Handbook
Public Health ERU
Community Based Surveillance (CBS)

Norwegian Red Cross

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Contents

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Abbreviations

AWD	Acute Watery Diarrhea
CBHFA	Community Based Health and First Aid
CBS	Community Based Surveillance
CCM	Community Case Management
CEA	Community Engagement and Accountability
CP3	Community Epidemic and Pandemic Preparedness Program
CTC	Cholera Treatment Center
DREF	Disaster Response Emergency Fund
DRM	Disaster Response Management
ECV	Epidemic Control for Volunteers
EoM	End of Mission Report
EMT	Emergency Medical Teams
EPoA	Emergency Plan of Action
ERU	Emergency Response Unit
EVD	Ebola Viral Disease
EWARS	Early Warning and Response System
FACT	Field Assessment and Coordination Team
FAD	Finance and Administration
GPS	Global Positioning System
HMIS	Health Management Information System
HP	Health Promotion
ICRC	International Committee of the Red Cross
IDSR	Integrated Disease Surveillance and Response
IFRC	International Federation of Red Cross and Red Crescent Societies
IGER	Implementation Guide for Epidemic Response

IPC	Infection and Prevention Control
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NGO	Non Governmental Organization
NS	National Society
ORP	Oral Rehydration Point
ORS	Oral Rehydration Salt
PH	Public Health
PNS	Partner National Society
RC	Red Cross or Red Crescent
SBCC	Social Behavioural Change Communication
SIM	Subscriber Identification Module
SMS	Short Message Service
SOP	Standard Operating Procedures
TL	Team Leader
ToR	Terms of Reference
TWG	Technical Working Group
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WORC	World of the Red Cross

Terminology

Alert: the message sent by the platform or by an individual to one or several pre-designed people in the CBS hierarchy, when the number of reports has reached a pre-defined number (e.g. 1 for Ebola or measles, but a higher number for AWD).

Case: this is part of the facility-based surveillance system and usually refers to clinically or laboratory confirmed cases of a disease.

Report is the term for the message transmitted from the volunteer to its supervisor on a person in the community who has signs and symptoms meeting the community case definition for a specific health risk. A report can also be a message of an unusual event (group of animal or human deaths, floods, fires, etc), as per the particular CBS protocol in that NS.

PART I Concept and context

1. Introduction

How to read this handbook

This handbook is intended for:

a) Delegates trained in Public Health in Emergencies (Tier B) or with equivalent experience and knowledge who will be deployed as part of the PH ERU CBS

b) NS staff who will be involved in the set up and/or running of a PH ERU CBS.

c) Partner National Societies who wish to set up a PH ERU CBS module

The handbook intends to be a guideline for understanding a PH ERU CBS. It is complemented by several other documents, which are mostly focused on CBS in non-emergency contexts, with which the reader should become familiar. These documents are cited repeatedly throughout the handbook.

BOX 1. KEY CBS DOCUMENTS TO KNOW

- IFRC. The CBS Guiding Principles. 2017 (revised version 2020). Available in English, French and Spanish
- IFRC. CBS Assessment Tool and Template. Not published, for internal use only. Available from PH ERU CBS trainers.
- IFRC. CBS Protocol tool. Not published, for internal use only. Available from PH ERU CBS train-

This document is divided into 3 sections, as follows:

Part 1 -**Concept and context** (chapters 1 to 3) lays out the conceptual framework that supports the development of PH ERU's, including strategic frameworks, guiding principles and minimum standards. It then focuses on the concept of the PH ERU CBS configuration, explaining what CBS is, the ERU's activities and objectives, how it integrates with other ERUs, and how it can be linked with other types of surveillance systems.

Part 2 – **Operational Framework** (chapters 4 to 6) lays out the information needed by ERU deploying National Societies to develop and maintain their PH ERU CBS, including human resources needed, training, equipment and financial resources.

Part 3 – **Operational Management** (chapter 7)**,** is intended for deploying National Societies as well as

delegates, as it details the deployment phases, and explains key issues and procedures.

Background – development of Public Health ERUs

The International Federation of Red Cross and Red Crescent (IFRC) and partners have long acknowledged the impact of disasters on the health of populations and the importance of disease outbreaks at local, regional and global levels.

The Movement has not only vast experience in emergency response but also in preparedness, recovery and development. The Movement is a major player among humanitarian organisations and has the world's largest network of volunteers and staff. Collectively, it has also the largest pool of trained and experienced specialists[1] ready to deploy within short notice. The IFRC has been coordinating the deployment of Health Emergency Response Units (ERUs) since 1996.

During annual technical working group meetings, IFRC and ERU National Societies (NS) have observed that clinical care alone in an emergency setting is not enough to mitigate health risks at the community level, suggesting a need for Public Health-focused tools.

Moreover, the Movement has been a major player both in some of the largest outbreak responses such as for example the Ebola outbreak in West Africa or the cholera outbreak in Somalia as well as smaller scale epidemics including the plague outbreak in Madagascar, cholera in Malawi or Ghana and many others. In 2017, the Council of Delegates of the International Red Cross and Red Crescent Movement, the IFRC and NS committed to strengthen effective community engagement in disease outbreak prevention and response.

The Red Cross and Red Crescent Movement[2] believes that epidemic preparedness and response starts and ends with communities, and that without community-driven efforts to prevent, detect and respond to infectious disease threats, government efforts can be delayed and potentially less effective[3].

In this context, a review of lessons learnt has led to the recommendations for improved IFRC Public Health response capacity. To ensure the IFRC remains 'fit for purpose' and can meet the demands of global trends and requests for support from National Societies standalone, multi sectoral Public Health (PH) ERU configurations have been proposed.

IFRC in collaboration with ERU NS have outlined seven spheres of activity that are needed in order to better respond to public health emergencies, that have been submitted to the Global Surge Working

[1] The pool consists of specialists from diverse domains needed in order to respond to emergencies, including health, WASH, logistics, finance/admin, IT, communication and others.
[2] Further in the text, the Red Cross and Red Crescent Movement will be referred to as the Movement
[3] IFRC, Council of Delegates of the International Red Cross and Red Crescent Movement; Working towards an International Red Cross and Red Crescent Movement Approach to Epidemics and Pandemics, Resolution, 2017

Group, the Human Resources Group for International Deployment of Delegates and the Disaster Management Working Group[4].

Six standalone, multi-sectoral PH ERU configurations and one clinical care support team for outbreaks have been prioritised for development and deployment:

1. Community Case Management – Cholera or Nutrition
2. Community Based Vector Control
3. Community Based Surveillance
4. Safe and Dignified Burials
5. Social Behaviour Change Communication (SBCC)/Health Promotion
6. Infection and Prevention Control
7. Vaccination

IFRC have invited National Societies with the capacity, or the willingness to develop capacity in one or more of the PH ERU configurations. A list with all ERU configuration and leading as well as supporting NS can be found in Annex 1.

This handbook focuses on **Configuration 3 of the PH ERU's: Community Based Surveillance**. It reflects standard operating procedures that are particular for the PH ERU CBS configuration and complements the general IFRC ERU standard operating procedures (IFRC, ERU Standard Operating Procedures, 2012) as well as the IFRC handbook for delegates (IFRC, Handbook for delegates, 2002).

Articulation between PH and clinical ERUs

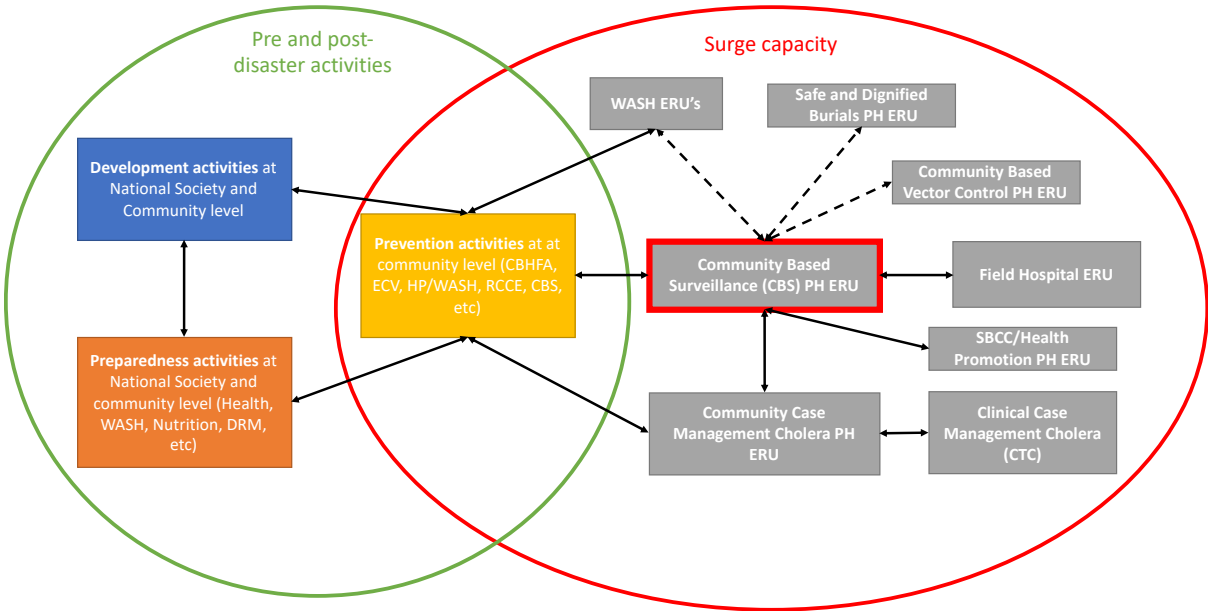
Within the health domain, ERU NS have Red Cross hospitals and Red Cross clinics ready to deploy, and public health/community health delegates have supported prevention efforts in the communities. The new PH ERU CBS configuration will not replace but complement these elements. Neither do they replace capacity building of NS or contingency planning.

Figure 1 shows articulation between clinical and PH ERU's from the perspective of the PH ERU CBS.

The PH ERU CBS will have close linkages to other response activities. For example, it can link detected cases for referral to a clinical ERU. It can be deployed together with a community-case management of cholera PH ERU (CCM ERU), to allow for effective data collection at oral rehydration points.

[4] IFRC, Briefing note on Improving Response to Public Health in Emergencies, 2016

Figure 1: Complementarity of ERUs and link to pre and post disaster activities



BOX 2. CBS and ORPs – a special relationship

CBS was first tested in the context of an ORP (Oral Rehydration Point) during a Cholera outbreak. Since then, the advantages of linking CBS and ORP have become evident. CBS in an ORP is one of the most common uses of CBS that delegates may encounter. It is thus worth to give it some special consideration. ORPs are now being integrated into PH ERU CCM Cholera.

CBS can be used in an ORP to provide valuable, real-time information on Acute Watery Diarrhea (AWD) cases seen in the community. Since only 10 to 20% of cholera/AWD cases will be referred and seen in a health facility, this information from ORPs is crucial to estimate the real size of the outbreak. It is also useful in programmatic terms, helping to make evidence-based decisions on where to shut down ORPs and where to reposition them, as the outbreak increases, decreases or shifts geographically.

When CBS is used in ORPs, a number of variables will change. First, reports will be linked to an ORP site, and not to an individual volunteer, as several volunteers may be working in a same ORP.

Second, more data may need to be collected, either through regular SMS to the digital CBS toolkit (see next chapters) or through other means (paper-based, phone calls, apps). This information includes number of people referred to a health facility (i.e. number of people with severe dehydration, disaggregated by age group and gender), and potentially number of ORS and/or water tablets distributed, among others.

Third, the response activities for CBS are very well defined in the ORPs (distribution of clean water, water purifying tablets, ORS, etc), and go beyond the prevention and health promotion messages that may be the only response provided by the volunteers in other outbreaks.

Fourth, when ORPs are deployed with CBS, it will be in an active outbreak setting, as opposed to the preventive deployment of a PH CBS ERU in cases where an epidemic outbreak is feared but not yet present. Thus, an “active” reporting system is needed. This means that the number of reports from the system will be high and daily/regular reporting is required. It also means that “zero reporting” is needed, with all ORPs reporting daily, even if they have not seen any individuals with AWD that day.

Finally, good communication with any Clinical ERUs (Cholera Treatment Centers or Units) present, is also needed, ensuring follow up of referred cases, and avoiding “double counting” (of cases seen in community and in facility).

2. Framework for Public Health ERU's

Strategic and institutional framework

IFRC's Strategy 2020 "Saving Lives, Changing Minds" renews the commitment to humanitarian aid and calls for more action to prevent and reduce the underlying causes of vulnerability.[5] The PH ERU CBS configuration unites Strategic aim One (save lives, protect livelihoods and strengthen recovery from disasters and crises) with Strategic aim Two (enable healthy and safe living).

The Movement bases its activities on the seven Fundamental Principles: humanity, impartiality, neutrality, independence, voluntary service, unity and universality.

The IFRC adheres to the following standards:

- The Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organisations in Disaster Relief[6]
- The Humanitarian Charter and Minimum Standards in Disaster Response (The Sphere Project, 2018)

Moreover, the Public Health ERUs also ensure that deployments adhere to-.

- ERU Standard Operating Procedures[7]
- Data protection principles[8]
- Surge Guidelines and Standard Operating Procedures[9]
- Implementation Guidelines for Epidemic Response (IGER)

Guiding principles

The PH ERU CBS configuration follows guiding principles that are aligned with the IFRC Strategy 2020.

Access to health for all: The Movement strives to achieve that all community members have equal access to the PH ERU CBS, paying attention that also the most vulnerable and disadvantaged people such as women, children, the elderly and those living with disability have access.

Cooperate in partnership, promote alliances and participate in networks: The PH ERU CBS will work under the umbrella of the IFRC operation manager and in close collaboration with the local NS, other

[5] IFRC. (2010). *Strategy 2020; Saving lives changing minds*. Geneva: IFRC.
[6] IFRC/ICRC. (1994). *Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organisations in Disaster Relief*.
[7] IFRC. (2012). ERU Standard Operating Procedures. Geneva
[8] IFRC. Data Protection Policy. Draft 2019 – unpublished.
[9] IFRC. Emergency Surge personnel deployments. Deployment Guidelines and Standard Operating Procedures. Final Draft 2019 – unpublished.

deployed ERUs and the Ministry of Health. Interventions follow the national health policies or WHO guidelines. The PH ERU CBS also works with other international partners where appropriate.

Do no harm and take conflict-sensitive action: The PH ERU CBS always considers the unintended negative effects of its work (do no harm). Conflict-sensitive project management is therefore a fundamental component of the project management in all areas. Barriers and enablers are carefully assessed in the community and services are provided equally for all segments of the population. Together with stakeholders, intervention areas are carefully selected to ensure the best possible service coverage with equal access for all.

Gender and diversity: The minimum standard commitments on gender and diversity will follow the four specific areas dignity, access, participation and safety as described in the IFRC minimum standard commitments to gender and diversity in emergency programming guidelines[10]

Minimum core standards

All the PH ERU NS are expected to confirm that they are able and willing to adhere to IFRC ERU SOP[11] and to the defined minimum standards for each PH ERU.

Table 1 shows the minimum core standards are criteria to which the PH ERU CBS team must adhere. They describe structure and performance during deployment, but they should be acknowledged and implemented prior to deployment. This allows the affected country to have confidence in the capabilities of the PH ERU CBS and an opportunity to hold PH ERU CBS accountable if they do not meet their stated capability.

Table 1. Minimum core standards

Standard 1	Adhere and follow IFRC ERU SOP
Standard 2	Collaborate and coordinate with inter-agency response coordination mechanism at global, regional and national level, as well with other response team and health system if appropriate
Standard 3	Ensure regular reporting to designated stakeholders during the response in accordance to IFRC deployment order
Standard 4	Ensure data protection rules and regulation followed appropriately
Standard 5	A. Adhere to professional guidelines – all delegates have the appropriate knowledge, skills and relevant formal education to practice the work they are assigned to. B. Adhere to IFRC Humanitarian Health Competency Framework in selection, training and evaluation of delegates C. Ensure that delegates deployed within the PH ERU CBS are appropriately trained in accordance to agreed training requirements
Standard 6	Ensure that all equipment deployed complies with international quality standards

[10] IFRC. (2015). *Minimum standard commitments to gender and diversity in emergency programming*. Geneva.
[11] IFRC. (2012). *ERU Standard Operating Procedures*. Geneva.

Standard 7	Ensure that the PH ERU CBS have arrangements in place for care of the team members health and safety including repatriation and exist strategies if required
Standard 8	Ensure that the PH ERU CBS is self-sufficient and do not put demand on logistic support from the affected National Society, unless agreed otherwise before deployment
Standard 9	Ensure integration of crosscutting approaches are included in the response such as CEA, gender, diversity and protection.
Standard 10	Ensure system for compliance mechanism and plans for evaluation are in place during response and undertake evaluation of deployment to ensure learning and enhance good practice

3. The PH ERU CBS configuration

What is CBS?

Outbreaks normally begin with a cluster of sick people, or sudden deaths in a community, that is not detected in a timely manner by traditional surveillance systems[12]. This may be aggravated in scenarios where traditional surveillance systems have weaknesses or there is inadequate coverage of communities by health facilities. This allows them to start an immediate response, while waiting for support from the NS.

Meanwhile, trained staff and delegates can monitor in the real-time the notifications being sent in by volunteers and carry out an appropriate and timely response in conjunction with health authorities or other partners.

The Movement has several years of experience with CBS, starting from 2012 during the cholera outbreak in Sierra Leone, where the first CBS pilot was run, aiming to determine if volunteers would be able to report community cases. CBS efforts have been set up (as emergency or long term development projects) by IFRC or NS with PNS support in Sierra Leone, Madagascar, Somaliland, Senegal, Mozambique, and more recently under the Community Epidemic and Pandemic Preparedness (CP3) project in IFRC, where its being set up in 8 additional countries.

Purpose and Objectives of the PH ERU CBS

The overall purpose of the PH ERU CBS is to reduce the loss of lives by preventing or contributing to reduction of outbreaks or potential outbreaks of diseases or their negative impacts in sudden-onset disasters, protracted crisis or health emergencies/outbreaks, where there is a defined need for surveillance of diseases.

The general objective of the PH ERU CBS is to **support the establishment of a CBS system for detecting and reporting of events of public health significance within a community by community members,**

[12] IFRC. CBS Guiding principles. Draft 2019 - unpublished

to strengthen the response during an emergency.

Specific objectives:

- Assess the need for a PH ERU CBS in the specific context
- Determine the configuration of the data collection, flow, protection and response, and other components of the CBS system that will be put into place.
- Set up the data collection and analysis tools
- Train delegates, NS staff and volunteers who will support data collection, analysis and response
- Maintain ongoing analysis and use data for decision-making
- Ensure monitoring of data collection, analysis and response
- Early detection of cases of disease at community level, and appropriate preventive responses and referral, as necessary.

Activities

- Assessment of needs, feasibility and capacity for response of the CBS based on initial request by NS or IFRC
- Design of CBS system
- Set up of CBS system adapted to context and need
- Coordination with all relevant stakeholders
- Training of RC volunteers in CBS methodology
- Depending on the situation; support epidemic control for volunteers training
- Development of exit strategy/plan

Key characteristics

- Light team and set up which is portable and adaptable to context and need
- System set up adapted to context and scale
- Staffed and equipped as a stand-alone unit
- Self-sufficient for 4 weeks
- Estimated deployment time dependent on needs.

General design and operation

The general design of a CBS operation starts with CBS-trained volunteers working in their own communities to detect pre-agreed health risks – based on community case definitions – or events (e.g. deaths, fires, floods). Volunteers are trained to pass on this information via SMS (if using the CBS digital

tool) to the RC staff/delegates. Volunteer supervisors or RC staff (usually branch level) verify the reports sent by volunteers.

Meanwhile, the volunteer takes action, informing the case and the family of preventative measures to put into place to avoid transmission, and recommending referrals if needed. Volunteers base their response actions on ECV and CBHFA trainings.

When a pre-agreed threshold of reports is met (which can be a single report for measles or Ebola), the RC then informs health authorities (or clinical ERU personnel, or other clinical partners, as agreed), and supports an investigation in the community, with the participation of the RC volunteer(s) who sent the report(s), in order to foster trust in the community.

The RC maintains a database of all reports sent and investigated and communicates this information back to the volunteers and communities, as well as to health authorities, cluster and others.

Link to other surveillance systems

PH ERU CBS is part of the surge capacity toolbox. By definition, it will be deployed when existing surveillance capacity is not available or not functional (temporarily or permanently). However, in most scenarios, it is possible that some part of the facility-based national surveillance system is still working. And other health information systems may have been set up as part as of the emergency response, both inside the Movement, if an ERU field hospital/CTC have been deployed, or by outside partners (e.g. EWARS).

CBS can be linked to these systems in different ways. The simplest way to share the CBS information is though daily or weekly reports showing aggregated community-based cases (with age, sex and geographical distribution, for instance). Other set-ups can be envisioned depending on time and technology available. It will also be possible, once the RC CBS platform is fully developed, to grant authorized outside parties' access to aggregated data reports in real time. Data protection principles must be fully ensured during these sharing practices.

It is key to clarify to all parties involved that facility and community cases should NOT be counted together, as the former have been seen by a clinician while the latter are based only on community case definitions. The possibility of "double-counting"[13] must also be taken into consideration, if cases seen in the community are referred to a health facility or are seen in the community by a clinician during an investigation.

[13] In reality, «double counting» would only be a concern if facility-based and community-based cases are mistakenly counted together.

PART II Operational framework

Developing and maintaining a PH ERU CBS

4. Human resources

The composition of the PH ERU CBS team will be dependent on context and scope of the deployment. Table 2 describes the list of profiles, competencies and responsibilities required for deployment, in relation to the Deployment phases that are discussed in Section 7.

PH ERU CBS Team profiles

In order to set-up and run the CBS module, five different profiles might be needed. However, an experienced NS staff or delegate may be able to cover two or more profiles. It is important that each individual member is fully aware of and comfortable with his/her responsibilities. Moreover, the team needs to function very well as an entity. Every team member is responsible of ensuring good working as a team, and this is one of the main responsibilities of the team leader.

Table 2. Profiles required in a PH ERU CBS

Phase	Role	Responsibilities	Competencies (from HHCM)	Training
Advance team – feasibility assessment **Design** **Implementation**	Team leader (PH profile)	Team management, program design and coordination	1. General / RCC 1. General/COOR 1. General / AQA 1. General / OM 1. General / AA 1.General /CP 6. FE/ops management	ERU TL, PH ERU CBS, CBS training, PHiE, IMPACT/security Recommended: FACT/ADPIC other related trainings
Advance team – feasibility assessment **Design**	Field epidemiologist and/or Data/Information manager	Epi analysis, support program design and implementation, data analysis	1. General / RCC 6. Field Epi / Ops Mgt. B2 6. Field Epi / Ops Mgt B3 6. Field Epi / Ops Mgt B4	PH ERU CBS, CBS training, PHiE, IMPACT/security Optional: FACT/ADPIC other related trainings

Implementation			6.Field Epi / ES. B2 6.Field Epi / ES. B3 6.Field Epi / ES. B5 6.Field Epi / ES. B7 6.Field Epi / ES. B8 6.Field Epi / ES. B9 6.Field Epi / ES. B10 7. Epidemics /G.B1-B10	
Implementation	Public health delegate	Support program design, implementation and trainings	1.General/CB 1. General/RCC. B1 1. General/RCC. B4 1. General/RCC. B5 1.General/COOR. B2 6. Field Epi /ES. B2 6. Field Epi /ES. B6-C6.	PH ERU CBS, CBS training, PHiE, IMPACT/security Optional: other related trainings (ECV, CBHFA)
Design/Implementation	ICT and/or Logs or ICT LOGS	Support set up of ICT	6. Field Epi/ET. B1-C1	IMPACT/Security, PH ERU CBS training, Optional: ICT tech training
Depending on needs and context, e.g could be through hiring local staff?	Finance/Admin	Admin and finance support (if needed)		IMPACT/security, PH ERU CBS training Optional: EMT FAD ERU training,

Team leader/PH coordinator: The team leader must have solid humanitarian RC knowledge; public health (including CBS, equipment and tools, coordination, assessment and analysis) experience; oper-

ational management skills specific to health issues; experience in information management, data collection/management and knowledge of how to operationalize CEA. A PH background is required, as well as RC understanding, and ability to negotiate with MoH, health cluster and networks.

Field epidemiologist and/or Data/Information manager: The epidemiologist requires solid knowledge and experience in epidemiology and surveillance, particularly CBS, capacity to analyse, interpret and disseminate data to inform decision making; familiarity with information management, data collection/management; RC knowledge; public health (including CBS, equipment and tools, coordination, assessment and analysis); operational management specific to health issues. A public health or epidemiology background.

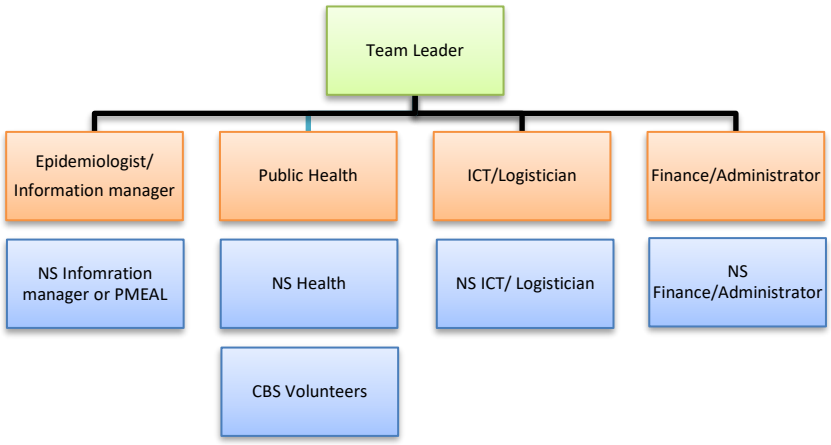
Public health delegate: solid humanitarian RC knowledge; public health (including CBS, equipment and tools, coordination, assessment and analysis); operational management specific to health issues; information management, data collection/management; CEA. PH background.

ICT and/or Logs or ICT LOGS: humanitarian RC knowledge; information management; understanding of CBS, familiarity with informatics and data collection and analysis tools and technologies. Capacity to problem-solve hardware, software and network challenges.

Finance/admin: humanitarian RC knowledge; administrative and financial skills in emergency settings.

The organisational chart below highlights the organization of the team and the above positions, as well as links to NS staff and volunteers.

Figure 2. CBS PH ERU team - Organisational chart



Local Counterparts

Potential counterparts from the Host National Society need to be identified at the beginning of the mission for every position covered by delegates. Counterparts and delegates need to work closely together from the beginning of the mission. If no counterparts are available, it should be discussed if available NS staff can be trained. Once counterparts are ready, they should take over responsibilities so that the delegates role can gradually shift from management towards mainly facilitating tasks where still required.

The delegate team could ideally be reduced in numbers soon after the local counterparts feel comfortable with the management and running of the PH ERU CBS. An important pre-condition for this gradual fade-out of delegate presence and overall exit strategy is the involvement of local counterparts in all decision-making processes right from the start.

The Delegate Team

The complete team of delegates can consist of up to 5 expatriates delegate but can be reduced where local capacities are available. Also, depending on context, size of response and delegate's skills and training, more than one position may be covered by a single delegate. Expatriate delegates should be replaced by local colleagues as soon as the situation allows. There is no static scheme for the team composition as each situation is different and calls for individual solutions.

A high degree of flexibility is expected from the team. Each delegate has to be aware that in particular during the set-up phase that everyone has to perform various tasks regardless of their individual professions. Having a broad vision of the work that needs to be done is essential. Independent from the individual job descriptions, other duties and tasks may be assigned. General responsibilities can be delegated among team members. This does not mean that delegates will be asked or are allowed to exceed their professional capacities.

Decisions by the team leader shall be transparent to all team members and local counterparts. Regular information flow toward and from the team leader is key. Regular meeting shall be held on management level as well as meetings with all staff to facilitate a structured exchange of information.

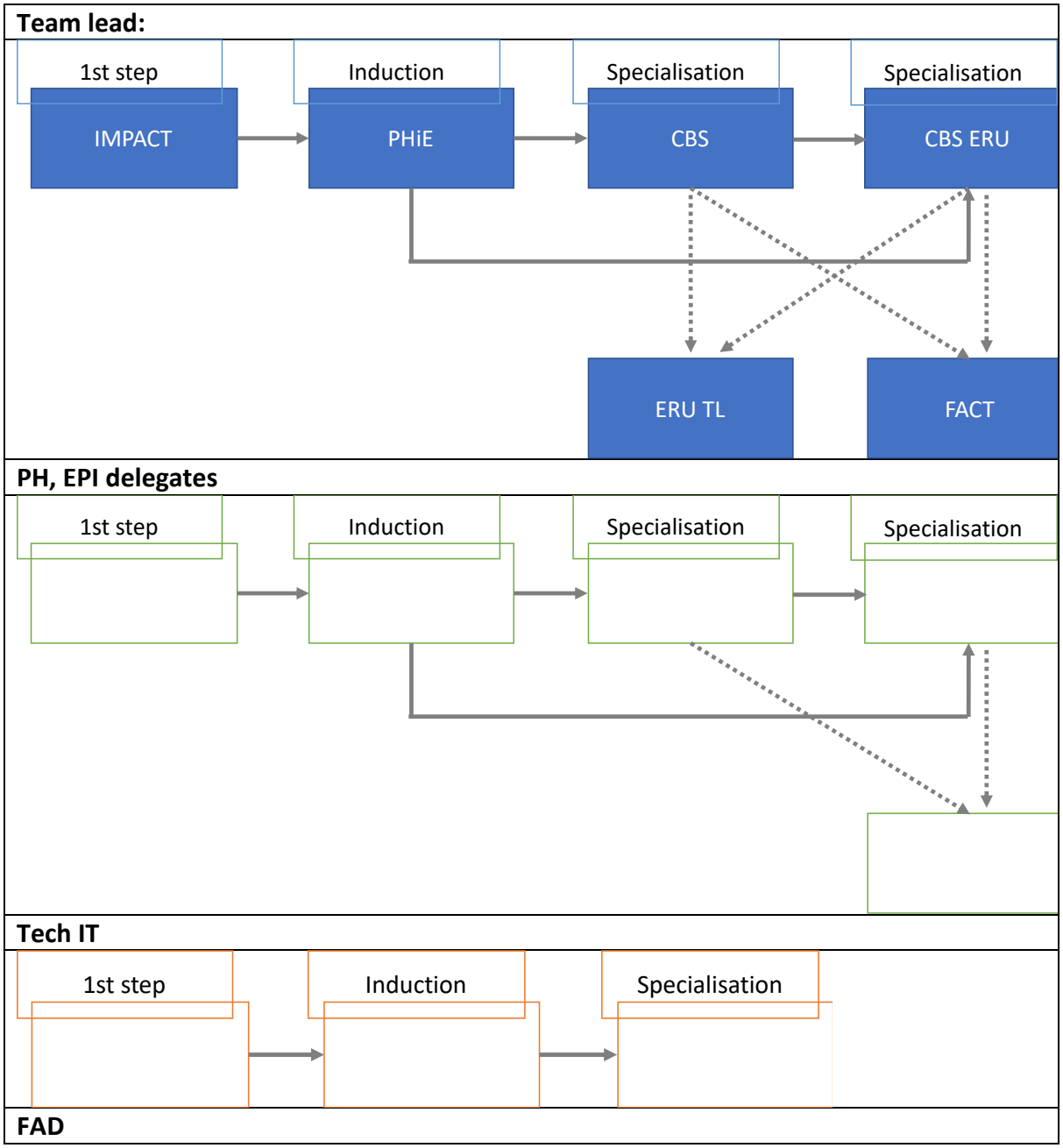
The main tasks of delegates are to get the CBS system up and running, as well as training and capacity building of local counterparts and volunteers. The equipment and methods used need to be introduced to local counterparts and volunteers, ensuring they feel comfortable within the working environment provided. Delegates will need to maintain flexibility in order to best adapt the system to context and local customs.

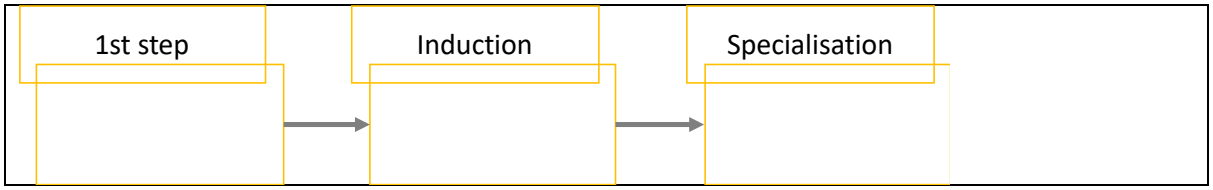
Training of human resources

Delegates need to comply with mandatory Red Cross training such as WORC, Stay Safe and Fraud and Corruption online trainings. All delegates, independently of their profile would have undergone IM-PACT training, to ensure understanding of the Red Cross Movement prior to deployments.

The table below shows additional training pathways for each team profile.

Table 3. Training pathways for different team profiles





A PH ERU CBS operational training has been developed. This 4-day training prepares delegates to conduct a CBS assessment, design a CBS system, implement and run a PH ERU CBS in a public health emergency. This training is recommended for all team profiles.

A shortened (2.5-day) alternative version of the PH ERU CBS operational training is also available, designed for highly experienced public health and epidemiology delegates who work regularly in epidemiology and surveillance.

Briefings, debriefing & end of missions

Briefings, debriefings and end of mission tasks follow normal ERU SOPs and/or surge SOPs.

Briefings

Every delegate shall receive a quick administrative/financial as well as operational briefing at the start of the mission. This briefing can be done remotely and includes:

- A*dministrative/financial briefing* shall be carried out either by their own NS or the IFRC office processing the deployment. This will include the handing over of the working advance and any equipment.
- Operational briefings, including security briefings, can be organised at field level and/or before departure if the delegate's NS is the one sending the PH ERU CBS. The operational briefing can cover current situation and needs, security matters, communications and public relations, as well as the current state of the PH ERU CBS operation on the ground if it has already been deployed.

Recommendations for operational briefing[14]:

- Go through key topics/issues that can come up in the field along with advice on solutions.
- Explain to delegates the lines of communication and hierarchy between deploying National Society, IFRC, ERU team and delegates.
- Create a whatsapp/SMS/ group with the deploying delegate(s), and one or two key contact persons in the CBS team or CBS TWG.

[14] Based on lessons learned from previous deployments

Debriefings

Debriefings can take place in a field office, via telephone once back home or at the deploying National Societies' headquarters or in Geneva in person. They can be undertaken by IFRC or deploying NS. Debriefings can cover general issues encountered during the deployment, lessons learned, current state of the PH ERU CBS left behind, any safety and security incidents or concerns, and other matters, as relevant.

The debrief may also include a financial/administrative debrief to return the equipment provided as well as provide the required clearance of the working advance provided.

End of Mission Report

As per ERU SOPs, all PH ERU CBS team members should complete an EoM report for their deploying National Society. For the IFRC, one 'team report', a compilation by the team leader of the team's impressions in one document is expected, which shall be forwarded to the IFRC's in-country head of operations, zone disaster management office, the ERU desk and technical department in Geneva as well as the team's National Society. The EoM report shall be in English and shall include any lessons learned and specific recommendations for the future[15].

Handover document

The CBS PH ERU team leader is responsible for developing a handover document to be shared with the incoming rotation and direct line manager. Good documentation of the performed activities from the beginning of the mission will prevent information loss and gaps between rotations. The handover document must contain a list of pending activities to be carried out, detailing to which part of the Plan of Action they belong, as well as financial commitments, agreements and the contact information of the people involved in each activity[16]. A Handover document template is available in the ERU SOPs.

Performance appraisal

Performance appraisals also follow ERU SOPs.

Individual performance evaluations of ERU team members is the responsibility of the ERU team leader and should be done as per the human resources regulations of the deploying National Society. The performance evaluation of the ERU team leader is the responsibility of the IFRC and should be done by the FACT (first ERU team leader) and subsequently the technical counterpart (coordinator) and head of operations.

For both levels a "Short term mission appraisal" format is available in ERU SOPs annexes. Deploying

[15] IFRC. (2012) ERU Standard Operating Procedures. Geneva.
[16] IFRC. Emergency Surge Personnel Deployments. Guidelines and SOPs. Final draft version Feb 2019.

NS use the information in the mission appraisals to update the information about the person's competencies in the register.

Safety and security of deployed staff

Safety and security for CBS PH ERU team members follow ERU SOPs.

Security regulations as established by the IFRC operational manager in the field (and referred to in the ERUs ToR) shall be applicable to all ERU members from the moment they are deployed and are non-negotiable.

It is the duty of the PH ERU CBS team leader to inquire after existing security regulations when arriving in-country. It is the responsibility of the Team Leader to ensure that the team members have been briefed on the security regulations and remain up to date following any changes[17].

It is the responsibility of each delegate to request a security briefing if none is initially offered and keep themselves updated on changes in the situation. All delegates must have completed the IFRC Stay Safe online course as a minimum.

Any breaches of security shall be dealt with according to the IFRC Code of Conduct for staff.

Remote support and lines of communication

It is expected that the team on the ground will have enough diverse skills to cope with most situations autonomously. However, remote support will be available to team members from PH ERU CBS technical working group, as well as the CBS Technical Working Group.

Recommendations[18]:

- Establish a contact person responsible for following the delegates in the field, either from the PH ERU CBS technical working group, CBS team or CBS TWG or
- During the briefing, create a whatsapp/SMS/ group with the deploying delegate(s), and one or two key contact persons in the PH ERU CBS technical working group, CBS team or CBS TWG.
- Explain to delegates the lines of communication and hierarchy between deploying National Society, IFRC, ERU team and delegates.

5. Equipment

The PH ERU CBS is a light configuration. It is not expected that there will be a need for tented delegate

[17] IFRC. (2012) ERU Standard Operating Procedures. Geneva.
[18] Based on lessons learned from previous deployments

accommodation. In areas where tented accommodation is the only option, the team will pair up with existing response configurations such as the field hospital, health clinic or other relevant configurations that deploys with a tented structure.

Equipment needed to ensure a fast and portable operational response would be:

- Delegate personal kit (standard ERU, see Annex 2)
- CBS digital kit (see description below)
- If needed, Fin/admin kit and health promotion kit (adjusted to epidemic control)

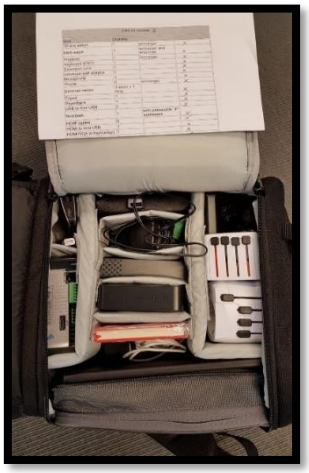
Logistic requirements for deployments include availability of accommodation and access to cars.

CBS digital kit

The aim of the CBS digital tool (also called “CBS in a rucksack”) is to provide an out-of-the-box solution that can be set up without the need of an IT technician. The equipment will be self-configured and updated, however, that ambition is not yet reality. In a first phase, some back-office support might be needed to support the field team in troubleshooting both hardware and software issues.

"CBS in a rucksack" is created to ensure all the necessary equipment is available to the national society when setting up CBS. In addition to setting up the local CBS platform connection, CBS in a rucksack supports training of volunteers; digital data collection; information sharing and emergency power supply. The equipment is packed in a protective carry-on rucksack, for easy deployment (See figure 3). One kit can support a national scale CBS implementation.

Figure 3. The CBS in a rucksack.



Characteristics:

- Much lighter and smaller than normal deployable field kits

- Easy to set up
- Adapted to emergency settings
- Very little equipment is enough to support a national level response

Set up

The CBS digital toolkit kit takes 20-30 minutes to set up and can be set up by any PH ERU CBS trained delegate. A video and a short manual are available to guide delegates through the process (Annex 3).

Additional materials required to set it up include:

- A local unblocked SIM card with known telephone number.
- An ethernet connection or stable wifi.

Table 4. List of contents in the CBS digital toolkit

Item	Description	Quantity
Lowepro fast-pack bp 250 aw ii	This is the backpack. It is well padded and allows us to pack all the CBS equipment safely, while still allowing it to pass as hand luggage and have space for personal belongings.	1
TP-link switch	This network switch connects devices together on a computer network. We use this to ensure that the rest of the system is provided with access to a stable internet connection.	1
SMS eagle	The SMS eagle is the gateway device that transfers incoming SMS to the CBS platform, where the data is stored and analysed. The eagle is set up with local sim cards, to keep costs down.	1
Projector	The pocket size projector is needed for configuration and set up of the eagle (which would normally require a computer screen). The projector can also be used for training purposes.	1
Keyboard (ENG)	A lightweight keyboard for configuration and set up of the Eagle, as well as troubleshooting if required.	1
Extension cord	The extension cord ensures that all chargers and plugs (which are Norwegian) can be used in the country where the CBS system is deployed without complications.	1
Universal wall adaptor	The universal wall adaptor goes on the extension cord in order to provide Norwegian plugs to all devices.	1
Microphone	The microphone attaches to the phone and allows for simple media content creation and participation in meetings and trainings from a distance.	1
Mobile Phone (w/charger)	The mobile phone is used for testing of the configuration; for training purposes; and can be used digital data collection; and for generating media content	1
Ethernet cables	Ethernet cables allow for connection to the internet via the switch.	3
Tripod	The tripod attaches to the phone and allows for simple media content creation and using the mobile phone for remote support/video calls	1
Powerbank	The powerbank ensures that devices are charged, even during power cuts	1
USB to miniUSB	For charging of phone and tablet	1
Notebook	The notebook stores the passwords, IP address needed to configure the system, and be used for other useful notes about the system.	1
HDMI cables	Connects computer to devices	2
HDMI to mini USB	Connects computer to devices	1
HDMI/VGA to thunderbolt	Connects computer to devices	1
Ethernet to thunderbolt	Connects a mac to the internet on the switch	1

Speaker	The speaker enables training/dissemination, allows for media content creation and participation in meetings and trainings from a distance.	1
AAA batteries		1
USB flash drive 32 gb	Used for back-up, electronic data transfers	1
Mini-jack to min-ijack	Used for sound transfer between devices	1
Ether-net/USB/HDMI to USB-C	Used to ensure that any device type can connect to the system	1
Tablet	The tablet is used for registration of data collectors; for training purposes; and can be used for generating media content. It can also be used as a back up SMS Gateway in emergencies.	1
AC to USB	Used to ensure that all USB charged devices can be charged at the same time directly in the wall socket	1

Other equipment

In addition to the CBS digital toolkit, other small equipment – not included in the kit -may be required to operate a CBS project. This equipment can be purchased locally once the CBS design has been agreed upon.

- Simple mobile telephones (non-smartphones) for the volunteers reporting in CBS[19]
- SIM cards for the phones
- Credit for the phones or a group deal arrangement (closed user group) with the local operator where all SMS and calls to the CBS digital toolkit number are free of charge.
- Solar chargers for the phones, if assessment shows these are needed.
- RC T- shirts or bibs for volunteers

A full list of all material resources to consider for budgeting purposes is listed in the financial chapter below.

6. Financial

As per ERU SOP's, the ERU National Society funds all deployment costs of an ERU, including the equipment, the personnel and the running costs, for the full period of its deployment. Operational costs in the country affected are funded by the IFRC's emergency appeal[20]. The ERU shall not commit the IFRC funding for operational costs without prior approval from the emergency appeal project manager (i.e. the "budget holder").

Running costs are those incurred in making the ERU functional, in the case of the PH ERU CBS, these may include:

[19] Although it is preferred to the extent possible that volunteers use their own personal phones.
[20] IFRC. (2012). *ERU Standard Operating Procedures*. Geneva.

- International staff costs including salaries, flight to assignment, insurance, per diem, and accommodation costs
- Nationally hired staff costs – salaries and other benefits
- Volunteers – per diems and other benefits
- Communication costs including satellite and mobile phones, internet connections, for the team
- CBS digital toolkit
- Phones, solar chargers for the phones, SIM cards and phone credit for the volunteers, if needed.
- T-shirts or bibs or other RC-identifying items for the volunteers
- Maintenance costs required by the CBS digital tool, if needed.
- Vehicles including fuel, rental, maintenance, spare parts, insurance, etc. (Note that support for fuel is normally requested by MoH clinicians carrying out investigations of reports).
- Training expenses for volunteers and NS staff.

The deploying NS will ensure the self-sufficiency of all team members and ensure a working advance is provided or a mechanism for cash transfers is in place.

All administrative and financial functions of the ERU shall be handled by the responsible administration officer of the designated ERU with all reports and accounts kept in the forms and standards of the ERU National Society.

The total implementation costs will vary depending on the number of team members to be sent, place of deployment, and needs on site.

PART III Operational management

Deploying a PH ERU CBS

7. Deployment mechanism

The PH ERU CBS is applicable for both health emergencies and health in emergencies. It can be deployed under the auspices of the IFRC global surge mechanism, bilaterally or under the auspices of ICRC upon request. Subsequently, it follows the Standard Operating procedures (SOP) for ERU. Deployments can be initiated under DREF, and then included in Emergency appeals.

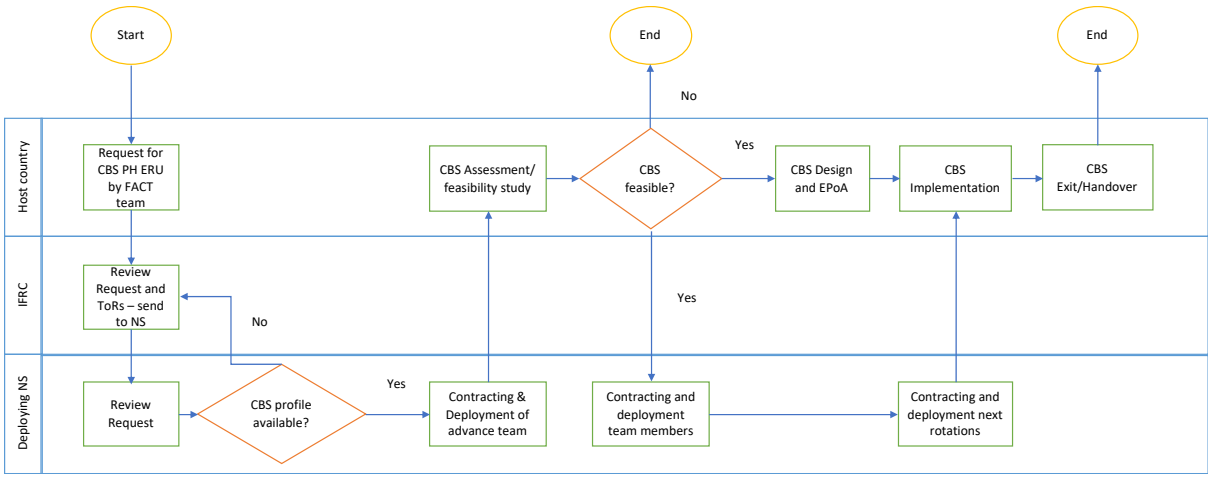
Box 2. Deployment phases

1. Activation criteria
2. Feasibility study/ Assessment
3. Design & Set-up
4. Implementation
5. Exit of ERU – Handover to operation/ NS

The phases of the deployment mechanism are shown in Box 2.

While timelines will vary greatly dependent on context and complexity of the emergency, recent experiences have shown that the time from the arrival of advance team tasked with carrying out the feasibility study, to the start of implementation, with data starting to come into the system, can be as short as a week.

Deployment flow chart



Activation

Activation of deployments can be initiated either in contexts where the risk of disease outbreaks is imminent or in an ongoing disease outbreak.

Acceptance of deployment includes sending an advance team and having the capacity (and delegate availability) to deploy a complete PH ERU CBS if the assessment shows CBS is feasible. Timeline from alert to deployment should not be more than 48 to 72 hours. The timeline might be different for protracted crises.

Deployment of advance team/feasibility study:

Deployment of a PH ERU CBS will start with a feasibility study/ assessment by an advance team. This team will assess the situation on the ground and validate the need and/or relevance of deploying a PH ERU CBS. It will also describe the operational feasibility of deployment of a complete PH ERU CBS (including capacity of NS, MoH, WHO, NGOs, private actors; and technical assessment).

The scope of the services will be defined in the feasibility study.

The PH ERU CBS advance team consists of a 2-person team (see roles and competencies described in Table 2 in the Human Resources section). Timeline for completement the study aims to be less than 1 week, and no longer than 2 weeks.

The feasibility study/assessment can be guided by the **CBS assessment tool and template**, always taking into consideration that this tool was devised for longer term programming and not emergencies.

Table 5. Main deliverables of the feasibility study/assessment.

Main deliverables:	
CBS is not feasible	An assessment report documenting why CBS is NOT feasible is to be submitted to relevant partners. It leaves open the door for a later review of needs and feasibility if the situation changes.
CBS is feasible	An assessment report documenting why CBS is feasible is to be submitted to relevant partners. The team uses all data and findings to support the development of the CBS design and set up.
Minimum tools requirements: • Feasibility assessment protocol (CBS assessment tool and template)	
Equipment requirements: • Delegate personal equipment (Annex 2) • To ensure smooth and quick implementation if CBS is deemed feasible, it would be advisable to bring a CBS digital kit (1 rucksack)	

Site selection

The PH ERU CBS will be mobilized either when there is clear risk of a potential outbreak during an emergency or once an outbreak has been declared. The feasibility study/assessment will provide risk assessment information on areas of outbreak, or areas in impending risk of outbreak based on current cases and/or epidemic risk assessments.

Site selection for deploying CBS-trained volunteers should take into account other partners carrying out epidemic surveillance activities and be cleared with the authorities. It is key to ensure the collaboration with clinicians in the closest health care facilities or other available clinicians (whether MoH, partner or Movement ones), to carry out the investigations.

Important information to collect during the feasibility study to facilitate site selection and scale of response may include:

- Approximate size of affected area (number of villages/districts)
- Approximate size of the population in the affected area
- Setting: Urban, Rural, Camp
- Health risk (e.g. Viral Haemorrhagic fever, Measles, Cholera) or event of concern (e.g. floods)
- Number and place of health facilities or treatment centres in the affected areas
- Are there any specific places affected (schools, prisons, displaced camps) or notable changes in context such as population movement, mass gatherings, flooding, security?
- Is this an area with specific trade routes and associated traffic?

If an outbreak is already under way:

- Total number of reported cases in affected areas (both, facility and community levels). If possible disaggregated by gender and age (below 5 and 5 years of age and above)
- Total number of reported deaths in affected areas (both, facility and community levels). If possible disaggregated by gender and age (below 5 and 5 years of age and above)
- Area from where cases mainly come from (name of places)
- Information on the trend in cases and deaths (over past weeks, month)
- Suspected reason(s) for the outbreak

Partner capacity

As part of the feasibility study, it is key to understand the capacity in country, especially from the National Society to carry out a CBS project in addition to other response activities that may have been agreed upon (see CBS assessment tool and template).

While the PH ERU CBS team can take up many functions in order to run the project, support from volunteers and branch level officers is still required. It is also ideal to be able to train NS counterparts at national level who specialize in health or information management.

Understanding partner capacity may include:

- What capacities lay within the NS (volunteers, branches, national)?
- What other organisations are present and working on CBS or providing clinical and/or outbreak investigation services?
- What are the capacities of health authorities to carry out investigations and respond to outbreaks?
- Is there a CBS coordination effort?

A clear mapping of capacities needs to be taken into account to determine CBS feasibility and it can also help guide site selection.

Advocacy

Initial communication during CBS feasibility study and design phase is key. CBS advocacy to external partners can be challenging. Advocacy documentation is developed by the CBS technical working group to support with this.

If CBS is deemed feasible, collaboration agreements with MoH (and other partners if appropriate) need to be put into place. Discussions need to be had on data and report sharing, and data sharing agreements in line with IFRC Data protection policy need to be set up.

Design and set-up:

If CBS is deemed feasible, the advance team will continue into the design phase. The team will use information collected during the feasibility study (such as health risk assessment, site information and NS and partner capacity) to establish the design of the CBS project. The team will work closely with NS and other partners such as IFRC and/or ICRC.

The design phase is guided by the CBS Protocol tool, taking into account that this tool was developed for long term programming and may require adjustment for CBS in emergencies.

The design phase will deliver a completed CBS protocol and a PH ERU CBS section for the Emergency Plan of Action (EPoA) (Table 6).

Table 6. Main deliverables of the design phase.

Main deliverables: • Development of the PH ERU CBS Protocol (possibly signed by MoH/NS) • PH ERU CBS EPoA, including operational budget and HR plan • List of equipment needed and network map	
The PH ERU CBS protocol will include:	*The PH ERU CBS EPoA will include:*

• Data collection • Data management • Data analysis • Links to response ○ Links with systems of operational management / e.g. IM • Technical components and equipment need • Coordination with MoH • HR needs, description of roles and responsibilities required for implementing the protocol • Ensure sustainability beyond ERU operation is considered and planned for with required support (transition/ exit of ERU) • Volunteer management	• Operational plan of the PH ERU CBS protocol • Plan for PH ERU CBS rotation • Operational budget
Minimum tools requirements: • PH ERU CBS Protocol template (guidance) • PH ERU CBS template EPoA with M/E	

Community Engagement and Accountability (CEA)

A CBS system will not work without community and volunteer support. Communities must understand the benefit of the system, and that their input is valued and helps improve, or adapt, the system to work better for the community.

Acceptability of the CBS project by the community is essential and requires early and continuous engagement with the community from the feasibility study onwards. As a minimum, the CBS project needs to be discussed with the communities, explaining its value. If local volunteers don't exist in the communities targeted, they need to be chosen by community members/leaders based on agreed criteria.

Accountability is also key. Communities need to be assured that they will receive feedback, reports and responses to their concerns if they are feeding information into the system. Responses and feedback include the preventive measures at community level set up by the volunteers (based on ECV or CBHFA) after notification of a health risk or event and reporting back to the communities on the results of outbreak investigations. It also needs to include adequate responses (preventive health messages, referrals, etc) to health risks or events reported by the community that have not been included as part of CBS reporting system.

For example, if a volunteer reports a community member showing fever and bleeding (or other community case definition criteria used for haemorrhagic fevers), and after the investigation the results show that this was not a viral haemorrhagic fever, this information not only needs to be shared back

to the community, but adequate measures (e.g. a referral) need to be put in place nevertheless to support the sick community member. This is key to maintaining community trust.

Proper CEA measures need to be included at each step of the design protocol, balancing this need with the time pressures set by the emergency or outbreak.

Implementation

The team composition in the implementation phase (see roles and competencies described in table 2 in the Human Resources section) will be determined by context and need, the results of the feasibility study and the choices made in the design phase.

The PH ERU CBS team is tasked with implementing the CBS plan laid out in the EPoA and the CBS protocol. This will mostly require the setup of the system, training of staff and volunteers, supervision of reporting, outbreak investigations, community responses and CEA, monitoring and evaluation duties, covering coordination efforts and organizing subsequent rotations (See Table 7).

Table 7. Implementation deliverables, outputs, tools and equipment.

Deliverables:	**Output:**	**Tools required:**	**Equipment requirements:**
• Implementation of the EPoA - Stakeholder meetings/ coordination - Training of trainers - Training of CBS volunteers - Set up of CBS platform or data collection tool to be used - Ensure information sharing: CBS data informs overall response • Monitoring / supervision/ volunteer management • Continuous monitoring of the CBS system and data, plan for subsequent ERU rotations	• No. of people trained • Hardware set up, running and maintained as needed • Functional CBS system is set up and running (hardware and software) • CBS reports (dashboard, weekly/ daily paper reports) provided to the operation, MOH, other stakeholders as appropriate to inform response • Monitoring and support system in place	• PH ERU CBS Protocol template (guidance) • PH ERU CBS template EPoA with M/E • CBS digital kit – set up video and user manual • ECV and IGER manuals	• Additional digital kit as needed • Field volunteer equipment - Ideally volunteers use their own phones - Phone/ SIM is the only essential items; - SIM cards are difficult to fetch - Scratch cards are also bad options - Toll free no. takes long time to set up • Hygiene promotion as needed • Finance admin kit as needed

Training of volunteers

The PH ERU CBS training for delegates delves into the training of trainers (usually NS staff) and training of volunteers (data collectors) for CBS.

If the option exists, volunteers with previous basic first aid training, CBHFA training and/or ECV training should be prioritized for CBS training. Trainings in emergency settings should be kept short (1-2 days) and focused on the most important operational activities: detection (understanding and use of community case definitions), reporting (data collection by SMS and in paper format) and community level response (prevention and health promotion messages, referrals). Training must include safety and infection control practices for volunteers, so they know what measures to take to protect themselves.

Recommendations for training of volunteers:

- Revise the community case definitions with the volunteers, in the local language, to make sure they make sense to the volunteers and communities
- Ensure the training on SMS data collection includes common mistakes and obstacles and how to troubleshoot these.
- As much as possible, ensure training of volunteers are carried out in the local language.
- Ensure that volunteers are registered as data collectors on the CBS digital toolkit during the training.

CBS Operation

The specifics of running a PH ERU CBS will vary depending on the agreed upon CBS design. Usual tasks and responsibilities are described below.

Volunteers: Responsible for detecting a) individuals in their own communities who present signs and symptoms compatible with pre-agreed community case definitions of health risks and/or b) detecting specific events (e.g. floods, fires, groups of animal deaths). They are also responsible for reporting these health risks or events following a pre-agreed channel (if a CBS digital tool is being used, this would involve SMS). They give adequate prevention and health promotion messages to individuals, families and communities where a health risk is detected, and they support the investigation team when it comes to the community, acting as a liaison between outbreak investigation team and affected community members.

In emergency settings, volunteers may be supported with incentives (pre-agreed with the NS) to dedicate more hours a week than normal volunteering hours to detection and health promotion activities. In this case, house- to- house or other resource intense detection activities can be implemented. Zero

reporting may be included to maintain updated databases on volunteers that are active.

Volunteer supervisors: Tasked with supporting the volunteers, confirming reports sent by them, problem-solving any challenges volunteers may be experiencing, maintaining volunteer motivation and acting as liaison between volunteers and branch staff, and volunteers and outbreak investigation teams if necessary.

Branch NS staff: They support volunteer supervisors and monitor reports coming in. They may also be the link between the communities and the local health authorities, passing on an alert once a threshold has been reached, supporting the investigation and ensuring it takes places. They also support with CEA. They can act as liaison with national NS staff and delegate team.

National NS staff: Together with the PH ERU CBS delegate team they will be responsible for coordination and communication with health authorities and partners, carrying out or supporting data analysis and interpretation, development and disseminating of reports, ensuring adequate supervision and monitoring of CBS activities, and advocating at national and local level for investigations where cases have been detected by RC volunteers, if these are not taking place as expected.

Data collection, analysis, reporting and sharing

Data to be collected will be defined in the CBS design. It may include three layers of data:

1) **Data collected in the CBS digital toolkit.** Data that can be collected in the CBS toolkit is limited, as it is intended to be easy to fill out by volunteers, and to allow automatic development of simple analysis and graphs. The CBS digital toolkit can collect the following data:

- Volunteers' name, phone number, area of activity/community (collected during training) – *this information is key, as it allows for providing feedback to volunteers when the data they are inputting into the CBS toolkit is not in the correct format.*
- Date of report (automatic, from SMS)
- Location (obtained through the area of activity of volunteer reporting, or by GPS)
- Health risk being reported
- Sex of individual presenting health risk
- Age of individual presenting health risk (divided into under-five and five and over categories)
- **ORP setting.** In the case of CBS in ORPs, the CBS digital toolkit will include the capacity to collect data on deaths and referrals. Meanwhile, these data can be collected by volunteers on paper-based registries (see below) and transmitted by phone to supervisors or branch officers.

2) **Paper-based registries at volunteer level.** Volunteers may collect names and addresses and other

contact information of affected individuals in notebooks, to ensure proper follow up when an investigation is carried out. It is good practice to train them to register in their notebooks all the SMS they send, as this allows for quality assurance later on.

They may also report on any activity they carried out as a response (prevention messages, community wide health promotion or prevention activities, etc).

In an **ORP setting** they may have pre-prepared registries that include data on deaths, referrals, ORS distributed, etc.

3) **Other data to collect on paper or digital format** by supervisors and branch officers may include:

- If an investigation was carried out, and if yes, date, result of the investigation, investigation team and RC person who accompanied the investigation team.
- If a sample was taken, date of sample taking, result of the laboratory test, date of the result and date when it was communicated to the community.

Data analysis must be carried out in an ongoing fashion by the ERU PH CBS team (or ideally by the national NS health counterpart) . The CBS digital toolkit will eventually provide automatic reports, but to date still requires exporting data and analysing it in another software (e.g. Excel, Stata, SPSS).

Reports aggregating data by time, person (age/sex) and place (location) should be updated daily. Weekly reports can be sent to the MoH and other partners as agreed.

It is important that PH CBS ERU delegates have a generic data sharing agreement that can be easily amended to a particular context. All use of data and all data sharing agreements need to be in line with the IFRC Policy on the protection of personal data[21].

Addressing fear and stigma during outbreaks

Communities can be frightened during outbreaks, in particular in the case of new diseases previously unknown to them or those with a high case-fatality rate. If the community has recently experienced a natural disaster or other emergency, this can compound the situation. Stigma related to certain diseases can also be high and has been seen in cholera and Ebola outbreaks in particular.

Both fear and stigma in the communities may affect the ability of the RC and authorities to respond. Communities are less likely to report to volunteers, implement behaviour change, seek treatment or work together on prevention activities. The RC volunteers are in a unique position to work with communities and help address fear, stigma and misinformation as they are a trusted source of information. Sometimes communities can react badly to authorities or outside agencies, especially if isolation units

[21] IFRC. (2019). Policy on the protection of personal data. To be published.

are established in the community. The RC plays a vital role in ensuring the cooperation and understanding of the community for CBS and other outbreak response and prevention activities.

CBS volunteers can work with communities in addressing fear and stigma. In addition, PSS-trained volunteers can also be brought in to help communities deal with grief if there have been deaths from the outbreak.

First aid PSS for volunteers *themselves* should be considered if there are high levels of fear and stigma attached to the outbreak or the community is experiencing a high number of deaths. Volunteers are part of the affected community and may be dealing with a lot of pressure, stress and grief themselves.

Coordination and communication

Initial communication during CBS feasibility study and design phase is key. CBS advocacy to external partners can be challenging. Advocacy documentation has been developed to support with this. Collaboration agreements with MoH (and other partners if appropriate) need to be put into place and should include data sharing agreements in line with IFRC Data protection policy.

CBS is a relatively new activity and thus even inside the RC Movement, few delegates are aware of it. PH ERU CBS team members should not assume that other delegates or NS staff know about or understand CBS. PH ERU CBS delegates, in particular the team leader, need to ensure proper communication and advocacy around CBS to both NS staff and other ERU and FACT team leaders and delegates, explaining clearly what it's added value is.

Ongoing coordination and communication need to happen in a systematic and regular way. Adequate measures need to be put in place in the CBS protocol and EPoA to plan for regular opportunities to strengthen this communication and coordination (e.g. meetings, phone calls, etc.), at several levels:

a) Inside the PH ERU CBS team, including delegates, national and branch NS staff and volunteers.
    - SMS or whatsapp groups have been shown to be effective and fast communication and problem solving channels for the team, and also allow to be in touch with supervisors and branch level staff.
    - As with other ERU delegate positions, PH CBS ERU deployment kits can be linked with email address per CBS kit (or per delegate) that follow the deployment and is passed over to next rotations.
b) Within the whole ERU operation, if it includes more configurations than the PH ERU CBS (e.g. CCM PH ERU, clinical ERUs, other PH ERU delegates, WASH ERU/delegates, etc)
c) With the NS governance and senior officials.

d) With health authorities and other partners invested in CBS, surveillance, outbreak investigation and response.

- An important forum for communication and cooperation are the weekly (or during an outbreak, daily) epidemiological surveillance meetings chaired by the MoH or highest surveillance authority and including WHO participation. Presence of someone from the PH ERU CBS team (either delegates or national staff) has been shown, during CBS evaluations, to be key to the visibility and performance of CBS undertaken by the RC.

Monitoring and Evaluation

A monitoring and evaluation plan for CBS needs to be included in the protocol and EPoA. An M&E tool for CBS that can guide this plan is currently under development, and general M&E guidance is available in the CBS guiding principles.

Monitoring. In CBS, the system itself is designed to monitor a specific health risk, thus by default a part of the monitoring and evaluating data is automatically collected and analyzed as part of a CBS operation. This data can feed into performance indicators.

In addition, M&E requires data collection beyond the one obtained by the CBS digital toolkit (see section above for additional data to collect) that will allow to monitor project and volunteer performance.

Qualitative data can be collected through regular communication (informal or including semi-structured interviews and focus group discussions) with branch, volunteer supervisors, volunteers, the communities and local health authorities. Supervision and observation visits can also be sources of information. Qualitative data from volunteers and the community is an essential part of contextualising and understanding quantitative CBS data and explaining performance indicators.

The aim of monitoring activities is to ensure CBS is working as originally planned. Data allows to tweak the system as needed, for example with refresher trainings for volunteers, supporting volunteers through more engaged supervision/coaching, strengthening non-SMS based data collection, advocating for adequate follow by local health authorities, and verifying that adequate CEA is happening on the ground, in particular reporting back to the communities on the outcomes of outbreak investigations.

Common indicators for monitoring of CBS include:

- Number of reports (total, and over unit of time; disaggregated by type of health risk, age, sex and location)
- Number or proportion of reports investigated
- Number or proportion of reports investigated in 24h/48h

- Number of CBS volunteers trained
- Proportion of CBS volunteers reporting regularly via SMS
- Number or proportion of affected communities with CBS in place

Evaluation. Where possible, the PH ERU CBS missions should undergo a formal evaluation, either as part of the larger evaluation planned for the whole mission or a smaller, specialized one. The aim of the evaluation is to improve service provision in the future. This is particularly important as CBS is in its early phases in the Movement and collection of lessons learned is key. Relevant findings shall be discussed at the PH technical ERU meetings and CBS TWG, as well as at the general ERU working group. Relevant documents shall be published as agreed to by the organizations involved.

CBS-trained staff not involved in the mission, or external evaluators with experience in CBS in the RC Movement can carry out such an evaluation, based on the original CBS protocol and EPoA, as well as all reports and data collected through operational and monitoring activities. This data can be triangulated against information especially collected during the evaluation through key informant interviews and focus group discussions.

Exit of ERU – Handover to operation/ NS

Exit strategy will be determined by context and need. The nature of CBS may change over time (e.g. from active case finding to longer term CBS in a stable context). There will be a need to redesign the CBS protocol. Options can be addressed in a transition plan but should already have been incorporated to a certain extent from the start in the original EPoA and PH ERU CBS protocol. The PH ERU CBS team leader of the second or third rotation is expected to prepare for the eventual transition and exit-planning. The exit strategy needs to be prepared in consultation with the NS and other relevant partners.

Many countries with gaps in their facility surveillance systems are now trying to implement long term CBS projects as a way to reinforce epidemic surveillance. Several NS supported bilaterally by PNS or the IFRC are participating in such efforts. As such, there might be considerable interest in transforming the emergency PH ERU CBS into a longer-term project once the emergency is over.

In preparing this exit, focus should be placed upon capacity building of the National Society in-country. All efforts to ensure long-lasting effects, contributing to strengthening the National Society's response capacity-building and to reducing vulnerability should be undertaken. Additional trainings can be envisaged, to strengthen or refresh original trainings, as well as to solidify CBS management capacities.

Annexes

Annex 1: List of PH ERU Configurations

PH ERU configuration	Objective	Lead NS	Supporting NS
Community Case management of Cholera	Community case management of outbreaks.	Swiss RC	British RC Canadian RC French RC Norwegian RC Spanish RC Swedish RC IFRC GVA IFRC Americas IFRC Asia IFRC Africa IFRC Mena
Community Case management of malnutrition	Community case management of malnutrition	French RC	
Community Based Surveillance	Establishment of event or syndromic surveillance	Norwegian RC	French RC Hong Kong RC IFRC
Safe and Dignified Burials	Support the training and management of Burials for or in highly infectious disease context or mass casualty events	Canadian RC	British RC French RC IFRC
Vaccination	Surge support for mass vaccination or EPI programming in emergency or complex settings	Canadian RC	French RC IFRC
Clinical Care Support Team (IPC, case management)	Provision of clinical care support inside existing, MoH facilities. A focus on case management and IPC.	Japanese RC	French RC Spanish RC Swedish RC IFRC
Community Based Vector control (Parked for the time being as no NS expressed interest to take lead)	Community based vector control/ chemical control in vector related outbreaks or at-risk areas		
SBCC / Health Promotion (Parked for the time being as no NS expressed interest to take lead)	Provision of technical expertise in designing and implementing large scale SBCC activities in health emergencies		

Annex 2. PH ERU CBS delegate personal box content

DELEGATE BOX ERU

	Description	Qty
1	Backpack	1
2	Bottle, aluminum, 600 ml	1
3	Cap	1
4	Cup, plastic	1
5	Detergent pouch of 5	1
6	Ear plug	1
7	First aid kit	1
8	Glass, plastic	1
9	Hand disinfection, Anti bacterial gel 100 ml	1
10	Head lamp w/batteries+ spare batteries	1
11	Knife, fork and spoon, set	1
12	Mattress inflatable	1
13	Mosquito dome	1
14	Mosquito repellent	1
15	Multi tool (Gerber or similar)*	1
16	Note pad and pen	1
17	Pad lock	1
18	Pillow	1
19	Pillow cover	1
20	Plate, plastic	1
21	Rain poncho	1
22	Sew kit	1
23	Sheet, cotton, 140x240 cm	1
24	Sheet, cotton, stretch	1
25	Sheet, sleeping bag, silk	1
26	Sleeping bag suitable for climate	1
27	Thermos 500 ml	1
28	Thirst quencher powder (20 bags)	1
29	Toilet paper roll	1
30	Torch w/ batteries + spare batteries	1
31	Towel 50 x70 cm, microfiber	1
32	Towel 60x120 cm, microfiber	1
33	Vest cotton with multi pocket, red	1
34	Vest reflective	1
35	Water purification kit	1
36	Water purification tab, Aqua-tab for 10 ltr	1
37	Wet tissue, disinfection pkg	1
38	Working gloves	1
39	Box aluminum 60x40 x40 cm	1
	Options:	
*	Only for technician	
	Knife, pocket, Victorinox	1
	Money belt (Fin/adm+ TL)	1

How to set up the CBS digital toolkit A step-by-step guide

This Manual shows 2 options:

OPTION 1. To use for setting up the platform through an ethernet connection (cable internet) – preferred option in areas with unreliable Wifi.

OPTION 2. To use for setting up the platform through Wifi (wireless internet connection)

Here you can access a Video explanation (based on Option 1, but also useful for Option 2) with the step by step instructions.

Materials needed

- Your CBS in a rucksack kit
- A laptop computer
- An ethernet connection (if you don't have one, go to OPTION 2 at the end of the document)
- A local SIM card with credit (and for which you know the phone number)

Time for set up: 20-40 minutes

Before starting:

- Make sure you are in a room with an ethernet connection (if you don't have one, go to OPTION 2 at the end of the document)
- Check that you have electricity
- Set up your laptop

NOTE: All items in the rucksack are labelled to facilitate finding the correct one.

OPTION 1. To use with an ethernet connection (preferred in areas where wifi is unreliable)

Here you can access a Video explanation with the step by step instructions.

Step 1. Find the Eagle in the left side of the kit

Step 2. Use a pen to push open the yellow button in the SIM 1 holding space, to push the SIM case out.

Step 3. Put the local SIM card in the SIM case

Step 4. Reinsert the SIM case with the SIM card in the Eagle (slot for SIM1)

Step 5. Find the two antennas in the pocket on the right of the rucksack

Step 6. Screw in the antennas to the eagle

Step 7. Find the TP switch in the left side of the rucksack

Step 8. Find the three ethernet cables (usually one white and two red, but this might vary) in the small bag at the front of the rucksack

Now we need to check that the internet is working…

Step 9. Plug one end of the long white ethernet cable into the port on the wall of the room you are in.

Step 10. Plug the other end of the ethernet cable into your computer (most modern laptops do not have an ethernet port anymore, but adaptors are available in the rucksack, find the right one for the entry ports in your laptop).

Step 11. Turn off the wifi on your computer.

Step 12. Go to your favorite browser (Internet explorer, Safari, Firefox, Chrome) and check that you can still load a webpage. If you can, that means that you are getting internet through the ethernet cable.

Step 13. Move the ethernet cable from the laptop to the TP link switch. Insert it into port number 1.

Step 14. Take a new ethernet cable and plug one end into port number 2 in the TP link switch. Place the other end in your laptop.

Step 15. Take the last ethernet cable and connect one end in port number 3 of the TP link switch. Connect the other end to the SMS eagle (single ethernet port).

Now we need to obtain the IP address.

Step 16. Connect the projector to the SMS eagle using an HDMI cable which you will find in the little bag at the front of the CBS kit

Step 17. Turn the projector on by pressing the power button on the bottom right

Step 18. Point the projector at a white wall. Make sure you open the projector lens by sliding the button on the left side.

Step 19. Click the button with the squares on the top of the projector to select English as the SMS eagle language (Note. Sometimes this is not needed as English is already pre-selected)

Step 20. Find the charger cables for the SMS eagle and the TP switch (these are labelled)

Step 21. Plug in the TP switch to a power outlet

Step 22. Plug in the SMS eagle to a power outlet. The eagle will make a loud beep-sound when ready

Step 23. Find the keyboard in the back of the rucksack

Step 24. Find the small USB in the socket under the keyboard. Insert batteries for the keyboard into the same socket

Step 25. Turn the keyboard on using the power button on the back (Remember to turn the keyboard off when you are finished)

Step 26. Insert the keyboard USB into the eagle.

Step 27. While looking at the projection on the wall/screen, type in “root” to login in, then press enter. Note that it will look like you are not typing on the projection screen. This is normal.

Step 28. Type the password when prompted, and press enter. **Password: “fly2thesky”**

Step 29. Get the ip address.

- Type “ifconfig” and press enter.
- The IP address will appear after a “inett address”. For example: inett address 10.49.156.28
- This needs to be done every time you are using a new internet connection.

You can now disconnect the keyboard and the projector, as you won’t be needing them anymore. Turn off the projector.

Now we need to configure the SMS eagle

Step 30. Type the IP address in your browser in your computer, then click enter

Step 31. The SMS Eagle page will appear. Log in using:

Username: admin

Password: password

You will be logged into the SMS eagle page

Step 32. Activate the SIM card.

- Scroll down the menu on the left and click on “Settings”.
- Then click on “Maintenance”.
- Write the SIM pin code in SIM 1 (if this is where you placed the SIM in the SMS eagle)
- Click the orange SAVE button at the bottom of the page
- Click Reboot, and wait until the SMS Eagle

Step 33. Create an autoreply.

- Scroll down the menu on the left
- Click on autoreply
- Click Edit
- Change the text (if you want)
- Click SAVE

Step 34. Now select “callback URL” on the left hand side menu

- Click “add new rule” on the right hand side of the screen
- Give your new rule a name, e.g “forwarding SMS”.
- For the URL type: (http://demo.cbsrc.org/notifications/smseagle/incoming)

https://cbs-demo-eagle.dolittle.cloud/incoming (for demo site when testing or simulating)

https://cbs-eagle.dolittle.cloud/incoming (for real CBS implementation)

- Change URL method to post. Select “send request always”
- Click “test URL”. You should get a message “test successful”
- Click SAVE

Now we need to restart the SMS Eagle

Step 35. On the menu on the left hand side, go back to “Settings”

- Click “Maintenance”
- Click “Reboot”
- Eagle will restart (and beep)
- On the top of the SMS Eagle configuration webpage, it should now read “SIM 1 connected”

Test the platform. (SKIP THESE STEPS IF USING REAL IMPLEMENTATION)

Step 36. Go to https://cbs-demo.dolittle.cloud or

https://demo.cbsrc.org/admin/projects/list

- Click on “Volunteer reporting”

Step 37. Send a test SMS

- From your phone or a phone with a local SIM card, send any SMS to the number on the SIM card which you put in the SMS eagle.

Step 38. Reload the CBS demo webpage (volunteer reporting) to see if your SMS came through. This can take a little while.

Congratulations! You’ve set up the SMS eagle and your CBS digital platform Is ready to roll

Next time you want to use the CBS kit (on the same ethernet connection), simply connect the Eagle to the ethernet (and to a power outlet).

Something not working? Contact NorCross CBS Tech Lead.

(check Option 2 below)

OPTION 2: To use for setting up the platform through Wifi (wireless internet connection). For when you don't have an ethernet connection or there is a firewall around the cabled internet in the organization

Step 1. Find the Eagle in the left side of the kit

Step 2. Use a pen to push open the yellow button in the SIM 1 holding space, to push the SIM case out.

Step 3. Put the local SIM card in the SIM case

Step 4. Reinsert the SIM case with the SIM card in the Eagle (slot for SIM1)

Step 5. Find the two antennas in the pocket on the right of the rucksack

Step 6. Screw in the antennas to the eagle

Step 7. Find the TP switch in the left side of the rucksack

Step 8. Find the three ethernet cables (usually one white and two red, but this might vary) in the small bag at the front of the rucksack

Now we need to check that the internet is working and share the internet from your computer so that SMS eagle can connect to it.

Step 9. Check that you have Wifi access from your personal computer, by trying to load any webpage in your favorite browser.

Step 10. Share the internet on your computer (your computer will act as a "mobile hotspot" for the SMS eagle to connect to the internet)

- Find the network preferences in your computer and set to internet sharing

For Mac: Finder>System preferences>Sharing

- On the left hand side, tick the box on internet sharing
- Share your connection from : select "Wifi"
- To computers using: USB/10/100/100

For Windows: Go to Start button>Networks & internet > **Mobile hotspot**.

- For **Share my Internet connection from**, choose the Wifi RedGuest
- Select **Edit** > enter a new network name (no password) > **Save**.
- Turn on **Share my Internet connection with other devices**.

Note: If you have a work computer, it might be that your organization's IT has blocked the possibility for internet sharing in your computer.

Step 11. Plug on end of the ethernet cable into Port 1 of the TP link

Step 12. Plug the other end of the ethernet cable into your computer (most modern laptops do not have an ethernet port anymore, but adaptors are available in the rucksack, find the right one for the entry ports in your laptop).

Step 13. Take a new ethernet cable and connect one end in port number 3 of the TP link switch. Connect the other end to the SMS eagle (single ethernet port). Alternatively, you could also just use a single cable from the SMS eagle to your computer.

Now we need to obtain the IP address.

Step 16. Connect the projector to the SMS eagle using an HDMI cable which you will find in the little bag at the front of the CBS kit

Step 17. Turn the projector on by pressing the power button on the bottom right

Step 18. Point the projector at a white wall. Make sure you open the projector lens by sliding the button on the left side.

Step 19 (optional). Click the button with the squares on the top of the projector to select English as the SMS eagle language (Note. Sometimes this is not needed as English is already pre-selected)

Step 20. Find the charger cables for the SMS eagle and the TP switch (these are labelled)

Step 21. Plug in the TP switch to a power outlet

Step 22. Plug in the SMS eagle to a power outlet. The eagle will make a loud beep-sound when ready

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- The IP address will appear after a “inett address”. For example: inett address 10.49.156.28
- This needs to be done every time you are using a new internet connection.

You can now unplug the keyboard and the projector, as you won’t be needing them anymore. Turn off the projector before unplugging!

Now we need to configure the SMS eagle

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Now we need to restart the SMS Eagle

Step 35. On the menu on the left hand side, go back to “Settings”

- Click “Maintenance”
- Click “Reboot”
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- On the top of the SMS Eagle configuration webpage, it should now read “SIM 1 connected”

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