Community-based surveillance (CBS) for COVID-19

This document has been developed to assist National Societies in deciding if and how they may wish to include community-based surveillance in their preparedness and response plan for COVID-19. This tool is designed with the focus of COVID-19 and makes references to other global community-based surveillance tools such as the Community-based surveillance Assessment tool, Community-based surveillance Protocol template and global list of suggested health risks/events (shared as an annex).

Given the complexity of COVID-19, its global scope, national priorities and National Society capacities, CBS may or may not be the best option to include in the response plan. This document provides guidance on the decision process for including CBS in a country's COVID-19 response and specific considerations to include within CBS initiatives.

Contents

Community-based Surveillance: Who, What and Why

Community-based surveillance (CBS) is the "the systematic detection and reporting of events of public health significance within a community by community members".[1] The concept is that early warning can lead to early action, which can save lives. The Red Cross Red Crescent Movement is strategically placed to work in CBS given its extensive volunteer network and auxiliary role to the government in many contexts.

CBS compared to other forms of public health surveillance:

There are many ways to include various forms of surveillance and detection within NS activities, of which CBS is only one of them.

Process	Purpose	Who	How
CBS	Immediate reporting of observed health risks that meet the COVID-19 criteria	Trained CBS volunteers within the NS	Volunteers report health risks matching COVID-19 during their regular activities, or through active surveillance activities.
Contact Tracing	The identification and follow-up of persons who may have come into close contact with an infected person with COVID-19	Officials, VHWs or CHWs (NS volunteers when requested) typically with special request, support and training from National or local government	Close contacts to be isolated and monitored for 14 days following potential exposure. This entails: 1. Finding people who meet the definition of a close contact, and 2. Following-up on whether contacts develop symptoms (daily by phone if possible)
Active Case Finding	Systematic searching and screening for COVID-19 within targeted groups or locations believed to be at risk	Epidemiologists, CHWs or others based on the Health System Capacity. May also include NS volunteers depending on auxiliary role	Requires rapid diagnostic testing capabilities and human resources, may include checkpoints, door-to-door, or searching within hospitals wards

[1] 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 meeting, Eurosurveillance, 24, 1800681 (2019), https://doi.org/10.2807/1560-7917.ES.2019.24.2.1800681.

		of the NS to the MOH/ National CDC	for people who may have been misdiagnosed.
Reporting Hotline	Communication network allowing community members to call and report if they believe COVID-19 is an issue in their community and provide information on symptoms for follow-up	Community members, health facility workers, RCRC Volunteers (population/ community)	Requires a national or local hotline established and maintained with referral connections
Point of Entry Screening	Screenings that are put in place at points of entry to assess whether symptoms are present in travelers	Government officials (HWs, army, police, etc.), based on mandate can also be RCRC NS	Based on National government requirements. Typically screening for symptoms aligned with WHO or National case definition

Integrating CBS with existing surveillance systems:

CBS is designed to be implemented to enhance local and national surveillance systems by closing the gap between facility and community reporting. CBS should never be conducted as a parallel system, rather it must be incorporated into existing surveillance and referral mechanisms, whatever they may be (MoH National Surveillance, EWARN, SARI, etc.).

Alerts emerging from RCRC CBS systems should be viewed as "health risks" that match the community case definition for which volunteers have been trained to look for but have not been confirmed by a clinician. Thus, these alerts do not constitute a "case" or even a "suspected case" at this time until examined by a medical professional and confirmed through laboratory testing. Therefore, CBS alerts should be considered separately from cases reported through the health facility system or EWARS until verified by a medical professional and laboratory testing.

Considerations on whether CBS is the best-fit tool:

When considering using Community-based surveillance within your National Society for the reporting of COVID-19 health risks, several factors must first be considered including:

More specific considerations are listed below from the CBS Assessment tool (adjusted to be specific to COVID-19):

Decision-Making tool: Should CBS be used?			
Objectives	Yes/ Feasible	Possible, but challenging	No/ Unfeasible
Need/ Relevance of CBS *Is there a gap in surveillance, would CBS be useful to fill this gap?* *Is there a risk of localized or community transmission of COVID-19?*			
Mandate and Capacity of the National Society *If CBS is relevant, is RCRC best positioned to fill that gap?*			
Feasibility of CBS *Given the financial, human resource and training is CBS feasible?* *What Technical support will be needed?*			
Collaboration & Partnerships with MoH/ MoA/ others *Any existing community-based surveillance structures from MoH or other actors?* *Is the MoH supportive of RC implementing CBS?* *Does the National Health system have the capacity to respond to alerts?*			
Modality, data collection structure & Health Risks *Have considerations been made on the modality and feasibility of data flow? Will the response match the health risks/events identified?*			

Suggested health risk description for COVID-19

General considerations for selecting/ developing community definitions for COVID-19 include:

- Major public health concerns: Since COVID-19 is a novel virus, there is no existing immunity within populations and therefore large portions of the general population are at risk for contracting the disease once it is present through localized or community transmission.
- Effective interventions exist if caught early: Interrupting transmission to others through early detection can deter the spread of the disease further throughout the community. Additionally, those with severe symptoms should receive facility-based treatment as soon as possible to prevent significant morbidity and death.
- Feasible for community volunteers: The community case definition includes simple signs and symptoms that can be recognized by volunteers.

The CBS Technical Working Group has suggested a global community definition based on the current WHO case definition for COVID-19 and most recent information regarding common symptoms. Corresponding actions are also suggested, pulled from other COVID-19 Guidance for Volunteers from the Epidemic Control for Volunteers manual (also available online). If implementing CBS for the first time as part of the COVID-19 response it is highly recommended to limit the health risks volunteers will report on to the 1-2 health risks related to COVID-19, but as a reference, a global list of suggested health risk definitions is provided as an Annex.

The suggested community definition and corresponding health risk described below should be compared and adjusted in each country to match MoH requirements (if they exist). Since COVID-19 is endemic in most regions, alert thresholds should be discussed and agreed with the MOH and/or local health authorities so as not to overwhelm local surveillance systems. While volunteers should submit reports for each health risk related to COVID-19, the number of reports that trigger an alert to health authorities should be determined in alignment with local MOH and related actors.

Number	Health Risk	Suggested community definition	Related diseases	Suggested key messages for data collectors/ volunteers
9	Cough and difficulty breathing	Combination of 3 or more of the following symptoms: • Cough • difficulty breathing • fever • runny nose • tiredness • headache • feeling unwell • sore throat • diarrhea • loss of smell • loss of taste	COVID-19	• Explain importance of handwashing, cough etiquette and social distancing. • Refer to Health Facility or authorities if difficulty breathing • Use ECV tools #7 & 16
14	Cluster of unusual illnesses or deaths	Cluster of people (3+) suddenly sick or died with the same signs of illness.	• Any • COVID-19	• Encourage social distancing • Note types and symptoms and refer sick to care • Use ECV tool #28

Special Considerations by Context:

To better determine the scope and need for using CBS in your context please ensure you discuss with your MoH focal point. Based on the contextual situation, you may be asked to also include 'recent

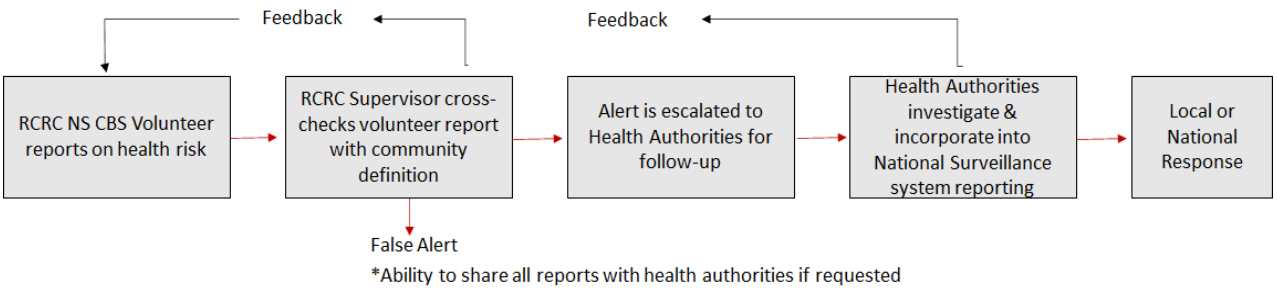
contact with a person with confirmed COVID-19' or travel history to your community definition. For a list of countries experiencing localized transmission and/or imported cases please refer to the tables in [WHO's most recent Situation Report].

Implementation of CBS for COVID-19

To implement CBS appropriately several considerations must be taken under advisement. Overall logistics and technical requirements for a RCRC CBS approach are listed in the below table (as well as different approach options). It is extremely important to liaise with the MoH and other surveillance focal points throughout the process of establishing or expanding a CBS system and to ensure that if alerts are generated the health authorities have the capacity to respond.

Additionally, it is suggested that reports are cross-checked by supervisors before immediately reaching health authorities as an alert. This allows for the supervisor to cross-check that the CBS volunteer report matches the community definition and reduce the "noise" or false reports/ requests to authorities to follow-up. While overall volunteer reports can be shared with authorities if requested, having supervisors first cross-check reports increases the reliability of CBS alerts coming from the National Society while allowing health authorities to focus their resources on the true alerts they need to respond to.

One Reporting Example is shown below:



Ensure the reporting structure your National Society has selected (including links to the National surveillance system) is clearly described in your protocol.

Regardless of the status of the report with health authorities, CBS volunteers have been trained on proper public health measures related to COVID-19 and will continue to work with community members advising on physical distancing, handwashing, and other measures to stop COVID-19 transmission, and thus working to slow transmission in their respective communities.

General Set-up and Logistics Requirements

Category	Suggested Considerations	Yes/ Feasible	No/ Not currently feasible
CBS Planning/ Processes	1. CBS Assessment has been conducted or rapid one is planned 2. CBS Protocol planned with partners/ MoH, relevant stakeholders 3. CEA/ RCCE strategy considered in planning process 4. ECV/ health promotion activities planned alongside CBS		
Referral Partnerships	Capacity and interest by MoH and/ or other actors to respond to alerts detected through CBS in the targeted communities		
Suggested Human Resources	1 Country HQ CBS Officer 1 District (or equivalent) Officer per area 1 Volunteer supervisor per 20-35 volunteers 1 Volunteer per 30-50 households[2]		
Logistics Considerations	Transport/ Community Access ● Supervision visits to the communities considered (i.e. are motorbikes or bicycles needed, etc.) Security situation in locations of interest ● Volunteers able to move within communities and conduct activities ● Supervision visits possible ● CBS is accepted by the community		

[2] For implementation, the number of CBS volunteers required within a community is heavily dependent on the context (rural, urban, security situation, etc.) and what is feasible for volunteers, the National Society, and community preferences. What is most important to consider is that the community has been engaged from the beginning on CBS and know who their local RC CBS volunteer is and how to contact them, and that volunteers can feasibly report on the area they cover.

	Paper-based CBS system: • Printed forms for volunteers • Reporting books for supervisors SMS-based CBS system: • 1 phone/ tablet for each supervisor • Provide airtime/ data for each volunteer supervisor • Provide airtime for volunteer data collectors if active surveillance is required Nyss CBS platform (see 1-pager in annex) • Technical support to set-up the eagle for SMS (remote or in-person) • Manager has access to internet with computer or smartphone • Volunteer requirements same as listed under SMS system Digital App-based Technologies • Smartphones and network available for supervisors based on CBS plan Hygiene • All volunteers conducting CBS should have access to hand sanitizer and/ or hand-washing after every household		
Recommended Trainings	1 Training of Trainers on CBS (if CBS is new) • Recommended not to exceed 25 participants Volunteer training per location • Location supervisor to lead • Recommended not to exceed 25 2-5 days for Volunteer training on CBS Refresher trainings as needed		
Monitoring, Evaluation & Feedback Mechanism	• Core indicators considered and can be captured given expected resources • Feedback mechanism planned		

Volunteer Safety

All volunteers, in contexts at every level of transmission (whether there are only imported cases, locally transmitted cases or community transmission) should have access to hand washing facilities and/or hand sanitizer after every household visit and masks/ face coverings[3]. It is recommended that **volunteers keep a 1-2 meter distance** from community members during discussions and **no physical contact** should take place. If possible, discussions about someone showing health risks should take place outside, through a window or in an open space and between a healthy member of the family/ community member and volunteer rather than the ill person themselves.

If CBS is conducted by CHVs who have been trained to provide additional medical support, they should follow any additional PPE measures that pertain to those activities and government requirements.

[3] Please follow proper guidance on how to use a face mask including covering both the nose and mouth. If using a cloth face covering please ensure proper sanitation/ washing is observed. For additional guidance on proper use of masks and face covering please see *IFRC Guidance on Face Masks during the Pandemic.*

Suggested Indicators for Monitoring and Evaluating your CBS implementation

Suggested Indicator	Calculations/ Details	Purpose
% of confirmed cases in target areas referred and captured through CBS alerts	# of alerts shared with authorities in target areas later confirmed as cases by authorities/ Total # of cases confirmed by authorities	Programme impact
Number or percent of alerts from volunteers cross-checked and accurately matching community case definition	Percentage: # reports cross-checked with an accurate match/ total # reports shared	Programme quality
% of escalated alerts verified as a confirmed case through clinical or lab testing	# of true alerts confirmed through laboratory test or clinical validation/ # of true alerts sent by a RC volunteer	Programme Quality, *positive predictive value*
% of active volunteers submitting health risk reports and/or activity reports "on time" as determined by the protocol	# of trained volunteers deployed and submitting reports as required/ # of trained volunteers deployed in CBS	Programme monitoring
% of targeted communities with active CBS volunteers	# of targeted communities with at least one active CBS volunteer / # of targeted communities for CBS	Coverage

Total Number of Trainers (ToT/ Master trainers) trained in CBS and Total number of Volunteers trained in CBS	*No calculation required*	Needed for programme monitoring calculations and follow-up
% of CBS alerts investigated/ reacted to within 24 hours	# of alerts followed-up by authorities within 24 hours/ Total # of alerts shared with authorities for follow-up	Programme Quality (and referral mechanism)
Proportion of communities in which action was taken following an alert (per month)	# of communities where a PH action was taken following an alert/ Total number of communities that shared alerts with health officials	Programme Quality (and referral mechanism)

ADDITIONAL TOOLS & GUIDANCE

1. IFRC Health Help Desk for the latest guidance on Coronavirus disease (COVID-19) including community health guidance
2. Community-based surveillance guiding principles (English & French) **Under revision*
3. Community-based surveillance assessment tool & template
4. Community-based surveillance protocol template
5. IFRC Epidemic Control for Volunteers
6. List of global health risks/ events and suggested community case definitions (ANNEX)
7. Key Performance Indicators for community-based surveillance projects