COMMUNITY-BASED SURVEILLANCE

Indonesian Red Cross experience

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COMMUNITY EPIDEMIC AND PANDEMIC PREPAREDNESS PROGRAMME

Since 2018, the Indonesian Red Cross (PMI)[1], with the support of the International Federation of Red Cross and Red Crescent Societies (IFRC), and funding from the USAID Bureau for Global Health, has been helping communities prepare and prevent the spread of diseases through the Community Epidemic and Pandemic Preparedness programme (CP3).[2] In selected pilot communities in West Java, Central Java, Banten and Bali, the Indonesian Red Cross is working with governments, communities, local responders and humanitarian partners to collectively prepare for and respond to epidemics. Through its network of volunteers, the Indonesian Red Cross is providing critical health information, community-based surveillance and referrals in coordination with the Ministry of Health and Ministry of Agriculture, Animal Industry and Fisheries to help stop diseases from spreading before a serious outbreak occurs.

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1   Palang Merah Indonesia (PMI)
2   This programme is part of a broader USAID-supported collaboration of One Health-focused partners to strengthen Global Health Security Agenda (GHSA) capacities in at-risk countries.

Community-based surveillance

"Community-based surveillance is the systematic detection and reporting of events of public health significance within a community, by community members" [3]

Epidemics begin and end in communities. Often outbreaks go unnoticed until many people in the same community become seriously ill. All too often, communities lack the knowledge or skills to take preventive action. The IFRC, with its network of 192 National Societies around the world and strong community presence, is working to change this by ensuring communities have basic information about the spread of diseases and how to prevent them, simple and effective systems to detect outbreaks, and communications mechanisms that ensure timely information-sharing and community engagement. Community members are the first to know when a suspicious or unusual health event has occurred in their community – so enabling, empowering, and equipping community members to recognize and respond to public health concerns forms an essential foundation for community-based surveillance.

Active Surveillance
EMERGENCY

Passive surveillance and reporting collaboration with stakeholders and mobilization readiness
PREPAREDNESS

Health education and awareness, disease prevention and control practices, Community activities for risk reduction and preparedness
COMMUNITY HEALTH PROMOTION AND RISK REDUCTION

IFRC Epidemic Preparedness Community-Based Surveillance Model

With its network of over 500 branches, 6,000 paid staff and 384,000 volunteers in communities throughout Indonesia, the Indonesian Red Cross is uniquely placed to strengthen community preparedness and resilience to respond to potential outbreaks by conducting early detection and early actions.

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The Red Cross Red Crescent Movement builds on its core community presence and strengths in community health, behaviour change and broad emergency preparedness, recognizing these as a critical foundation for building local capacities, ownership and sustainability of community-based surveillance efforts.
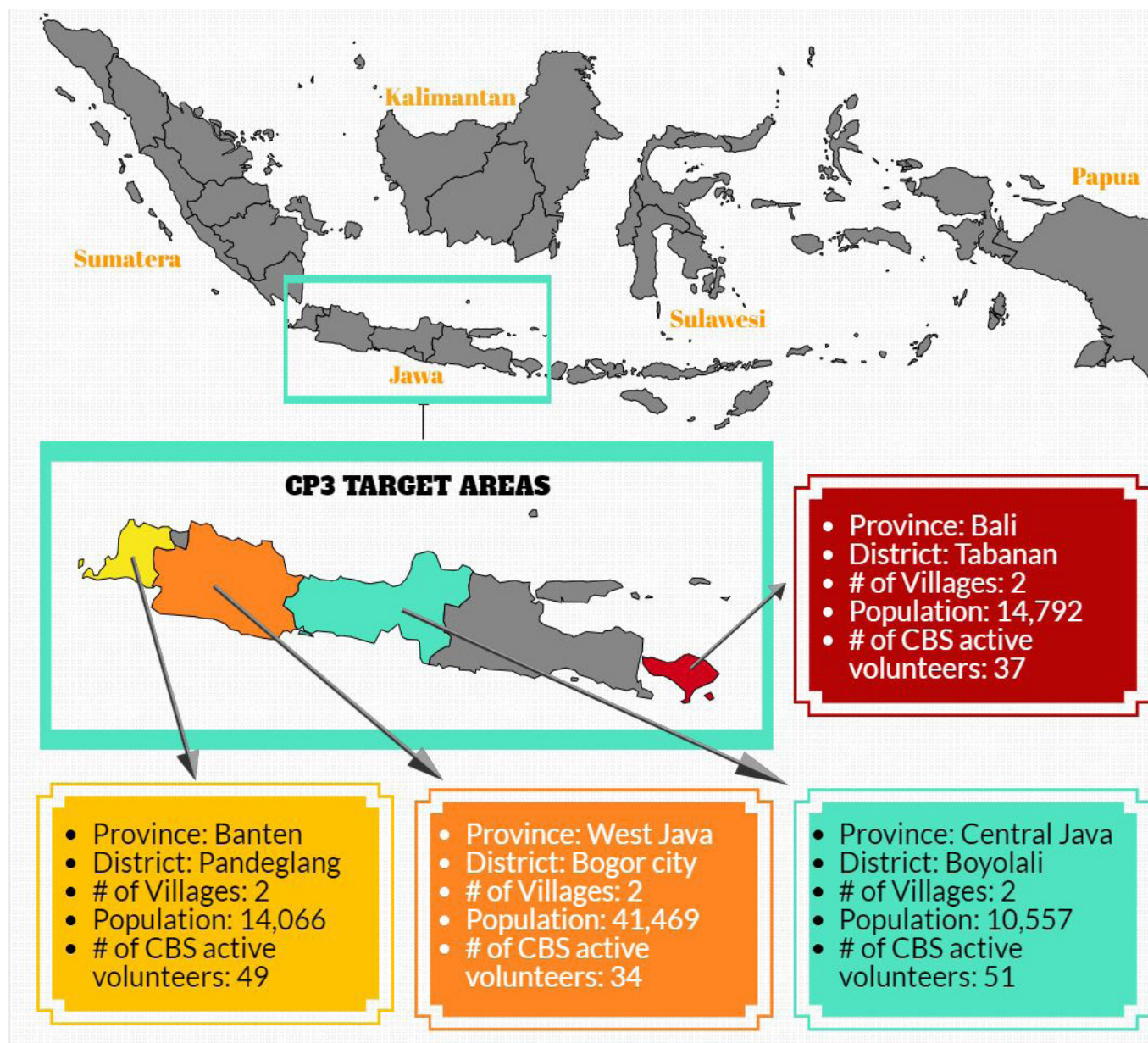
To date, the programme has been piloted in a total of eight villages and towns – two villages/towns in each of four target districts and provinces – with a targeted population of over 80,000. A total of 234 volunteers received training in community-based surveillance in addition to previous training in health and first aid. Volunteers were recruited from existing structures such as community leaders, faith leaders, youth groups, midwives, teachers, community officials, etc. They have the ability to communicate with and empower the community and are recognized as colleagues by local health authorities.

Health authorities in each target district have identified specific priority diseases for surveillance and reporting based on epidemiological history of infectious disease outbreaks, disease prevalence, and potential for severe mortality or morbidity.

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3   Technical Contributors To The June 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):1800681. doi:10.2807/1560-7917.ES.2019.24.2.1800681

Map of Republic of Indonesia

CP3 TARGET AREAS

- Province: Bali
- District: Tabanan
- # of Villages: 2
- Population: 14,792
- # of CBS active volunteers: 37

- Province: Banten
- District: Pandeglang
- # of Villages: 2
- Population: 14,066
- # of CBS active volunteers: 49

- Province: West Java
- District: Bogor city
- # of Villages: 2
- Population: 41,469
- # of CBS active volunteers: 34

- Province: Central Java
- District: Boyolali
- # of Villages: 2
- Population: 10,557
- # of CBS active volunteers: 51

Priority diseases selected for surveillance in districts covered by the Community Epidemic & Pandemic Preparedness Programme

Pandeglang District (Banten)	Bogor City (West Java)	Boyolali District (Central Java)	Tabanan District (Bali)
Avian influenza	Avian Influenza	Avian Influenza	Avian Influenza
COVID-19	COVID-19	Anthrax	COVID-19
Dengue	Dengue	COVID-19	Dengue
Diphtheria	Rabies	Dengue	Measles
Measles	Tuberculosis	Leptospirosis	Rabies
		Rabies	

Community-based surveillance emphasizes identifying and reporting on signs and symptoms of potential health risks rather than on diseases themselves (which require case investigation and confirmation via testing or a trained health professional). The programme is integrated in existing systems by providing community-based surveillance alerts to local health and veterinary authorities who then feed them into the Early Warning System (SKDR/EWARS) and Integrated Animal Health Information System (iSIKHNAS).[4]

HOW DOES COMMUNITY-BASED SURVEILLANCE WORK IN INDONESIA?

When volunteers (and their supervisors) encounter information about a possible human or animal health risk or event in their community, they take early steps to:

- identify the person (or animal) showing signs and symptoms matching the community case definition

- identify a supporting family member to inform them about the potential disease risk and how to conduct practical prevention measures in the household, as well as explain next steps (such as referral to health facility or follow-up by health authorities)

- visit the person showing signs/symptoms accompanied by a family member (or visit the area accompanied by the owner/farmer for animal cases), only if safe to do so

- report the alert (e.g. SMS, WhatsApp, phone call) to their Red Cross supervisor if the signs and symptoms meet the community case definition of a priority health risk for that district

- follow all relevant safety and prevention steps (e.g. wearing a mask when encountering someone with suspected tuberculosis or COVID-19)

- conduct follow-up actions for prevention and control of the spread, such as referring the sick to the local health facility and community health promotion, infection prevention tasks, etc.

The supervisor will confirm that the alert does meet the community case definition, report it in an online database, and coordinate with local health worker (or local veterinary worker for animal cases) for further action. The volunteer and/or supervisor will follow up with local health workers on the investigation and suspected case outcome.

For Example:

To help curb the spread of dengue fever, Red Cross volunteers in Tabanan Regency in Bali have supported the identification of a growing number of dengue cases in the area. Through engaging youth and neighbourhood groups, volunteers shared information with the community about dengue symptoms, where to get help if they become sick with dengue, and practical actions such as how to keep home and community water sources free of mosquito larvae.

PMI / 2020

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4   http://wiki.isikhnas.com/images/9/9a/What_is_iSIKHNAS_v6_ENG.pdf

SUCCESSES

1 / Partnerships

The Indonesian Red Cross is a well-known and trusted disaster risk management partner, working with various sectors of the Government and with civil society organizations. The National Society has built on its reputation and relationships in order to obtain national partner buy-in to introduce and pilot community based-surveillance. It has ensured the system is aligned with other initiatives, filling an unmet surveillance gap and adding value to the systems already in use.

> *"For anthrax and leptospirosis, we collaborate with PMI on many community empowerment activities, how to educate the public about the threat of these diseases and how to prevent their occurrence."*
>
> Dr. A. Rifdania, Head of Animal Health Division, Boyolali District

2 / High percentage of true alerts detected

In the year since community-based surveillance has been implemented, volunteers have attained consistently high "true" alert levels and 100 per cent of alerts have been responded to within 24 hours with appropriate actions (e.g. environmental clean-ups, household visits, health promotion, immunization campaigns).

Community-based surveillance in numbers	
September 2019 to September 2020	
Percentage of community-based surveillance alerts validated as "true" alerts which were then confirmed as positive cases	• 90.3% for Dengue • 83.3% for COVID-19 • 100% for TB • 100% for Leptospirosis • 0% for rabies, unusual events or measles
Percentage of communities in which appropriate follow-up action was taken following a true alert *(e.g. household visits, targeted health promotion activities, etc.)*	100%

3 / Response to COVID-19

On 26 March 2020, a volunteer sent the first COVID-19 alert from a CP3 target area (Bogor City). Since that time, the Indonesian Red Cross has noted a relatively faster adaptation and deeper engagement in COVID-19 response by Red Cross volunteers and their communities in CP3 target areas. For example, volunteers are collaborating with local leadership to set up and regularly participate in COVID-19 task forces (e.g. in Karangmojo) and conducting contact tracing. Additionally, some districts have prioritized community-based surveillance and pandemic response in their local budgets and action planning (e.g. in Boyolali District). This enhanced responsiveness can be attributed to the increased community networking and cooperation building that took place before the pandemic struck.

Community Epidemic and Pandemic Preparedness Programme (CP3) in action during the COVID-19 pandemic

In the CP3 programme target village of Karangmojo, villagers and their leadership prioritized investing in COVID-19 prevention and response as a result of programme activities. They set up a COVID-19 monitoring post where Red Cross volunteers help to screen and collect data from visitors and returning residents, also providing them with handwashing facilities and COVID-19 prevention information. These activities are funded through the village budget allocation (an allowance from the Government that villages can use for local population welfare priorities). By prioritizing pandemic prevention and mitigation in their budget, village leaders demonstrated a strong awareness of epidemic preparedness and response for their community – an awareness in which CP3 played a critical role.

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CHALLENGES

The main challenges have been the following:

The COVID-19 pandemic has restricted movement and activity implementation. While this was a considerable challenge, the Indonesian Red Cross was able to adapt to new approaches such as conducting health promotion via loudspeaker and radio programmes instead of going door-to-door. Additionally, the National Society was able to conduct refresher trainings remotely.

Volunteer motivation and retention is always a challenge for Red Cross/Red Crescent National Societies. For the implementation of this programme, the Indonesian Red Cross has selected a sufficient number of volunteers who are all part of existing community-level structures. They are engaged in regular community health activities and get technical support from the Indonesian Red Cross. To date, the programme has been able to retain a high proportion of volunteers trained in community-based surveillance who continue to provide 100 per cent coverage in target villages.

Feedback from local health authorities/facilities to the Indonesian Red Cross staff and volunteers who report alerts is important for community-based surveillance to be efficient but needs to be handled with care to ensure data protection and confidentiality are maintained.

LESSONS LEARNED

The Community Epidemic and Pandemic Preparedness Programme uses an innovative approach that builds on the Red Cross Red Crescent core community health promotion and risk reduction activities (before an epidemic is present), embedding community-based surveillance, rather than have it as a stand-alone activity.

This approach builds:

- community trust, greater buy-in and ownership of community-based surveillance, and sustainability for improved community engagement in disease prevention

- earlier alerting of local health authorities of possible cases of diseases

- earlier action for the timely control of possible outbreaks.

PMI / 2021

CONCLUSION

The global COVID-19 pandemic has put a spotlight on the fact that the world has become increasingly vulnerable to public health emergencies fuelled by globalization, urbanization, climate change, environmental degradation and increased contact between humans and animals. The number of re-emerging and new high-threat infectious hazards continues to rise, and today epidemics and pandemics pose a threat to human lives that, arguably, is equal to that of climate change and natural hazards. Recent large-scale epidemics and pandemics have demonstrated that it takes an inclusive and collaborative effort engaging communities as full-fledged partners to effectively prevent, detect and respond to significant infectious disease threats and minimize their effects.

The experience of the Indonesia Red Cross with community-based surveillance has helped to build community trust, buy-in and ownership of community-based surveillance in the programme target areas. The pilot programme has demonstrated that lay volunteers, when properly trained and supported are vital contributors and important change agents to sustainably detect, control and contain disease spread, thus helping to save lives and build back better in their communities.

'I thank Palang Merah Indonesia (PMI), honestly, I get the knowledge, I can change my life by preventing risk, for example if there is an illness.'

Wahyudi, farmer and Red Cross volunteer

LOOKING AHEAD

Based on successful pilot outcomes to date, the Indonesian Red Cross plans to expand coverage of the programme to an additional 16 villages, adding four additional villages to each of the four target districts.

Indonesian Red Cross has strengthened its public health preparedness and response capacity and has started to use the approaches and tools of the programme for its broader COVID-19 response activities in other areas not covered by the programme. In the future, community-based surveillance is likely to be more regularly embedded within the Indonesian Red Cross community health programming and preparedness capacity development. Since volunteers and staff engaged in community-based surveillance use free virtual formats which are widely available and acceptable such as WhatsApp for communicating, mentoring, and reporting alerts, the investment in physical infrastructure remains relatively low.

The same approach that Indonesian Red Cross has initiated in developing community-based surveillance continues to be considered by multiple entities throughout Indonesia including the Ministry of Health (an original partner of the Indonesian Red Cross in establishing community-based surveillance), the Indonesia One Health University Network and other local NGOs.

Additional resources

- "CP3 at a Glance", Indonesia, Dec 2019. *https://www.youtube.com/watch?v=xH5mlapnsGQ&feature=youtu.be*

- Byrne, A. and Nichol, B. A Community-centred Approach to global health security: Implementation experience of community-based surveillance for epidemic preparedness. Global Security: Health, Science and Policy. September 2020. *https://www.tandfonline.com/doi/full/10.1080/23779497.2020.1819854?scroll=top&needAccess=true*

- IFRC Epidemic Control for Volunteers toolkit: *https://ifrcgo.org/ecv-toolkit/*

- IFRC Community-based Health and First Aid resources: *https://ecbhfa.ifrc.org/*

- Red Cross Red Crescent Community-based surveillance resources: *https://www.cbsrc.org/resources*

Acknowledgments

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Contact information

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