

**Evaluation of the Malawi deployment of the
Public Health Community Case Management of
Cholera ERU**
Final Report

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Organization: Swiss Red Cross
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Acknowledgments

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The field visits and focus group discussions were carried out by the Swiss RC, while the document review and pre-country visit interviews were carried out by the Alanda team. The evaluation report was developed by the Alanda team and reviewed by the Swiss RC and partners.

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Acronyms

AWD	Acute Watery Diarrhea
CBS	Community-Based Surveillance
CCMC	Community Case Management of Cholera
CFR	Case Fatality Rate
CHF	Swiss francs
DREF	Disaster Relief Emergency Fund
DODMA	Department of Disaster Management Affairs
EPoA	Emergency Plan of Action
ERU	Emergency Response Unit
GTFCC	Global Task Force on Cholera Control
HNS	Host National Society
IPC	Infection Prevention and Control
IRFC	International Federation of Red Cross and Red Crescent Societies
KAP	Knowledge, attitudes and practices
M&E	Monitoring and Evaluation
MoH	Ministry of Health
MRCs	Malawi Red Cross Society
MSF	Médecins Sans Frontières
NS	National Society
ORP	Oral Rehydration Point
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PHE	Public Health Emergency
PH	Public Health
RC	Red Cross or Red Crescent
RCCE	Risk Communication and Community Engagement
SDB	Safe and Dignified Burials
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WSR	Water Supply Rehabilitation

Executive Summary

Background. Cholera is an acute diarrheal disease that is spread through contaminated food and water. It can cause fast dehydration and lead to death in those severely affected. Preventing dehydration is thus key and around 80% of cases can usually be treated at the community level by providing adequate rehydration with Oral Rehydration Salts, safe water and key health and hygiene promotion messages at Oral Rehydration Points.

As part of the strengthening of Public Health (PH) responses through Emergency Response Units (ERUs) within the Red Cross Red Crescent Movement, an ERU focused on the Community Case Management of Cholera (PH ERU CCMC) was developed by the Swiss Red Cross with support from other national societies and the International Federation of Red Cross and Red Crescent Societies. The PH ERU CCMC aims to reduce morbidity and mortality due to cholera by supporting case management in the community and treating mild and moderate cases to reduce the burden of cases in healthcare facilities. It is composed by a team of 7 delegates: one team leader, one public health epidemiologist, two training and quality control delegates, one WASH delegate, one logistician and one finance/admin delegate.

In 2022, a cholera epidemic broke out in Malawi, with nearly 40,000 cases and 1210 associated deaths reported from all 29 districts between 3 March 2022 and 9 February 2023. Considering the ongoing rainy season, wide geographical spread, and high case fatality rate of above 3%, the cholera outbreak was declared a public health emergency by the Malawi government on 5 December 2022¹. The IFRC and Movement partners responded to support the Malawi Red Cross Society. As part of this response, the **PH ERU CCMC was deployed for the first time in early 2023** with the Swiss Red Cross as the lead organization, staying in the country from the end of January to the end of May, completing the usual 4-month ERU deployment schedule.

Objectives and methodology of the evaluation. In August 2023, the Swiss Red Cross launched an evaluation of this first deployment, focusing on a) evaluating the Impact, Effectiveness, Efficiency, Sustainability, Relevance and Coherence of the CCMC ERU deployment; b) understanding how well the CCMC ERU collaborated and communicated with partners on the ground (IFRC teams, MRCS and public health authorities); and c) analyzing what worked well and what can be improved, extracting lessons learned and developing actionable recommendations. A mixed methods approach was used combining primary (interviews with key stakeholders, focus group discussions) and secondary (desk review and analysis of quantitative data from Nyss) data, which was triangulated and analyzed based on a pre-defined evaluation matrix covering the dimensions stated in the objectives.

Findings. Effectiveness. The CCMC team set up a total of 17 ORPs across three districts: Lilongwe, Mangochi, and Blater, after Cyclone Freddy, also in Blantyre. The ORPs were operational for a cumulative 947 days (about 2 and a half years) over a 2.5-month period (range 13 - 88 days) and reported a cumulative of 6955 cases seen. Twenty percent of cases were children, 39% were females > 5 years of age, and 41% were males > 5 years of age. A total of 805 people were referred to healthcare facilities (12% of cases). Only two ORPs (in Lilongwe) may have been working at top capacity throughout the deployment, although several saw over the recommended 25+ cases some days. Ten ORPs had at least one day with zero cases, and one was eventually closed. All ORPs had at least one day where their number of children <5 reported was larger than the number of referrals² (average 27.6% of operational days).

FGDs showed that the quality and level of work at the ORP was high and RCRC ORPs were seen as 'model' ORPs, as they were well located in communities, were staffed by well trained, local volunteers, had a tent and were well equipped and clean, and had clear guidelines and SOPs. ORPs were well-accepted by the communities as in-depth

¹ WHO Cholera-Malawi 9 February 2023; <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON435>

² Volunteers are trained to refer all children under five and pregnant women, independently of the severity of dehydration seen, as well as people with severe dehydration. Thus, the number of people referred should always be equal to or higher than the number of children seen at the ORP.

community engagement was carried out previous to setting up the ORPs which facilitated managing erroneous beliefs and fears around cholera. It was also important that volunteers at ORPs and community volunteers going door to door reinforcing the same messages.

Impact. The Handbook does not contain a logframe nor indicators to measure results at process, output, outcome, and impact level³. No systematic quantitative data was captured during the deployment to measure impact level changes. However, qualitative data collected during the country visit for the evaluation suggest that stakeholders believe the ORPs to have contributed to the reduction of morbidity and mortality. The reasons cited for this include that the ORPs were easily accessible in communities; staffed by well-trained, trusted volunteers from the local community; always well supplied, and providing free ORS to take home, as well as free transportation for children under 5 and pregnant women and severely ill people to the referral health facility. This enabled early detection of cases, early rehydration, and referral of severe cases. Participants in the FGDs also stated that the ORPs substantially reduced the workload of the health facilities as soon as they were installed.

Efficiency. On cost-efficiency, most ORP materials were considered necessary, the presence of a tent and the fact that they were always well-equipped were part of the reasons for their success. Per diems for volunteers ensured consistent presence and engagement. However, the ORP kits included phones for SMS reporting which were not used in the end, as it was challenging to ensure they were charged and had data. As for timeliness, the ERU team arrived in-country 6 days after the request was issued, but setting up the first ORP took a full 19 days (about 2 and a half weeks). The delay may have been partly due to just one trainer on the team as it was not possible to find a second one available. After the cyclone in Blantyre, the team managed to set up the first ORP less than 2 weeks. Having ambitious timeliness goals in the Handbook could give more clarity to the team on what to aim for.

Relevance and Coherence. ORPs have been shown to be highly relevant in a cholera outbreak to ensure early diagnosis and treatment in the community and this deployment was no exception, Additionally the deployments were done at a time when the ministry of health system was overwhelmed and the MoH had made a request for international assistance to support with the cholera response Flexibility and adaptability were shown by the team, such as using limited epidemiological data complemented by MRCS and health authorities' expertise to select areas for deployment and quickly mobilizing to Blantyre after the cyclone. The original ORP volunteer training was quickly adapted to the context, and data collection was switched to WhatsApp when the SMS Eagle kit failed. The team adapted to requests from the MoH to collect more variables. As for coherence, there was no duplicity of efforts with other organizations, as RC ORPs were the only ones based in the communities.

Sustainability. ERUs are in nature a short-term solution. Sustainability depends on the behavioral changes managed in the community and the ability of the NS to continue ORP operations if needed. The exit and handover strategy seems to have been started in the last rotation, and MRCS did not feel included in the planning, including clear exit measures. There were also challenges with the need to move from Nyss to Kobotoolbox for data collection and reporting. Despite these challenges, the Evaluation visit to Malawi in August 2023 showed that ORPs were still running (albeit seeing very few cases). They were clean and still had all the material available. ORPs send daily patient data to a WhatsApp group (no names, only numbers). The MRCS project coordinator received these reports and entered data into the Kobo toolbox. It seems that training and capacity building, strong SOPs, and involving the NS in choices of reporting systems post-exit were all important pieces to ensure sustainability.

Partnerships. There were potential areas for improvement when it came to collaboration and coordination with the MRCS. MRCS considered that the ERU did not interact and communicate enough, and their activities and decisions were not integrated into the MRCS cholera response plan. MRCS shared that there were ERU ORPs and MRCS ORPs, and limited exchange between the ERU team and the MRCS team that was in charge of the other ORPs. It seems that MRCS staff did not feel included in the operation nor in critical decision making. It seems like the initial collaboration was good but deteriorated over time and further after the ERU team moved to Blantyre. There were attempts by the last rotation delegates to rectify this situation, including by moving part of the team back to

³ This gap is being addressed through the development of an M&E framework for the PH ERU CCMC.

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Lilongwe. The delegate team were also concerned about coordination and communication with MRCS, reporting canceled meetings or no attendance from MRCS staff.

Conclusion. The effectiveness and impact of the PH ERU CCMC deployment was important, and it likely managed to contribute to early detection and treatment of cases, which potentially had a positive impact on decreasing morbidity and mortality. It also likely helped reduce the burden of cases at referral healthcare facilities. In addition, the ORPs were still operational, well-equipped, and staffed over 2.5 months after the PH ERU CCMC team left, although the number of cases seen had decreased considerably. The MoH and MRCS were very satisfied with the ORPs and their achievements, as well as with the data reported to the MoH. The main challenges encountered were around communication and collaboration with the MRCS, where missed opportunities created challenges for the handover.

Key lessons learned and recommendations. (GP= good practice to reinforce, AO: area of opportunity)

Lessons learned	Recommendations
Impact and Effectiveness	
GP. Factors contributing to success of the ORPs included: well trained volunteers trusted by the community, ORPs always well supplied with free ORS to take home and free transport for referrals, as well as ORPs conveniently located inside communities.	Produce a short case study that can be used to reinforce these messages in training and to advocate for ORPs and the PH ERU CCMC in future cholera outbreaks
AO. There was limited data available on knowledge, attitudes and practices at the community and these were mainly qualitative.	Quick KAP surveys at the start and end of the operation can help identify beliefs and practices that need to be specifically addressed at the ORPs and can help measure changes that occurred due to the PH ERU CCMCs efforts.
AO. Data on number of AWD/cholera cases seen on a daily or weekly basis at treatment centers and hospitals that served as referrals for the ORPs was not collected (or was unavailable to collect). This data is useful to help measure the true impact of the ORP of decreasing the load of healthcare facilities.	Review the need and usefulness, as well as the time and effort trade off of collecting this data to facilitate impact measurement. If it is agreed that this data should be collected, provide guidance in the Handbook and in the Training
Efficiency and quality	
AO. Regular reporting did not include indicators for efficiency and quality, such as number of days where ORPs were seeing too few or too many cases, or where the number of referrals was below the number of cases of children under 5 seen at the ORP.	Ensure that weekly sitreps analyse number of days where ORPs see more than the recommended number of cases per day, zero cases, and days where the number of referrals < than the total number of children reported so that the delegate team can take action based on the data
AO. Quality control visits of the ORPs did happen, but the timing seems to have been somewhat ad hoc and not systematized. A tool was developed by the delegates on the ground to carry out the quality control supervision visits of the ORPs.	Review and incorporate into the Handbook the checklist for quality control supervision visits of the ORPs and include guidance on when and how to carry out these visits, as well as refresher training suggestions based on the findings.
AO. It is difficult to establish the timeliness of ORP set up activities as there are no guidelines in the Handbook as to what should be the goal in terms of days elapsed between team arrival and opening of ORPs.	Since this is the first deployment of the ERU, consider using the timelines managed by this first team as benchmarks to be included in the Handbook, so that delegates have clear goals in mind, and revise further as more deployments accumulate.
Communication and collaboration	
GP Systematic data sharing with MoH was highly appreciated. This is already embedded in the handbook and can be done via a Nyss “data consumer” user access, as well as by sharing weekly situational or Epi reports.	Ensure the handbook and delegate training continue to highlight the importance of sharing data with health authorities and MRCS, and suggests way to do it if an alternative system to Nyss is chosen
AO. Communication and collaboration with MRCS were the main challenge arising from this evaluation. There seem to have been parallel efforts in MRCS vs so called “ERU” ORPs, and a breakdown in communication, as well as some decisions made without consulting the NS that later created challenges for the NS at handover.	Establish clear guidelines in the Handbook on how to ensure continued efforts and communication and collaboration with the NS. Include case studies and inject on challenges that may arise into the Delegate’s training so the team can be better prepared.

Introduction

Cholera is an acute diarrheal disease that is spread through contaminated food and water. It can cause fast dehydration and lead to death in those severely affected. Preventing dehydration is thus key. In any cholera outbreak, around 20% of cases will be severe and require hospitalization, while 80% of cases can usually be treated at the community level by providing adequate rehydration with Oral Rehydration Salts (ORS) and key health and hygiene promotion messages. Treatment at the community level can be done using Oral Rehydration Points (ORPs) which distribute safe water and ORS and carry out health and hygiene promotion.

As part of the push to strengthen Public Health (PH) responses through PH Emergency Response Units (ERUs) within the Red Cross Red Crescent (RCRC) Movement, an ERU focused on the Community Case Management of Cholera (PH ERU CCMC) was developed by the Swiss Red Cross with support from other national societies (NS) and the International Federation of Red Cross and Red Crescent Societies (IFRC).

The PH ERU CCMC aims to reduce morbidity and mortality due to cholera by supporting case management in the community and treating mild and moderate cases to reduce the burden of cases in healthcare facilities. The PH ERU CCMC has been ready to deploy since 2021 and the first training of delegates happened in November 2022.

In 2022, a cholera epidemic broke out in Malawi. The IFRC and Movement partners responded to support the Malawi Red Cross Society (MRCS). As part of this response, the newly developed PH ERU CCMC was deployed for the first time with the Swiss Red Cross as the lead organization. In August 2023, the Swiss RC launched an evaluation of this first deployment.

This report contains the evaluation of this first PH ERU CCMC deployment, carried out in August – September 2023 by Alanda in collaboration with the Swiss Red Cross.

Background

This background section provides an understanding of the origins of the PH ERUs and the CCMC one, as well as an overview of the Malawi cholera outbreak and the CCMC ERU deployment.

The Public Health Emergency Response Units

Emergency Response Units, or ERUs are one of the most important humanitarian response tools in the RCRC Movement. They consist of packages of equipment, material and trained human resources that can be deployed quickly in an emergency. Water, Sanitation and Hygiene (WASH), Shelter, Health and Logistics ERUs exist in various configurations.

The development of the Public Health (PH) ERUs came in the frame of surge optimization, when the health department of the IFRC in collaboration with NS that are part of the ERU health technical working group outlined seven spheres of activities needed to better respond to public health emergencies (PHEs). IFRC health department submitted a plan of action, which comprises new public health ERU modules, to improve response to public health emergencies to the Global Surge Working Group, the Human Resources Group for International Deployment of Delegates, and the Disaster Management Working Group (IFRC, 2016). The new ERU modules were approved and in a call of interest; NS were requested to state interest in the lead/support of the development of these new ERU modules.

Among the seven original PH ERUs proposed (see Annex 2)⁴, Swiss Red Cross applied and received the lead to develop the Community Case Management of Cholera PH Module. Swiss Red Cross with the support of

⁴ Among the original ERU's proposed (see Annex 2), two have been completed (CBS and CCMC), two are under development and nearing completion (IPC and SDB). A feasibility study was carried out for the Vaccination ERU and this one will not be moving

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health/epidemiology, WASH, logistics, finance, and education specialists from IFRC, Norcross, Swedish and Spanish Red Cross developed / adapted all necessary material to manage cholera at community level. All documents and tools are in alignment with World Health Organization (WHO) tools and were developed in close collaboration and alignment with the IFRC Africa regional cholera advisor as well as experts from the Global Task Force on Cholera Control (GTFCC).

The PH ERU CCMC

Objectives

The overall goal of the CCMC module is to contribute to the reduction of mortality and morbidity due to cholera. The general objective is to respond early to a declared cholera or acute watery diarrhea outbreak and promptly inform and treat people infected with cholera/acute watery diarrhea at the community level.

There are five specific objectives:

1. Oral Rehydration at community level through Oral Rehydration Points. This includes the provision of oral rehydration salt to drink at the ORP and given for home use as well as distribution of Zinc to eligible children as defined in WHO guidelines.
2. Assessment of dehydration status at the ORP and advise severely ill people or people at risk to seek medical attention.
3. Health and hygiene promotion activities at the ORP
4. Engagement with communities at the ORP
5. Data collection, analysis, interpretation and acting at ORP level.

Swiss Red Cross planned to have this ERU Module with joint responsibility and accountability with partners, who also contribute with delegates. For IFRC to have a sole contact partner it was agreed that for each deployment one partner will be in the lead and hence will be the contact NS.

A pilot deployment (prior to the module being finalized) was conducted in response to the Cholera outbreak following cyclone Idai in March 2019 in Mozambique. The finalized PH ERU CCMC has been ready to deploy since 2021. Twenty ORP kits are prepositioned in Dubai.

Tools and training

Similar to other ERUs, the PH ERU CCMC has the following tools and guidelines:

- A Handbook establishing the operational framework and serving as a guideline for deployed delegates.
- A Delegate's training manual to be used for training of delegates prior to deployment.
- An ORP volunteer training manual to be used by deployed delegates when training volunteers to manage ORPs.
- A Nyss platform and SMS Eagle for data collection from the ORPs via SMS (see Box 1)

Due to the COVID-19 pandemic, the delegate training needed to be postponed twice and finally took place for the first time in November 2022. Not all delegates deployed to the Malawi operation had participated in this training. The next delegate training is planned for late spring 2024.

forward. The other three: CCM-M, Community Based Vector control and SBCC/Health promotion have not initiated development, and the last two do not have a lead NS for their development (data from KIIs as of Jan 2023).

Box 1. The Nyss platform

The Nyss open source platform was developed by the Norwegian RC for use in Community Based Surveillance (CBS) efforts, including by the PH ERU CBS, and from the start, it was also conceived to support data collection from ORPs.

Nyss developers chose to use SMS-based data collection based on the observation of limited data connectivity and access to smartphones in many areas where humanitarian responses are needed, yet a high penetration of mobile cellular networks and simple cell phones with SMS capabilities.

Volunteers send coded SMS messages to an established local number. The messages are received by a so-called SMS gateway (SMS eagle) that passes on the coded information into the Nyss cloud platform and sends back feedback messages to the volunteers (e.g., to confirm reception or to signal an error in the SMS coding). The Nyss platform creates a database and can then generate dashboards with data visualizations and send automatic alerts as pre-established.

In the case of the CCMC ERU configuration, Nyss is set up to receive a single daily SMS per ORP with the aggregated data from the visitors seen that day. The preestablished codes stand for the disease code number in position 1, followed by the total number for each of the other columns in the Table in Annex 8, separated by a hashtag.

Team composition

The PH ERU CCMC team is composed of 6 to 7 team members as described in Box 2.

Box 2. The CCM-C ERU Team

As described in the CCM-C Delegates Handbook, the delegates team is meant to be composed of:

- A Team Leader -primary focal point for all matters related to the CCM-C ERU module.
- A Public Health Delegate/Epidemiologist, responsible for the of the overall epidemiology and acts as deputy team leader when needed.
- Two Training and Quality Control (TQC) Delegates, responsible for training and supervision of ORP volunteers and supervisors. This position is covered twice so that once the first training is completed, one delegate can start with the second training and the other can support the set-up and supervision of the ORPs
- A WASH delegate (responsible for WASH hardware needed for the running of the ORPs).
- A Logistician (in charge of overall logistics).
- A Financial and Administrator (responsible for accountancy, cash book, and admin issues).

The Malawi cholera outbreak and the RC Movement response.

Malawi has dealt with endemic cholera since 1998, with seasonal outbreaks reported during the rainy season (November through May). However, the country experienced a widespread cholera outbreak with nearly 40,000 cases and 1210 associated deaths reported from all 29 districts between 3 March 2022 and 9 February 2023. This is the deadliest outbreak of cholera in the country's history. Considering the ongoing rainy season, wide

geographical spread, and a consistently high case fatality rate of above 3%, the cholera outbreak was declared a public health emergency by the Malawi government on 5 December 2022⁵.

The MRCS was able to scale up its response through the support of partners and an initial allocation from the IFRC Disaster Response Emergency Fund (DREF). In light of increased cases of acute watery diarrhea despite these efforts, and the stretching of the capacity of the Ministry of Health, the IFRC was asked to launch an emergency appeal for CHF 5.2 million to enable MRCS to further scale up their response. Regional and global alerts were issued for coordinators in WASH and public health in emergencies as well as the deployment of the PH ERU CCMC Module⁶.

On 20 January 2023, the request for the deployment of the PH ERU CCMC Module was launched. After contacting partners (Norcross, Spanish, and Swedish Red Cross) Swiss Red Cross and partners stated their availability to send the PH ERU CCMC Module with the Swiss Red Cross being the lead organization. As is true of any other ERU deployment the PH ERU CCMC Module is an IFRC tool and is part of the IFRC operation. On 26 January 2023, the first delegates arrived in Lilongwe. The ERU remained on the ground until May 2023, completing the usual 4-month ERU deployment schedule.

This is the first time that the finalized PH ERU CCMC Module was deployed. The Swiss RC wished to conduct a final evaluation of the deployment to obtain lessons learned and recommendations to improve the PH ERU CCMC.

Objective and scope of the evaluation

The overall aim of the evaluation was to understand if and how the CCMC achieved its objectives and extract lessons learned and recommendations to conduct necessary modifications to ensure improvement of subsequent deployments.

The specific objectives included:

1. Evaluate the Impact⁷, Effectiveness, Efficiency, Sustainability, Relevance and Coherence of the CCMC ERU deployment.
2. Understand how well the CCMC ERU collaborated and communicated with partners on the ground, including IFRC teams, MRCS and public health authorities
3. Analyse what worked well and what can be improved across these dimensions, extract lessons learned and develop specific and actionable recommendations for the CCMC ERU handbook, Delegates' training and to improve deployment dynamics.

Box 3. Two other important review efforts and their reports complement this Final Evaluation of the Malawi January 2023 Cholera PH ERU CCMC deployment:

- The preliminary report from the interim review of the epidemiologist role and use of Nyss, conducted by the Norwegian Red Cross
- The M&E needs report focusing on monitoring and evaluation of the PH ERU CCMC, data collection, analysis, interpretation and reporting, commissioned by the Swiss RC

We aimed to minimize overlap between these reports, while still ensuring this evaluation contains all necessary data for the objectives, and referring readers to these other sources when appropriate.

⁵ WHO Cholera-Malawi 9 February 2023; <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON435>

⁶ IFRC Emergency Appeal, Malawi. Appeal N° MDRMW017, 23. January 2023

⁷ A full impact evaluation to measure the contribution of the operation to the reduction of morbidity and mortality (overall goal) is not feasible, as appropriate data for this has not been collected. However, the evaluation team collected qualitative data to partially address impact and understand if i) the ORP has reached its intermediate outcome of decreasing the burden in healthcare facilities and ii) what impact it had in the communities through the voice of community members.

Methodology of the Evaluation

Here we briefly summarize the methodology used for the evaluation. The full methodology can be consulted in **ANNEX 2**. The evaluation methodology was based on the ToRs (**ANNEX 1**) and used a mixed methods approach comprising both primary and secondary data from qualitative and quantitative data sources. The OECD DAC criteria (Relevance, Coherence, Effectiveness, Efficiency, Impact and Sustainability), with the added criteria of Partnerships, were used as evaluation dimensions to structure the evaluation framework (see **ANNEX 2**).

Secondary data included a desk review of reports and other documents from the deployment (**ANNEX 3**). Primary data was collected by the Swiss Red Cross during a visit to Malawi in August 2023, and it included interviews with key informants from MRCS, health authorities at central, district and local levels; local leaders and beneficiaries (see **ANNEX 4**), focus group discussions with MRCS volunteers (see **ANNEX 5**) and visits to ORPs that were still active (but not seeing any cases). Validated quantitative data from the ORPs collected in Nyss⁸ was also analysed (see **ANNEX 6**).

Findings

This section describes the finding of the evaluation, starting with a general description of the timeline of events for the Malawi cholera outbreak and the CCMC ERU deployment. It then covers the findings organized by evaluation dimension.

The cholera outbreak in Malawi

In March 2022, Malawi experienced the start of what would become one of the worst cholera outbreaks in years. The Ministry of Health (MoH) declared a cholera outbreak a day after the first cholera case was confirmed in Machinga on March 2nd, 2022. As of August 2022, the cholera outbreak had spread to 15 districts with 1,736 registered cases and 67 deaths (Case fatality rate CFR= 3.85%)⁹.

One of the challenges of the outbreak was the unpredictability of the situation as cases continued to be registered in the dry season, which is exceptional. The high CFR could be attributed to the distance between affected communities and healthcare facilities which resulted in delayed access to rehydration treatments and lack of community awareness on how to support affected individuals with Oral Rehydration Therapy (ORT).

Between October 2022 and November 2022, the number of new cholera cases increased by 95%, going from 2434 to 4766 cases. Considering the magnitude and geographical spread of the outbreak, the situation was declared a “Public Health Emergency” on December 5th by the President.

By the end of January 2023, the Ministry of Health reported a cumulative number of 29,995 cases with a case fatality of 3.30%, 27,936 recoveries, and 1,069 individuals in treatment units. After a peak in cases in the last week of January and covering 29 affected districts, cases started to decrease from February onwards.

Tropical Cyclone Freddy which affected the country from March 12th to 15th 2023 placed another strain on the healthcare system and ongoing response, damaging health facilities and severely affecting access to safe water and sanitation. *Figure 1* shows the districts impacted by the cyclone and those prioritized for cholera interventions.

The IFRC’s operations update (April 2023), covering the timeframe from January 24 to April 4, 2023, reported as of March 17 a cumulative number of 54,324 cases and 1,671 deaths. In this same report, seventeen districts reported

⁸ Nyss is the platform used to collect data from the ORPs in the PH ERU CCMC. The platform was originally build for Community Based Surveillance data collection through the use of SMS, and has also been adapted to collect data from the ORPs.

⁹ The GTFFC states that with rehydration treatment provided rapidly and appropriately, the CFR should remain below 1%.

a decline in the number of new cases, seven reported an equal level of cases, and five reported an increase in new cases. Overall, as depicted in the operations update (May 2023), 76.2% of the new cases were concentrated in five districts: Blantyre, Lilongwe, Neno, Dedza, and Chikwawa¹⁰.

The RCRC emergency response in Malawi

The MRCS had been supporting the government's response to the cholera outbreak in multiple districts, working in close coordination with various governmental departments such as District Health Offices, the MoH, the Department of Disaster Management Affairs (DODMA) and the Ministry of Water and Sanitation, through various funding sources¹¹

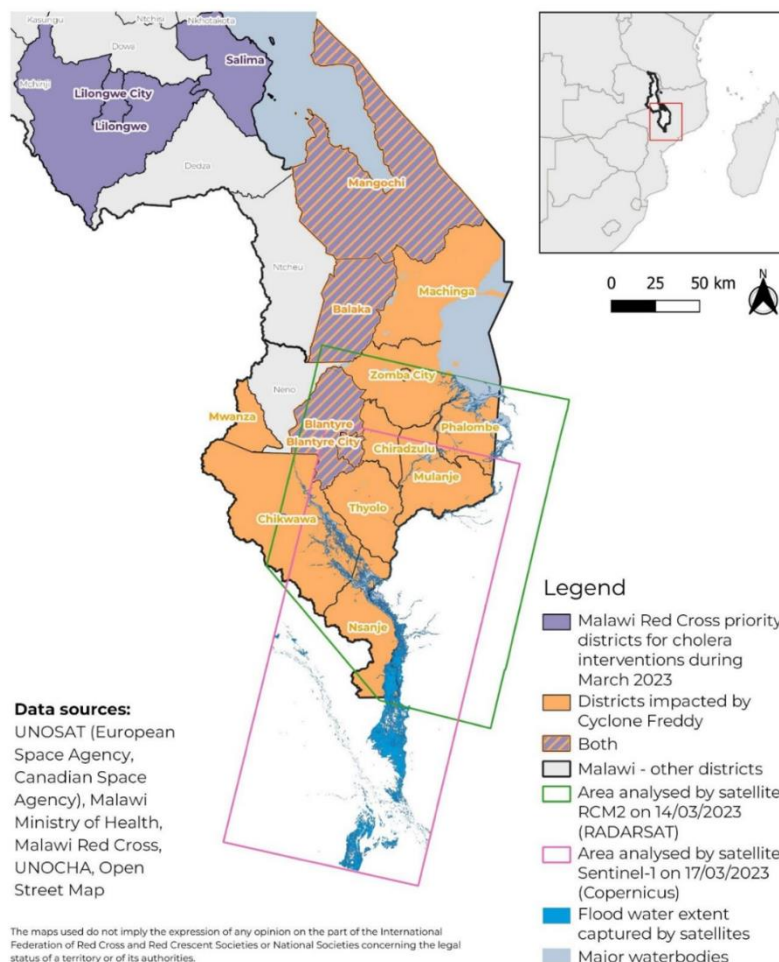
As the cases escalated, additional support was obtained from the IFRC and Movement partners through an Emergency Appeal launched on January 24, 2023. Responding to such an outbreak required the support of various IFRC teams: Public Health and WASH, Logistics and Finance. It was also an opportunity to deploy the CCMC ERU (see next section).

Activities led by the RC movement, as listed in the IFRC's operations update (May 2023), included Risk Communication and Community Engagement (RCCE) at household and community level; Deployment of volunteers to support with active case finding; Capacity building and training of Volunteers, health workers, Health Surveillance Assistants Village Health Committees on Cholera Prevention and Control concepts; Provision of critical non-medical cholera prevention and control supplies to cholera treatment centers.

Two interviewees mentioned that a separate appeal was launched after Cyclone Freddy, which also covered some PHE activities for cholera. Other ERUs, such as the Water Supply Rehabilitation (WSR) and mobile health clinics were also deployed to the Cyclone Freddy response.

Non-Red Cross actors involved in the cholera response included WHO, UNICEF, and MSF. Analysis of the RCRC emergency response partners and external partners can be found in the Coherence and Partnership sections.

Figure 1. Cholera priority districts and districts impacted by Cyclone Freddy (source: IFRC, April 2023)



¹⁰ Sources: EPoA (Sept 2022, IFRC), Operation update (May 2023, IFRC), Emergency Appeal (Jan 2023, IFRC), Operation update (April 2023, IFRC)

¹¹ Emergency Appeal (Jan 2023, IFRC)

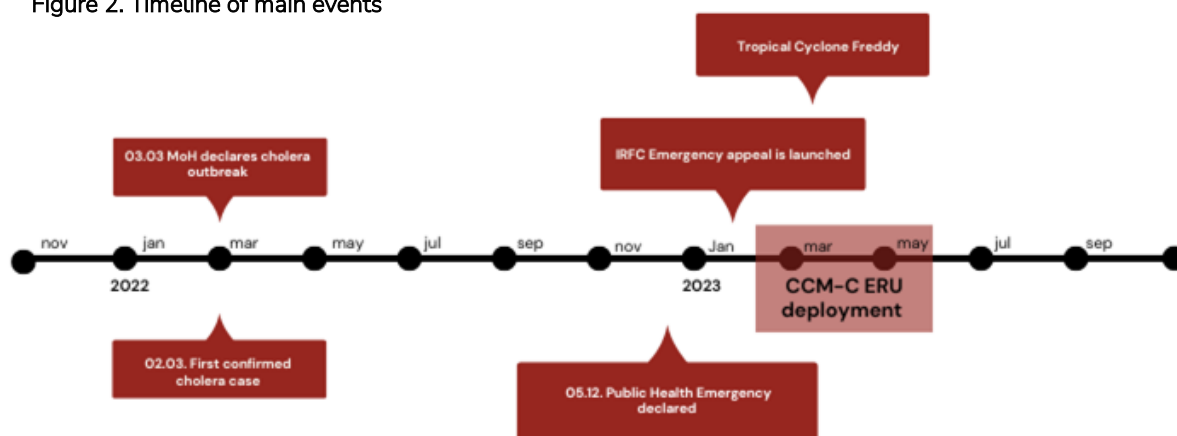
The CCMC ERU deployment in Malawi

On 20 January 2023, the request for the deployment of the PH ERU CCMC Module was launched. After contacting partners (Norcross, Spanish, and Swedish Red Cross), the Swiss Red Cross and partners stated their availability to send the PH ERU CCMC Module with the Swiss Red Cross being the lead organization.

On 26 January 2023, the first delegates arrived in Lilongwe. On 30 January the team was complete. The first volunteer training started on 6 February and the following week, on 14 February, training for trainers started. For training purposes, ORP kits that were prepositioned in the country were used. The 20 CCMC ORP kits arrived on 10 February in Lilongwe. The first ORP was opened on 18 February. The PH ERU CCMC was deployed for the standard 4-month period until mid-May 2023 (see Figure 2).

Due to the high case load in and around the capital city of Lilongwe the CCMC ERU team was requested by IFRC, MoH and MRCS to start setting up ORPs in this area. Mangochi as a second hot-spot was included end of February. When Tropical Cyclone Freddy hit on March 12th to 15th 2023, there was an agreement to also cover Blantyre. The CCMC team switched headquarters from Lilongwe to Blantyre to better be able to respond, while ORPs in Lilongwe and Mangochi continued operations. The first ORP in Blantyre opened on March 30th, 2023.

Figure 2. Timeline of main events



Effectiveness of the PH ERU CCMC

The level of activity at the ORPs and results obtained.

During the deployment, the CCMC team set up a total of 17 ORPs across three districts: Lilongwe, Mangochi, and later, after Cyclone Freddy, also in Blantyre (see **ANNEX 7** and Table 1). One ORP had already been set up by the Malawi Red Cross Society (MRCS) in the Mangochi Stadium. The ORP in Matanda was closed after a short period of time, on March 17th, due to low attendance, as described in the sixth situational report (Mid-March 2023).

Days of activity. An analysis of opening and last reporting dates from ORPs in Nyss, considering 7 days a week of work, revealed that a total of 18 ORPs were operational for a cumulative 947 days (ranging from 13 days for the last ORPs opened in Blantyre to 88 days (about 3 months) for the first one opened in Lilongwe) (see **ANNEX 9**).

Cases seen at the ORPs. The end of mission Epidemiology report shows that the total number of cases reported by ORPs during the PH ERU CCMC deployment was 6955, for a total of 17 ORPs that were set up over the course of 2.5 months. Twenty percent of cases seen at ORPs were children, 39% were females > 5 years of age, and 41%

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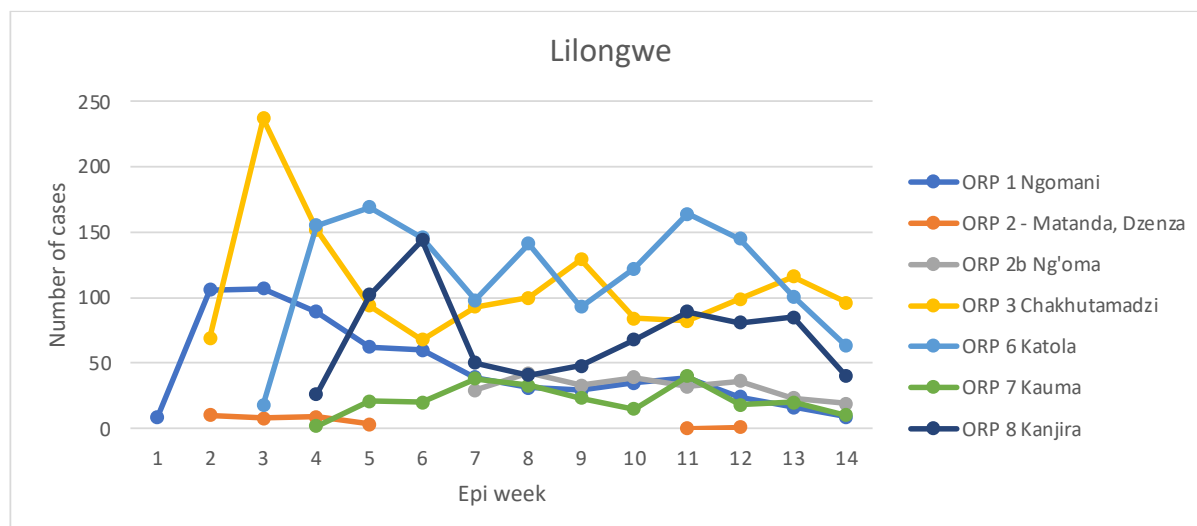
were males > 5 years of age. A total of 805 people were referred to healthcare facilities, representing 12% of cases and most of whom were children under 5 years of age¹². (See Table 1).

Table 1. Cases seen at ORPs from the start to the end of the PH ERU CCMC mission. Source: End report Epidemiology CCMC ERU May 21st, 2023.

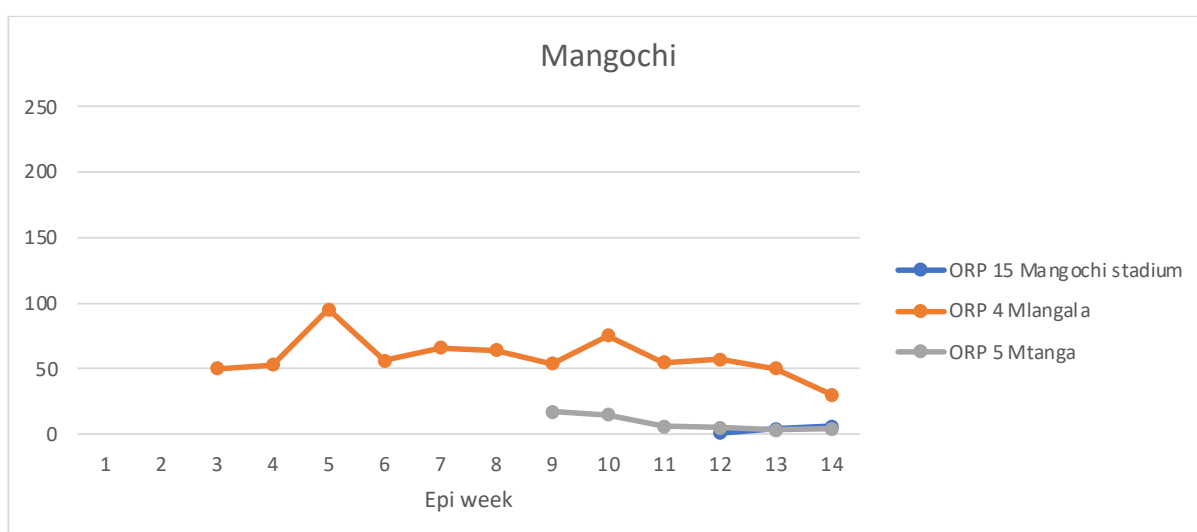
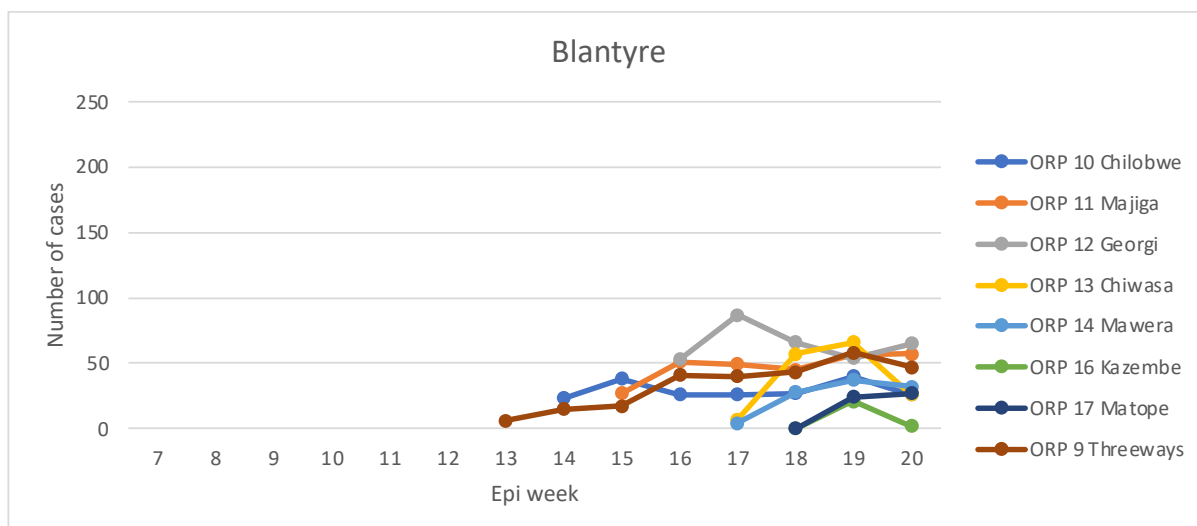
21 May 2023			Total cases	Children 0-4		Females ≥ 5		Males ≥ 5		Referred	
Region	ORP Village	Opening date		n	%	n	%	n	%	n	%
Blantyre			1409	281	20%	555	39%	573	41%	264	19%
	Chilobwe	5 Apr 2023	206	58	28%	67	33%	81	39%	32	16%
	Georgi	17 Apr 2023	325	31	10%	141	43%	153	47%	47	14%
	Majiga	12 Apr 2023	285	97	34%	100	35%	88	31%	74	26%
	Threeways	30 Mar 2023	267	16	6%	136	51%	115	43%	14	5%
	Mawera	30 Apr 2023	101	21	21%	39	39%	41	41%	27	27%
	Chiwasa	30 Apr 2023	151	43	28%	46	30%	62	41%	59	39%
	Kazembe	7 May 2023	23	6	26%	10	43%	7	30%	4	17%
	Matope	7 May 2023	51	9	18%	16	31%	26	51%	7	14%
Lilongwe			4780	578	12%	2185	46%	2017	42%	388	8%
	Chakhutamadzi	23 Feb 2023	1419	78	5%	751	53%	590	42%	95	7%
	Kanjira	10 Mar 2023	774	145	19%	348	45%	281	36%	12	2%
	Katola area 54	4 Mar 2023	1405	105	7%	627	45%	673	48%	24	2%
	Kauma CCDC	10 Mar 2023	240	53	22%	102	43%	85	35%	96	40%
	Matanda	22 Feb 2023	31	1	3%	6	19%	24	77%	7	23%
	Ng'oma	29 Mar 2023	253	24	9%	108	43%	121	48%	34	13%
	Ngomani	19 Feb 2023	658	172	26%	243	37%	243	37%	120	18%
Mangochi			766	240	31%	309	40%	217	28%	153	20%
	Mnangala	27 Feb 2023	705	231	33%	280	40%	194	28%	150	21%
	Mtanga Area	10 Apr 2023	50	7	14%	27	54%	16	32%	3	6%
	Mangochi stadium	4 May 2023	11	2	18%	2	18%	7	64%	0	0%
Total			6955	1099	16%	3049	44%	2807	40%	805	12%

Cases per ORP over time. We used the raw data available from Nyss to develop final graphs showing the distribution of cases seen at the ORPs per Epi week, for each district (Figure 3), and distribution over time by sex and age for all ORPs (Figure 4).

Figure 3. Number of cases per Epi week per ORP (a. Lilongwe, b. Blantyre, c. Mangochi).



¹² Volunteers are trained to refer all children under five and pregnant women, independently of the severity of dehydration seen, as well as people with severe dehydration. Thus, the number of people referred should always be equal to or higher than the number of children seen at the ORP.



As can be seen from the figures, cases in Lilongwe were the highest throughout, especially for ORPs 3 and 6, compared to the other districts, where cases almost never went above 100 per week. Roughly speaking, ORPs can be divided between those that saw consistently less than 50 cases per week, those that saw between 50 and 100, and those that saw more than 100. These categories may be helpful to guide volunteers and the CCMC ERU team in their decision-making in other deployments on when to open new or close existing ORPs.

Too many or too few cases. The handbook states that an ORP should see a maximum of 30 cases per day, and preferably not surpass 25¹³. We used the total number of days operational for the ORPs, and Nyss reporting data, to estimate the number and % of days were ORPs saw more than 25 cases (**ANNEX 10**).

It was only ORPs 3 and 6 that surpassed 150 cases in some weeks and may have been working at top capacity throughout the deployment. Three ORPs in Lilongwe, one in Blantyre and one in Mangochi had at least one day of 25+ cases. ORPs 3 and 6, had 9 days each with over 25 cases (representing 10.4 and 11.6% of days operational, respectively) and ORP 8 had five days (7.4%).

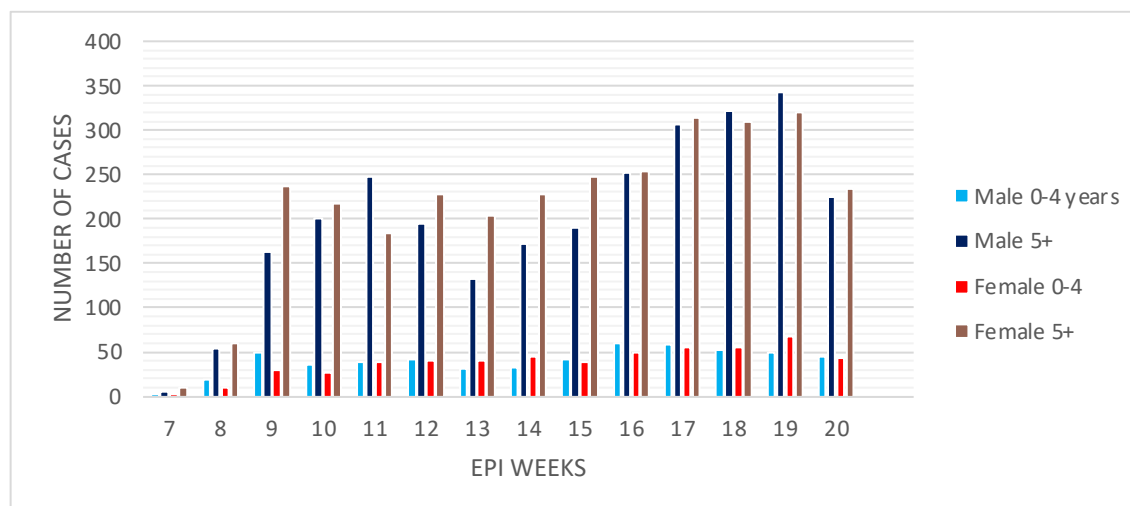
We also estimated the number and % of days with zero cases reported (consecutive or not, see **ANNEX 11**). Ten ORPs had at least one day with zero cases. ORP 7 Kauma and ORP 2 Matanda in Lilongwe had 11 days each.

¹³ For a 5-day week, this would mean 125 cases per week as a conservative maximum and 150 as the top maximum. For a 7-day week, this translates as 175 cases per week as a conservative maximum and 210 as a limit.

Matanda was eventually closed. In Mangochi, ORP 5 and ORP 15 saw each 11 and 10 days respectively, representing 28.4 and 13% of days they were operational and reporting in Nyss, respectively, suggesting that ORP 5 at least could have been considered for closing.

Gender and age distribution of cases. Figure 4 shows that there were no stark differences overall in the distribution of cases by gender and age, even though some differences appeared by week, and from sitreps it can be seen that for specific ORPs, these differences attracted the attention of the Epi delegate and warranted follow up at the ORP. We could not find further data on reasons for differences.

Figure 4. Number of cases per week for all ORPs combined, distributed by age and gender.



These figures show that the activity and output at the ORPs in terms of cases seen, was good, and related to a real need in many communities where the ORPs were set up.

Other activities and outputs. ORP volunteers carry out community health and hygiene promotion activities only inside of the ORP, these include talking to visitors of the ORP about how to ensure water is clean, handwashing, sanitation, how to prepare ORS and other pre-established messages. In addition, visitors are requested to inform others in their community about the ORP. ORP volunteers do not carry out any door to door or other community activities, as they are busy enough at the ORPs.

Hygiene promotion activities inside the ORPs, in Malawi, were supported by MCRS community volunteers who were not ORP volunteers and were carrying out CEA and community awareness activities to drive people with symptoms to the ORPs. It is complicated, and potentially unnecessary to disentangle both types of activities and their impact. However, there might be an opportunity to better define activities for each type of volunteer to prevent overlap and ensure homogenous messaging.

One sitrep mentions that CEA activities around the ORPs remained minimal (Sitrep 12). Interviewees highlighted the importance of community awareness activities by the volunteers, as “when posters were placed around several ORPs, cases increased in these ORPs immediately afterward, indicating that CEA efforts could increase engagement substantially”. (Sitrep 12)..

Limited community awareness might, however, not be the only reason for community members not visiting the ORPs. Another sitrep mentions delays in seeking help, fear of getting infected with COVID-19 in the CTCs and difficulty to find transport as potential reasons for continued mortality in the community. It is unclear whether these reasons come from discussions with community members, ORP volunteers, or other sources. (Sitrep 13).

Ensuring referrals. Another important measure of the Effectiveness of ORPs was treating mild and moderate cases while still ensuring severe cases are referred to the healthcare facility. Some stakeholders were concerned that ORPs may be a limitation for care on a higher level, however, data shows that 12% of cases seen were referred.

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Sitreps suggested that volunteers at the ORPs were good at “explaining to persons with severe symptoms or parents coming with children under 5 that they need to go to a treatment center, and they help facilitate transport.”

Because all children under 5 and pregnant women, as well as people with severe symptoms, should be referred, an easy way to analyze compliance with referral rules (and thus an aspect of quality of care at ORPs) is to estimate the number of days where the number of children under 5 is larger than the number of referrals reported. We analyzed this using the raw Nyss data (**ANNEX 12**).

All ORPs had at least one day where their number of children under 5 reported was larger than the number of referrals, the average percentage of days where this happened was 27,6% (range from 1,4 to over 72%), suggesting that regular analysis of this number in weekly reporting could facilitate identification of the problem and ensure refresher training as necessary. Discussions with Epi and TQC volunteers showed that when Epi delegates found that ORPs were referring a lower number of cases than the total number of children seen, they alerted TQC delegates who then conducted a refresher training on this issue.

Quality of care at ORPs. FGDs showed that the quality and level of work at the ORP was high and RCRC ORPs were seen as ‘model’ ORPs. The majority of the volunteers were highly engaged and active and were proud and eager to work at the ORPs.

“The quality and level of work done at the MRCS ORPs was superior to the ORPs run by other actors. This was mainly due to the fact that volunteers of MRCS ORPs were compensated (paid) which raised their (volunteers) willingness, commitment and engagement to work at the ORPs. MRCS ORPs were staffed 7/7 days while other ORPs were staffed only 2 days per week. ERU ORPs were well supplied and volunteers well skilled”. - Health authority

Interviews with delegates and a review of the ORP supervision forms suggest that the work was mostly high quality, and in most ORPs, volunteers kept the settings clean and followed hygiene and safety norms. Exceptions were reported, like uncovered or unclean water buckets, dangerous practices with chlorine, etc. TQC delegates proceeded to conduct mini refreshment training on-site when they observed these and other issues during supervision visits.

Satisfaction with achievements and strategies.

Data from key informant interviews suggest that MRCS staff and volunteers as well as health authorities (local, regional and state) have been very satisfied with the achievements. Even the president of Malawi visited an ORP and stated his gratitude towards MRCS and its achievements. Other organizations, including WHO and MoH came to see how the PH ERU CCMC ORPs work.

When it comes to the strategies used, it was noted by interviewees that the PH ERU CCMC ORPs came with all the Standard Operation Procedures (SOP), guidelines, and teaching materials for volunteers. Interviewees reported that other ORPs were lacking these materials. In a coordination meeting, it was agreed that the ERU SOPs should be adopted by all organizations that are running ORPs. ERU SOPs were slightly adapted and were afterward used for all ORPs set up by different organizations.

However, interviews show that despite the success of the ORPs, the MRCS felt left out of the PH CCMC ERU operation. Their impression was that the ERU did not interact and was not integrated into their cholera response plan. MRCS would have liked to have a common cholera response plan where all actions would have been integrated. This is further discussed in the **PARTNERSHIP SECTION**.

Effectiveness of ORP volunteer setup

Training of volunteers. Volunteers received theoretical and practical training and particularly appreciated the practical exercises. Volunteers participating in FGD mentioned that they felt well-trained, and “strong” enough to

set-up and run an ORP, and some even felt well-equipped with knowledge and skills to train others on how to run an ORP.

"The training was very good. We had theory and practical parts. I liked practical parts better, but theory is necessary. I know how to run an ORP and can also teach others". - ORP volunteer

Volunteer recruitment. The selection of volunteers for the ORPs was done either by the MRCS branch or by the local leaders in the communities, according to people interviewed. Having volunteers coming from the community was seen as essential for acceptance of the ORP and its activities and for ensuring the trust of the community. This is in line with numerous findings from other RCRC deployments.

However, interviews and FGD suggest that in some places, volunteers who did not come from the local community but from neighboring communities were chosen to work at the ORP. The volunteers were chosen by the MRCS chapter lead. This caused some conflict in the remuneration as all volunteers got remunerated the same amount to cover transportation and meal costs, but for volunteers coming from further afield, the amount did not fully cover the transportation cost. In addition, they were not familiar with the community. It is unclear if this impacted the work of the ORP, however.

"There was a good relationship with the volunteers. All of them came from the community so they (community) had trust in them". - Local leader

Working at the ORP. From the FGDs, we understood that having two volunteers per shift worked well for most ORPs, but not all. In some ORPs, the water source was quite far away which resulted in one volunteer needing to fetch water and being absent for a while whilst the other volunteer was attending to people. Three people would have been necessary in these ORPs, or alternative solutions could have been set up, such as involving the communities in the water provision. It is unclear if changes were carried out by the delegate team based on these contextual factors.

It was also noted by volunteers that the largest workload was mainly in the morning. This knowledge could be used to better organize volunteer shifts and divide activities between managing the ORP and community health and hygiene promotion activities.

"I feel that I can serve my community. We can save lives. This makes me proud". - ORP volunteer

Community activities. FGDs and interviews showed that in some communities, there were two "types" of volunteers working at ORPs (and supported by the CCM-C ERU) and community volunteers. The latter went door to door to disseminate health and hygiene promotion messages, or organized community gatherings to transmit messages. They also provided (in some communities) household chlorination. This was part of either MRCS programs or the IFRC appeal activities. Importantly, it seems that both groups of volunteers transmitted the same messages.

However, carrying out these door-to-door activities led to challenges in some cases, as some interviewees mentioned that volunteers started to treat and give advice to people for other things than acute watery diarrhea during these visits. This is concerning as they might not have been trained for these other health promotion messages.

Volunteer engagement and remuneration. Factors seen as key to the success of the PH ERU CCMC ORPs included the remuneration of volunteers, having a "tent" and having all materials always available. Non-MRCS ORP

volunteers were not always remunerated and ran out of materials at times. They also did not have a tent or a fixed point from where to conduct activities. Expecting a volunteer who is not remunerated to stand six hours in the sun, or the rain was, unsurprisingly, not a success.

Even though the remuneration for MRCS ORP volunteers only covered transportation and meal costs, it was considered a “good enough” incentive for volunteers to attend and engage in the ORPs. During the FGD, however, some volunteers pointed out that they had higher transport costs which were not covered. In one place a volunteer stopped coming to the ORP as he was no longer willing to spend money on transportation.

Finding the right remuneration costs for volunteers is a well-known issue in ERU deployments. Guidelines from IFRC and NS must be considered but ensuring that the volunteers are sufficiently remunerated for work that is beyond the usual hours expected from volunteerism is also critical, both for ethical concerns and to ensure engagement.

Community Engagement and Participation

This section looks at the extent to which communities were involved in the planning and implementation of the response and any challenges encountered with community engagement.

ORP sites. ORP site selection (assessment) reports show the engagement of community leaders and members for ORP site selection. ERU delegates checked whether the sites covered all criteria. If not, a new site was selected together with the community leaders.

From the FGDs, we understand that the engagement of communities varied based on the involvement of MRCS. In places where the CCMC ERU team went into the community without involving MRCS, community engagement was lower.

In some places, communities contributed to the protection of the material during the night. They offered places where the material could be safely stored. In other communities’ security guards were hired (this created some challenges that are discussed in the **SUSTAINABILITY SECTION**). The ORP site selection assessments show that other communities made toilets or latrines available for the ORPs or facilitated access to clean water (even though this access was paid for).

Communication strategies. All participants in the FGDs stated that communication strategies were adequate, culturally adapted and tackled the most pressing issue (watery diarrhea). ORPs used key messages from the ORP material which have useful pictures. The ORP communication materials used came from the African Version of IFRC Watsan Mission Assistant materials.

In general terms, direct communication between the PH ERU CCMC team and the community happened mostly at the beginning when establishing the ORP sites and mostly through community leaders and the use of community gatherings to disseminate messages. Beyond that, it seems like community communication strategies happened mostly via the volunteers at the ORPs.

ORP acceptability and community's perception of ORPs /PH ERU CCMC. There is no quantitative data from KAP surveys or other on ORP acceptability. However, interviews and FGD showed that there was initial resistance or skepticism towards the ORPs from community members, as there are a lot of myths and beliefs around cholera. People had been extremely afraid due to high mortality, especially at healthcare facilities. People were afraid to visit the health facility as they saw health facilities as a threat and somewhere you could die.

In addition, interviewees and FGD participants reported that people were afraid that with the ORP cholera will be brought to the community. People also have a strong belief that cholera only exists during the rainy season and not during the dry season and therefore people denied having cholera.

For these reasons, the PH ERU CCMC team and MRCS considered it essential to conduct in-depth community engagement. Leaders were first contacted and after approval from the leaders, community gatherings were

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organized to explain what the ORPs are, what they provide, and what they do not provide. Interviewees and FGD participants reported that this then helped to break down the fear.

Once the community was aware of what an ORP is and community leaders/members supported the establishment of the ORP, there were no reservations against them, there were no problems with the engagement of the communities, and people visited the ORPs. FGD participants reported that leaders and community members have been engaged with the ORP and happy to have it in their community.

"They (MRCS) used local leaders for communication. The local leader did the dissemination on what an ORP is and thanks to that they trusted the ORP". - Beneficiary

People who were still resistant may have not visited the ORPs, but since no KAP or other surveys were carried out, the level of remaining skepticism is not known. Anecdotally, in one FGD it was mentioned that the leader refused to have an ORP in his community. Some of his family members pushed him not to have the ORP as they were afraid. Retrospectively it was said that he regrets this decision and the family members that were against it apologized for this. He asked if next time the ORP could be in his community. This information could not be independently verified.

"Community members were very happy to have the ORP in the village to receive basic treatment. "It prevented me from going to the health facility and I felt safer with having the ORP in this village". - Local leader

Overall, community and volunteer satisfaction with the ORPs was high. All volunteers, leaders and beneficiaries interviewed stated that they were 100% satisfied with the ORPs and the services they had received. They would have loved to have more services at the ORPs.

Effective delivery of key cholera prevention messages

FGDs suggest that cholera prevention messages were well received and effective. When beneficiaries in the FGD were asked to mention ways to prevent cholera, all mentioned hand and household hygiene (critical times of hand washing, keeping the kitchen and food clean, eating hot meals, covering food, keeping the environment clean). The reasons cited for this effectiveness of messaging are multifold:

- One major factor was the trust people had in the volunteers. Community members believed what the volunteers said.
- The fact that no volunteer became sick (this was not independently confirmed) even if they were working at the ORP and in constant contact with people that suffered from acute watery diarrhea supported the credibility of what volunteers were saying.
- Volunteers as well as beneficiaries found the messages transmitted by volunteers adequate and adapted to the context. They believe that key messages were simple but important and powerful.
- From the FGDs, we understood that the strategy of having volunteers at the ORP and community volunteers going door to door transmitting the same messages in the communities seemed to have a great impact on the behavior of community members.

"They have used existing strategies by gathering community members for information about the ORP and engaged a lot with community leaders as a channel to communicate with communities". - MRCS staff

FGD participants explained that community members had trust in the volunteers and that is why they were listening to them. None of the volunteers working at the ORPs got sick (this could not be independently verified) which was an important message showing that when following certain rules cholera can be avoided.

Impact

Impact on mortality, morbidity, and health facility workload

While the objectives of the PH ERU CCMC are clear in terms of ultimately decreasing morbidity and mortality from cholera, and decreasing the burden in healthcare facilities, the Handbook does not contain a logframe or theory of change nor indicators to measure results at process, output, outcome, and impact level. This gap has already been flagged by the Swiss RC before the development of this evaluation and is being addressed through the development of an M&E framework for the PH ERU CCMC (see **M&E NEEDS REPORT**).

Process level (e.g. volunteers trained, supervision visits, ORPs set up, etc.) and output level data (number of cases seen at ORPs) are available from sitreps, ORP site visits, and Nyss data. However, outcome and impact-level data were not systematically collected during the deployment and limited data is available.

In theory, the reduction of the burden of healthcare facilities could have been measured if available data from the referral hospitals on the number of cholera cases seen over time (and pre-post opening of the ORPs) had been collected. There seem to have been very few visits to treatment centers acting as referrals for the ORPs from the CCMC ERU team, and no data analyses from these centers. One field trip report states that an interview with clinical staff in a referral hospital suggested that they had seen a decrease in cases since the ORP opened (see **M&E NEEDS REPORT**)

The reduction of morbidity and mortality is more complex to measure as it would need granular data for the communities where the ORPs were set up, which is difficult to come by. As reported in the **M&E NEEDS REPORT**, epidemiological data available from the MoH was limited in granularity and disaggregation, and likely had gaps. Data (number of new cases per district, per day and number of currently admitted in treatment, per day (not disaggregated)) was limited to cases seen in the health centers and was likely underestimated due to unreported cholera cases.

The country visits part of this evaluation was especially concerned with capturing qualitative data for the Impact dimension to partly compensate for the lack of quantitative data at outcome and impact levels. The qualitative data collected through key informant interviews and FGDs suggest that stakeholders believe the ORPs to have contributed to the reduction of morbidity and mortality.

"The tool works, it is powerful, and it reduces mortality." - MRCS staff.

"MRCS ORPs have highly contributed to the reduction of morbidity and mortality." - Health Authority.

"Transportation was paid by ORP in case of severe cases. Community members could not have afforded to pay the transportation fee. Thanks to this it helped to reduce morbidity and mortality."- ORP volunteer.

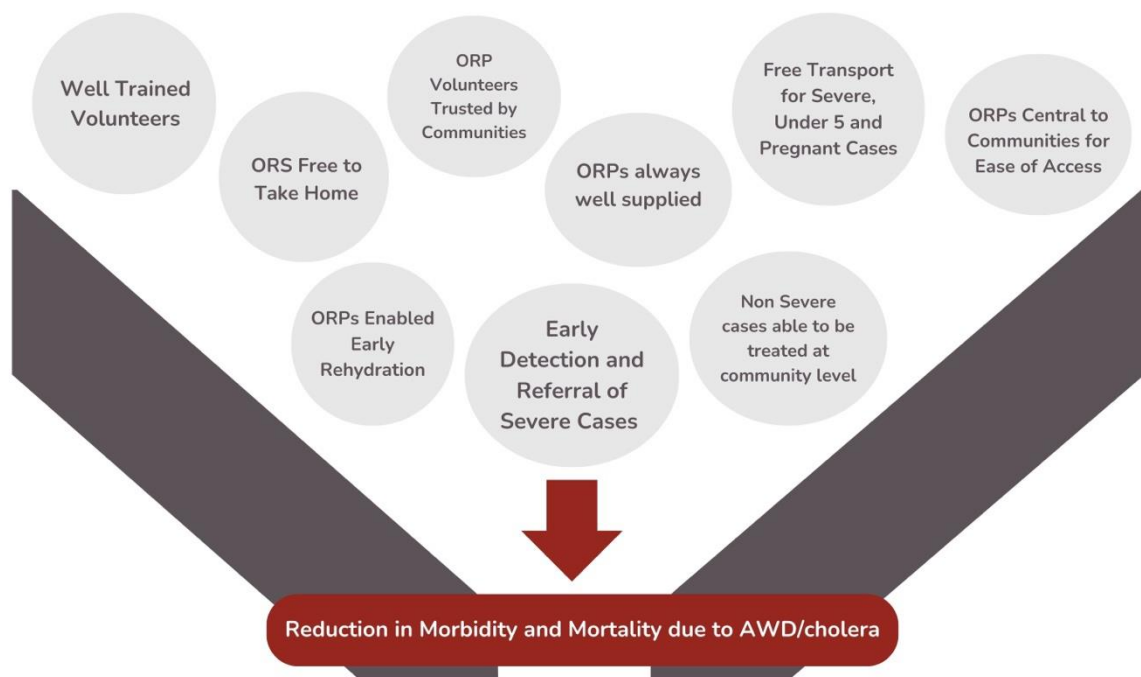
"Because at MRCS ORPs all patients, including severely ill patients received ORS to drink straight upon arrival at the ORP and prior referral, this helped to reduce morbidity and mortality" - Health Authority.

"The impact of the ORP was great. Without ORP there would have been more deaths. It helped to reduce death." - Local leader.

The reasons cited for this reduction in morbidity and mortality include (see Figure 5) : that the ORPs were at the center of communities and thus easily accessible; staffed by well-trained, trusted volunteers from the local

community; ORPs were always well supplied, and provided free ORS to take home, as well as free transportation for children under 5 and pregnant women as well as severely ill people to the referral health facility. All of this enabled early detection of cases, early rehydration, and referral of severe cases. Because people did not need to travel to healthcare facilities for detection, it is also believed that it allowed for a decrease of spread as people did not wait long to seek treatment at the ORP.

Figure 5. Reasons cited by interviewees and FGD participants for the contribution of ORPs to decrease in morbidity and mortality.



Participants in the FGDs also stated that the ORPs substantially reduced the workload of the health facilities as soon as they were installed. This is because ORPs were able to treat non-severe cases and sort out cases of non-cholera diarrhea which prevented them from going directly to the treatment center if not necessary, thus reducing the workflow at health centers.

"Having the possibility to deal with not severe cases at community level decreased the workload at health facility level." - Health authority.

"ORPs were relevant. They reduced the workload of the health facilities and they changed the health seeking behaviour of community members. Thanks to the ORP community members had timely access to ORS and to health facilities." - MRCS staff

While this qualitative data on its own is not conclusive, the concurrent opinion of several sources, together with the clear effectiveness and level of activity and output of the ORPs (see **EFFECTIVENESS SECTION**), suggest that the PH CCMC ERU had an impact in reducing the burden at healthcare facilities and even decreasing morbidity and mortality through early detection, treatment and referral.

Community impact

Behavioral change through health promotion messages. No quantitative data is available to measure the behavioral change of community members, as no KAP or other surveys were conducted. However, qualitative data from interviews and FGD suggests there were changes in the communities' handwashing, latrine use, and household

hygiene behaviors after receiving health promotion messages from volunteers. In one community it was mentioned that people who had attended ORPs had better knowledge on hygiene than those who did not attend the ORP, but this could not be independently verified.

"People were scared and at the beginning they were skeptical. But because I've learned how to prevent cholera and I apply this also at home I never got sick. None of us got sick. So people have seen that these techniques work." - ORP volunteer

"People got information on hygiene at home and how to improve hygiene at household level. The commitment to use the toilet increased, to focus more on hygiene and take more care of hygiene, especially when it comes to hand washing and having clean facilities. Big improvement of things we did not take care of beforehand". - Beneficiary

"Thanks to the good training we learned many skills and we were able to transmit health and hygiene messages in an adapted way, community members accepted and adopted the messages. They have mainly changed in hand hygiene and in keeping households hygienic." - ORP volunteer

An important factor suggested to have facilitated behavior change was the double messaging from community volunteers that went from door-to-door for health and hygiene promotion, and from ORP volunteers. MRCS strengthened hygiene messaging in all communities that had ORPs. ORP volunteers and community volunteers both transmitted the same messages. Reasons for the effectiveness of these messages are discussed in the **EFFECTIVENESS SECTION**.

Access to healthcare services. Basic healthcare was provided at the ORPs, as volunteers helped with the detection of AWD and rehydration treatment, as well as health promotion messages. The key location of ORPs in communities seem to have truly increased access to services (both the basic service at the ORP and referral to healthcare facilities)

"The ORPs were right in the village which improved access to services. Before the ORP was installed the health facility was very far from the community, approximately 12 km". - Local leader

"Before we had an ORP I lost a child due to cholera. My other child was saved thanks to the ORP. Access to service (ORP) was good and so close". - Beneficiary

Quantitative data on effective referrals is not available as there was not a bidirectional referral information system in place between ORPs and healthcare facilities. ORP volunteers mainly recommended all children under 5, pregnant women and severely dehydrated people to visit the referral healthcare facility and covered transportation costs. But neither ORP volunteers nor the PH ERU CCMC delegates had a way of verifying if people referred made it to the healthcare facility.

Qualitative data suggests nevertheless that ORPs facilitated access to health facilities, as all FGD participants stated this to be true. Transportation to the health facility was mainly free of charge by the ORP and beneficiaries were reportedly thankful for this support during a moment of severe illness. From comments from volunteers, it may seem however, that in some instances patients did not take their children to the healthcare facility as instructed.

Patients needed to organize and pay for their transport back home from the healthcare facility though. It seems that in some cases transportation cost to the hospital was not covered (this was not independently verified and it is unclear why this would have happened), but even in these cases, volunteers reported that severely sick patients sought medical attention when advised by the ORP volunteers.

"Most (people) went but if someone did not want to go we cannot force him. Especially if a child was not severely sick the mother preferred to keep it at home". - ORP volunteer

"Thanks to ORPs, severely sick patients had free transportation to health facilities which otherwise they would not have had. They had early access to ORS. People were happy to be referred to a health facility as transportation was provided by the ORP. This facilitated access. The return way patients had to organize by themselves which did not seem to be a problem." - MRCS staff

"Although the ORPs were only for acute watery diarrhoea, if a patient showed severe signs of sickness, was in bad condition, the ORP also provided transport to the health facility". - ORP volunteers

Unintended positive or negative consequences

As with any other deployment or emergency operation, it is important to analyse positive and negative unintended consequences. Table 2 shows qualitative data for positive unintended consequences coming from interviews and FGDs.

Table 2. Positive unintended consequences of the PH ERU CCMC deployment as seen by interviewees and FGD participants.

Unintended Consequence	Positive or Negative
The introduction of ORPs led to MRCS volunteer recruitment in previously uncovered locations. Overall, there was approximately a 638% increase in MRCS volunteers. In one community, the positive impact of the ORP encouraged other people to become MRCS volunteers and MRCS went from 8 ORP volunteers at the time of ORP set up to 59 volunteers today.	Positive
Oral Rehydration Salts were perceived as 'emergency treatment' by communities, and families now reported to have ORS in at-home First Aid Boxes.	Positive
ORP access in the community reduced the need for sick people to travel, potentially reducing disease spread.	Positive
Increase in trained community members/volunteers with the ability to deliver public health messages and raise community awareness for AWD/cholera.	Positive

No negative unintended consequences were mentioned in the FGDs. However, there were some “disappointments” as in some cases community members thought that ORPs would provide health services, other than for diarrhea. Even though community members and leaders were informed about the services an ORP would provide, expectations were high that other services would be provided. While there might be an area of opportunity to strengthen messaging and better manage expectations on the scope of services an ORP provides these “additional expectations” tend to be common in settings where healthcare services may be limited, and during emergencies.

"Why only cholera, we have lots of other diseases like malaria, so we need treatment also for that". - Local leader

There were also negative unintended consequences in the overall relationship with the MRCS, as seen from KIIs and reports, caused by a series of actions taken by the PH ERU CCMC delegate team and/or individual team members.

While it seems like initially, the communication with MRCS was good, communications deteriorated over time, especially when the team moved to Blantyre after the cyclone. It was reported that certain team members decided to change the remuneration of volunteers without discussing it with MRCS or even entered communities without

informing and involving MRCS (these last items were not independently verified through discussions with team members). Both actions caused inconvenience and trouble for MRCS. See **PARTNERSHIP SECTION** for further discussion.

Another potentially negative consequence is that community leaders would like the ORPs to remain in the communities, and community members would like them to provide more services, such as in a proper health center. This is outside of the scope of a PH ERU CCMC deployment and potentially beyond the scope of what MRCS is able to provide, thus creating a request that might be difficult to fulfill.

However, the interest and engagement with the ORPs from communities and the health-seeking approach denoted by this request can be considered positive. It may also provide opportunities for the establishment of long-term collaborative projects between MRCS and other NS to provide access to primary health services in underserved communities.

Efficiency

Efficiency is usually analyzed in terms of cost-efficiency, timeliness, and added value.

Cost efficiency. The cost-efficiency concept is less important in emergency response as once there has been a commitment to engage, it is understood that to act fast and save lives some cost inefficiencies may ensue. Conducting a budget analysis was beyond the scope of this assignment, however, we collected some indirect qualitative feedback from interviews and the desk review.

Most ORP materials were considered necessary and used, the presence of a tent and the fact that they were always well equipped were highlighted as part of the reasons for their success. Per diems for volunteers also represented a cost that was necessary and a good investment to ensure ORP success. On the other hand, ORP kits included phones for SMS reporting, but these phones were not used in the end, as it was challenging to ensure they were charged and had data. Volunteers usually preferred to use their own phones.

Timeliness. When looking at the overall timeline of the cholera outbreak in Malawi, it seems as if the PH ERU CCMC deployment came in too late, a full 9 months after the outbreak started. However, the government did not establish the outbreak as a public health emergency until December 2023 and this is what likely triggered the larger IFRC appeal and response.

As for the speediness of the deployment, the call for the PH ERU CCMC came on January 20th and 6 days later the first part of the team arrived in Malawi which speaks to fast coordination between IFRC and the Swiss RC as well as partner NS providing delegates. Of note, however, the Handbook does not establish timeliness benchmarks that could be used to compare against for the time from the request to team deployment and to ORP setup.

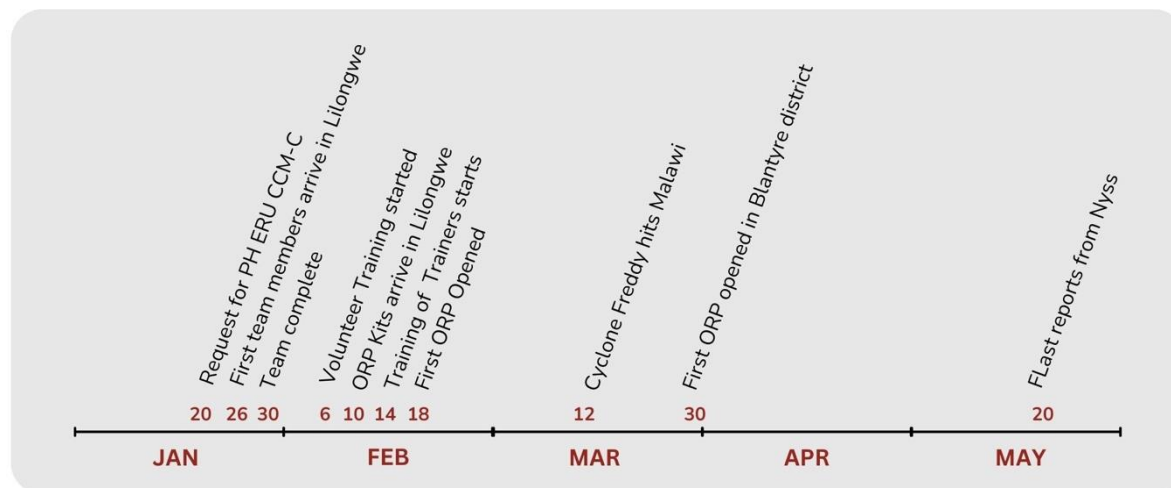
As for the ORP setup, the sitreps mention that the Malawi MoH representative was impressed by the quality and speediness of setting up new ORPs during the deployment, however it took a full nineteen days since the full team was on the ground to open the first ORP (from Jan 30th to Feb 18th).

Seven days after the full team was on the ground, the team was able to start the training using a few ORP kits already in-country, which was a great time-saver. It took another 12 days to open the first ORP on Feb 18th. The ORP kits arrived on Feb 10th so this was not likely to have caused the delay. The delay may have partly been due to the fact that there was just one TQC on the team and the training of trainers was also taking place at the same time. One interviewee mentioned that during the first rotation at the start of the deployment, a second TQC profile would have been needed at that critical point in time to accelerate ORP training and setup. Indeed, the team is ideally composed of 2 TQC delegates, but it was not possible to find available delegates to fill the second position. Delays may have also been caused by the limited epidemiological data which hindered the decision on where to set up the ORPs (see **M&E NEEDS REPORT**).

As for the post-cyclone response in Blantyre, the team managed to decide on the response, move to Blantyre, conduct training, and set up the first ORP less than 2 weeks after the cyclone occurred. This is remarkable knowing

that there are usually delays because of floods and damaged roads. The question always remains on whether it can be sped up even further, especially considering the advantage of already being in the country. Having ambitious timeliness goals in the Handbook could give more clarity to the team on what to aim for.

Figure 6. Timeline of PH ERU CCMC deployment



Added value and efficiency of team configuration. In terms of the team, it seems like all the positions were critical, however, interviewees reflected that the position of WASH specialist needs to be reformulated, as many of the activities carried out by a WASH delegate required hardware WASH skills (latrines, setting up water connections, etc) and technician skills and these are to be covered by a WASH ERU rather than by the CCMC ERU WASH delegate. As for the hygiene promotion skills, these skills were also partially covered by the TQC profile if people with WASH skills are selected.

In addition, a second TQC position, especially in the first rotation, was considered necessary to ensure faster training and ORP setups. Indeed, two TQCs positions are recommended in the Handbook to be present throughout the operation, but it was not possible to find available delegates to cover the second position. With two TQCs, one can take care of training while the other helps with quick assessments to find ORP locations and help the trained volunteers launch the ORP.

Finally, a review of the deployments and interviews with deployed delegates showed that at several points in time, the overlaps between delegates in different rotations were long (10 to 14 days), resulting in some positions having two delegates with not enough work for both. This was considered challenging by one team leader, and potentially inefficient use of the delegates' time, although it was set up that way to ensure some shadowing time from less experienced delegates.

It was also mentioned that the handover from one ERU delegate to another ERU delegate was not always smooth. There was a loss of information from one delegate to another (for Epi delegates this is further discussed in the **M&E NEEDS REPORT**)

Relevance

ORPs have been shown to be highly relevant in a cholera outbreak to ensure early diagnosis and treatment in the community and this deployment was no exception, as shown in the impact and effectiveness section.

Alignment of CCMC activities and outputs with different stages of the emergency

From the handbook, we understand that flexibility is expected from the team during the deployment to meet the local needs and respond to changing circumstances. In order to reach this flexibility, the handbook mentions aspects

such as transparency in decision making from the team leader to the rest of the team and local counterparts and regular meetings (with management as well as with local counterparts and volunteers).

Flexibility and adaptability were shown by the team at different points in time:

- At the start of the deployment, by starting training with available ORP kits in the country, and by using the limited epidemiological data complemented by MRCS and health authorities' expertise to select areas for deployment.
- After tropical cyclone Freddy in mid-March 2023, the team had to respond quickly and moved operations to Blantyre to set up new ORPs there. The team had to prioritize cholera interventions for the districts that had been the most impacted by the cyclone.
- From the sitreps and interviews, we also understand that the original ORP volunteer training was quickly adapted to the context, as it was too specialized for the volunteers and the quality control supervision for the first ORPs.
- The ORP setups were adapted as needed in each location to ensure protection against rain, access to water, and security of the ORP supplies during the night.
- When the Eagle SMS system failed, data collection was quickly adapted to be sent via Whatsapp message, even if it required a higher workload from the Epi delegate (see **M&E NEEDS REPORT**)
- When one ORP showed consistently low numbers of people, even after community awareness activities, it was closed and moved to a different area.
- When some volunteers started seeing a decrease in the number of cases in their ORPs, as stated in Sitrep 13, they started engaging more in hygiene promotion.

Team responsiveness to needs and priorities of beneficiaries, national authorities, MRCS and other partners.

From sitreps and interviews, it seems like the PH ERU CCMC team was open and responsive to the information and requests from health authorities and MRCS on where to place the ORPs, and those decisions were made collaboratively. Later on, it seems as if there were more challenges in communication with the MRCS (see **PARTNERSHIPS SECTION**). At the last stage of the deployment (last rotation), interviews show that there were serious efforts carried out to improve the relationship in the last stage of the deployment. The team worked hard to ensure a smooth transition, changing the reporting from ORPs based on the requests from MRCS to use Kobo.

From interviews with health authorities, it also seems like the MRCS was responsive to their needs as well. There was a request to capture additional variables at the ORP, which was done, despite concerns over data protection. This data was collected and handed over to the health authorities. (see **M&E REPORT**)

To stay up to date with local needs and changing epidemiological data, the CCMC team took part in regular meetings with different stakeholders including the Malawi MoH, ORP sub technical working group (with WHO and other partner organizations, and the MRCS. However, the sitreps mention several times a general lack of engagement with MRCS and that the ORP sub-technical meetings were sometimes cancelled due to low attendance.

Coherence

Figure 6 presents an overview of some of the key stakeholders in the cholera response in Malawi. Partners later expanded after Cyclone Freddy. To enable coherence in the deployment and avoid duplicity of efforts, it is crucial for the different in-country stakeholders involved in the response to have good communication and collaboration, including inside the RC Movement.

It is clear from the data available that there was no duplicity of efforts with other organizations in terms of ORPs, as RC ORPs were the only ones based in the communities. When it comes to community health promotion activities,

there were efforts from ORP and non-ORP volunteers, however, this was regarded as a plus and is believed to have contributed to effectiveness (see **EFFECTIVENESS SECTION**).

As for collaboration and cooperation with other partners, there were some challenges initially in finding the right communication partners within the MoH but this was later achieved, opening the door to participation in coordination meetings with other partners. From sitreps and interviews, it seems like the CCMC added value through data collection and data sharing of operational (ORP) data, as this was well-received and appreciated by health authorities and other partners who did not gather/share such data.

Figure 6. Key stakeholders involved in the Cholera response (non-exhaustive list)



Partnerships

Communication and cooperation with MRCS

Interviews suggest that despite the success of the ORPs, there were missed opportunities and potential areas for improvement when it comes to collaboration and coordination with the MRCS.

MRCS considered that the ERU did not interact and communicate enough with MRCS, and their activities and decisions were not as integrated into the MRCS cholera response plan. MRCS shared that there were ERU ORPs and MRCS ORPs, and that they did not perceive the ERU ORPs as theirs. The ERU ORPs also had their own data collection and reporting system (this was not independently verified, however, and at least one MRCS ORP was integrated into Nyss reporting). Whilst at the ERU ORPs the Nyss platform was used, for the other ORPs MRCS used Kobo toolbox. There was no exchange between the ERU team and the MRCS team that was in charge of the other ORPs.

MRCS would have liked to have a common cholera response plan where all actions would have been integrated. It seems that MRCS staff did not feel included in the operation nor in critical decision making. Delegates also mentioned that there had been a decrease in communication after the move to Blantyre.

From the desk review, interviews and FGDs, as mentioned earlier, it seems like the initial collaboration was good, the ERU team introduced themselves upon arrival and exchanged with the HQ staff, and MRCS provided strong input on where to set up ORPs.

Communication and collaboration seem to have decreased after the ERU team moved to Blantyre, at which point MRCS HQ felt completely disconnected. It was mentioned in interviews that after the move to Blantyre, the ERU team made some decisions without informing HQ which caused problems for the MRCS HQ, such as increasing incentives for volunteers or entering a village without informing MRCS HQ. It is clear from the desk review, however, that there was some collaboration with the MRCS Branch in Blantyre for ORP set up, training of volunteers, etc.

"CCMC Team informed MRCS about ERU operations but did not collaborate at response level. Once the team moved to Blantyre, communication was cut". - MRCS staff

"Once volunteers were selected, they (ERU team) did their things without us". - MRCS staff

It was also mentioned that in finance, there was no collaboration. The ERU did their budget and MRCS was not aware of what was spent. MRCS interviewees also shared that the exit came abruptly, and they did not feel prepared. Sitreps and interviews suggest that communication on the exit and considerations for moving the reporting to Kobo started in the last rotation.

While there seem to have been attempts by last rotation delegates to rectify this situation and reestablish connection with the MRCS, including by moving part of the team back to Lilongwe, it might have been too late in the deployment to change the perceptions.

From the sitreps, it seems like the delegate team also were concerned about coordination and communication with MRCS. There are mentions of canceled meetings or no attendance from MRCS staff. In at least one case mentioned in a sitrep, a lack of information sharing regarding MRCS volunteer management resulted in a day of delay of ORP opening and site preparation. It is unclear if this difficulty in engagement led to less frequent efforts to maintain communication as time went by.

In addition to ensuring regular communication with the MRCS, some interviewees (both delegates and MRCS staff) suggested that these should include not only TQC, team leader but also Epi, finance, WASH and logistics.

An additional issue raised in FGDs was that communication lines as well as roles and responsibilities between MRCS HQ, Branch and ERU were not clear. The branch thought that ORPs were supposed to report to the branch, but they never received any report nor data from the ORPs.

"The entry (start of operation) of the ERU team was not good. They went together with MRCS staff directly to the field without involving the Branch. They also started engaging with Health Surveillance Assistance, without informing District Health Officers. This caused problems for us". - MRCS staff

"The CCMC team just took the volunteers and never came back. There was only communication at the beginning during the set-up but not afterwards". - MRCS staff

Communication and cooperation with health authorities.

Delegates expressed the usefulness of having access to coordination meetings with the Malawi health authorities, although it was initially challenging to gain this access. Local information, such as data from treatment centers and daily updates from the Malawi health authorities (i.e. reports on cases, admittances, deaths), enabled the delegates to have a better overview of what was happening on a national level (see **M&E NEEDS REPORT**)

In the early days of the PH ERU CCMC deployment, the epidemiologist was in contact with the treatment centers of some of the busiest ORP's in the centers' catchment area, which helped guide the setting up new ORP's. However, interviewees mentioned there was less contact from the treatment centers as the number of cases started to fall. The desk review shows that visits from the delegate team to treatment centers (reported) were few. Throughout the deployment, guidance for ORP set up locations came mostly from the MRCS who were working on the ground and had a better overview of what was happening within the communities.

The Nyss platform can grant data consumer access to the national health authorities and other parties. When the Eagle SMS system failed, data sharing took place with the Ministry of Health through sharing of weekly reports and informal communication between the CCMC ERU Epidemiologist and the MoH focal point for the ORPs. All raw paper data forms collected from the ORPs were handed over to the MoH. This data exchange was highly appreciated by the MoH. MoH stated that this was the most reliable data they received. It was stated that since the ERU team left, MoH has not received any further report from MRCS.

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Other partners (MSF, WHO, UNICEF) were reported by interviewees to also have ORPs, but it seems that many of these did not report back systematically to the MoH, which made the data shared by the PH ERU CCMC ORPs even more valuable.

Coordination and communication were done through various means including meetings with MoH, case management coordination group (WHO and MoH), community leaders, ORP sub-technical working meeting organized by WHO every Tuesday and Friday (participants: MSF, Unicef, MoH and MRCS), MRCS technical cholera coordination meeting (every Monday and Thursday), coordination with IFRC surge team (CEA and WASH for community activities).

When it comes to district-level health authorities, however, communication was not as good. The team did not have much contact at the district level, and the district health authorities felt they were not kept informed. While they were informed about the ORP setup, they mentioned that they did not receive reports or raw data (this was not independently verified). While local authorities were appreciative of the ORPs, they would have liked to receive regular data.

"A district health officer should know what is going on in its district". - Health authority

At the community level, the health surveillance assistants were involved as supervisors for ORPs. They received training and had to visit the ORPs twice a week. At the start of the operation, the health surveillance assistants reported to the ERU team. This was then changed to an MRCS staff.

Coordination and collaboration with IFRC

When it comes to cooperation and coordination within the Movement, from the sitreps, we understand that activities were coordinated in cooperation with the IFRC RRPHE delegate and with the IFRC surge team (CEA and WASH for community activities). The PH ERU CCMC team collaborated and had contact with IFRC operations managers as well as with the WASH and Public Health Coordinator. It was mentioned that technical exchanges between IFRC and PH ERU CCMC took place regularly.

However, interviewees suggested that collaboration and coordination between IFRC, MRCS and the PH ERU CCMC was not optimal, and roles and responsibilities were not clear. Sitrep 8 mentioned the challenge of having two Emergency appeals running at the same time with overlapping activities (and staff), and this was further commented upon during interviews. One interviewee mentioned that communication and cooperation with other ERUs deployed after Tropical Cyclone Freddy in Blantyre was limited and there were missed opportunities for collaboration with other ERUs (e.g. Water Supply Rehabilitation) and individual delegates. This was somewhat remedied thanks to personal contacts among delegates in charge, instead of pre-established communication and coordination lines. We do not have enough data to provide an understanding as to what was causing cooperation and communication challenges within the Movement.

Capacity building

Capacity building efforts from the PH ERU CCMC team were mostly focused on training and ToT for ORP management. Volunteers were trained to run ORPs and MRCS staff (at HQ and Branch level) were trained as Trainer of Trainers to carry out the volunteer training. In addition, master training sessions were given out on how to carry out the assessment for the ORP location, how to set up and run an ORP, and how to close an ORP.

Apart from the initial training, reports show that Epi, WASH and TQC delegates used ORP supervision visits as opportunities to carry out mini refresher training on-site based on observations at the ORP.

Volunteers as well as staff mentioned that they felt well trained and skilled to train others. They also mentioned that if ORPs were needed in six months, they would know how to set up and run the ORPs. People trained as ToTs received all teaching material in hard and soft copy, and a trainers' network was set up.

Before the PH ERU CCMC deployment, the concept of the ORPs was not as well understood by MRCS. However, after this operation, interviewees felt confident enough to run ORPs by themselves. They said that if the magnitude of the epidemic were too big, they still would need support. However, they feel confident to start ORP operations on their own.

Whilst the capacity building regarding the running of ORPs was great, other capacity building was lacking, especially concerning data collection and analysis. MRCS PMER staff reported not being trained and seeing that as a missed opportunity.

"There has been capacity building through volunteer training. Volunteers learned new skills and improved their CVs which is important". - MRCS staff

The ERU team also trained health surveillance assistants (HSAs) which are affiliated with the MoH. Each community has its own HSA that comes from the community. They have some training from MoH, and they report directly to the district health officer. HSAs acted as supervisors for ORPs early on before this responsibility was switched to MRCS staff. The HSAs interviewed felt well-trained and knew what they had to check and to whom they had to report if something was missing. They had a checklist that they had to fill out every time they visited the ORP. They had to visit each ORP twice a week. Sitreps however do not contain any information on supervision visits by HSAs, so it is unclear if these took place.

Sustainability

ERUs are in nature a short-term solution. Sustainability for a PH ERU CCMC operation depends on the behavioral changes managed in the community and the ability of the NS to continue ORP operations if and when needed.

The number of cases seen at the ORPs despite initial misgivings and false beliefs about cholera suggests that some behavioral change in terms of healthcare-seeking behavior was achieved, although it is likely that the proximity and convenience of the ORP were also important factors. However, since no community wide KAP surveys were carried out at the start and at the end of the deployment, this is hard to quantify.

The exit and handover strategy seems to have been started in the last rotation. From the FGDs, we understand that MRCS did not feel included in the handover and exit planning. MRCS felt that the handover was not initiated early enough and mentioned that the exit was discussed only one month before the team left. At Branch level they said that they were only informed the week before the ERU team left. MRCS stated that a stronger involvement from the start of the operation would have facilitated the handover.

The End of mission Epidemiological report (May 2023) indicates that the Malawi Red Cross Society decided to continue running all the ORPs. Challenges encountered when planning the exit strategy included the reporting system. The Handbook considers that the SMS Eagle will be operational and that in most cases, the Nyss platform can continue to be used after ERU departure. However, since the SMS Eagle had challenges from early on in the operation and Epi delegates were manually entering data in Nyss, this solution was likely unsustainable post exit. MRCS decided to use Kobo toolkit for data collection instead. It was discussed that the MRCS had previous experience with the Kobo toolkit, however, during the April 20, 2023, visits to the ORPs in Lilongwe, the Epi delegate asked this question from the volunteers and none of the volunteers informed of previous experience with Kobo toolkit

Financial challenges were also reported. MRCS mentioned that they were not fully aware of what was paid, especially when it came to volunteer incentives. In certain communities' security guards were hired, which, according to MRCS should not be necessary as communities should contribute to the operation by providing safe storage places. It also placed MRCS in the difficult situation that after the handover they had to continue to pay for security guards. In some places, when they stopped paying the guards, community members were not willing to "guard" the material for free and want to be paid for it.

Despite these challenges, the Evaluation visit to Malawi in August 2023 showed that ORPs were still running. The running ORPs continued to fill out all the necessary forms (daily tasks, cleaning, registration, logistics, etc). All ORPs were clean and still had all material available. ORPs send daily patient data to a WhatsApp group (no names, only numbers). The MRCS project coordinator received these reports and entered data into the Kobo toolbox and the PMER department compiles the data.

One concern was, however, that the ORPs were seeing very few cases of AWD. Volunteers were aware that the ORPs eventually would close but they did not know when. Community leaders did not know if and when ORPs would close, and their expectations are that the ORPs would remain forever. MRCS staff mentioned that they would close the ORPs soon. Thus, while there was a success in keeping the ORPs running, questions can be raised as to the relevance of keeping them open when cases decline sufficiently. This might also highlight challenges with analyzing and interpreting operational and wider epidemiological data to drive decisions on closing or moving ORPs.

It seems that training and capacity building, strong SOPs, and involving the NS in choices of reporting systems post-exit were all important pieces to ensure sustainability. There might yet be some areas of opportunity in terms of epidemiological training, including data analysis and interpretation for decision-making.

Lessons learned and recommendations

The PH ERU CCMC opened and managed in collaboration with MRCS a total of 18 ORPs across three districts which provided an accumulated 947 days of community-level treatment of cholera, seeing almost 7000 cases over the course of 2.5 months.

In summary, it is clear from the findings that the effectiveness and impact of the PH ERU CCMC deployment was important, and it likely managed to contribute to early detection and treatment of cases, which potentially had a positive impact on decreasing morbidity and mortality. It also likely helped reduce the burden of cases at referral healthcare facilities. In addition, the ORPs were still operational, well-equipped, and staffed over 2.5 months after the PH ERU CCMC team left, although the number of cases seen had decreased considerably. The MoH and MRCS were very satisfied with the ORPs and their achievements, as well as with the data reported to the MoH.

The main challenges encountered were around communication and collaboration with the MRCS, where missed opportunities created challenges for the handover.

Table 3 highlights lessons learned, and recommendations based on the main findings, as well as marking whether the recommendation needs to be incorporated into the Handbook, the Delegate's training, the ORP training of volunteers and/or the actual operation. We also highlight whether the lesson learned was a good practice (GP) to be further replicated and refined, or an area of opportunity (AO) to be improved.

Please also consider the lessons learned and recommendations presented in the M&E needs report and the Interim review of the epidemiologist role and use of Nyss. There is some overlap, but also separate learnings that can be taken into account.

Table 3. Lessons learned from the Evaluation, recommendations and where to incorporate them. AO= area of opportunity, GP= Good practice, H=handbook, DT=delegates training, O=Operation, VM= ORP volunteer manual

Lessons learned	Recommendations	Incorporate into			
		H	DT	O	VM
Impact and Effectiveness					
GP. Factors contributing to the success of the ORPs included: well trained volunteers trusted by the community, ORPs always well supplied with free ORS to take home and free transport for referrals, as well as ORPs conveniently located inside communities.	Produce a short case study that can be used to reinforce these messages in training and to advocate for ORPs and the PH ERU CCMC in future cholera outbreaks	X	X	X	
GP. It seems like the combined efforts of health and hygiene promotion messaging at the ORP and through door to door and other community level activities carried out by volunteers was a powerful combo.	While data on this is limited, it is possible to consider establishing these two different community health promotion strategies when planning activities at the start of an operation.			X	
AO. There was limited data available on knowledge, attitudes and practices in the community and these were mainly qualitative.	Quick KAP surveys at the start of the operation can help identify beliefs and practices that need to be specifically addressed at the ORPs and when discussing with communities to set these up. End of operation KAP surveys can also help measure changes in knowledge and behavior that occurred due to the PH ERU CCMCs efforts. These KAP surveys could be carried out by the NS or requested by the larger health operation (e.g. PHiE Coordinator)	X	X	X	
AO. Data on number of AWD/cholera cases seen on a daily or weekly basis at treatment centers and hospitals that served as referrals for the ORPs was not collected (or was unavailable to collect). This data is useful to help measure the true impact of the ORP of decreasing the load of healthcare facilities and reducing morbidity and mortality due to cholera.	Review the need and usefulness, as well as the time and effort trade off of collecting this data to facilitate impact measurement. Challenges to collect it may include data sharing agreements, availability of data in a digital or aggregated manner at the healthcare center, etc. If it is agreed that this data should be collected, provide guidance in the Handbook and in the Training about what and how to collect, along with frequency of collection and use in analyses.	(X)	(X)		

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<p>AO. Quantitative data on effective referrals is not available as there was not a bidirectional referral information system in place between ORPs and healthcare facilities. Neither ORP volunteers nor the PH ERU CCMC delegates had a way of verifying if the people referred actually made it to the healthcare facility.</p>	<p>Analyse if it is possible (including data protection issues) and worthwhile to establish a bidirectional referral system that would allow the PH ERU CCMC team to know what percentage of referred patients actually made it to the HCF.</p>	(X)	(X)		
<p>GP. Supporting patients with transportation costs to the referral facility seems to have been an important component for ORP success.</p>	<p>Consider systematizing in the operational framework to cover the costs for transportation for children under 5, pregnant women and severe cases</p>	X		X	
<p>GP. Flexibility and adaptability of the PH ERU CCM- C team was likely an important component in the success of activities and appreciation by the health authorities.</p>	<p>Produce a short case study that can be used to reinforce these messages in delegate training's and/or use examples from this report to create injects for training that push for flexibility and adaptability.</p>		X		
<p>Efficiency and quality</p>					
<p>AO. Regular reporting did not include indicators for efficiency and quality, such as number of days where ORPs were seeing too few or too many cases, or where the number of referrals was below the number of cases of children under 5 seen at the ORP. While Epi delegates mentioned reporting this to TQC colleagues, it can be systematized to ensure it is not delegate dependent.</p>	<p>Ensure that weekly sitreps and other reports regularly analyse number of days where ORPs see more than the recommended number of cases per day, and zero cases, as well as days where the number of referrals is lower than the total number of children reported so that the delegate team can take action based on the data</p>	X	X	X	
<p>AO. Quality control visits of the ORPs did happen, but the timing seems to have been somewhat ad hoc and not systematized. In the absence of a pre-existing checklist, a tool was developed by the delegates on the ground to carry out the quality control supervision visits of the ORPs. The refresher trainings carried out on the spot after these visits were an effective tool to improve the ORP's work. (see M&E needs report)</p>	<p>Review and incorporate into the Handbook the checklist for quality control supervision visits of the ORPs and include guidance on when and how to carry out these visits, as well as refresher training suggestions based on the findings.</p>	X	X	X	
<p>AO. There is no guidance on the handbook on how many ORPs can be managed by a single CCMC ERU. Due to the large number of ORPs in this deployment, it seems like at some points in time the team was</p>	<p>Based on ongoing experiences and the final evaluation, consider adding guidance into the Handbook on when additional positions in the team are needed or when a second CCMC ERU full team might be required. This</p>	X	X	X	

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<p>somewhat overwhelmed (e.g. training at the start where a second TQC was needed, and Epi delegate having to manually enter all Nyss data).</p>	<p>might be based on number of ORPs, number of districts covered, distance, needs and other considerations.</p>				
<p>AO. It is difficult to establish the timeliness of ORP set up activities as there are no guidelines in the Handbook as to what should be the goal in terms of days elapsed between team arrival and opening of ORPs and/or start of first trainings.</p>	<p>Since this is the first deployment of the ERU, consider using the timelines managed by this first team as benchmarks to be included in the Handbook, so that delegates have clear goals in mind, and revise further as more deployments accumulate. This also allows for a better evaluation of timeliness after a deployment.</p>	X	X		
<p>AO, Many of the activities carried out by a WASH delegate required hardware WASH skills (latrines, setting up water connections, etc) and technician skills instead of hygiene promotion skills, which can also be partially covered by the TQC profile if people with WASH skills are selected.</p>	<p>Consider reformulating the job description for WASH delegate in the PH ERU team to focus on activities that are mostly needed by the team and avoiding potential overlap with TQC and Epi/Ph profiles.</p>	X		X	
Communication and collaboration					
<p>GP Systematic data sharing with MoH was highly appreciated. This is already embedded in the handbook and can be done via a Nyss “data consumer” user access, as well as by sharing weekly situational or Epi reports.</p>	<p>Ensure the handbook and delegate training continue to highlight the importance of sharing data with health authorities and MRCS, and suggests way to do it if an alternative system to Nyss is chosen</p>	X	X		
<p>AO. Communication and collaboration with MRCS was the main challenge arising from this evaluation. There seem to have been parallel efforts in MRCS vs so called “ERU” ORPs, and a breakdown in communication, as well as some decisions made without consulting the NS that later created challenges for the NS at handover.</p>	<p>Establish clear guidelines in the Handbook on how to ensure continued efforts and communication and collaboration with the NS. Include case studies and injects on challenges that may arise into the Delegate’s training so the team can be better prepared.</p>	X	X	X	
<p>AO. Communication and collaboration with other IFRC efforts including other IFRC ERUs. There seem to have been missed opportunities to leverage collaboration across related ERU teams deployed after cyclone Freddy, in particular WSR ERU.</p>	<p>Update the Handbook to showcase newer ERUs (such as the WSR) that can now be deployed, as well as highlight areas for collaboration and paths for establishing communication. Include injects in the delegate’s training on this topic. Consider carrying out joint trainings with related ERUs so delegates can become more aware of areas of collaboration.</p>	X	X	X	

Annex 1. Terms of Reference for Malawi country visit

Terms of Reference (TOR) for: CCMC PH ERU Module deployed to Malawi

1. Background

2.1 Community Case Management of Cholera Public Health Module

In the frame of surge optimisation, the health department of the International Federation of Red Cross and Red Crescent (IFRC) in collaboration with National Societies (NS) that are part of the ERU health technical working group have outlined seven spheres of activities that are needed to better respond to public health (PH) emergencies. IFRC health department submitted a plan of action, which comprises new public health ERU modules, to improve response to public health emergencies to the Global Surge Working Group, the Human Resources Group for International Deployment of Delegates, and the Disaster Management Working Group (IFRC, 2016). The new ERU modules have been approved and in a call of interest; NS were requested to state interest in the lead/support of the development of these new ERU modules. Swiss Red Cross applied and received the lead to develop the Community Case Management of Cholera (CCMC) PH Module. Swiss Red Cross with the support of health/epidemiology, WASH, logistics, finance, and education specialists from IFRC, Norcross, Swedish and Spanish Red Cross developed / adapted all necessary material to manage cholera at community level. All documents and tools are in alignment with World Health Organization (WHO) tools and were developed in close collaboration and alignment with the IFRC Africa regional cholera advisor as well as experts from the Global Task Force on Cholera Control (GTFCC).

The overall goal of the CCMC module is to contribute to the reduction of mortality and morbidity due to cholera. The general objective is to early respond to a declared cholera or acute watery diarrhoea outbreak and promptly treat people infected with cholera/acute watery diarrhoea at community level as well as refer severe sick people for further medical treatment. ORPs serve as a triage system and can reduce workload of health care facilities. There are five specific objectives:

- Oral Rehydration at community level through Oral Rehydration Points (ORP)
 - This includes the provision of oral rehydration salt to drink at the ORP and given for home use as well as distribution of Zinc to eligible children as defined in WHO guidelines
- Assessment of dehydration status at the ORP and advise severely ill people or people at risk to seek medical attention
- Health and hygiene promotion activities at the ORP
- Engagement with communities at the ORP
- Data collection, analysis, interpretation and acting (at ORP level)

Swiss Red Cross planned to have this ERU Module as a joint Module with partners. Joint not only in the sense that partners can contribute with delegates but in the sense of joint responsibility and accountability. For IFRC to have a sole contact partner it was agreed that for each deployment one partner will be in the lead and hence will be the contact person.

The ERU has been ready to deploy since 2021. Twenty ORP kits are prepositioned in Dubai. Due to Covid-19 the delegates training needed to be postponed two times and took place for the first time in November 2022.

2.2 Malawi

Cholera has been endemic in Malawi since 1998 with seasonal outbreaks reported during the rainy season (November through May). However, the country is currently experiencing a widespread cholera outbreak with nearly 40'000 cases and 1210 associated deaths reported from all 29 districts since 3 March 2022 to 9 February 2023. This is the deadliest outbreak of cholera in the country's history. In light of the ongoing rainy season, wide geographical spread, and a consistently high case fatality rate of above 3%, the ongoing cholera outbreak was declared a public health emergency by the Malawi government on 5 December 2022¹⁴.

In response to the escalation of the outbreak, the Malawi Red Cross Society (MRCS) was able to scale up its response through the support of partners and an initial allocation from the IFRC Disaster Response Emergency Fund. Despite efforts, the numbers of people affected with acute watery diarrhoea were rising. The capacity of the Ministry of health has been stretched for various reasons. Based on the MRCS scenario planning, the scale of the needs had reached the worst-case scenario. IFRC had been asked to launch an emergency appeal for CHF 5.2 million to enable MRCS to further scale up their response. Regional and global alerts were issued for coordinators in WASH and public health in emergencies as well as the deployment of the PH ERU CCMC Module¹⁵.

On 20 January 2023 the request for the deployment of the CCMC ERU PH Module was launched. After contacting partners (Norcross, Spanish and Swedish Red Cross) Swiss Red Cross and partners stated their availability of sending the PH ERU CCMC Module with Swiss Red Cross being the lead organization. On 26 January the first delegates arrived in Lilongwe. On 30 January the team was complete. First volunteer training started on 6 February and the following week, on 14 February, a training for trainers started. For training purpose ORP kits that were prepositioned in country have been used. The 20 CCMC ORP kits arrived on 10 February in Lilongwe. The first ORP was opened on 18 February.

This is the first time that the finalised PH ERU CCMC Module was deployed. As any other ERU deployment also the PH ERU CCMC Module is a Federation tool and is part of the Federation operation.

¹⁴ WHO Cholera-Malawi 9 February 2023; <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON435>

¹⁵ IFRC Emergency Appeal, Malawi. Appeal N° MDRMW017, 23. January 2023

2. Evaluation Purpose & Scope

As this is the first time the PH ERU CCMC Module was deployed it is important to understand how the deployment went from the call of deployment until the handover of the ORPs to Malawi Red Cross. Different aspects from operational management but also from the operational framework need to be analyzed. An abundant amount of information has been collected during the deployment as well as from delegates debriefing and end-of-mission reports. These findings will be compiled and analyzed and will flow into the overall evaluation.

Two important elements are missing in the currently available information.

- A) Did the CCMC fulfil its goal: Contribute to the reduction of mortality and morbidity due to acute watery diarrhoea?
- B) What is partners perspective of the CCMC?

3.1. Objective

The overall objective of this evaluation is therefore to explore how much the CCMC fulfilled its goal and how the CCMC was perceived by partners.

3.1.1 Specific Objectives

- A) Contribute to the reduction of mortality and morbidity due to acute watery diarrhoea
 - Whilst it will not be possible to find causal links between ORPs and reduction of mortality and morbidity, it shall be explored whether ORPs made a difference to the workload of health facilities.
- B) The perspective of following four “partners” should be included
 - **Malawi Red Cross:** how was MRCS prepared for receiving the CCMC ERU, how was MRCS staff and volunteers integrated or in the lead of the operation and how did MRCS perceive the handover process?
 - **IFRC in Malawi:** did, and if yes to what extend the CCMC ERU collaborate and exchange with IFRC staff in country, including technical staff such as WASH coordinator, WASH delegate and Public Health Coordinator? What was the perception of this staff members towards the CCMC ERU?
 - **Health authorities:** did, and if yes to what extend the CCMC ERU collaborate with health authorities at community, health facility as well at district level? What was the perception of this staff members towards the CCMC ERU?
 - **Community members:** How did community members perceive the CCMC ERU?

3.2. Scope

The evaluation will cover the whole deployment period. From the call of deployment until the handover of the ORPs. The project area of Lilongwe as well as of Blantyre shall be included. The main focus is on partner perception. However, this does not include partners of the operational framework¹⁶. This aspect will be looked at during a planned lessons learned workshop.

3. Evaluation Criteria – Objectives - Questions

The evaluation questions are adapted from the Core Humanitarian Standards.

- A) Contribute to the reduction of mortality and morbidity due to acute watery diarrhoea

Effectiveness: To what extend did the ORPs contribute to the reduction of mortality and morbidity due to acute watery diarrhoea? Did ORPs contribute to the reduction of workload at health facility level?

Community impact: What was the overall impact of the CCMC on the health and well-being of the communities? Were there any unintended positive or negative consequences impacts resulting from the response efforts?
- B) Partners perspective:

Strengthen local capacities of MRCS: Did the response strengthen capacities of MRCS and avoid negative effects? To what extend did the response place MRCS in the driving seat of the operation? Were MRCS staff and volunteers adequately trained in community case management of cholera? Was MRCS prepared for the hand-over of the operation?

Coordination with IFRC and health authorities: Was the response coordinated and complementary? To what extend did the CCMC coordinate and collaborate with other IFRC staff in country (Surge, WASH, Health)? To what extend did the CCMC collaborate with health authorities? How and what was communicated with IFRC and health authorities?

Community Engagement and Participation: To what extend were community members engaged and involved in the planning and implementation of the cholera response? Were culturally appropriate communication strategies employed to raise awareness and educate the community about cholera prevention and treatment? How effectively did the response address the community's concerns, beliefs, and practices related to cholera? How effectively were key messages about cholera prevention, treatment, and available services communicated to the community?

4. Evaluation Methodology

¹⁶ Partners of the operational framework are partners that have financially and/or with human resources contributed to the CCMC ERU. This collaboration will be looked at during the lessons learned workshop.

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For the overall evaluation, a mixed method approach will be used. Information will be collected from reports (internal and external where relevant), Nyss platform and external data where possible, interviews, and observations. In a lesson learned workshop with delegates and partners results will be mirrored.

Information have already been collected from deployed delegates during the debriefing.

For this specific aspect of the evaluation, qualitative data will be collected through interviews with MRCS staff that have been involved in the cholera response as well as with volunteers, IFRC staff in Malawi, health authorities as well as community members shall be conducted. Data will be collected in Malawi.

5. Deliverables (or Outputs)

- At the end of the visit in Malawi, the evaluators will share preliminary findings of the interviews
- The draft report will be shared and mirrored with partners during the lessons learned workshop that is planned in September
- The final report will be shared with partners after the lessons learned workshop

6. Proposed Timeline (or Schedule)

Following timeline is foreseen:

Time Schedule	Activities	Deliverables - Responsible
<i>1 – 4 August</i>	Finalise desk review and compile question guide	Question guide – Nicole Rähle
<i>7 – 17 August</i>	Field visit and data collection	Present preliminary findings to key staff – Nicole Rähle and Thomas Büeler, Agenor Junior as external observer
<i>22 – 31. August</i>	Data analysis and Draft report	Draft report – Nicole Rähle and Thomas Büeler
<i>25 – 27 September</i>	Present findings during the lessons learned workshop	Findings – Nicole Rähle and Thomas Büeler
<i>2 – 13 October</i>	Finalize Report	Final Report – Nicole Rähle and Thomas Büeler

The time schedule may change in case that proposed dates do not suit Malawi Red Cross. The dates for the lessons learned workshop are yet tentative and may also change. In this case subsequent dates may also change.

Annex 2. Methodology of the Evaluation

Evaluation design

The evaluation used a mixed methods approach comprising both primary and secondary data from qualitative and quantitative data sources. The OECD DAC criteria (Relevance, Coherence, Effectiveness, Efficiency, Impact and Sustainability), with the added criteria of Partnerships, were used as evaluation dimensions to structure the evaluation framework.

Table 1 contains the evaluation matrix showing the suggested evaluation questions for each dimension and potential data sources. These questions provide the basis for the data collection tools for the dimensions where additional primary data will be collected.

Table 1 Evaluation matrix. DR= Document review, KII = Key Informant Interviews, FGD = Focus Group discussions.

Evaluation dimension and questions	Data sources
Dimension 1. Effectiveness. Assess to what extent the deployment objectives have been reached. Have activities been sufficient to realize agreed objectives?	
> To what extent are NS staff and volunteers, staff at the HCF and local health authorities satisfied with the achievements and the strategies used to achieve these results? What other things would they have liked to see?	KIIs, FGD
> To what extent were the ORPs active? What was their level of activity and outputs?	DR, FGD
> How effective was the ORP volunteer set up? What worked well? What did not work well? Consider provision of services to the people coming to the ORP, community health awareness, health and hygiene promotion at the ORP, provision of safe drinking water, ORS, etc, referrals, data collection and reporting	KIIs, FGD, DR
Community Engagement and Participation. Assess the extent of which communities were involved in the planning and implementation of the CCMC ERU response.	
> To what extent were community members engaged and involved in the planning and implementation of the cholera response?	KIIs, FGD, DR
> Were culturally appropriate communication strategies employed to raise awareness and educate the community about cholera prevention and treatment? If so, which.	FGD
> Where there any challenges encountered in the communication/engagement with community members?	KIIs, FGD, DR
Dimension 2. Potential Impact. What has happened/changed as a result of the project?	
> To what extent have the ORPs contributed to the reduction of mortality due to acute watery diarrhea in the communities?	KIIs, FGD, DR?
> To what extent have the ORPs contributed to the reduction of morbidity due to acute watery diarrhea in the communities?	KIIs, FGD, DR?
> To what extent have ORPs contributed to the reduction of workload at health facility level? Did the presence of the ORPs enable them to lower the number of patients in the health facilities and take pressure off the healthcare workers?	KIIs, FGD, DR?
> What was the overall impact of the CCMC on the health and well-being of the communities?	FGD, KIIs
Community impact. Assess the overall impact of the CCMC on the community.	

> How did community members perceive the work of the CCMC? Were there any differences across districts (Lilongwe, Blantyre,) or between communities linked to different ORPs?	FGD, KIIs
> Were there any unintended positive or negative consequences resulting from the response efforts?	FGD, KIIs
> What was the response of the CCMC team to any negative consequences resulting from the response efforts? How was any negative consequence tackled?	FGD, KIIs
> To what extent is the community satisfied with the achievements and the strategies used to achieve these results? What other things would they have liked to see?	FGD
Dimension 3. Partnership perspectives	
Capacity building. Strengthen local capacities of MRCS. Assess the extent to which the CCMC deployment enabled the strengthening of local MRCS capacities.	
> How did the response strengthen the capacities of MRCS and avoid negative effects?	KIIs, FGD
> To what extent did the response place MRCS in the driving seat of the operation?	KIIs, FGD
> How were the MRCS staff and volunteers trained in community case management of cholera? What can be improved in their training?	KIIs, FGD
> How was the handover and exit planning? To what extent was the plan co-developed with the MRCS? To what extent was the MRCS ready?	KIIs, FGD
Coordination with IFRC and health authorities. Assess how the CCMC ERU team coordinated with the IFRC and local health authorities during their deployment.	
> To what extent did the CCMC ERU collaborate and exchange with IFRC staff in the country, including technical staff such as WASH coordinator, WASH delegate and Public Health Coordinator?	KIIs
> To what extent did the CCMC collaborate with local, district and national health authorities?	KIIs
> How and what was communicated with IFRC and health authorities?	KIIs, DR
> Where there any challenges encountered in the coordination and collaboration with both actors?	KIIs, DR
> What was the perception of IFRC teams towards the CCMC ERU? (regional IFRC staff and delegates and wider operation for Freddy cyclone staff and delegates)	KIIs
Dimension 4. Sustainability	
> To what extent a viable exit and handover strategy was developed and implemented. What prerequisites and measures to achieve sustainability included in the planning?	DR
> How sustainable are/have been the ORPs after the CCMC ERU has left? What activities are likely to be continued/have been continued following withdrawal of the CCMC ERU from target areas?	DR, Direct observation and KIIs
> What factors may influence the sustainability of MRCS ORP efforts in the short, medium and long-term?	DR

Dimension 5. Efficiency	
> To what extent were the CCMC ERU activities cost-efficient? What would have made them more cost-efficient?	DR
> Were objectives achieved on time? What could have improved timely achievement?	DR
> What has been the value added of the CCMC delegates for the project? Did the delegates provide relevant training or technical support? What did local staff (and volunteers if relevant) considered most valuable from this role, what was lacking?	DR
Dimension 6. Coherence	
> How did the CCMC ERU support fit with support provided by Movement partners, the wider IFRC operation, and other partners supporting the Cholera epidemic?	DR
> What has been the value added of the CCMC support among other partners providing support to the National Society?	DR
Dimension 7. Relevance	
Were the CCMC ERUs activities and outputs aligned with what was needed during the different stages of the emergency? Did they adapt to circumstances changed?	DR
Was the team responsive to the needs and priorities of beneficiaries, national authorities, the MRCS and other partners?	DR

Data collection

Desk review. The desk review contributed to almost all the dimensions of the evaluation. Documents reviewed are found in Annex 3 and include:

- Situational reports, midway and final reports, mission reports, etc from the Malawi PH ERU CCMC deployments
- End of mission reports from deployed delegates
- IFRC document including briefing documents, EPoA, etc
- Nyss data and operational data as available
- Data and reports from the Malawi visit planned in August 2023
- M&E needs report

Primary data. The Swiss RC carried out new primary data collection in Malawi based on the proposal for the final Evaluation and their own ToRs. As explained in the evaluation design, this data collection focused on the dimensions for which data was missing, including Impact, Effectiveness, and Partnerships.

Key Informant Interviews (KIIs). Interviews were carried out with key stakeholders in IFRC and Norwegian RC, as well as a Malawi Red Cross Society who were involved in the cholera response in Malawi response (Annex 4). The KIIs used a semi-structured conversation guide tailored to the type of interviewee. Key informants were asked for informed consent and could choose whether they wanted their names to appear on the evaluation report (e.g. linked to specific quotes) or preferred to remain anonymous. Permission to record the interview for note-taking purposes was also requested in some cases. Interview notes were generated by hand, or by combining hand-taken notes and transcripts of the recording. **All recordings held by Alanda are deleted 6 months after the completion of the assignment, as a rule.**

Focus Group Discussions (FGD) were used with community members and MRCS volunteers who have supported the cholera response and worked in the ORPs. The discussion was based on a semi-structured FGD guide. Care

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was taken to ensure the adequate setup for these groups, in terms of composition (gender/age, inclusion of those with disability/mobility issues, nationality/ethnicity, community groups, etc), scheduling (to allow relevant participants to join without disrupting their workday and chores), space (where confidentiality and comfort can be ensured) availability of interpreters, etc, to ensure maximum inclusion and representation. Participants in the FGD were informed that data was collected confidentially and anonymously. Descriptions of the FGD conducted are available in Annex 5.

Direct observations. Primary data was collected through direct observations during visits of ORPs still in operation, run by MRCS. Locations visited are available in **ANNEX 6**.

Data analysis

Data was triangulated from all available desk review sources as well as any primary data collected in the Malawi visit where appropriate. Quantitative and qualitative data sources were used. Data was analyzed based on the evaluation matrix dimension and questions. For each dimension and subdimension, general trends were collected followed by any discrepancies or differences of opinion in the data. Data gaps were also remarked. Whenever data triangulation was not possible or confirmation of a piece of data from another source was not possible, this was noted in the report.

Annex 3. Documents reviewed

Foundational documents

IFRC. (March, 2020). Delegates Handbook Public Health ERU Community Case Management of Cholera.

IFRC. (May, 2019). Mozambique CBS deployment. Lessons learned.

Operation Update (April, 2023). International Federation of Red Cross and Red Crescent

End of Mission and other delegate reports

End report Epidemiology CCMC ERU May 21st, 2023.

Anne Metter Asfelt. (May, 2023). End of Mission epidemiological report CCMC ERU. CCMC ERU Swiss Red Cross.

Anne Signe Hørstad. (May, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Ariane Wilhem. (April, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Deo Namiva. (April, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Eli Skjåk Teigum. (June, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Eva Turro. (April, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Hanna Oommen. (May, 2023). End of Mission Report. CCMC ERU Swiss Red Cross

Sandra Piper QT. (May, 2023) End of Mission Report. CCMC ERU Swiss Red Cross

ORP Quality control supervision reports

Situational Reports

CCMC ERU Swiss Red Cross. (January, 2023). Situational Report 1.

CCMC ERU Swiss Red Cross. (February, 2023). Situational Report 2.

CCMC ERU Swiss Red Cross. (February, 2023). Situational Report 3.

CCMC ERU Swiss Red Cross. (March, 2023). Situational Report 4.

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CCMC ERU Swiss Red Cross. (March, 2023). Situational Report 5.

CCMC ERU Swiss Red Cross. (March, 2023). Situational Report 6.

CCMC ERU Swiss Red Cross. (March, 2023). Situational Report 7.

CCMC ERU Swiss Red Cross. (April, 2023). Situational Report 8.

CCMC ERU Swiss Red Cross. (April, 2023). Situational Report 9.

CCMC ERU Swiss Red Cross. (April, 2023). Situational Report 10.

CCMC ERU Swiss Red Cross. (April, 2023). Situational Report 11.

CCMC ERU Swiss Red Cross. (April, 2023). Situational Report 12.

CCMC ERU Swiss Red Cross. (May, 2023). Situational Report 13.

CCMC ERU Swiss Red Cross. (May, 2023). Situational Report 14.

Other documents

Swiss Red Cross -Alanda. (August 2023). Monitoring and Evaluation needs report for the Public Health ERU Community Case Management of Cholera

Preliminary report from interim review of the epidemiologist role and use of Nyss in the PH ERU CCMC Malawi 2023 deployment

Annex 4. Key informants interviewed

Seven video-conference interviews with 6 women and 1 man were carried out for the purposes of the M&E report and the Malawi deployment evaluation with PH ERU CCM-C delegates and IFRC staff deployed to the larger operation.

Eighteen in-depth interviews were carried out with 12 men and 6 women during the country visit part of the Evaluation. The table below provides the disaggregation for all online and face to face interviews.

Names are not shared for confidentiality reasons and to maintain overall anonymity, even in cases where interview participants agreed to be named/quoted.

	Male	Female
Delegates deployed to Malawi	0	6
MRCSC staff	6	2
IFRC	1	1
Health authorities	2	1
Beneficiaries	2	1
Community leaders	2	1
Total	13	12

Annex 5. Focus group discussions

Qualitative data from 23 FGDs with 58 males and 55 females was collected during the country visit. FGDs were composed of minimum two and maximum 12 participants. Participants included:

- MRCS – HQ, Branch and Community level
- MoH – Central, District and Community level
- IFRC
- Beneficiaries
- Local leaders

Annex 6. Places visited during country trip

Places visited for key informant interviews and Focus Group Discussions (August 8th - August 16th). Except for MRCS headquarters, all other places still had ORPs running (even if seeing very few cases), and these ORPs were visited.

- Lilongwe, MRCS headquarters
- Lilongwe Branch, Katola community
- Lilongwe, Kauma community
- Mangochi Branch, Sungusya community
- Mangochi, Tanga community
- Blantyre and Three way community
- Blantyre, Kazemba, Chilobwe ORP

Annex 7. Description of Nyss data (quantitative)

The ORPs set up as part of the CCM- C ERU deployment are operated by trained volunteers from the Host National Society. As described in the Handbook, volunteers at ORPs should register all cases of acute watery diarrhea they see during the day, recording the variables and using the format in Table 1.

Table. Data collected in the ORPs

Acute Watery Diarrhoea*	Male		Female		Referred	Died at ORP	Coming from other village
	0-4 yrs	5 yrs and older	0-4 yrs	5 yrs and older			

*This column does NOT represent the total number of people with acute watery diarrhoea seen at the ORP. Here the volunteers mark "1" to represent the disease code.

In the case of the CCMC ERU configuration, Nyss is set up to receive a single daily SMS per ORP with the aggregated data from the visitors seen that day. The pre-established codes stand for the disease code number in position 1, followed by the total number for each of the other columns in Table 1, separated by a hashtag.

Annex 8. Operational days per ORP

District	ORP	ORP #	Opening Date	Final Reporting Date	Total Days Operational

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Blantyre						
	Chilobwe	ORP10	05-04-2023	20-05-2023	45	
	Georgi	ORP12	17-04-2023	20-05-2023	34	
	Majiga	ORP11	12-04-2023	20-05-2023	38	
	Threeways	ORP9	30-03-2023	20-05-2023	52	
	Mawera	ORP14	30-04-2023	19-05-2023	19	
	Chiwasa	ORP13	30-04-2023	20-05-2023	20	
	Kazembe	ORP16	07-05-2023	20-05-2023	13	
	Matope	ORP17	07-05-2023	20-05-2023	13	
Total					234	
Lilongwe						
	Chakhutamadzi	ORP3	23-02-2023	20-05-2023	87	
	Kanjira	ORP8	10-03-2023	16-05-2023	68	
	Katola	ORP6	04-03-2023	20-05-2023	78	
	Kauma	ORP7	10-03-2023	20-05-2023	72	
	Matanda	ORP2	22-02-2023	03-05-2023	71	124
	Ng'Oma	ORP2b	29-03-2023	20-05-2023	53	
	Ngomani	ORP1	19-02-2023	18-05-2023	88	
Total					516	
Mangochi						
	Mlangala	ORP4	27-02-2023	19-05-2023	82	
	Mtanga Area	ORP5	10-04-2023	18-05-2023	39	
	Mangochi Stadium	ORP15	04-03-2023	20-05-2023	77	
Total					198	
GRAND TOTAL					947	

Annex 9. Days with >25 cases reported per ORP

District	ORP	ORP #	Total Days Operational	Days Reporting +25 Cases	Percentage of Days with +25 Cases
Blantyre					
	Chilobwe	ORP10	45	0	0.00%
	Georgi	ORP12	34	1	2.96%
	Majiga	ORP11	38	0	0.00%

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	Threeways	ORP9	52	0	0.00%
	Mawera	ORP14	19	0	0.00%
	Chiwasa	ORP13	20	0	0.00%
	Kazembe	ORP16	13	0	0.00%
	Matope	ORP17	13	0	0.00%
Total			234	1	0.43%
Lilongwe					
	Chakhutamadzi	ORP3	87	9	10.37%
	Kanjira	ORP8	68	5	7.38%
	Katola	ORP6	78	9	11.58%
	Kauma	ORP7	72	0	0.00%
	Matanda	ORP2	71	0	0.00%
	Ng'Oma	ORP2b	53	0	0.00%
	Ngomani	ORP1	88	2	2.27%
Total			516	25	4.85%
Mangochi					
	Mlangala	ORP4	82	2	2.45%
	Mtanga Area	ORP5	39	0	0.00%
	Mangochi Stadium	ORP15	77	0	0.00%
Total			198	2	1.01%
TOTALS					
			947	28	2.96%

Annex 10. Days with zero cases reported per ORP.

District	ORP name	ORP #	Total Days Operational	Days Reporting 0 Cases	Percentage of Days with 0 Cases)
Blantyre					
	Chilobwe	ORP10	45	1	2.22%
	Georgi	ORP12	34	0	0.00%
	Majiga	ORP11	38	0	0.00%
	Threeways	ORP9	52	1	1.93%
	Mawera	ORP14	19	0	0.00%
	Chiwasa	ORP13	20	0	0.00%
	Kazembe	ORP16	13	4	30.77%

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	Matope	ORP17	13	1	7.69%
Total			234	7	3.00%
Lilongwe					
	Chakhutamadzi	ORP3	87	0	0.00%
	Kanjira	ORP8	68	0	0.00%
	Katola	ORP6	78	0	0.00%
	Kauma	ORP7	72	13	18.10%
	Matanda	ORP2	71	13	18.37%
	Ng'Oma	ORP2b	53	0	0.00%
	Ngomani	ORP1	88	1	1.14%
Total			516	27	5.24%
Mangochi					
	Mlangala	ORP4	82	1	1.22%
	Mtanga Area	ORP5	39	11	28.39%
	Mangochi Stadium	ORP15	77	10	12.99%
Total			198	22	11.14%
TOTALS					
			947	56	5.92%

Annex 12. Days where the number of referrals is below the number of children under 5 reported per ORP

District	ORP	ORP Reference #	Total Days Operational	Days Where U5>Referral	Percentage of Days where U5>Referral
Blantyre					
	Chilobwe	ORP10	45	18	40.00%
	Georgi	ORP12	34	11	32.58%
	Majiga	ORP11	38	18	47.37%
	Threeways	ORP9	52	5	9.66%
	Mawera	ORP14	19	2	10.53%
	Chiwasa	ORP13	20	1	5.00%
	Kazembe	ORP16	13	2	15.38%
	Matope	ORP17	13	3	23.08%
Total			234	60	25.69%

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Lilongwe					
	Chakhutamadzi	ORP3	87	16	18.44%
	Kanjira	ORP8	68	49	72.32%
	Katola	ORP6	78	41	52.73%
	Kauma	ORP7	72	10	13.93%
	Matanda	ORP2	71	1	1.41%
	Ng'Oma	ORP2b	53	6	11.37%
	Ngomani	ORP1	88	38	43.18%
Total			516	161	31.23%
Mangochi					
	Mlangala	ORP4	82	33	40.37%
	Mtanga Area	ORP5	39	5	12.90%
	Mangochi Stadium	ORP15	77	2	2.60%
Total			198	40	20.25%
TOTALS			947	261	27.57%