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Global Health Security: A Complex and Challenging Issue

The first aid facilities deployed by the Swiss Red Cross are considered as gold standards for getting the outbreak under control

Alleviating the burden of cholera outbreaks through community case management

By Andrea Leuenberger, Agenor Junior Clerge and Nicole Rähle

Cholera is still endemic in nearly 70 countries. The diarrheal disease is highly infectious and has fatal consequences caused by rapid dehydration. However, the disease is preventable and early treatment with oral rehydration can reduce the morbidity and mortality of the disease. In line with this objective, Swiss Red Cross (SRC) has developed the community case management for cholera emergency response unit (“CCMC ERU”) to respond rapidly to declared cholera outbreaks. Using a multi-disciplinary and community-based approach, the CCMC ERU successfully contributed to mitigate to the cholera outbreak in Malawi in 2023. As part of the emergency system of the International Federation of Red Cross Red Crescent Societies (IFRC), SRC remains committed to address cholera as global public health issue.



Oral Rehydration Point (ORP) in Kadoma, Zimbabwe, February 2024. Photo: © IFRC

Cholera epidemiology: a brief overview

Globally, about 1.3 billion people are at risk for contracting cholera (Ali et al., 2015). Especially people having limited access to improved water and sanitation infrastructure are most affected (Ali et al., 2015; Sikder et al., 2023). The diarrheal disease, transmitted by *Vibrio Cholerae*, is highly infectious. Rapid dehydration can kill a person in a matter of hours (GTFCC, 2022). To mitigate the morbidity and mortality, early treatment and **oral rehydration therapy (ORT)** is key (Guerrant et al., 2003). Therefore, interventions on community-level such as **Oral Rehydration Points (ORPs)** are essential to provide early access to basic health care and effectively address disease outbreaks (GTFCC, 2023; Ripoll and Wilkinson, 2018; Schmidt-Sane & Hrynicky, 2023).

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CCMC ERU: the concept

Swiss Red Cross (SRC) has developed a Public Health **Emergency Response Unit (ERU)** pertained to Cholera, namely the **Community Case Management of Cholera (CCMC)** ERU. The CCMC is one out of five public health ERUs within the global surge system of the International Federation of the Red Cross and Red Crescent Societies (IFRC) (IFRC, 2024).

The main objective of the CCMC ERU is to respond early to a declared cholera or acute watery diarrhea outbreak. Specifically, the CCMC ERU promptly informs and treats people infected at community level with **Oral Rehydration Salts (ORS)** or refers severely dehydrated people to the next health facility for further treatment. Therefore, the key activity of the CCMC ERU is – together with the local Red Cross/Red Crescent organization (“Sister National Society”) – to set-up and run ORPs, while reinforcing hygiene awareness and health promotion activities. To successfully install these ORPs, maximize their impact to contain the disease and ensure the safety of staff and volunteers running ORPs, the CCMC ERU team is multidisciplinary.

The CCMC ERU team is composed of six different roles, including a team leader, an epidemiologist, an ORP delegate (potentially two people), a WASH specialist, a logistician and a finance & administration delegate. Embedded within the Sister National Society, the CCMC ERU team contributes to enhance the existing capacities. For instance, Red Cross/Red Crescent staff and volunteers will refresh their knowledge and/or gain new skills during trainings. Importantly, training participants will learn how to manage (or supervise) ORPs in their communities.

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ORPs are like first aid posts for people with acute watery diarrhea, allowing them to seek treatment in their community. According to their needs, patients or care takers are informed about the disease and preventive measures. ORS are distributed to drink immediately and to take home. Critically ill patients (e.g. severely dehydrated) and children under the age of 5 years are referred to a nearby health facility. Throughout the response, (anonymized) data is collected at ORPs. Volunteers are trained to send daily reports from their ORPs. By sending standardized SMS, the number of cases seen and referred (disaggregated by sex and age) is directly entered into Nyss, a platform for community-based surveillance developed by

Norwegian Red Cross. Data from Nyss can be shared with local authorities. Data can be analyzed manually, while a dashboard helps the team to take evidence-based decisions and maximize the impact of the response.

Beyond the actual outbreak response and in line with the National Society Development approach (IFRC, 2013), a participatory and enabling work mentality shall contribute to strengthen the Sister National Society. All delegates of the CCMC ERU closely collaborate with a counterpart from the Sister National Society, as well as other Red Cross/Red Crescent staff and volunteers. SRC is committed to address emergencies in a holistic manner, allowing affected National Societies to become stronger and communities to become more resilient.



Certificate ceremony at an Oral Rehydration Point (ORP) after successful completion of training of trainers in Malawi, April 2023. Photo: © Swiss Red Cross

CCMC ERU deployment to Malawi (2022): Findings and lessons learnt

The first deployment of the CCMC ERU was in January 2022 to Malawi, where a cholera outbreak was declared by the end of 2021. Over four months, the CCMC ERU team supported the Malawi Red Cross Society (MRCS) in their response. Under the lead of SRC, 28 delegates from different Partner National Societies were deployed. Together with the staff and volunteers of the MRCS, 18 ORPs were installed in three regions (Lilongwe, Mangochi and Blantyre), allowing 6'955 people to receive basic care and advise.

The deployment of the CCMC ERU was followed by an external evaluation to assess its performance. The high-quality standards and well-trained staff were appraised by the Minister of Health and the State President. ORPs were considered as “gold standards” for the current and future outbreaks by Malawi health authorities. Furthermore, ORPs were easily accessible, well supplied and run by trusted volunteers – all factors which contributed to the success of

the response measures. The epidemiological data collected continuously informed the ongoing activities and was reported regularly to the Ministry of Health. Yet, closer communication and coordination between the CCMC ERU team, regional IFRC team and MRCS staff could have contributed to further streamline response activities. Overall and as confirmed by the evaluation, the CCMC ERU reached its main objective and contributed to reduce the morbidity and mortality of the outbreak. According to health staff, ORPs contributed to decongest health facilities by referring only severe ill people. No mortality occurred in the communities after installing ORPs.

In addition to the rapid response with the CCMC ERU, SRC supported its ongoing long-term project in Malawi with emergency fund to improve access to safe water and hygiene. Through rehabilitation of boreholes more than 790'000 people gained access to safe water. 22'000 people gained access to hand washing facilities and 668'000 people were reached with health and hygiene promotion messages.

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CCMC ERU: recent actions

Early 2024, Swiss Red Cross was requested to support the cholera outbreak in South-East Africa, namely Zambia and Zimbabwe. With more than 22'000 cases in Zambia (Zambia Public Health Institute, 23.10.2023-29.03.2024) and 25,000 cases in Zimbabwe (WHO, 12.02.2023-29.02.2024), the outbreak was one of the worst since many years. Based on the needs indicated by the respective countries, five pre-dispositioned ORP kits from SRC were dispatched to Zambian Red Cross Society and 15 ORP kits to Zimbabwean Red Cross Society. This donation was complemented by a technical support mission from Swiss Red Cross. Moreover, SRC, in collaboration with the Zambian and Zimbabwean Red Cross Societies, strengthened the circuit for transferring severe cases to the health centers, by covering transport costs and/or providing patients with appropriate and dedicated logistical resources. In addition, the support assisted the Zambian and Zimbabwean Red Cross Societies to implement an integrated response strategy, including more water and sanitation into the health care provided.

Readiness of the CCMC ERU and emergency pool of Swiss Red Cross

In case of a declared cholera or acute watery diarrhea (AWD) outbreak, timely response is critical. To remain ready and ensure the “deployability” of the CCMC ERU, SRC relies on its emergency pool with health and logistics experts as well as the collaboration with other Partner National Societies. Therefore, specific trainings are held. For instance, a first CCMC ERU training was organized in 2022, a second training took part in May 2024. Approximately 30 people from more than six different National Societies will be trained this year. For the coming years, further trainings are envisioned in Switzerland as well as in endemic countries. This is in line with the regionalization approach of the IFRC and shall contribute to the epidemic preparedness of endemic countries.

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