

Engaging communities in early outbreak detection & response action through **community-based surveillance**



REGISTER HERE



13:00–14:30 CET (Geneva)
Thursday, 14 Nov 2024

Kai von Harbou

Unit Head, Community Readiness and Resilience (CRR), WHO

Petra Khoury

Director for Health and Care Department
International Federation of Red Cross and Red Crescent Societies

Biwott K. Hazael

Community Based Surveillance Officer, Kenya Red Cross Society

Jakob Zinsstag-Klopfenstein

Deputy head, Department of Epidemiology and Public Health
Swiss Tropical and Public Health Institute

Arun Balajee

Senior Specialist, Pandemic Surveillance
Technical Advice and Partnerships, The Global Fund



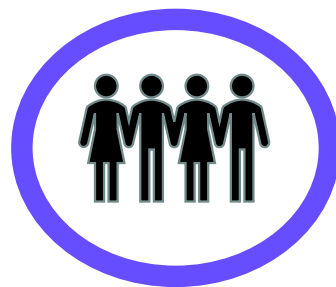
Strengthening Community Based Detection and Response through Community Based Surveillance

14 November | 2024, WHO EPI-WIN Webinar

Dr Kwang Il Rim
Community Readiness and Resilience Unit,
Country Readiness Strengthening Department
WHO Geneva

Critical role of communities for early detection and rapid response

✓ Health Emergencies Starts and Ends in Communities



Individuals



A community



The Covid-19 pandemic starts in a community



Districts, countries, regions, The Globe

Community Protection Capacity Building to Enable :

- ✓ Early detection and containment of outbreaks at source
- ✓ Effective and timely response to emergencies

Health emergencies begin & end in communities...

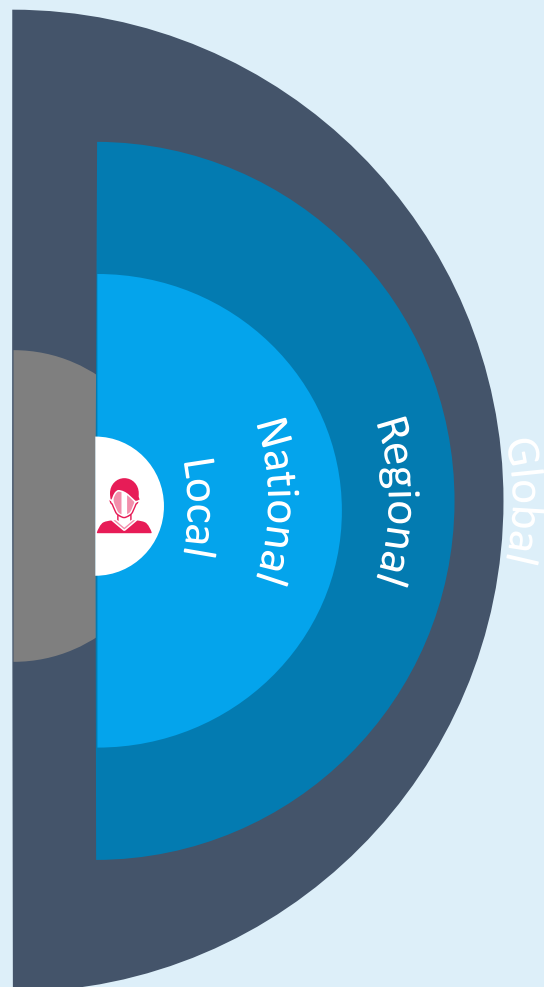


Pandemic

Epidemic

Outbreak

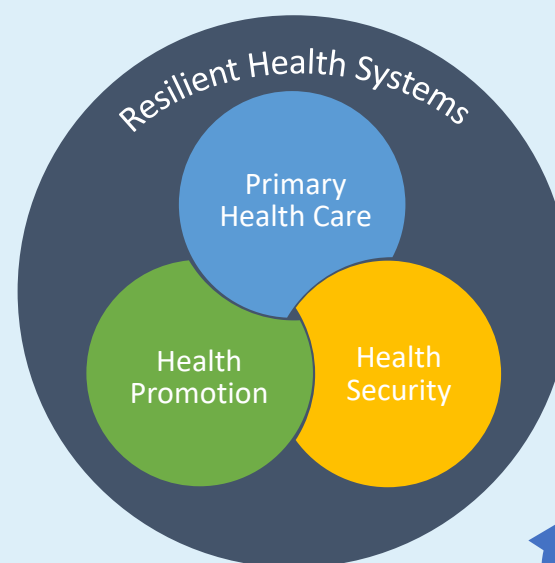
Patient 0



No one is safe until all are safe

...and require a systemic approach to achieve health protection

Resilient communities & health systems...



...supported by a local, national, regional & global technical/operational networks for health emergency preparedness, readiness and response

Community Protection of HEPR

Three integrated objectives of Community Protection

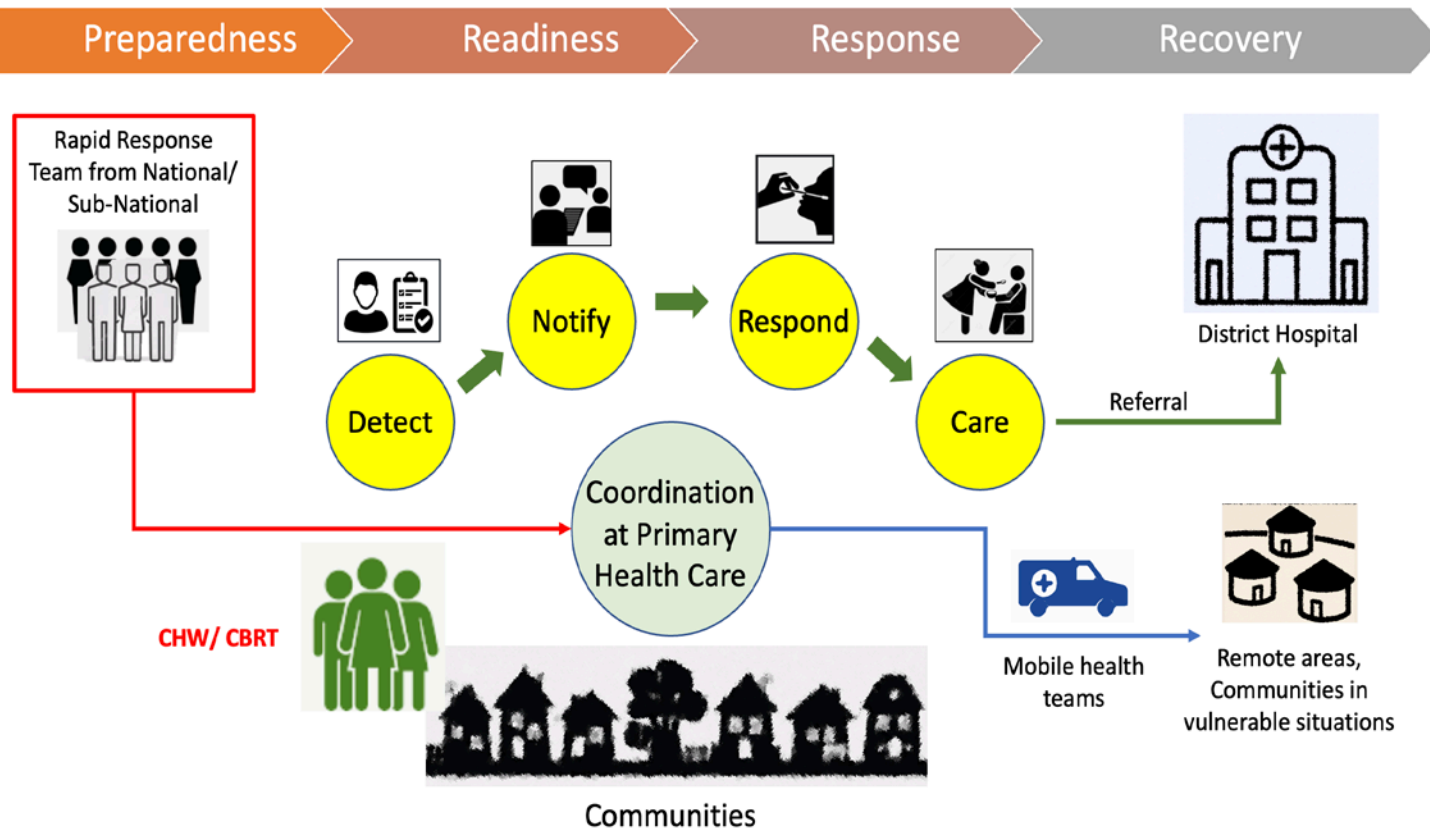
- 1 Community engagement, risk communication and infodemic management to guide priority actions & strengthen community resilience
- 2 Population and environmental public health interventions
- 3 Multisectoral action for social and economic protection

Community Protection functions/ capabilities across the health emergency cycle



Community capacities, services and coordination

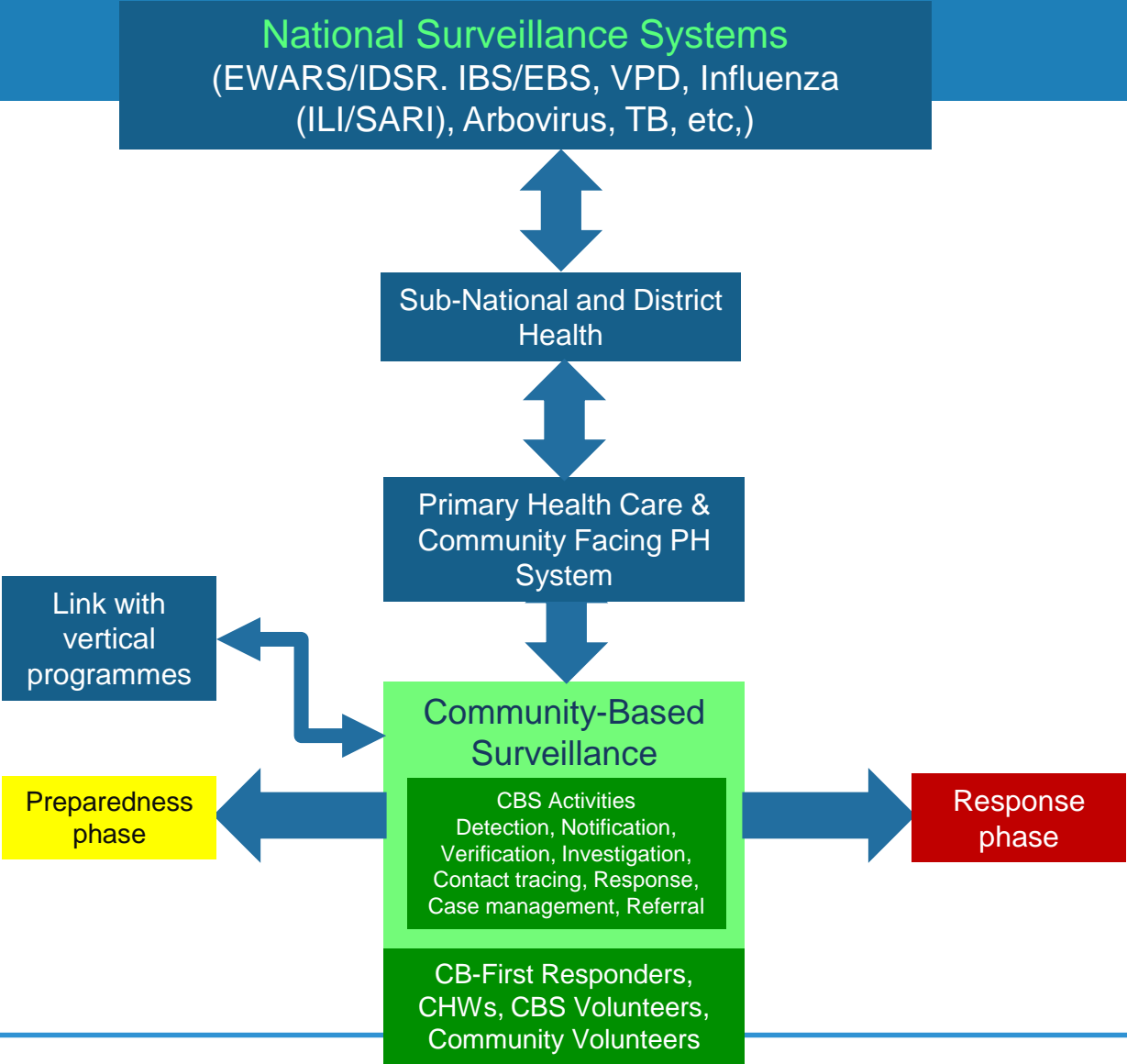
Community Public Health and Health Services in Public Health Emergencies



- **Leveraging community structures and networks**
- **Community based early detection and notification**
- **Community based public health interventions and services integrated with PHCs, local public health systems**
- **Capacity building of community health workforce**

¹Based on "Community-based response initiative". Covid-19 Response for Africa – monthly bulletin: Situation and Response actions in the African Region, June 2022; "AVoHC-SURGE pillars", Ensuring Health Security in the African Region: Emergency preparedness and response flagship programmes (Q2, 2022)

Example of national surveillance structure



Global Consultation on Community Based Surveillance, 2018, Lyon, WHO



MEETING REPORT

A definition for community-based surveillance and a way forward: results of the WHO global technical meeting, France, 26 to 28 June 2018

Technical Contributors to the June 2018 WHO meeting¹

1. Technical Contributors to the June 2018 WHO meeting are listed at the end of the article

Correspondence: José Guerra (guerraj@who.int)

Citation style for this article:

Technical Contributors to the June 2018 WHO meeting. A definition for community-based surveillance and a way forward: results of the WHO global technical meeting, France, 26 to 28 June 2018. *Euro Surveill.* 2019;24(2):pii=1800681. <https://doi.org/10.2807/1560-7917.ES.2019.24.2.1800681>

Article submitted on 14 Dec 2018 / accepted on 07 Jan 2019 / published on 10 Jan 2019

Interagency Community of Practice (CoP) on Community Based Surveillance (CBS)

- ❑ Established in Sep 2023 as a follow up action of WHO CBS meeting in 2018
- ❑ WHO and IFRC as secretariat of CoP on CBS
- ❑ CoP participants : UNICEF, US CDC, MSF, USAID, Global Fund, European CDC, Norwegian Red Cross, Robert Koch Institute, Resolve to Save Lives, Harvard Medical School, UKPHRS/LSHTM, etc.
- ❑ Objectives
 - Create a space to collaborate and exchange ideas, experience and opportunities,
 - Build consensus and share tools/ evidence generation
 - Strengthen partnerships for scaling-up or activating CBS in emergencies
 - Strengthen advocacy for community-based surveillance among partners
- ❑ Monthly meetings
- ❑ Interim Guidance on strengthening community based detection and response during Mpox outbreak



Way forward to strengthen community based early detection and response



- **Community Based Surveillance and Response as integral part of national surveillance and response system**
- **Leveraging community structures and networks for systematic community engagement**
- **Integration of community based interventions and services with primary health care**
- **Capacity building of community health workforce**
- **Enhanced global partnership and Investment for localized actions**

Thank you very much

Contact: rimk@who.int



Swiss TPH



The theory of integrated environmental-animal-humans surveillance - response systems: The example of the Adadle woreda in Ethiopia

Jakob Zinsstag, Yahya Osman

jakob.Zinsstag@swisspth.ch

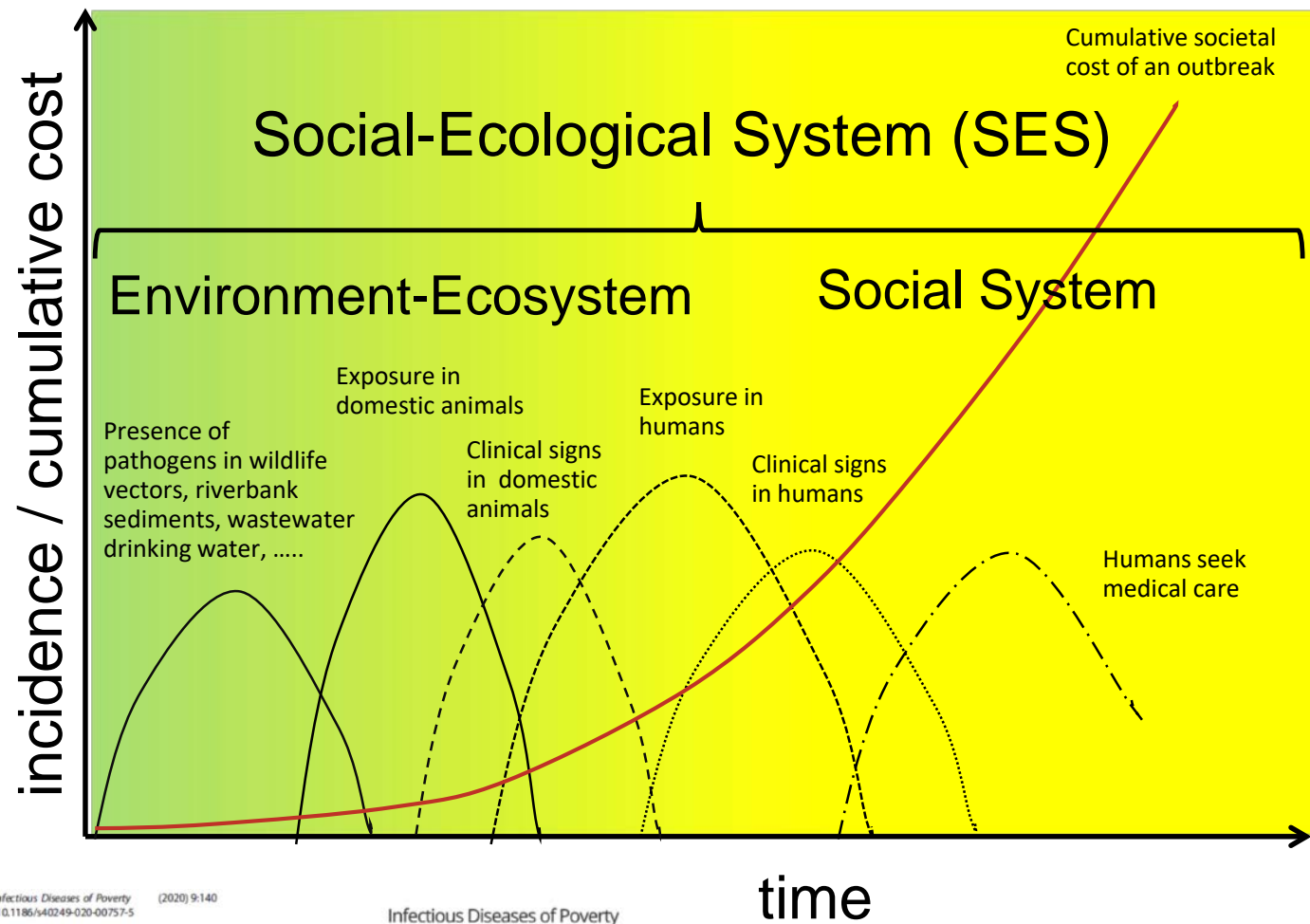
www.swisstph.ch

www.onehealthstory.com

Integrated human-animal-environmental surveillance-response systems

“research for [...] vaccines should urgently be complemented by modifications to smallholder livestock systems and live-animal markets to prevent or reduce interactions between [wildlife] and [livestock], which might be reservoirs for future human [...] pandemics”. “However, these implementations should be handled carefully to avoid impeding poverty ...”

Zinsstag J, Schelling E, Wyss K, Bechir M. Potential of cooperation between human and animal health to strengthen health systems. Lancet. 2005 2005;Sect. 2142-5.



Zinsstag et al. *Infectious Diseases of Poverty* (2020) 9:140
<https://doi.org/10.1186/s40249-020-00757-5>

Infectious Diseases of Poverty

time

OPINION

Open Access

Towards integrated surveillance-response systems for the prevention of future pandemics



Jakob Zinsstag^{1,2*}, Jürg Utzinger^{1,2}, Nicole Probst-Hensch^{1,2}, Lv Shan^{3,4} and Xiao-Nong Zhou^{3,4}

World-Bank People, pathogens and our planet: Volume 2: The economics of one health. 2012. p. 1–50. Report No. 69145-GLB:50.



One Health 1



Advancing One human–animal–environment Health for global health security: what does the evidence say?

Jakob Zinsstag, Andrea Kaiser-Grolimund, Kathrin Heitz-Tokpa, Rajesh Sreedharan, Juan Lubroth, François Caya, Matthew Stone, Hannah Brown, Bassirou Bonfoh, Emily Dobell, Dilys Morgan, Nusrat Homaira, Richard Kock, Jan Hattendorf, Lisa Crump, Stephanie Mauti, Victor del Rio Vilas, Sohel Saikat, Alimuddin Zumla, David Heymann, Osman Dar, Stéphane de la Rocque**

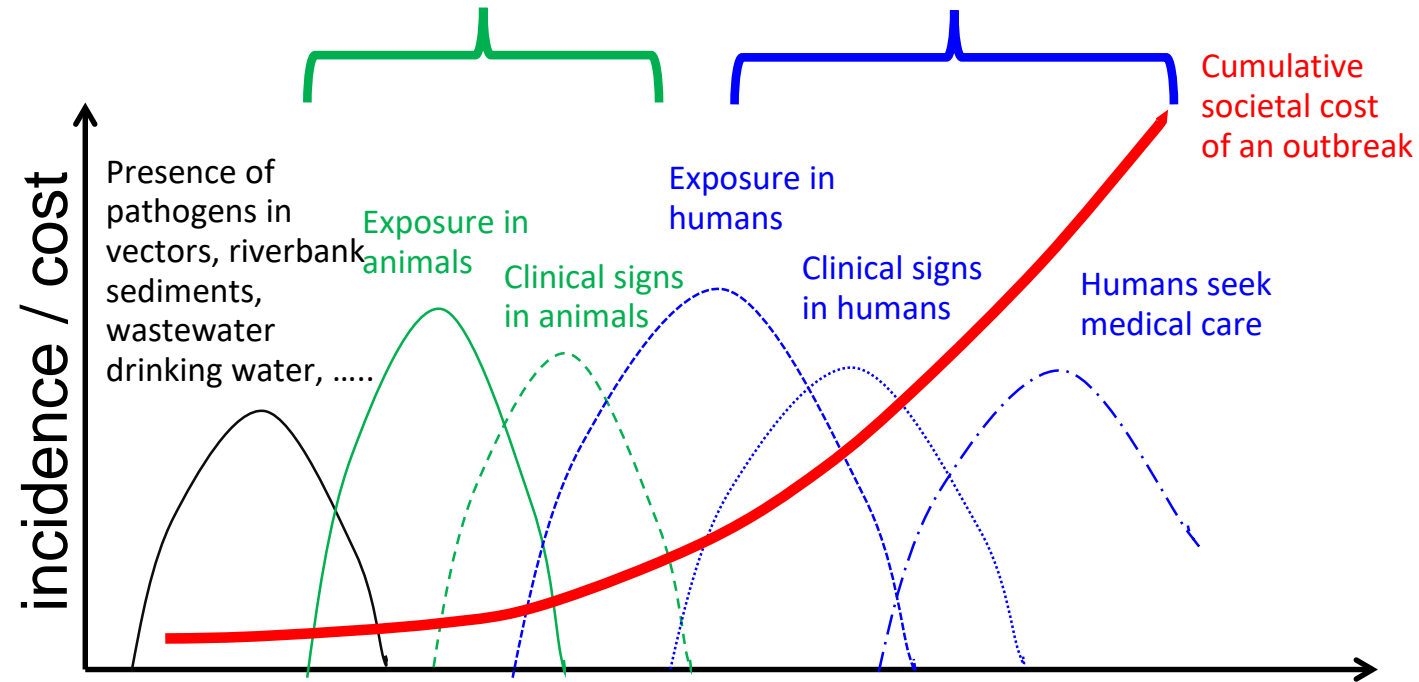
www.thelancet.com Published online January 19, 2023 [https://doi.org/10.1016/S0140-6736\(22\)01595-1](https://doi.org/10.1016/S0140-6736(22)01595-1)

1a) World Organization for Animal Health

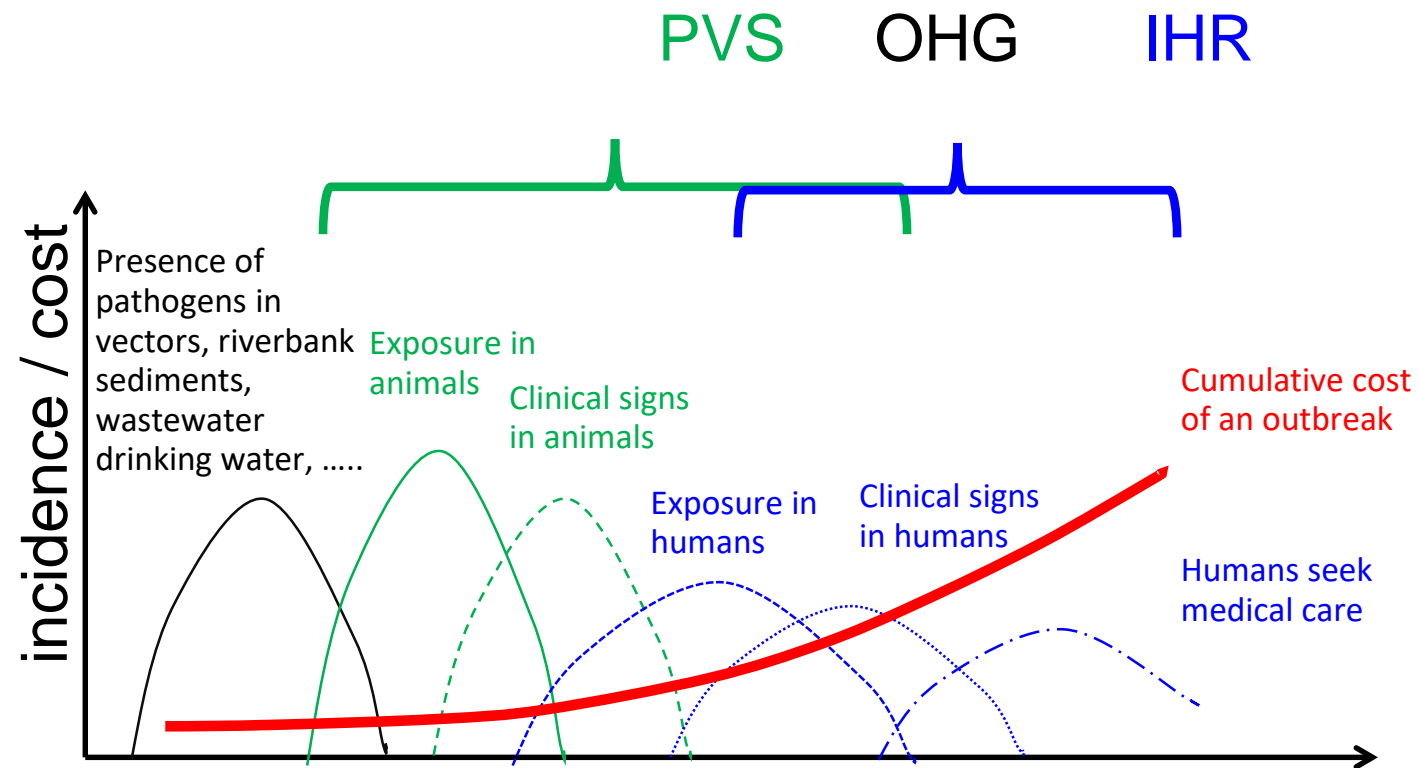
World Health Organization

PVS

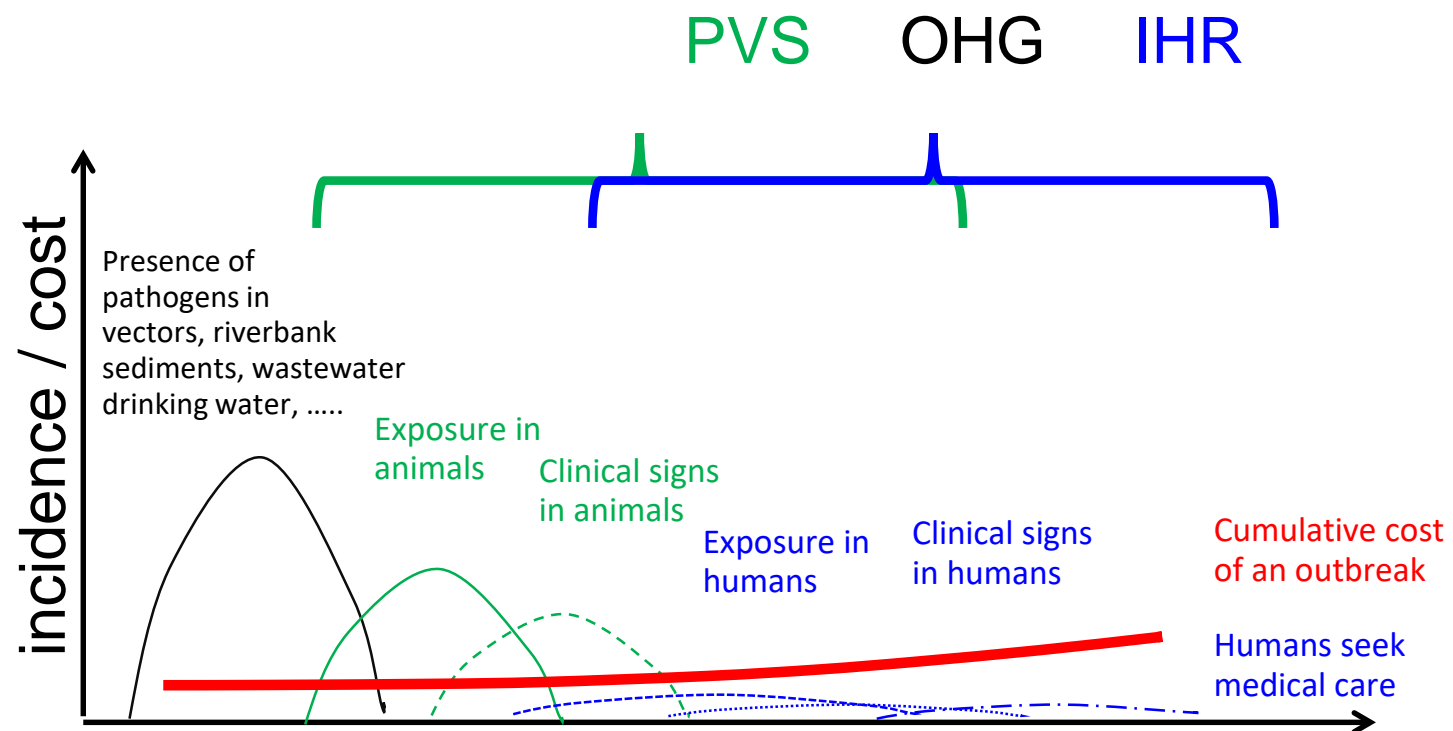
IHR



1b) Operationalization of One Health Governance (OHG)



1c)

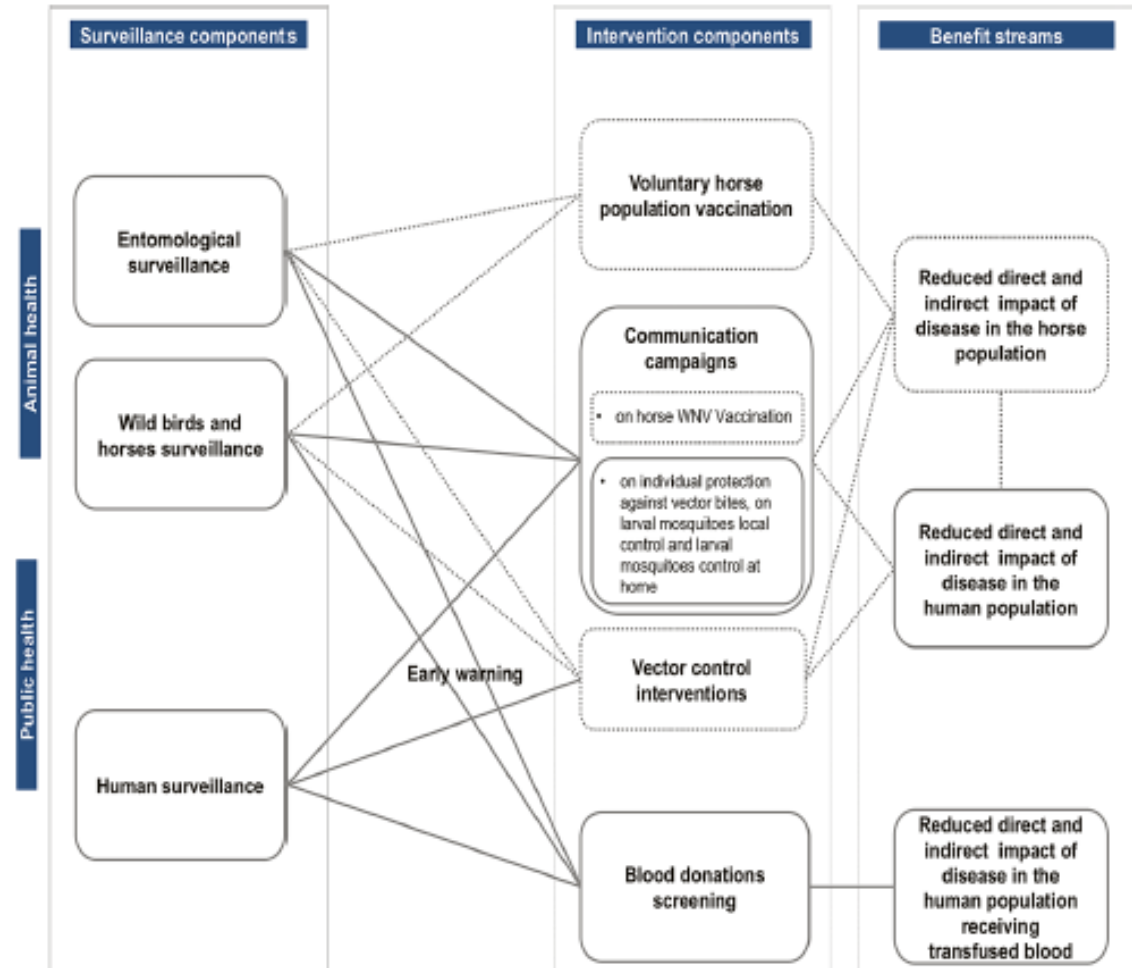


RESEARCH ARTICLE

Economics of One Health: Costs and benefits of integrated West Nile virus surveillance in Emilia-Romagna

Giulia Paternoster^{1,2,3}, Sara Babo Martins^{2,3}, Andrea Mattivi⁴, Roberto Cagarelli⁴, Paola Angelini⁴, Romeo Bellini⁵, Annalisa Santi¹, Giorgio Galletti¹, Simonetta Pupella⁶, Giuseppe Marano⁶, Francesco Copello⁷, Jonathan Rushton⁸, Katharina D. C. Stärk^{2,3}, Marco Tamba¹

Emerging diseases and
Re-emerging diseases because
of climate change
→ Rift Valley Fever,
West Nile Virus,
MERS,
Q-Fever,
Covid-19 ...



Urgently needed improvements of biosecurity and animal welfare in livestock production, transport and marketing.



FIRST PRE-DRAFT OF
THE GLOBAL ANIMAL LAW
GAL ASSOCIATION
AUGUST 23RD 2018

Jijiga University One Health Initiative (JOHI) Initiative

Swiss TPH



Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut
Institut Tropical et de Santé Publique Suisse

Associated Institute of the University of Basel

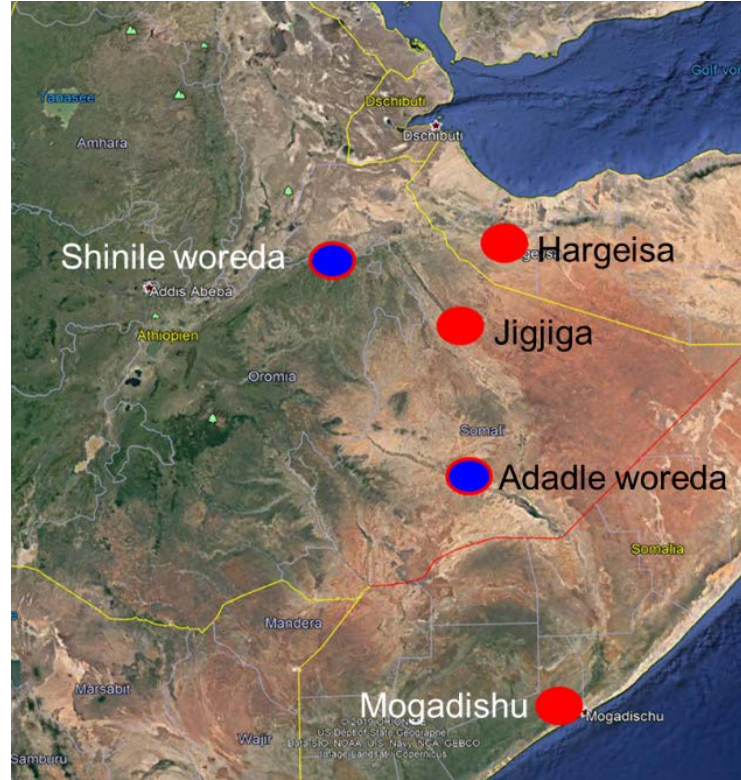


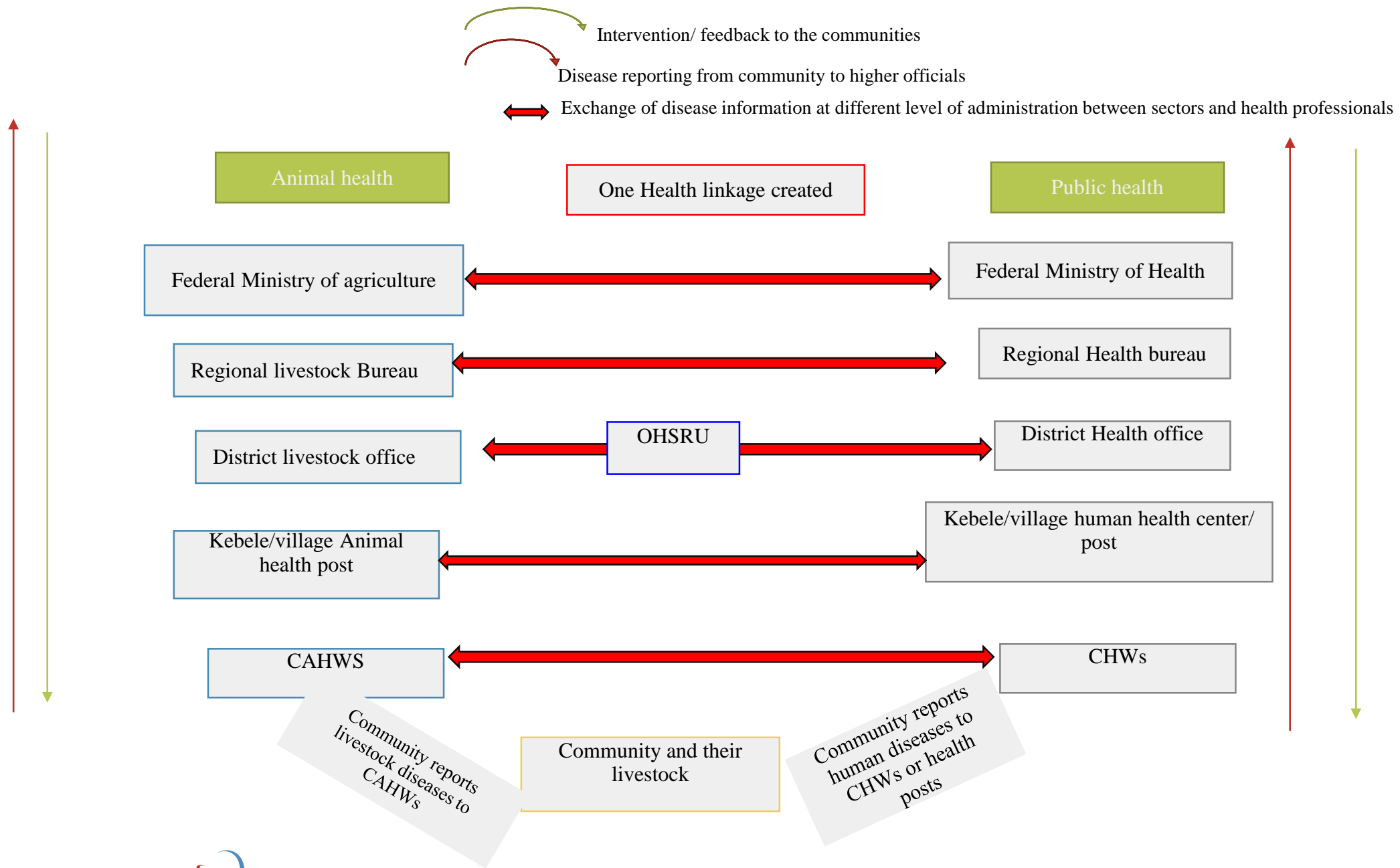
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

**Swiss Agency for Development
and Cooperation SDC**



Integrated Surveillance-Response System in the Somali Regional State of Ethiopia (SDC funding)

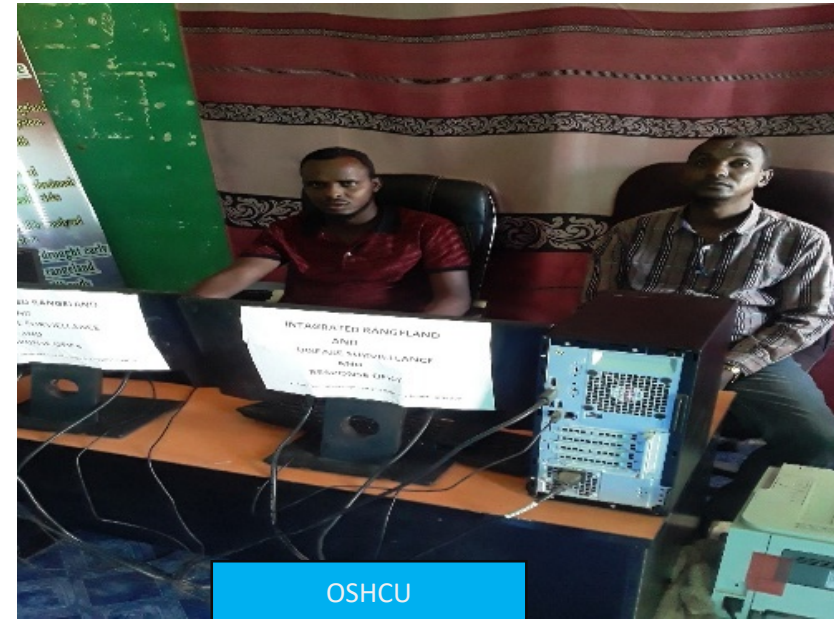




Community based iSRS

One health unit established

- Office furniture's and communication materials.
- Two staff (Livestock and animal health assigned).
- Surveillance team at village level established (CAHWS, CHW, human & animal health staff).
- Interdisciplinary training and inception workshop.
- Stakeholder workshop or meeting.



CHAWS & CHWS

List of human and animal diseases

Human diseases	Animal disease
Malaria	Contagious caprine pleuropneumonia(CCPP)
Dysentery	Contagious bovine pleuropneumonia(CBPP)
Typhoid Fever	Foot and mouth disease(FMD)
Meningitis	Camel pox
measles	Black leg
Acute flaccid paralysis	Bovine diarrhea
Small pox	Pasteurellosis
Anthrax	Botulism
Rabies	Anthrax
Avian influenza	Rabies
RFV	Avian influenza
SARS	RFV
COVID-19	
Unusual health events	Unusual health events



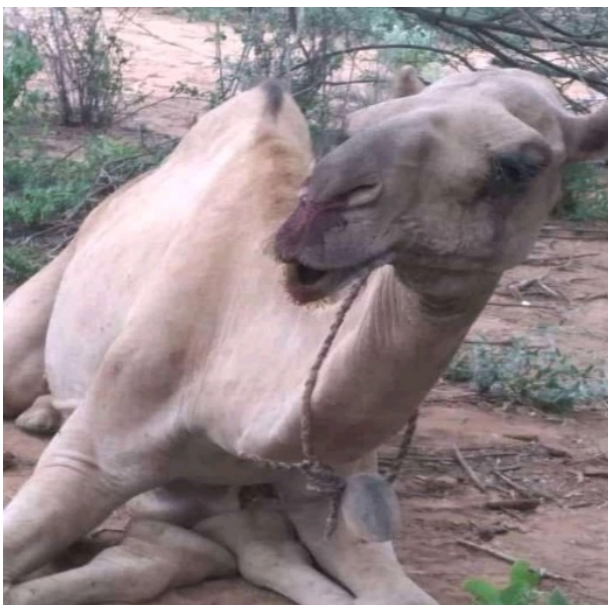
Anthrax



Anthrax



Anthrax



Unknown camel disease



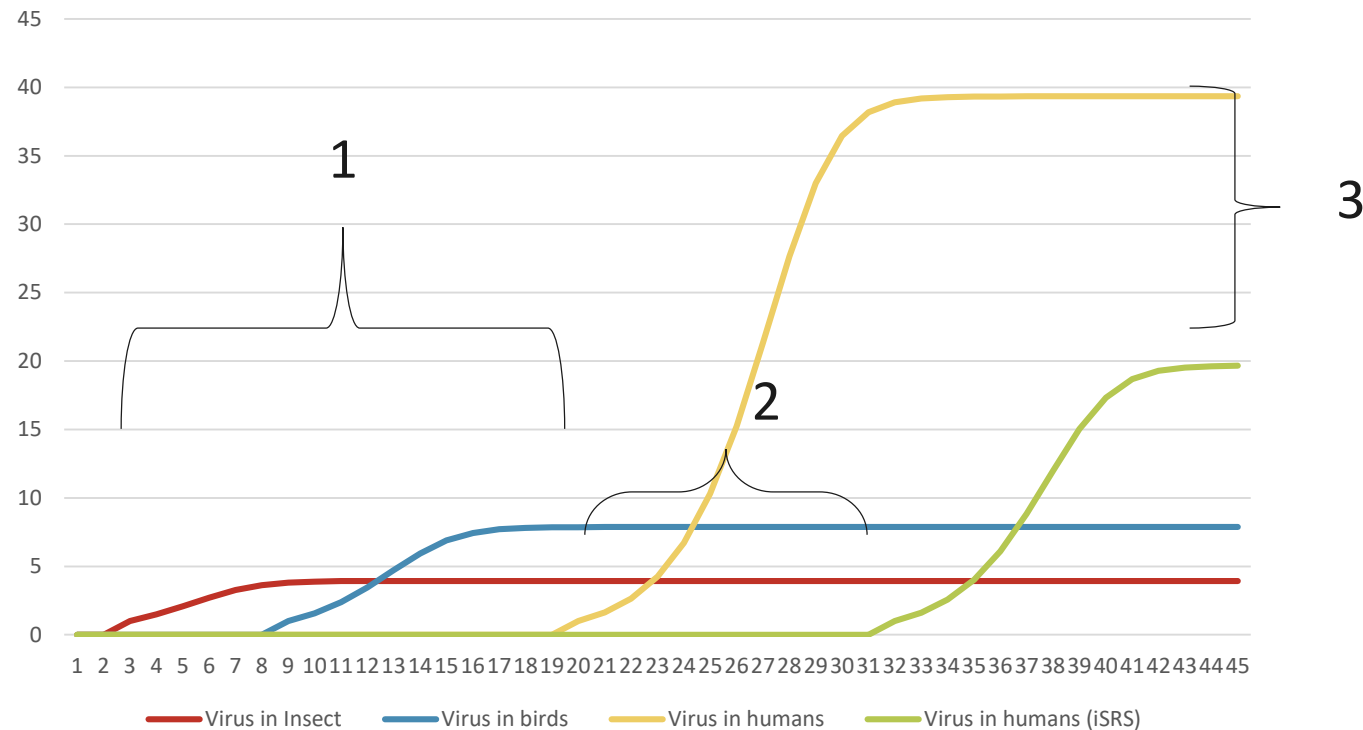
Camel Died of unknown disease



Sample collection

Integrated Surveillance-Response Systems

1. Reduce time to detection
2. Delay time to first emergence
3. Reduce exposure and burden
4. Are ultimately less costly than sectorial surveillance – response systems





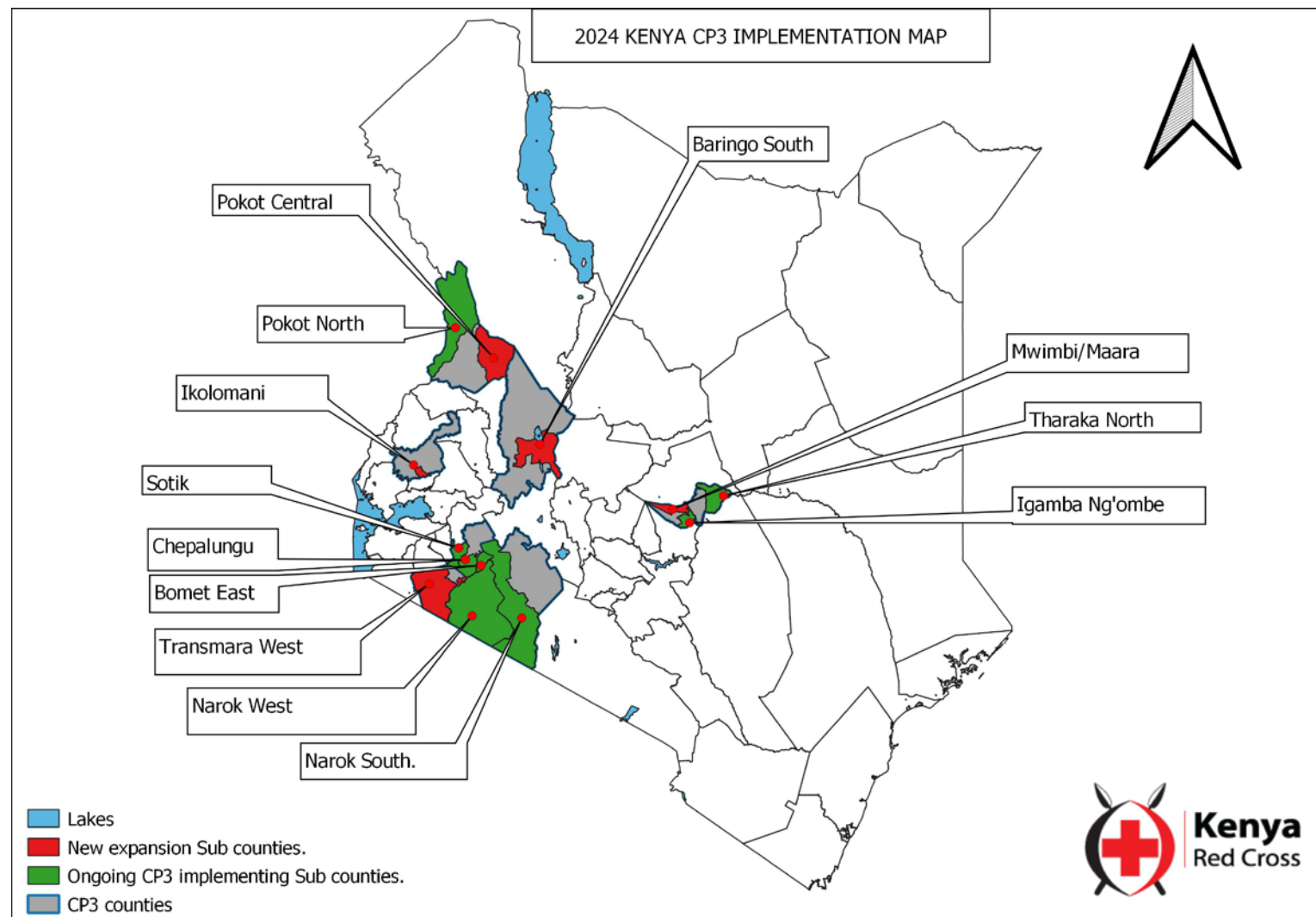
Engaging communities in outbreak preparedness: Early detection, warning and local response

Biwott Hazael, Community Based Surveillance Officer, Kenya Red Cross

Geographical areas

The approach:

- Kenya RC implements a community epidemic and pandemic preparedness programming (CP3) in 6 counties in Kenya.
- The program adopts a community-led approach to outbreak detection and response through the engagement of community health promoters, community members, community leaders and community based key stakeholders.
- CP3 aims to strengthen the ability of communities, KRCS, implementing counties, and other partners to prevent, detect and respond to disease threats and prepare for future risks.





The strategy:



- Use of a One Health approach in Risk Communication and Community Engagement (RCCE).
- Use of a One Health approach in Community-based Surveillance (CBS)
- Training of 2,042 Community Health Promoters (CHPs) in Epidemic Preparedness in Communities (EPiC) and CBS
- Training of 261 Community Health Assistants (CHAs) and 126 Animal Health Assistants (AHAs) in EPiC and CBS
- Coordination meetings
 - County and sub county one health units.
 - Community health units
- Adoption of Kenya's community health strategy (CHS) for sustainability

Code	Alert
Human alerts	
1	Severe watery diarrhoea
3	Fever with rash
4	Fever with rash (Mpox)
7	Sudden paralysis
9	Fever and unusual bleeding
41	Cluster of unusual illnesses or deaths of people
Animal Alerts	
61	Cluster of livestock abortions
63	Aggressive animal, rabies signs
67	Cluster of unusual animal illness or deaths
69	Deaths with unusual bleeding
ZERO REPORT	
0	I am active, but have seen no alerts this week

CBS ALERTS (2019-2024)





Thursday, 20 Jun • 18:57

ALERT !! Animal Alert
 -Unusual animal deaths reported in : **sosiana** -
 VillageID: 2535 No of Cases : 2535 Reported by VolunteerID:2319
 Phone Number : +254745041582 Date : 2024-06-20
15:57:53.673651+00:00
 Alert.NO : 22173

18:57 • Safaricom

Key successes in outbreak preparedness and response:

Anthrax outbreak in Narok, May-June 2024

- Claimed 6 heads of cattle.
- 4 of the carcasses properly disposed by burying.
- 70 people in 15 HHs affected after consuming meat from 2 carcasses. 13 people were hospitalized.
- Animal ring vaccination was conducted by government reaching 2,909 cattle.



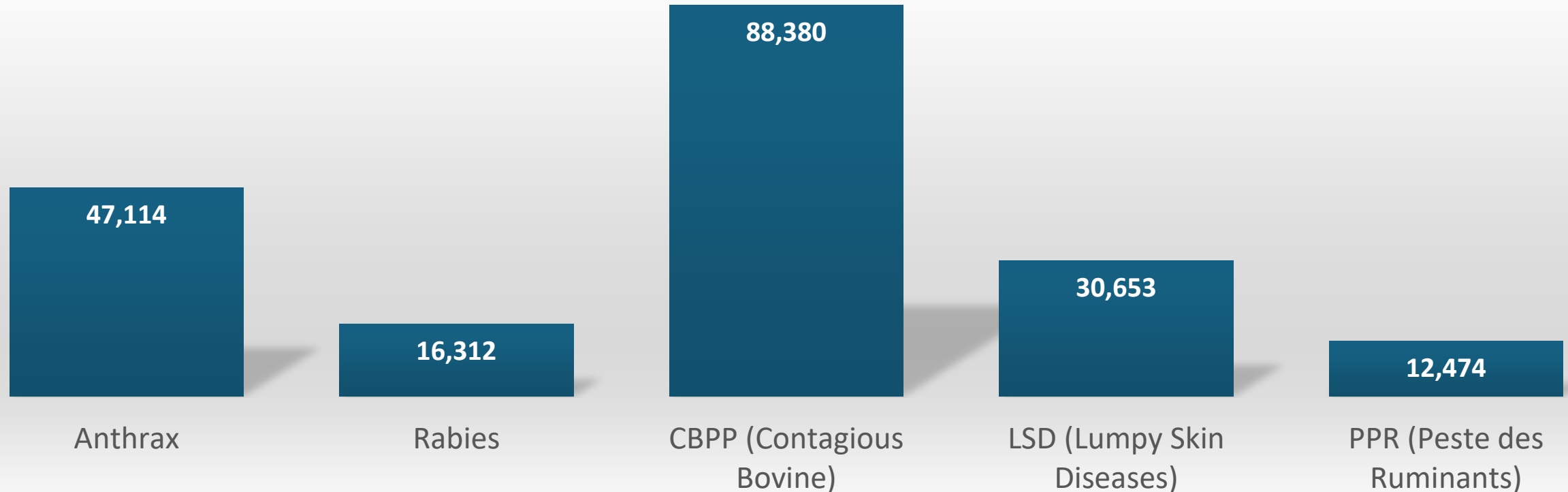


Key successes in outbreak preparedness and response



2024 CBS Triggered Animal Vaccination

No. of animals reached



Type of vaccination

Key achievements

- Enhanced data readiness to support decision making, e.g. in animal vaccination campaign.
- CBS data is being used to influence behavior change communication.
- Strengthened one health partnership:
 - VSF Germany has been supporting with rabies vaccines in Narok and Baringo counties.
 - Partnering with Boehringer Ingelheim in Narok and Bomet in school health programming and in provision of rabies vaccines.
- CBS data is being used to inform one health planning and financing:
 - Narok county procured human rabies vaccine due to sustained advocacy by COHU.
 - Bomet county procured animal rabies vaccines in financial year 2023/2024.

Thank you!

For more information, visit:

Epidemic and Pandemic Preparedness

www.ifrc.org/epidemic-and-pandemic-preparedness/

*Scan here to watch a
testimonial*



USAID
FROM THE AMERICAN PEOPLE



Kenya
Red Cross

+C IFRC



Investments in early warning surveillance including community based systems

WHO EPI-WIN webinar

Nov 14, 2024

Surveillance investment snapshot

- The Global Fund answered country demand for strengthening **surveillance systems targeting gaps** in post-COVID assessments and National Action Plans for Health Security
- **\$270M** budgeted for surveillance, end 2025
- Focus of investments is **early warning surveillance and data systems** for **detection and reporting** of epidemic-prone diseases

\$270 million USD

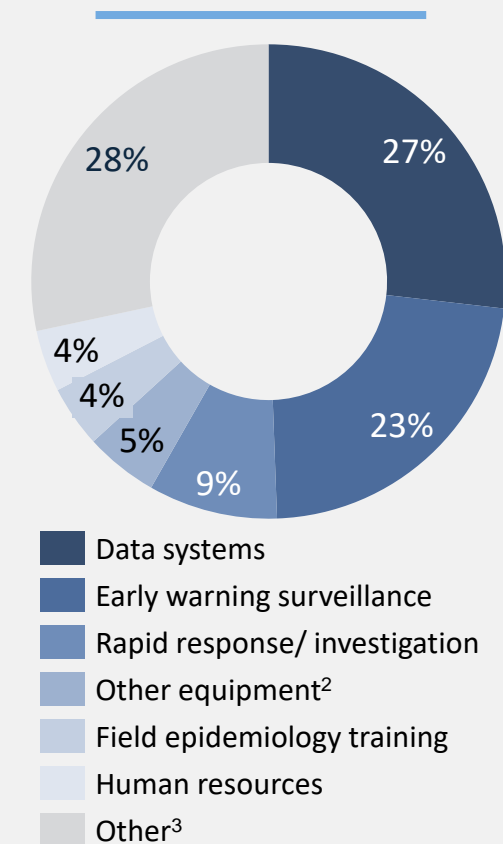
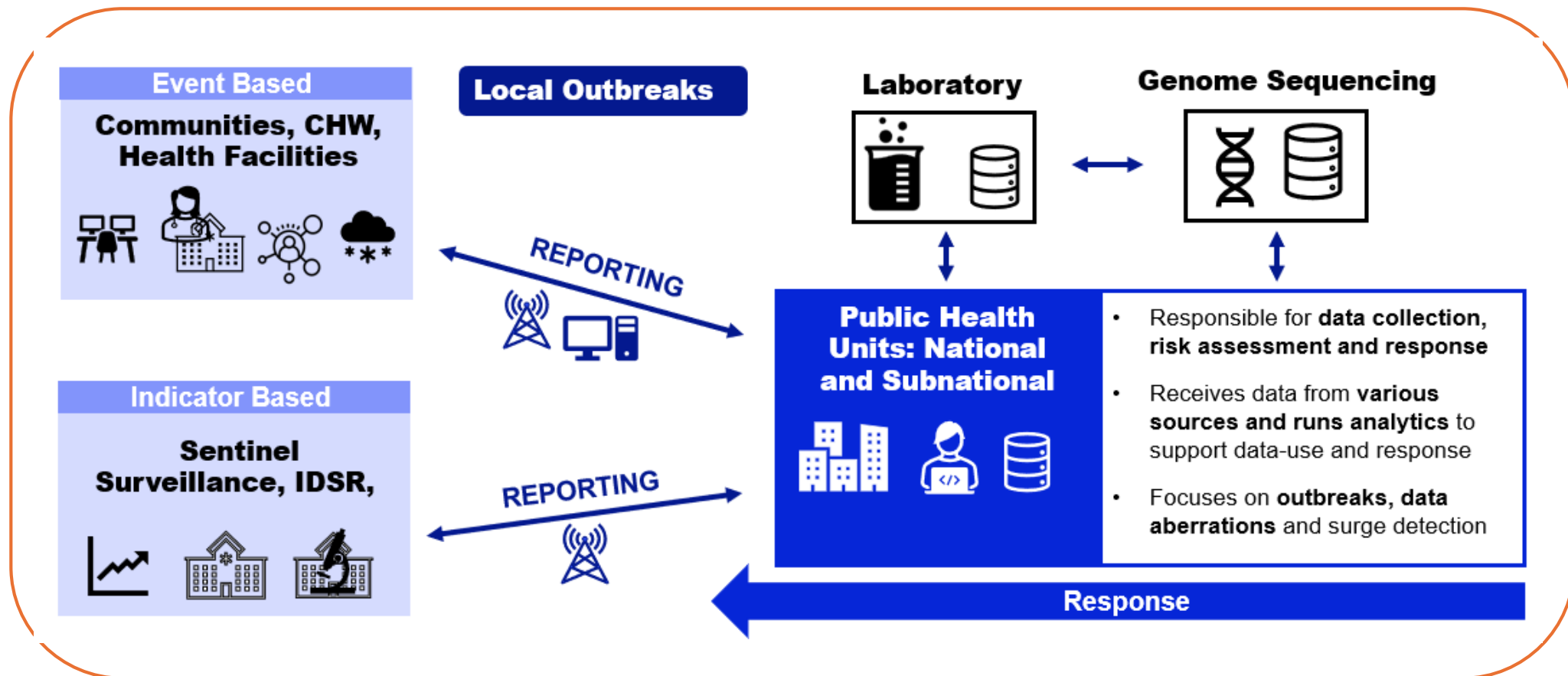


Illustration of early warning surveillance approach supported by The Global Fund



Early warning surveillance approach is multi-sectoral



- Human Health
 - Private & public health facilities
 - Communities: Community health workers & communities at large
 - Laboratories

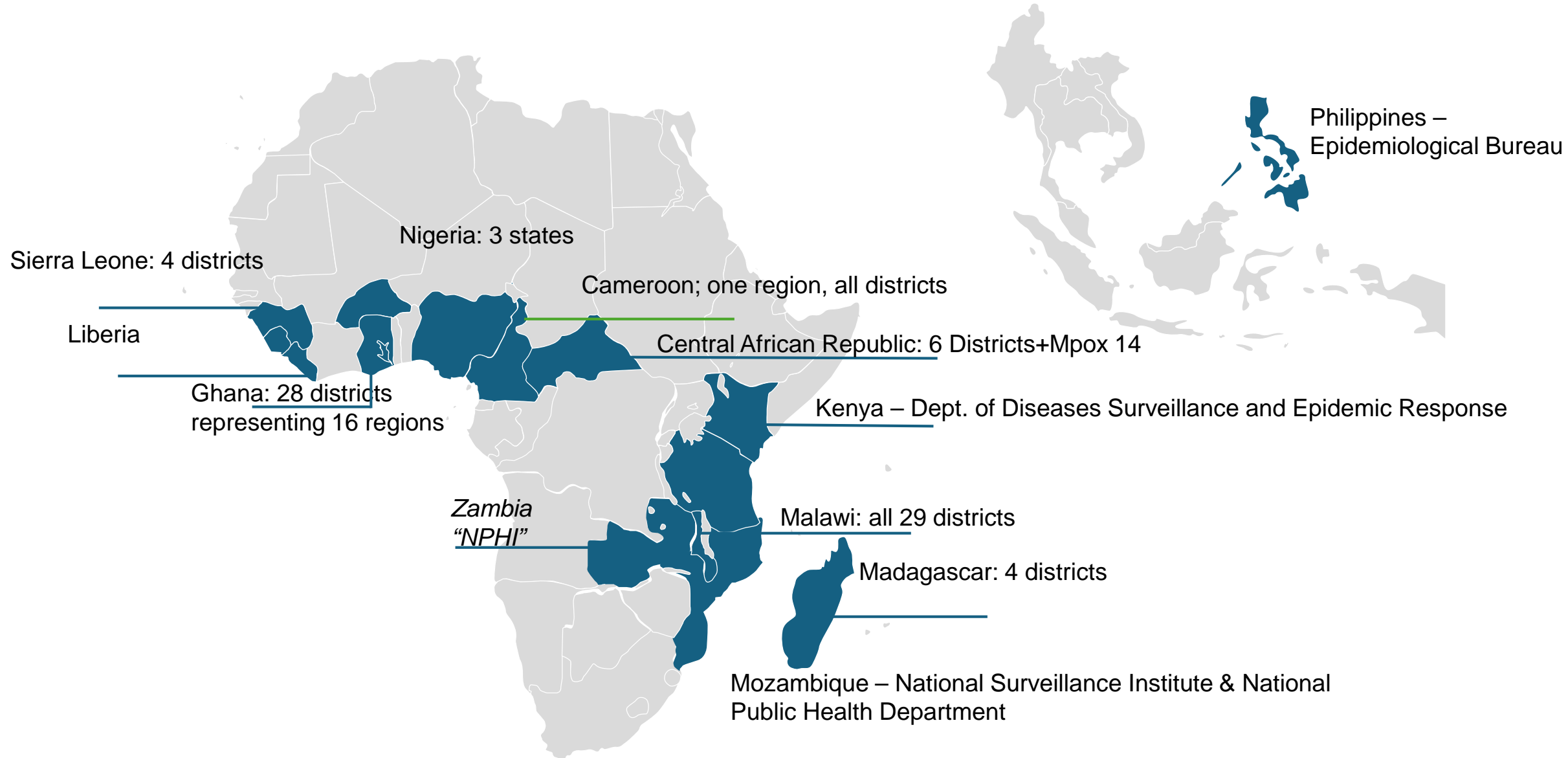


- Animal Health



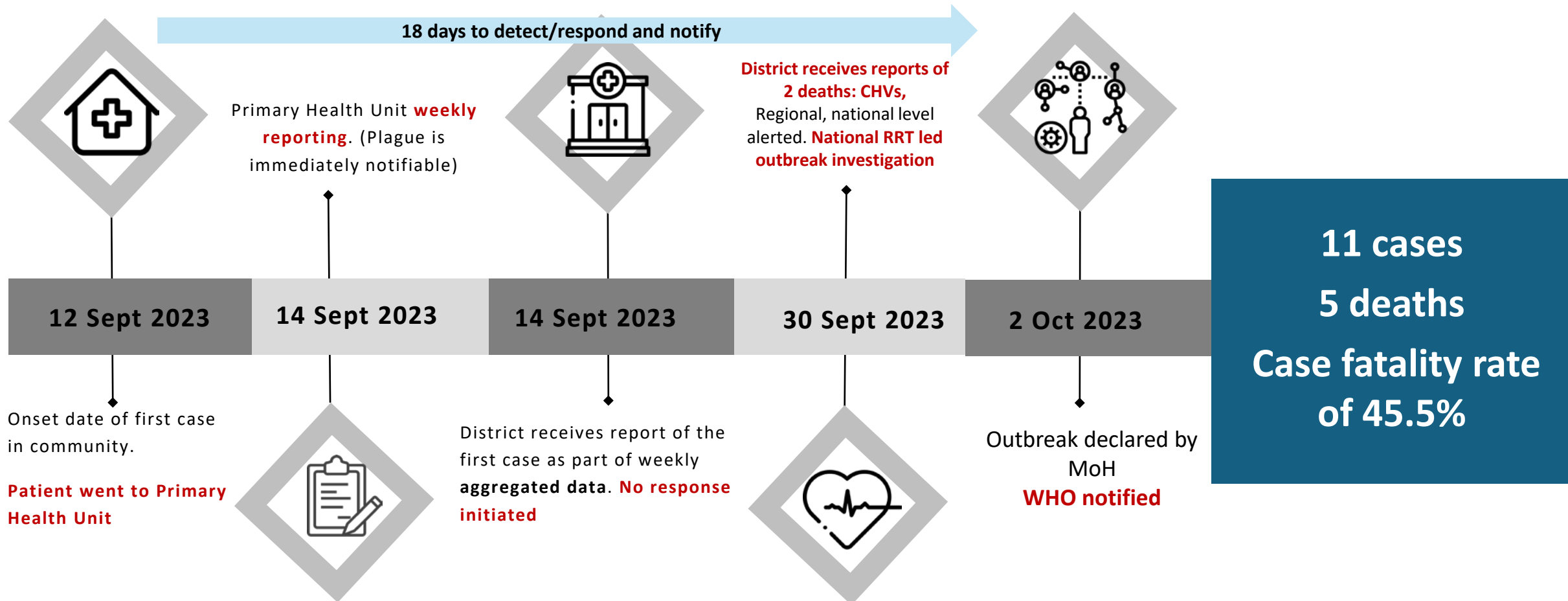
- Environmental Health including climate

Global Fund Investments are enhancing community based surveillance





Key role of Community Health Volunteers in detecting a plague outbreak in Madagascar*



Lessons learned from a plague outbreak in 2023 guide investments in event-based surveillance in Madagascar.

Manuela Christophere Andriamahatana Vololoniaina Nivoarisoa, Franck Chi Amabo, D.B. Ranoaritiana, F.A Raveloharivony, Fatim Louise Dia, Anthony Mounts, S. Arunmozhi Balajee. Plos Global Health (under review)

One year of implementation of community-based surveillance* early lessons

- 1 Careful design of event-based surveillance important for utility and sustainability
 - Signals need to be designed to balance sensitivity vs specificity
 - Number of signals need to be negotiated
 - Deliberate inclusion of communities/key focal points for event detection with community health workers (CHWs) as gatekeepers to public health system
 - Mentoring/routine supervision in addition to trainings key
- 2 Optimal implementation requires capacity building of the entire public health eco-system
 - Triage and verification
 - Investigation
 - Risk Assessment
 - Response
- 3 Continued challenges in the sustainability of CHW
 - CHW very busy with large workloads and routine functions sometime jeopardizing surveillance
 - Siloed support of CHWs by donors
- 4 Need to implement to scale under the coordination of Ministries of Health

*CBS is the systematic detection and reporting of events of public health significance within a community by community members, *A definition for community-based surveillance and a way forward: results of the WHO global technical meeting, France, 26 to 28 June 2018.*

Looking Forward

- Continue to encourage partner countries to use normative WHO and Africa CDC guidance to design optimal event-based surveillance systems*
- Invest in continuous monitoring to continuously improve systems
- Invest in the entire public health eco-system including capacity building at sub-national levels
- Begin to work with other MoH departments to ensure complementarity of CHW engagement
 - ✓ Leveraging previous TGF investments in HIV, TB, Malaria
- Working with a Technical partner (Taskforce for Global Health, TFGH) to develop measurement standards to better document impact of event-based surveillance

*WHO AFRO, Africa CDC, TFGH Webinar: EBS Signal Development for Community-level Surveillance of Novel Emerging Threats

Wednesday, 20 November 2024

cjennings-consultant@taskforce.org

Examples of GF surveillance investments on the ground



Philippines: Meeting with Barangay health workers to understand outbreak reporting



Madagascar: Sensitizing community health volunteers on "One Health" approach



Sierra Leone: Community health worker, Animal Health workers, Wildlife Sentinel trainings

Thank you

SAVE THE DATES

Webinars for **November to December 2024**

Date & Time (CET)	Webinar	Registration
14 Nov 2024 13:00 – 14:30	Engaging communities in outbreak preparedness: Early detection, warning and local response	 link
21 Nov 2024 14:00 – 15:00	Launch of MERS-tracker: An interactive dashboard to support evidence-based decision-making	 link
26 Nov 2024 13:00 – 14:30	Strengthening RCCE response to the mpox outbreak in the African continent: countries' experiences	 link
28 Nov 2024 13:00 – 14:00	One Health Intelligence: how WHO, FAO and WOA work together for global early warning on emerging health threats	 link
05 Dec 2024 13:00 – 14:00	Integrated Sentinel Surveillance for Influenza and Other Respiratory Viruses – standards and implementation	 link
12 Dec 2024 13:00 – 14:00	Pathogen Genomics in Health Emergencies: spotlight cholera	 link

