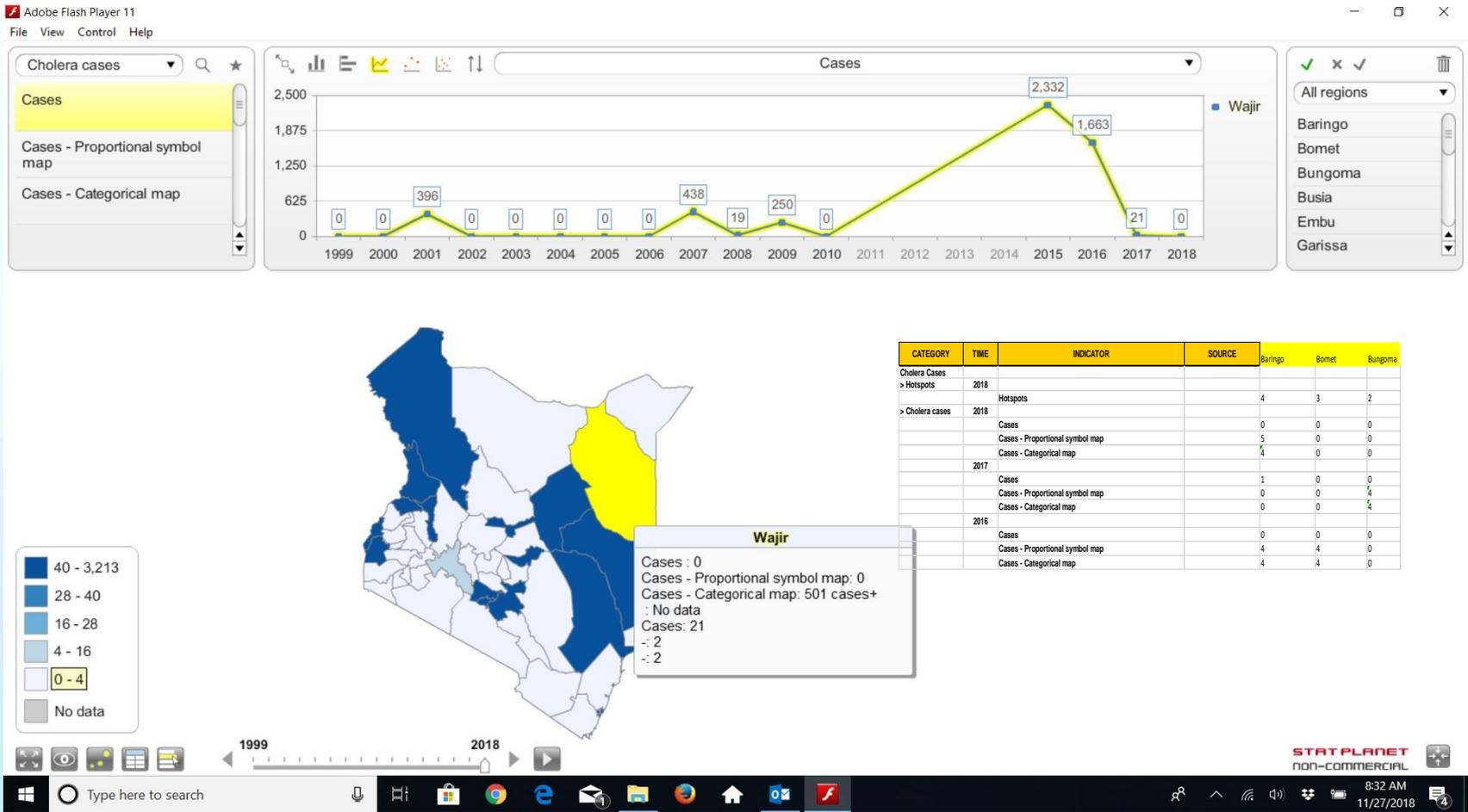
Low Frequency-high number

High Frequency-low number

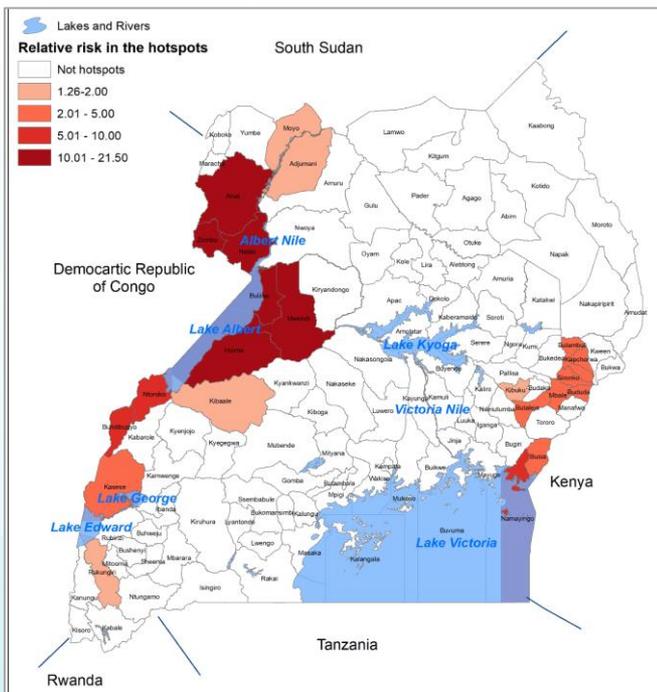
High Frequency-High number

Cholera in Kenya 1999-2018





Hotspot Map Informed Uganda Launch of OCV & M&E Campaign



Constraints:

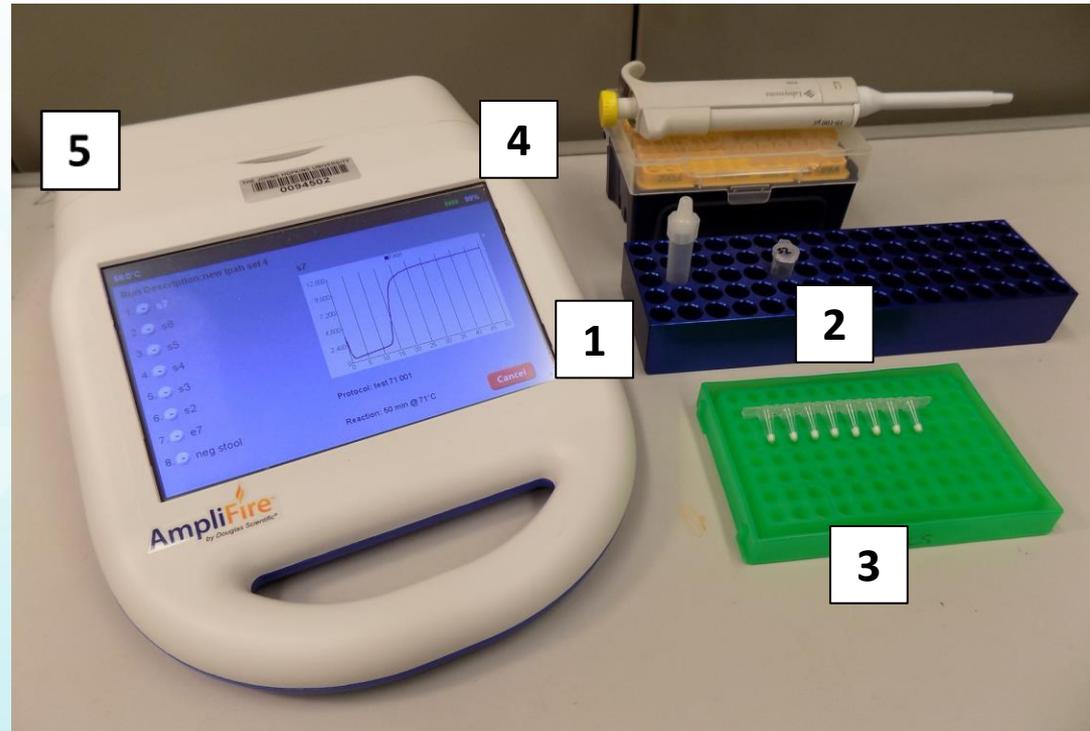
- Finances
- Competition

Minister of Health, Hon. Dr. Jane Ruth Aceng



- **RDT with only serotype O1**
- **Protocol will be starting in Uganda and Kenya**
- **This protocol will be in support of the WHO-prequalification**

1. Sample Collection Tube pre-filled with lysis buffer
2. Sample lysate to be added to lyophilized reagents
3. Lyophilized LAMP reagents
4. Pipette and tips capable of dispensing 25uL
5. AmpliFire heat block + fluorescent reader



Results in one hour – multiple pathogens possible
Sensitivity / specificity equivalent to TaqMan

Acknowledgement to Partners in Africa and Asia

- Cameroon: MA Sante
- Uganda: Makerere University & MOH
- Zambia: CIDRZ
- Tanzania: MOH
- Kenya: MOH & FELTP
- Malawi: MoH
- Nigeria: NCDC and Maiduguri University (Borno State)
- Nepal: GTA and MOH (EDCD & NPHL)
- Bangladesh: icddr,b
- India: NICED