

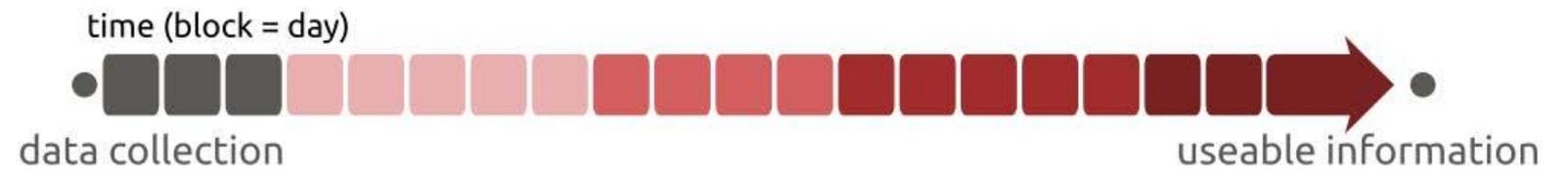
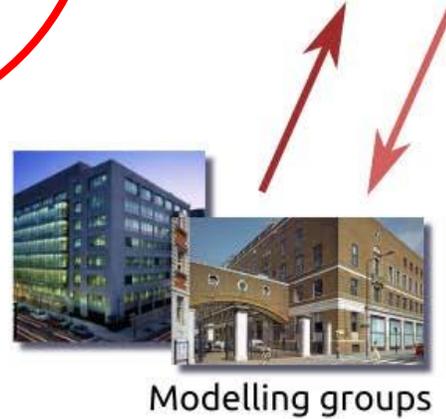
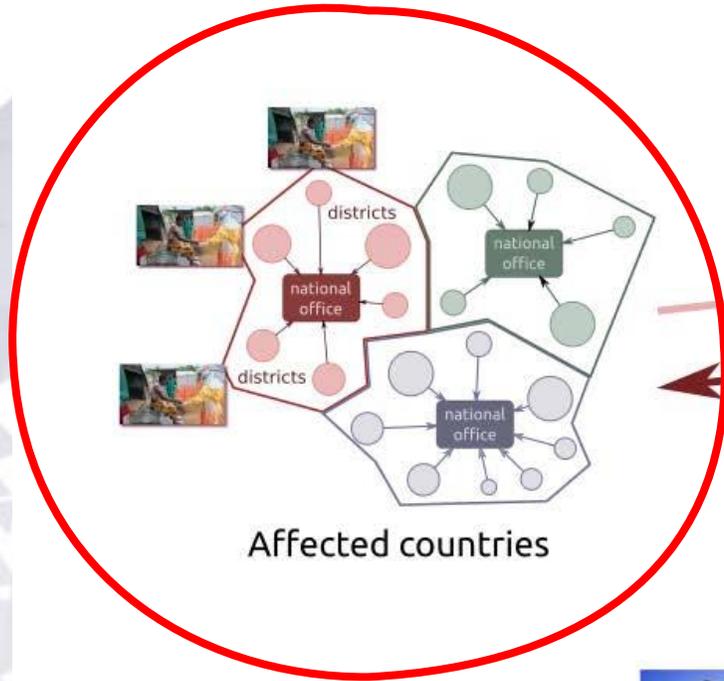
A man in a white t-shirt is seen from behind, standing in front of a crowd of people outdoors. The t-shirt has the text "Early Detection, Early action Healthier Communities." printed on it. The background is filled with green foliage and people, suggesting a community gathering or event.

Community-based surveillance (CBS) in the Red Cross Red Crescent Membership

2023

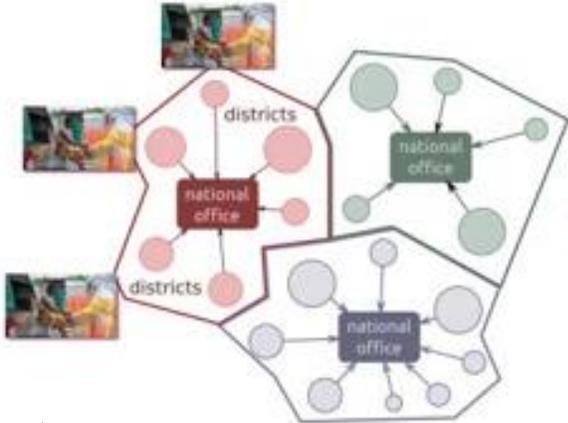


Action?

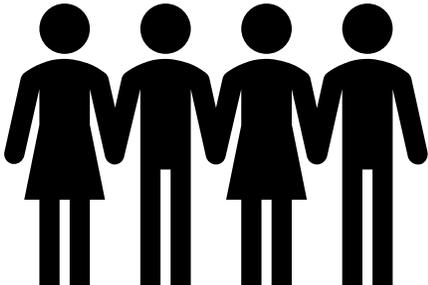
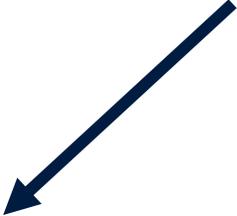


But Zoom in...

Outbreaks start in communities

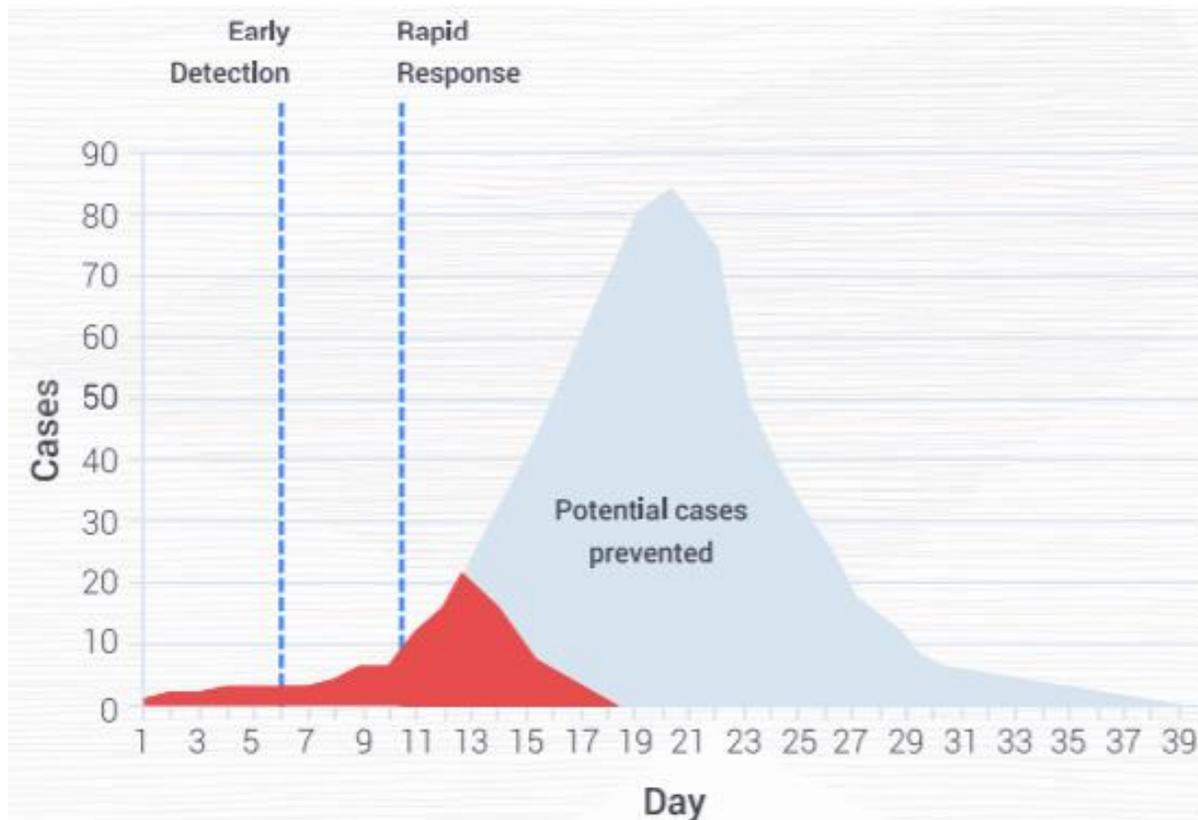


Affected countries



What is community-based surveillance and why are we talking about it?

CBS is the systematic detection and reporting significant public health events *within a community by community members**



Source: [PAHO, EWARs implementation in a complex emergency](#)

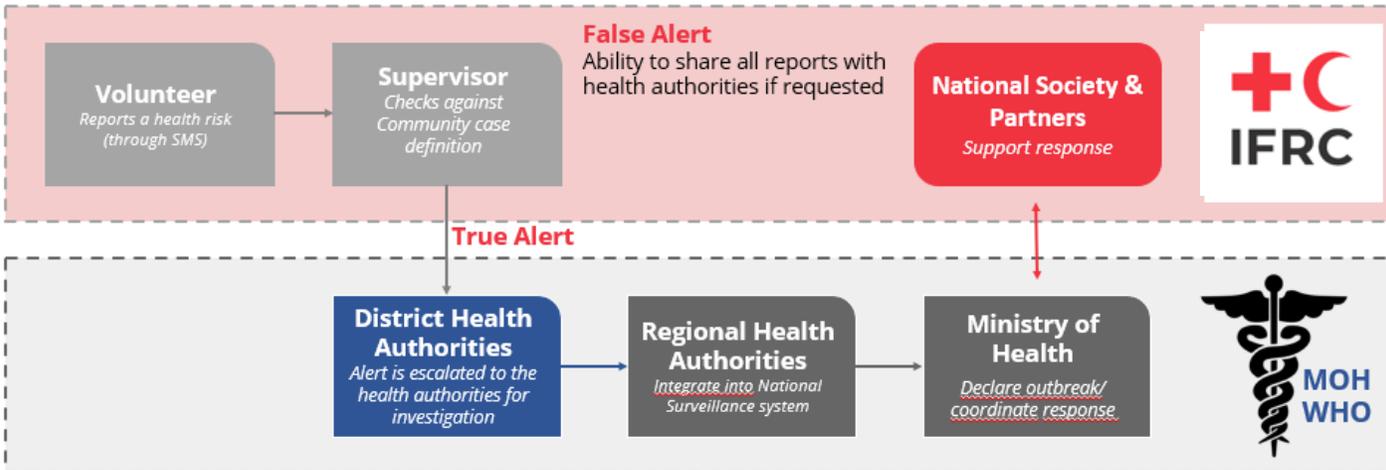
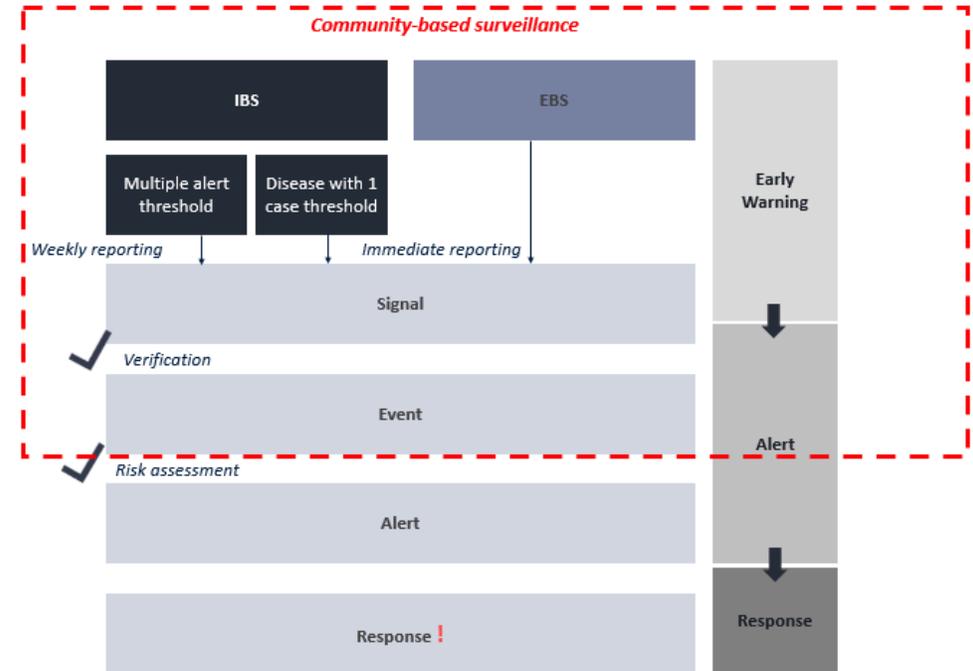
- CBS can extend existing surveillance systems beyond the health facility
- Opportunity to link surveillance with community actions
- Opportunity to engage volunteers systematically in preparedness, early detection and early response
- Early warning leads to early action which results in lives saved
- Community volunteers identify and report on simple health risks of public health concern (they do not need to be medically trained)

Integrating Community-based Surveillance with other systems



- ✓ CBS is designed to extend the existing surveillance system beyond facilities to communities
- ✓ Can integrate into existing systems such as eIDSR, DHIS2, etc. based on the needs and requests by Ministry of Health/ National CDC/Ministry of Agriculture
- ✓ This means CBS is not a separate system, rather it gives us a bigger picture as community information becomes part of the whole surveillance and referral system

EWAR structure



Other public health authorities

Information Flow (Example)

What makes Red Cross and Red Crescent National Societies a good fit for CBS?



- Well placed due to **extensive volunteer network**
- Long term **relationship with communities** and ability to deliver key information
- **Experience** delivering education, empowering and **strengthening communities**
- Relationship with MoH and government partners and previous experience in passing on key information about suspected cases.

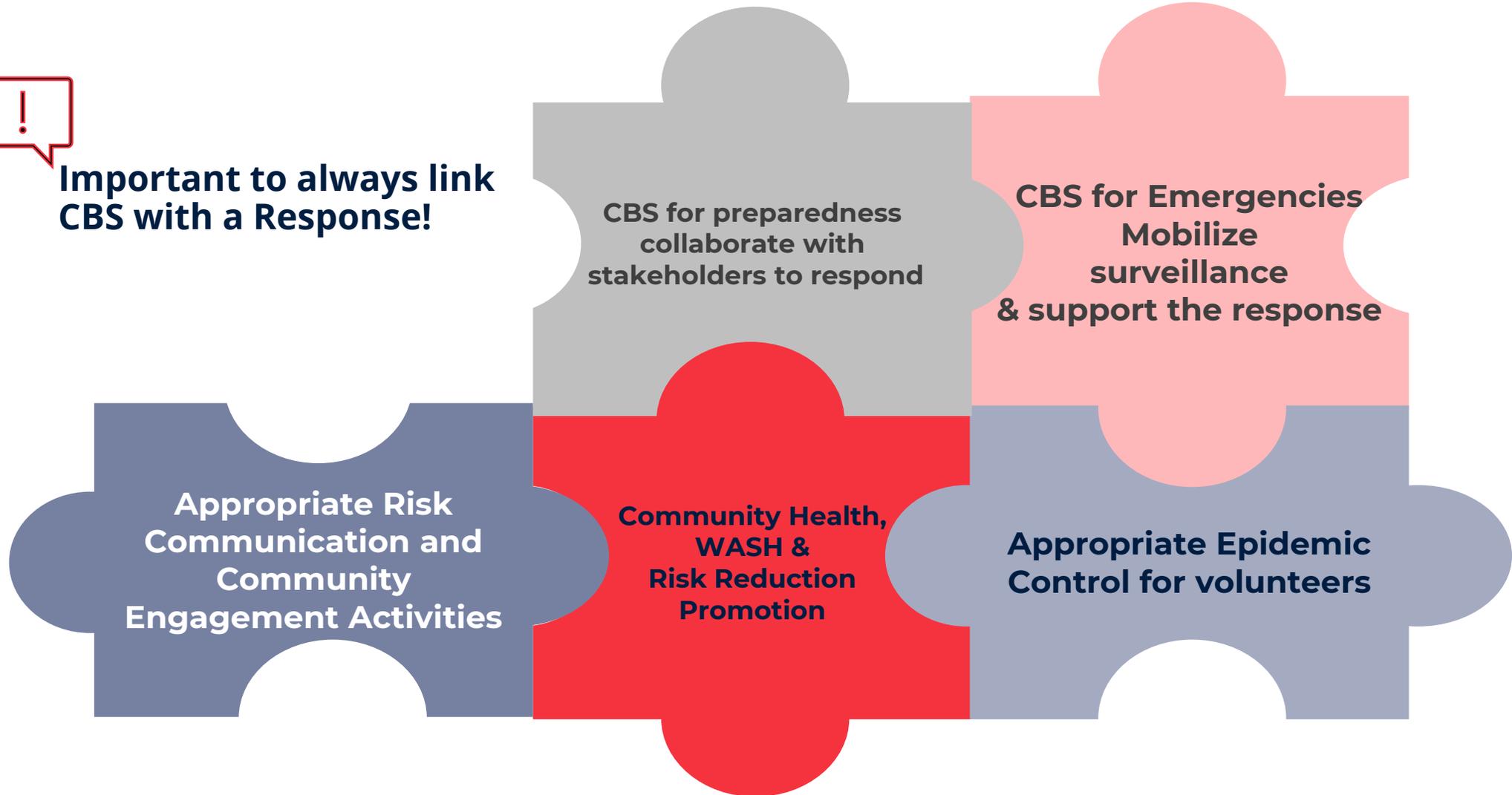


Using a building-blocks approach:

Building CBS capacity on a foundation of health programming



**Important to always link
CBS with a Response!**



The Red Cross Red Crescent Approach to CBS: Report on Health Risks, not cases/ disease

‘**Community case definitions**’ are based on WHO, IFRC and work with Ministry of Health.

- Primarily **indicator based**, but can also be event based
- **Adapted in each country** to fit with Ministry, local wording and understanding, local volunteer skills and literacy.
- **Having general community members engages in these systems is a strength!**

Priority illnesses are ideally limited to only few major outbreak-prone diseases or events – **relevant for early warning, & early action.**

- Decided **in collaboration** with Ministry departments
- Based on burden of past epidemics, impact and scale of potential outbreaks



Common Data management solutions for CBS reporting



Nyss 

Kobo

Paper & Excel

Satu SBM

nyss Project Dashboard

Mandawi example National Society > Projects > Mandawi test project > Project Dashboard

Project Dashboard

Start date: 2020-03-27, End date: 2020-04-03, Dates grouped: By day, Location: All

Health risk/event: All, Data collection type: All, Report type: Main reports, Training reports

Reports

Success	470
Error	0

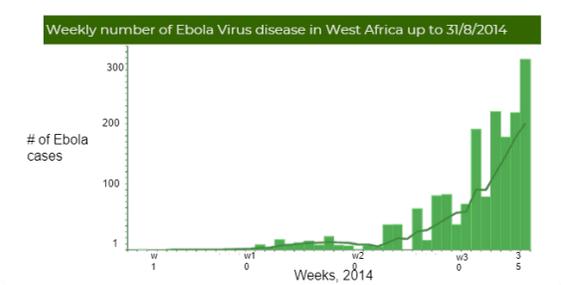
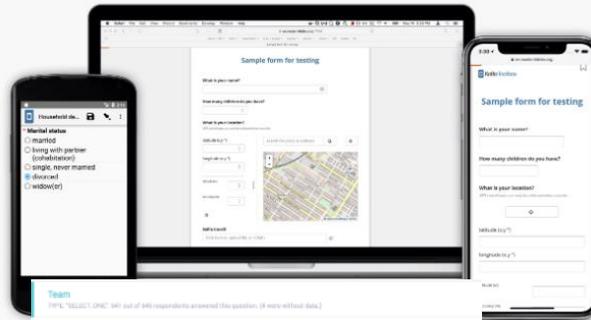
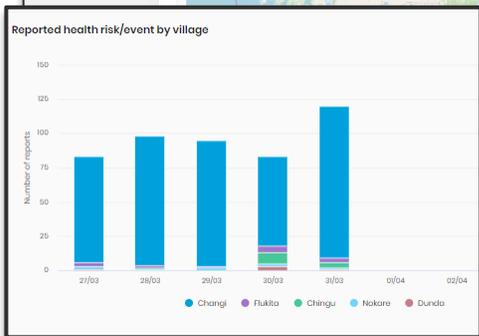
Data collectors/points

Active	11
--------	----

Alerts

Escalated	0
Dismissed	0
Closed	0

Reported health risk/event by location



SATU SBM Dashboard - 30 hari terakhir

RISIKO KESEHATAN

DBD	34
Tuberkulosis	28
Flu Burung	20
Amtras	16

ALERT AKTIF

Belum diverifikasi	50
Takutasi	34
Total	84

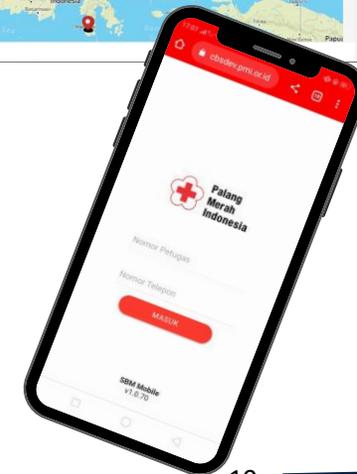
STATISTIK ALERT

POSITIVE	70
NEGATIVE	14

JUMLAH RELAWAN TERDAFTAR

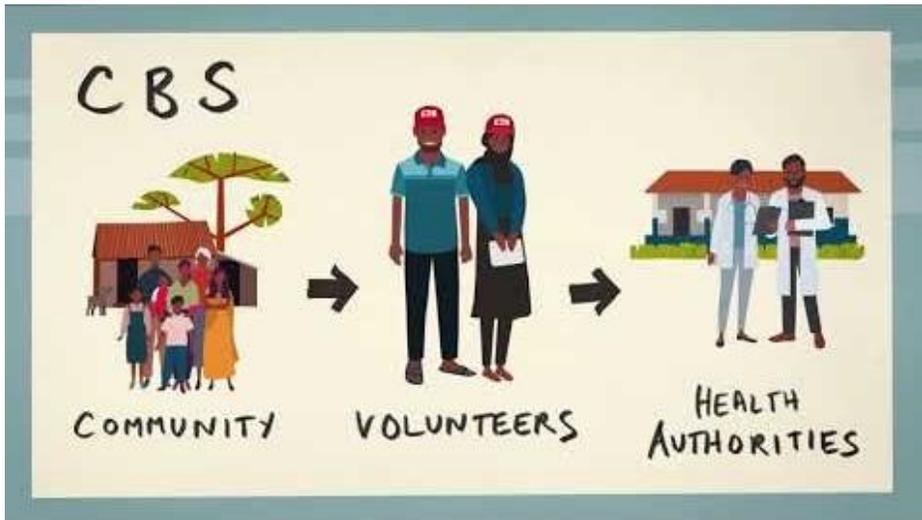
RELAWAN AKTIF	53
RELAWAN PASIF	142

ZERO REPORT 0% | **ALERT MANUSIA** 65% | **ALERT HEWAN** 35%



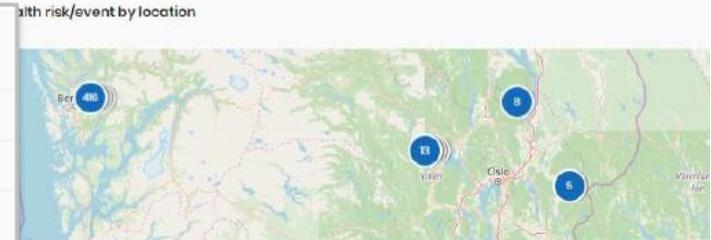
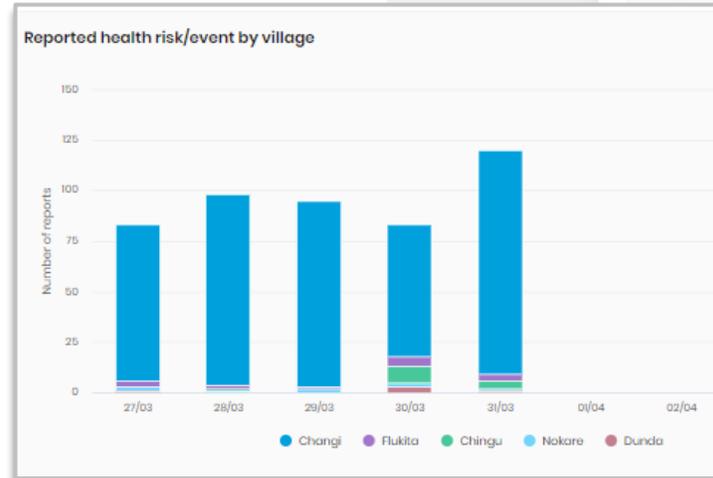
Red Cross Red Crescent

COMMUNITY BASED SURVEILLANCE



<https://youtu.be/784IzOIkzJE>

The screenshot shows the 'nyss' Project Dashboard for a 'Mandawi test project'. The interface includes a sidebar with navigation options: Project Dashboard, Alerts, Data collection, Project reports, and Project settings. The main content area features filters for Start date (2020-03-27), End date (2020-04-03), Date grouped (By day), and Location (All). It also has filters for Health risk/event (All), Data collection type (All), and Report type (Main reports selected, Training reports unselected). Summary cards show: Reports (Success: 479, Error: 0), Data collectors/points (Active: 11), and Alerts (Escalated: 0, Dismissed: 0, Closed: 0).



How does Nyss work?



Volunteers

Volunteers are trained to recognise signs and symptoms of epidemic-prone diseases and to be the focal point in their community for responding to and reporting health risks and events.



Reports

Volunteers report by sending short, coded SMS.

Nyss replies to the volunteers, providing them with health promotion messages so they can initiate the appropriate first aid response.



Aggregation & analysis

The SMS reports are automatically fed into Nyss, which aggregates and analyses the incoming reports in a visual dashboard, accessible by health authorities and the Red Cross or Red Crescent Society.



Alerts & response

Nyss automatically triggers alerts, informing volunteer supervisors and health authorities about increases in reports above predefined thresholds.

Health authorities can then initiate a response.

Nyss as a project management tool

The screenshot shows the Nyss project management tool interface. On the left is a sidebar with navigation options: Project dashboard, Alerts, Data collectors, Project reports, and Project settings. The main content area displays the breadcrumb path: National Societies > Mandawi example National Society > Projects > Mandawi test project > Project dashboard. Below this is a 'Project dashboard' section with a 'Filters' bar showing the date range '2021-06-02 - 2021-06-09' and a 'By day' filter. The dashboard is divided into four summary cards: 'Health risk/event reports' (Kept: 0, Dismissed: 0, Not cross-checked: 0, Total: 0), 'Data collectors/points' (Active: 0), 'Alerts' (Open: 4, Escalated: 0, Closed: 0, Dismissed: 0), and 'Geographical coverage' (Villages: 0, Districts: 0). At the bottom is a map titled 'Reported health risk/event by location' showing a geographical view of Europe and the Baltic region with various countries and regions labeled.

MAP OF EXISTING AND PLANNED COMMUNITY-BASED SURVEILLANCE IMPLEMENTATIONS IN 2023-2024



**CURRENT
IMPLEMENTATIONS** —○
16 countries

**FUTURE
IMPLEMENTATIONS** ■
27 countries



Successful linking early Detection to vaccination campaigns where it is needed most

Early Detection of Anthrax & Mass vaccination campaign in Kenya



- August 15th 2019, A community member shared that a local **young herder and two students had eaten meat from a dead cow and were now sick.**
- All three were diagnosed with anthrax at the health facility.
- A RC volunteer trained in CBS escalated the alert to both human and animal health authorities and it was incorporated into the national surveillance system
- Immediately local traditional community assemblies were created to gain trust within the community
- **Within days, the county vaccinated 10,600 cattle and 14,000 sheep in the vicinity.**
- The outreach work was so successful that the community recognized the risk, prioritized mitigation efforts and has taken over financing its own animal vaccinations.



Detection of the first COVID-19 case in Somaliland through CBS



TRAINING

131 SRCS CBS volunteers were trained on symptoms of Covid-19 and asked to report to the Nyss platform
March 8th

SMS REPORT

The volunteer visited the person and confirmed that the symptoms matched Covid-19 and sent an SMS report to the Nyss platform
March 26th 6PM

RESPONSE

The Ministry of Health went to the village to investigate. The person was asked to self-isolate at home. The person had recently travelled abroad and was tested for Covid-19 early the next day
March 26th 8PM

FUTURE

Volunteers continue to provide key health messages and report on symptoms in communities

DETECT

An SRCS volunteer detected that a person in her community was unwell with cough, fever and difficulties when breathing
March 26th 6PM

ALERT

Nyss immediately triggered an alert to the SRCS supervisor, who crosschecked the information with the volunteer
March 26th 6PM

CASE CONFIRMED

Following the investigation, the MoH confirmed that the person tested positive for Covid-19
March 31st



Successful linking early Detection to vaccination campaigns where it is needed most

Early Detection of Measles by Somali Red Crescent Society

- In August 2021, SRCS Community Based Volunteers **reported 5 alerts of fever and rash through the CBS system** in a village in Oodweine District of Togdheer region in Somaliland.
- The supervisor cross-checked signs and symptoms and immediately escalated the alert to health authorities leading to **clinical confirmation of 2 cases**.
- This sparked a **mass vaccination campaign** with the SRCS deploying mobile medical teams to conduct immunization and health promotion campaigns in the regions. **A total of 2,637 children aged between 9 months and 9 years were vaccinated against measles**
 - 5,568 people were reached with community mobilization, awareness raising, and health education against measles.
- **No other new cases were reported.**

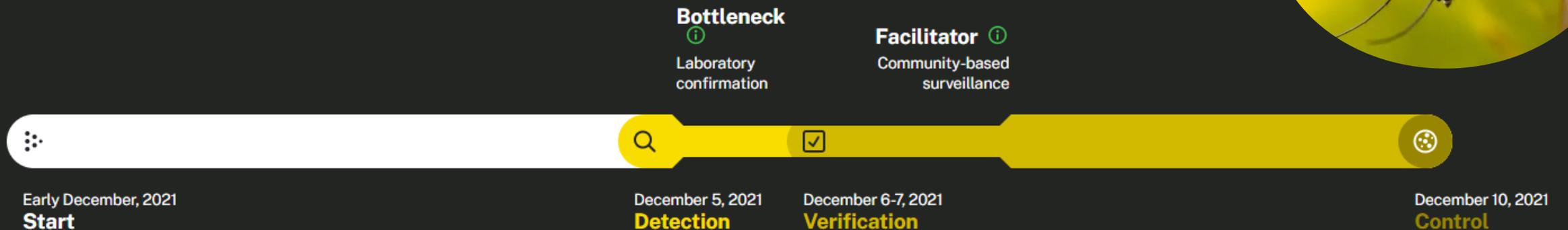
Stopping Dengue in its tracks

Early Detection of Dengue and community actions in Indonesia

- On December 5th, 2021, a man presenting with signs and symptoms of Dengue was identified by Red Cross volunteers in Sobokerto and referred to the local hospital for treatment and testing.
- Immediately volunteers began local risk communication and community engagement campaigns, speaking during community events on best practices for reducing opportunities for mosquitos carrying Dengue to breed, and mapping the community's environmental risk areas
- The original referred patient tested positive for Dengue, but was able to receive treatment and returned from the hospital on December 10th.
- No additional cases were reported in the area following these actions



TIMELINE (10 DAYS)



Building blocks of a sustainable approach to CBS

Lessons learned

- ✓ Value of engaging communities in all steps of the process
- ✓ Engage with, and including National Government & community stakeholders from the beginning
- ✓ Engage in advocacy efforts at all levels, from the community, to within your organization and beyond
 - ✓ This has ensured multiple stakeholder's concerns are addressed in the development of protocols and procedures, and makes it easier to integrate data into existing systems later on & improves sustainability
- ✓ Build CBS activities on a strong foundation of other epidemic control, WASH and first aid trainings & capacities
- ✓ Integrate CBS into existing social structures and activities, including the use of digital tools to facilitate the process





Recent Examples of CBS from the Red Cross and Red Crescent Membership



Indonesia Case Study

First Covid-19 case in Somaliland detected through CBS

Since May 2018, Ururka Bisha Caan (the Somali Red Crescent Society, SRCs) has been active in Somaliland with community-based surveillance (CBS), aiming at early detection, warning and response to potential outbreaks. When Covid-19 became a global threat, SRCs quickly adapted their early warning tool by training CBS volunteers to detect signs and symptoms of Covid-19 in communities. Although never used for Covid-19 before, the first case was detected in Somaliland through CBS. This provided early warning to health authorities, who initiated early response to limit community transmission, thereby saving lives.



Early detection, early response

When Covid-19 became a global threat, SRCs adopted their early warning tool to detect signs and symptoms in communities.

- 2018-2019** **TRAINING** 131 SRCs CBS volunteers were trained on symptoms of Covid-19 and asked to report to the Nya Nya platform.
- March 2020** **DETECT** An SRCs volunteer detected that a person in her community was unwell with cough, fever and difficulty when breathing.
- March 2020** **SMS REPORT** The volunteer called the person and confirmed that the symptoms matched Covid-19 and sent an SMS report to the Nya Nya platform.
- March 2020** **ALERT** Nya Nya immediately triggered an alert to the SRCs supervisor, who cross-checked the information with the volunteer.
- March 2020** **ESCALATE** The supervisor escalated the alert to the Ministry of Health, meanwhile the volunteer provided key health messages.
- March 2020** **RESPONSE** The Ministry of Health went to the village to investigate. The person was asked self-isolate at home. The person had recently been unwell and was tested for Covid-19 early in the case.
- March 2020** **CASE CONFIRMED** Following the investigation, the MoH confirmed that the person tested positive for Covid-19.
- FUTURE** Volunteers continue to provide key health messages and report on symptoms in communities.

Community-based surveillance (CBS) is the systematic detection and reporting of events of public health significance within a community by community members.

Nya Nya is a custom software platform for data collection, management and analysis, tailored to the needs of the Red Cross Red Crescent Movement for CBS.

CBS works for Covid-19 detection CBS detected one of the first two cases in Somaliland and had contributed to early detection to fight Covid-19 transmission. By detecting the case early, the person was isolated early. This limits community transmission, while also triggering more health promotion activities in the community. By SRCs, further, early detection enabled rapid response from the Ministry of Health. This case proves that **early warning through community volunteers is key in fighting Covid-19**.

CHAPTER 1 INTRO CHAPTER 2 EBOLA CHAPTER 3 NIPAH CHAPTER 4 CHOLERA CHAPTER 5 RABIES CHAPTER 6 INFLUENZA CHAPTER 7 DENGUE CHAPTER 8 CONCLUSION

EPIDEMICS THAT DIDN'T HAPPEN

CASE STUDY: DENGUE IN INDONESIA

How community trust enabled early detection of and response to a dengue case in Indonesia

RESOLVE TO SAVE LIVES IFRC

EPIDEMICS THAT DIDN'T HAPPEN

CASE STUDY: ANTHRAX IN KENYA

Building community trust: How Kenya controlled a deadly anthrax outbreak

RESOLVE TO SAVE LIVES IFRC

ONE-HEALTH IN ACTION Kenya Red Cross Community Epidemic and Pandemic Preparedness Programme



www.cbsrc.org



Using community-based surveillance and other community-sourced data to inform the response for neglected tropical diseases: A case study of visceral leishmaniasis outbreak in Kenya & recommendations for the future

Background: The world health organization estimates that there are approximately 0.3 to 1 billion new cases of Leishmaniasis annually, mainly spreading in 31 tropical countries. Cutaneous and mucocutaneous Leishmaniasis parasites transmitted through the bite of infected female phlebotomus sandflies. The disease is common in East Africa due to the temperate climate that supports sandy fly survival.

On Thursday 7th September 2021, a Kenya Red Cross Society (KRCs) volunteer trained in volunteer preparedness and early response, alerted the Community Health Assistant (CHA) to an unusual health event in a district Country Representative. The person in question had a detected anthrax and fever. Subsequently, 15 more were tested positive for community-based surveillance (CBS). Samples were collected from 15 individuals and tested using a rapid diagnostic test (RDT). A total of 12/15 tested positive for anthrax.

A response plan was developed to accelerate case finding in the area in collaboration with the Ministry of Health locally, through the regional Tropical Diseases Unit (TDU). The response plan includes a comprehensive case definition to guide for case detection and subsequent reporting, through the CBS platform. A total of 1,121 suspected cases were identified, reported to the local health centre and the CBS platform.

The Kenya Red Cross is a national leader and established government partner in disaster risk reduction, disaster management and public health with more than 150,000 volunteers throughout the country. The National Society started implementing CBS in partnership with International Federation of Red Cross and Red Crescent Societies (IFRC), the Kenya Ministry of Health, the Ministry of Agriculture, Livestock and Fisheries, the Ministry of Education, and the Teacher Service Commission in October 2019.

What is the One Health approach? One Health is a multi-sectoral, inter-disciplinary and collaborative approach that addresses the links between the human, animal and environmental determinants of health.

The Kenya Red Cross is a national leader and established government partner in disaster risk reduction, disaster management and public health with more than 150,000 volunteers throughout the country. The National Society started implementing CBS in partnership with International Federation of Red Cross and Red Crescent Societies (IFRC), the Kenya Ministry of Health, the Ministry of Agriculture, Livestock and Fisheries, the Ministry of Education, and the Teacher Service Commission in October 2019.

contributed to non-spatial transmission and how to work better and more appropriately with NGOs and healthcare services to better identify infection risks and prevent transmission. The survey has been adapted for COVID-19 and is currently being adapted for cholera to better understand the critical community group, healthcare workers.

checklist focused policies, operational targets to integrate evidence and practice, including the role of patients presenting to health facilities, and ensuring local adaptation and other emerging tools.

underpin new interventions under more than ever and require renewed investment and energy. Reducing delays in the detection of patients presenting to health facilities, and ensuring local adaptation and other emerging tools.

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Red Cross and Red Crescent Community-based surveillance Resources:



Communi
surveillan
Protocol ter

www.ifrc.org
Saving lives, changing minds.



Community-b
surveillance
Assessment too

www.ifrc.org
Saving lives, changing minds.



2022



WHEN

Timeline, duration,
change in frequency
over time.
Seasonality



Number of reports, per week, by location



Weekly number of Ebola Virus disease in West Africa up to 31/8/2014



nyss Mary Manager

Project Dashboard

Mandawi example National Society > Projects > Mandawi test project > Project Dashboard

Project Dashboard

Start date: 2020-03-27, End date: 2020-04-03, Dates grouped: By day, Location: All

Health risk/event: All, Data collection type: All, Report type: Main reports Training reports

Reports		Data collectors/points		Alerts	
Success	479	Active	11	Escalated	0
Error	0			Dismissed	0
				Closed	0

Reported health risk/event by location

<https://www.cbsrc.org>

- [CBS Guiding principles & COVID-19 guidance](#)
- [IFRC CBS Assessment Tool](#)
- [IFRC CBS Protocol Template](#)
- [Training Materials](#)
- [FAQs](#)
- [Nyss platform for CBS](#)
- [Suggested Community Case definitions](#)
- [Suggested KPIs](#)

Questions or comments:

Rachel Goodermote; Rachel.goodermote@ifrc.org