GLOBAL TASK FORCE ON CHOLERA CONTROL

Integrated Community approaches to improve access to Oral Rehydration Solution (ORS) for cholera

Leveraging existing community programs and interventions to decentralize access to ORS for cholera

List of Abbreviations

- AIDS: Acquired Immune Deficiency Syndrome
- AWD: Acute Watery Diarrhoea
- BFV: Blue Flag Volunteers
- BRAC: Bangladesh Rehabilitation Assistance Committee
- CATI: Case Area Targeted Intervention
- CBV: Community-Based Volunteers
- CHV: Community Health Volunteers
- CHW: Community Health Workers
- CLTS: Community-Led Total Sanitation
- DH: Depot Holders
- DSD: Differentiated Service Delivery
- FCHV: Female Community Health Volunteers
- GTFCC: Global Task Force on Cholera Control
- HEW: Health Extension Workers
- IAS: International AIDS Society
- IFRC: International Federation of Red Cross and Red Crescent Societies
- HIV: Human Immunodeficiency Virus
- iCCM: Integrated Community Case Management
- MoH: Ministry of Health
- NHC: Neighborhood Health Committee
- ORP: Oral Rehydration Point
- ORS: Oral Rehydration Solution
- ORT: Oral Rehydration Therapy
- ORW: Oral Replacement Workers
- OTEP: Oral Therapy Extension Program
- PODIs: Points of Distribution
- RMNCH: Reproductive, Maternal, Newborn, and Child Health Care
- UNGA: United Nations General Assembly
- WASH: Water, Sanitation and Hygiene
- WHO: World Health Organization

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Introduction

1.1 Background:

What is the current cholera situation?

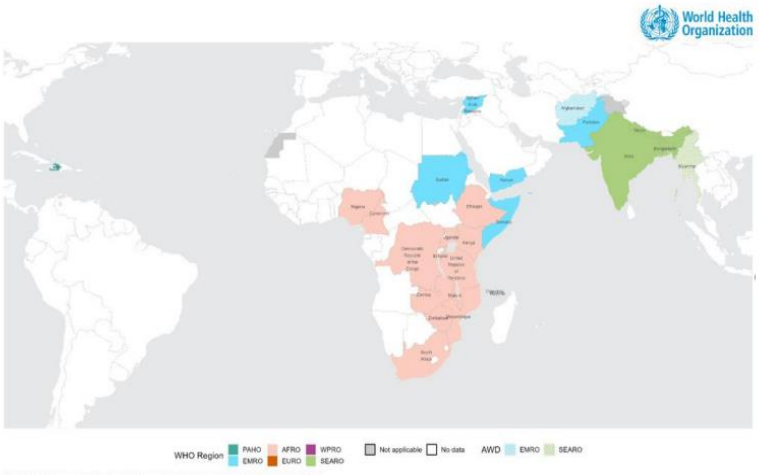
Cholera, caused by the bacterium *Vibrio cholerae*, is a severe diarrheal disease characterized by acute diarrhea and rapid dehydration. Most people with cholera have mild or moderate diarrhoea and can be treated with oral rehydration solution (ORS). However, the disease can progress rapidly, so starting treatment quickly is vital to save lives. Patients with severe disease need intravenous fluids, ORS and antibiotics. Without treatment up to 50% of patients with severe disease may die, primarily of hypovolemic shock.

Cholera is a marker of inequality, affecting those with inadequate access to clean water and sanitation often coupled with conflict, insecurity, poverty, and climate change phenomena highlighting significant socio-economic disparities.

Despite advances in treatment and preventive measures, cholera remains prevalent in many regions. In 2023, globally a total of 535,321 cholera cases were reported to WHO, a 13% increase compared to 2022. There were 4,007 deaths reported, representing a 71% rise from the previous year[1] .

A recent scoping review of published studies describing cholera mortality showed that approximately half of cholera deaths occurred in the community, before reaching a health facility[2]. Identifying the place of death (facility vs community), is important to orient response activities as facility deaths are primarily an indicator of issues in the quality of treatment, while community deaths indicate a lack of access to treatment.

Figure 1. Reported epidemics of cholera and acute watery diarrhoea (AWD), 1 January 2024 to 28 July 2024



While the prevention of cholera is multi sectoral and will require long term investment in access to WASH for populations at risk, this document focusses on reducing cholera deaths. The high reported number of deaths, which is likely underestimated due to uncounted community deaths,

[1] wer_36_2024_cholera-annual-report-for-2023_bilingual-proof.pdf (who.int)
[2] gtfcc-risk-factors-of-cholera-mortality.pdf

is very concerning underscoring the urgent need for more effective and widespread intervention strategies.

How can high number of deaths be effectively addressed through decentralization of treatment with community interventions?

Traditionally, case management of cholera has focused on treatment facilities, and community cholera control efforts have primarily involved establishing Oral Rehydration Points (ORPs) as part of emergency response. However, while crucial, field experience has shown that ORPs are often slow to be set up, inadequate in number and therefore may not reach all affected individuals promptly especially during the crucial first days and weeks of an outbreak. This leads to delays in access to treatment and specifically to initiating ORS which may lead to higher numbers of preventable cholera deaths.

Decentralizing ORS access into the community can contribute to overcoming these challenges by providing faster access to ORS. In highly endemic areas systems can be established in the community before an outbreak, allowing the first suspect cases to access ORS from the outset, potentially averting the first community deaths.

To effectively reduce cholera-related deaths, it is essential to explore different approaches including existing community programmes that are not traditionally used as part of cholera control.

For example, decentralizing treatment through community-based strategies, such as enhancing the role of Community Health Workers (CHWs) and local volunteers, improves accessibility and response times. This strategy is infrequently used for cholera control but has been used successfully for other pathogens, with CHWs providing competent lifesaving prevention and treatment services for many conditions (including malaria, childhood pneumonia, diarrea,[3]malnutrition[4] and to meet the health related Millenium Development Goals[OBJ:5] .

For this approach to be successful, it requires comprehensive strategies that integrate existing local health resources and support systems, ensuring that interventions are sustainable and reach those most in need (Institute of Development Studies [IDS], 2023[6]; WHO, 2019[7]).

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[3] Perry HB, ed. *Engaging Communities for Improving Mothers' and Children's Health: Reviewing the Evidence of Effectiveness in Resource-Constrained Settings*. Edinburgh University Global Health Society; 2017. Accessed January 22, 2021. https://issuu.com/laser-plus/docs/engaging_comunities_for_improving_m [Google Scholar]

[5] Bhutta ZA, Lassi ZS, Pariyo G, Huicho L. *Global Experience of Community Health Workers for Delivery of Health Related Millennium Development Goals: A Systematic Review, Country Case Studies, and Recommendation for Integration into National Health Systems*. World Health Organization and the Global Health Workforce Alliance; 2010. Accessed January 22, 2021. https://chwcentral.org/wp-content/uploads/2013/07/Global-Experience-of-Community-Health-Workers-for-Delivery-of-Health-Related-Millennium-Development-Goals.pdf [Google Scholar]

[6] Institute of Development Studies (IDS). (2023). *Promoting Community-Centred Preparedness and Response to Cholera's Global Surge*. https://www.ids.ac.uk/publications/community-centred-cholera-response

[7] World Health Organization (WHO). (2019). *Cholera – Community Engagement Hub*. https://www.who.int/cholera-community-engagement

Why examine existing community programs?

Approximately 3.8 billion people lack access to a full range of health services, and approximately 1 billion have never visited a healthcare provider (United Nations General Assembly [UNGA], 2019[8]). Further, it is estimated, that less than 30% of children have access to Oral Rehydration Therapy (ORT) in developing countries (WHO South-East Asia Journal of Public Health 2012[9]).

Community-based programs can address these gaps by improving healthcare access and connecting underserved populations to essential services. Such approaches offer a promising complement to more traditional facility based health services by bringing care closer to those in need, addressing geographic and logistic barriers that impede access to emergency response facilities (Perry & Chowdhury, 2024[10]). As part of cholera control, community approaches could not only enhance immediate access to ORS and decrease the number of deaths but also strengthen overall health system performance and equity (Chowdhury et al., 2023[11]).

Evaluating and building upon existing community-based programs is vital to optimize cholera control. Integrating the decentralization of cholera treatment into existing community programs is advantageous because these programs are already established, widely accepted by the population, and well-integrated into the community fabric. Using these pre-existing systems is cost-efficient, as it leverages existing resources, infrastructure, and trained personnel, thereby avoiding the significant costs and logistical challenges associated with initiating new systems. Additionally, embedding cholera control strategies within these established channels minimizes disruption to ongoing community health strategies, ensuring that cholera interventions complement rather than conflict with other health initiatives. This approach facilitates the anticipation of action, scalability and sustainability of cholera treatment efforts, ensuring very early access to care, which is crucial to reduce the number of deaths.

Integrating new activities into existing ones, though, presents notable challenges and is not a straightforward task; these complexities can vary depending on whether the implementation is undertaken by the Ministry of Health or an implementing partner. As the existing community programs are different in each context, there is not one single way to address community-based decentralization of treatment for cholera. In this document, a range of community programs are presented that serve as examples. To ensure effective integration, local assessment will be necessary to guide national programs to identify the most appropriate local community approach.

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[8] United Nations General Assembly (UNGA). (2019). *Political Declaration of the High-Level Meeting on Universal Health Coverage*. Retrieved from https://undocs.org/A/RES/74/2

[9] cover - initial pages.indd (who.int)

[10] Perry, H., & Chowdhury, A. (2024). *Bangladesh Health Advances*. https://example.com/perry-chowdhury2024

[11] Chowdhury, M., Perry, H., & Chowdhury, A. (2023). *50 Years of Bangladesh Health Advances*. Pre-press proof. Retrieved from https://example.com/chowdhury2023

Assessing successful cholera programs and integrating lessons from broader community health initiatives will bridge gaps in care, enhance community resilience, strengthen cholera control strategies and save more lives (WHO, 2020[12]; IDS, 2024[13]).

Which are the essential delivery packages for effective decentralized access to ORS for cholera?

When discussing the decentralization of the initiation of cholera treatment, we are specifically referring to the distribution of ORS at the community level.

ORS is logistically straightforward, as it does not require a cold chain and is easy to administer in community settings, making it less complex compared to other medical treatments, such as antibiotics. ORS has a well-established safety profile and is routinely used by Community Health Workers (CHWs) in Integrated Community Case Management (ICCM) programs without significant risk of harm (WHO, 2019[15]).

This community approach requires consideration of several factors, including:

- human resources available
- skills of the individuals involved
- overall feasibility of training
- need for supervision and support
- resources and structure of the health system including logistics and supply

We propose two delivery packages for ORS in the community, each depending on the resources available. Both options are acceptable and could be used based on the context and can also be implemented in parallel in the same setting. Below some important considerations when choosing the most adapted package:

Option	Minimum staff competency	Pros	Cons
Option 1	• **Apply case definition:** Able to accurately apply the definition of the disease in practice. • **Evaluate level of dehydration and identify danger signs:** Able to assess level of dehydration and recognize danger signs and refer cases to a health facility for further care	• Maximizes impact by providing comprehensive care for patients with no signs of dehydration directly in the community. • More effective in settings with challenging health systems or insufficient transport.	• It is more complex when using non-trained community volunteers. • Adds complexity to the existing package of care when using volunteers and when those are already involved in other programs requiring more training.

[12] World Health Organization (WHO). (2020). *Global Cholera Situation*. Retrieved from https://www.who.int/cholera-situation

[13] Institute of Development Studies (IDS). (2024). *Guidance Note on Community Engagement for Cholera Outbreak Response in the East and Southern Africa Region*. Retrieved from https://www.ids.ac.uk/publications/cholera-community-engagement

	• **Quantify ORS delivery:** Able to determine and provide the appropriate amount of ORS for each case. • **Provide awareness and education:** Able to deliver relevant awareness and educational information to the community.		
Option 2	• **Deliver standard ORS quantity:** Able to provide the standard quantity (ORS) as per guidelines. • **Refer to health facility:** Able to refer all individuals with diarrhea to the nearest health facility for treatment. • **Provide awareness and education:** Able to effectively deliver awareness and educational information to the community.	• More feasible and replicable across different contexts. • Less demanding in terms of required knowledge to deliver the package effectively.	• Does not reduce strain on health structures as all patients with diarrhea are started on ORS and referred to for treatment. • Could be a missed opportunity during declared outbreaks as it represents the closer contact with the community

In both options, some consulted experts strongly encouraged parallel efforts to ensure access to safe water and ORS delivery. This will maximize the impact of ORS therapy and help prevent further spread of cholera.

1.2 Purpose of the report

Primary Objective

- To identify strategies to enhance early access to ORS with the goal of reducing cholera deaths.

Secondary Objectives

- To showcase exemplary community programs and interventions that either currently support or have the potential to integrate decentralized cholera treatment. These examples include:

a. Existing decentralized cholera treatment programs within communities.

b. Community programs that include ORS distribution for non-cholera illnesses, presenting opportunities for decentralized cholera treatment.

c. Community interventions that do not regularly include ORS distribution nor cholera treatment, presenting opportunities for decentralized cholera treatment.

2. Descriptions of examples of existing or potential community-based cholera treatment programs

This section is designed to inspire new approaches and encourage the adaptation of proven strategies for more effective and accessible cholera treatment at the community level. It highlights key examples of innovative community-based cholera treatment models and other potential opportunities, offering practical approaches for national programs and implementing partners. Our goal is not to be prescriptive, but to provide valuable insights that can inform future strategies to decentralize cholera treatment and help bridge gaps in timely access to ORS.

It is important to note that while we showcase these examples, we do not aim to represent global best practices, nor do we exclude other potentially effective programs. Each program illustrates how decentralized treatment can be integrated into different community settings, demonstrating feasibility and adaptability across diverse contexts.

For all selected examples, including those which are further developed as **CASE STUDIES**, a standardized template is used to describe the program, inspired by the International AIDS Society (IAS) Differentiate Service Delivery (DSD) framework[14], which is a client-centered approach that simplifies and adapts HIV services to reflect the preferences, expectations and needs of people living with and affected by HIV, while reducing unnecessary burden on the health system.

Each building block, which describes the main characteristic of a model of care, poses a key question to help form the model. The model has been slightly adapted to cholera treatment interventions as follows:

1. WHEN – are the services provided outside, during the outbreak or continuously through the year?
2. WHERE – in what location are services provided?
3. WHO – who is providing the services? What are their competencies and skills?

[14] Getting Started | Differentiated service delivery

4. **WHAT** – what does the package of services provided include?

The examples are organized as a list followed by some case studies and organized as follows:

A. **Existing decentralized cholera treatment programs within communities.**

B. **Community programs that include ORS distribution for non-cholera illnesses, highlighting opportunities for decentralized cholera treatment.**

C. **Community programs or interventions that do not regularly include either ORS distribution or cholera treatment, presenting opportunities for decentralized cholera treatment.**

A. Existing decentralized cholera treatment programs within communities

This section examines already implemented cholera community-based programs.

*Description of both **OPTION 1** and **OPTION 2** can be found on page 7.*

Location	Intervention& Main implementor partner	Main characteristics (WHO, WHAT, WHERE, WHEN)
Bangladesh 	**Oral Therapy Extension Program** **Bangladesh Rehabilitation Assistance Committee (BRAC)**	**WHO:** Oral Replacement Workers (ORW) were local women aged 20-25 yro; trained in cholera prevention and home-based preparation of ORS; received financial incentive based on the outcome of the monitoring of what mothers would remember. **WHAT:** ORW provided **(OPTION 2)** teaching through practical face-to-face sessions how to prepare home-based ORS to primary care givers. Later home-made ORS were replaced by the distribution of ORS sachets together with continuous education on diarrhea prevention. **WHERE:** community households and later through pharmacies and groceries purchase. **WHEN**: continuously through the year and during cholera outbreaks. *** Currently:** The OTEP program has been completed as the last mother was taught in 1990. As it has become a part of the local culture, vigorous promotion is no longer necessary. However, the pharmaceutical companies promote their own products with a major market share for the Social Marketing Company which markets the most popular brand called ORSaline-N, and are easily accessible in all local pharmacies and groceries stores around the country

Resources available:

- AMR Chowdhury and RA Cash. A Simple Solution: teaching millions to treat diarrhea at home. Dhaka, University Press Limited (1996).
- AMR Chowdhury, Fazlul Karim, SK Sarkar, Richard A Cash and Abbas Bhuiya. The status of ORT in Bangladesh: how widely is it used? Health Policy and Planning 12: 58-66 (1997).
- AMR Chowdhury and RA Cash. Cultural incorporation of ORT message. Lancet 341:1591 (1993).
- AMR Chowdhury, F Karim, J E Rohde, J Ahmed and F H Abed. Oral rehydration therapy: a community trial comparing the acceptability of homemade sucrose and cereal-based solutions. Bulletin of the World Health Organization 69(2):229-34 (1991).
- A Gawande. Slow ideas. The New Yorker, July 22, 2013

Haiti	**Adapted Care Groups Model for cholera prevention and treatment** **World Relief**	**WHO:** volunteers who referred to as Mother Leaders, all of whom have children currently living in their household, mothers are of an age respected by their community, known by the community, able to visit neighbors on foot, organized as peer-to-peer groups with at least one per group literate; selected by their desire to be involved in the project; trained in disease definition, danger signs, amount or ORS per weight and prevention; unpaid volunteers who give 2-4 hrs. per week to this effort; supervised by CHW. **WHAT:** CHWs deliver ORS to the mother leaders and they provide **(Mixed of OPTION 1 and 2)** standard ORS quantity based on the presence of symptoms or to everyone in outbreak area and demonstrate how to use it at home, identify danger signs and report it to the promoters and/or CHW, awareness and education on cholera prevention , report of key indicators of major life events including key illnesses/births/deaths etc. and WASH conditions to the CHW. **WHERE:** in community meetings organized by NGO staff promoter or community health worker, and in community neighbors' households, with an average of 10 household visits per week **WHEN:** during outbreak (for a 4-month period). *** Currently:** There is a follow-on project in the same area, and there will be 3 more cycles of Care Groups implemented in new locations, expanding the number of Mother Leaders trained. World Relief also uses Care Groups in Kenya, Malawi, Burundi, and South Sudan and in each of these places' cholera modules have been integrated into the program.
Resources available: • https://drive.google.com/drive/u/1/folders/1tVpuZ3gmtuncYir2_te0gJpKzRIo8015 • SCOPE-Care-Group-Technical-Brief.pdf (worldrelief.org) • Care Groups I: An Innovative Community-Based Strategy for Improving Maternal, Neonatal, and Child Health in Resource-Constrained Settings - PMC (nih.gov)		
Haiti	**MotoMeds** **University of Florida Health**	**WHO:** group of nurses, backed by a set of on-call doctors who they can consult when more complicated scenarios arise, and a group of motorbike drivers. **WHAT:** Motomeds is a night-time pediatric call center and motorbike pharmacy delivery system for common childhood illnesses including cholera. Parents call MotoMeds for children ranging in age from 10 days to 10 years. The nurse makes an assessment about what illness the child has and creates a treatment plan (how and where

		to be treated). If the child lives in the MotoMeds delivery zone, a motorcycle will deliver basic medications and ORS **(OPTION 1)** **WHERE:** Gressier Haiti, a semi-rural area about 30 miles outside the capital, Port au Prince. Children who live within a 5km radius of the call center are eligible for medication and fluid delivery directly to their homes. **WHEN:** from 6PM to 5AM during all weekdays continuously through the year, including during cholera outbreaks. *** Currently:** ongoing program
Resources available: • https://nelson.reserach.pediatrics.med.ufl.edu/motomeds/		
Lebanon	**Decentralized of cholera treatment through Mobile clinics** **Ministry of Health with support of multiple partners**	**WHO**: registered nurse; salary paid by government; supervised by medical doctor **WHAT:** nurses were able to provide full **OPTION 1** approach plus the provision of oral antibiotic treatment. **WHERE:** mobile clinics organized by catchment areas **WHEN:** during cholera outbreak *** Currently:** in case of new outbreaks, it is likely that mobile clinics will be implemented again as they were considered effective
Resources available: • Cholera – Lebanon (who.int) • Cholera In Lebanon (moph.gov.lb)		
Sierra Leone	**Integration of cholera treatment within the Prevention and Treatment of Acute Watery Diarrhea program through Blue Flag Volunteers (BFV)** **Ministry of Health with the support of partners**	**WHO:** Blue Flag Volunteers (BFV) are community-based volunteers, men or women, selected by the community in which they serve. They identify themselves with a blue flag at their home for easy identification; trained on acute watery diarrhea (AWD) recognition and management; received financial incentive; supervised by closest health center staff **WHAT**: originally, they were treating all AWD cases in the community (especially important during the civil war) and later they became part of the community response for cholera with a full **OPTION 1** approach. **WHERE:** household of the BFV and in community members households

		WHEN: services provided by BFVs for AWD prevention and treatment are done continuously throughout the year. Cholera-specific messaging and treatment was added after the onset of the cholera outbreak. *** Currently:** the BFV have become "Community Based Distributors" in Sierra Leone and they do provide iMCC services. The IFRC inspired by the BFV are implementing "Community Oral Rehydration Volunteers" as their community-lead cholera model of care.
Resources available: • Scaling up access to oral rehydration solution for diarrhea: Learning from historical experience in low– and high–performing countries - PMC (nih.gov) • ORS Case Study (healthmarketlinks.org) • CHW policy.indd (mohs.gov.sl)		
Yemen	**Integration of cholera treatment within iMCC (Prevention and Treatment of Acute Watery Diarrhea for under 5 yro program) through Community Health volunteers** **Medair supporting Ministry of Public Health and Population**	**WHO:** Community Health Volunteers (CHV) are community members nominated by the governorate and district health officer and living within the community they serve, secondary school certificate needed; trained through the standard MoH CHV training package and on cholera case definition and management by Medair based on Module 1 of same training package; financial-incentive according to MoH scale; supervised by Medair, District health officer, Governorate Health Office and MoH staff. **WHAT:** CHV originally provided education and case management of AWD for under 5-year-olds through the distribution of ORS and zinc. After the onset of the cholera outbreak, they were able to provide full **OPTION 1** with the addition of the reimbursement for the cost of transportation paid by Medair. All household members were treated independently of their age. **WHERE:** community household level (each CHV covers 3-5 households per day) **WHEN:** services provided by CHVs regarding AWD prevention and treatment are done continuously throughout the year. Cholera-specific messaging and treatment was added after the onset of the cholera outbreak. ***Currently:** in Medair supported areas, CHVs continue to be part of the response to the ongoing cholera outbreak and will also be well placed to respond to future cholera outbreaks. They do this in an undifferentiated manner alongside other AWD conditions, since the CHV iCCM treatment approach is syndromic, and their role is recognized by the community.

<table>
<tr><td colspan="3">Resources available:
Yemen iCCM manual.pdf</td></tr>
<tr><td>Multiple countries ex.: Comoros, Haiti, South Africa</td><td>Integration of ORS distribution into Community WASH interventions including Case Area Targeted Interventions (CATI)

Ministry of Health with the support of partners</td><td>WHO: community volunteers; trained in WASH activities and on prevention of cholera.

WHAT: community volunteers 'main tasks are to disinfect houses, provide household water treatment and (OPTION 2) distribution of and standard number of ORS sachets, referral of any person with diarrhea to the nearest health facility and provide education on hygiene and prevention of cholera

WHERE: community households of cholera patients and their close neighbors

WHEN: during outbreaks, when patient numbers are low, especially at the beginning and end of the outbreak
*Currently: ongoing intervention in various countries but not done systematically</td></tr>
<tr><td colspan="3">Resources available:
Highly targeted spatiotemporal interventions against cholera epidemics, 2000-19: a scoping review - PubMed (nih.gov)
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7041943/</td></tr>
<tr><td>Zambia</td><td>Community Case Management through Community Based Volunteers

Ministry of Health with the support of partners</td><td>WHO: Community Based Volunteers (CBV) already deliver HIV/TB/Malaria care in collaboration with clinical officers and nurses; identified by community leaders in liaison with Neighborhood Health Committees and Ward councilors; receive a specialized training in cholera; paid in line with government remuneration guidelines (combination of salaries by government and partners, or stipends in transport or allowances); supervised by Provincial Nursing Officer who oversees daily operations of the team and by Public Health Nurse responsible for community case management interventions (who visit 4 CBV-lead Oral Rehydration Corners (ORC), which are simple ORS distribution points (OPTION 2)each day and 10 CBV providing blanket house-to-house engagement).

WHAT: extension of the reach of the Oral Rehydration Points (ORPs) in community settings by establishing ORC in existing community structures and CBV households, and blanket house-to-house engagement both done by CBV. CBV provided (OPTION 2) education in cholera prevention (3 Cs: chlorine, clean hands and early care),</td></tr>
</table>

		facilitate referrals to ORPs, ORS sachets distribution (4 ORS per household), chlorine distribution, water storage container, soap, social mobilization for vaccination if appropriate. **WHERE:** CBV operated in their local neighborhoods, in community structures and out of their houses which were furnished with posters, buckets and equipment to provide care and alert the community to their presence, and house-to-house sensitization (approximately 30 households assigned to each CBV). **WHEN:** activated at the onset of the outbreak, continued during the outbreak, and after the peak of the outbreak season (the last only in specific districts). ***Currently:** Public Healt Nurses continue tracking the adherence to messages and community practices and compare it with the attack rate from the communities. In selected districts supported by UNICEF and Red Cross there is continuous community active cholera case search by CBV. It is planned that this new approach will be part of the country's cholera control plan.
Resources available: • Community Strategy Zambia cholera_Final draft (2).docx • ORC and ORP Meeting 30 01 24.docx		

CASE STUDY 1 – Teaching millions to treat diarrhea at home: the BRAC Case in Bangladesh

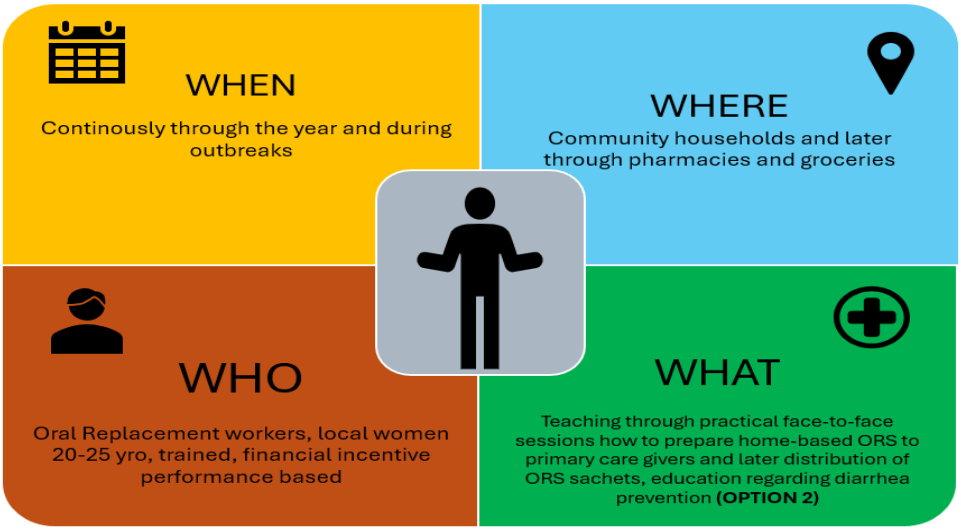
- **Main implementor partner: NGO Bangladesh Rehabilitation Assistance Committee (BRAC)**

- **Brief description of the intervention:**

  In the 1970s, Bangladesh faced approximately two hundred and fifty thousand child deaths from diarrhea-related dehydration, including from cholera (locally known as "Olaotha"), which represented a significant health threat. With the healthcare system unable to effectively distribute pre-packaged ORS as suggested by the WHO and lacking sufficient health care budget to provide ORS sachets for each diarrhea case, in the late 1970s BRAC initiated the **Oral Therapy Extension Program** (OTEP), starting with a 6-month pilot that was later extended nationwide. Local women, known as **Oral Replacement Workers** (ORWs), were trained to teach mothers how to prepare ORS at home using common ingredients like salt, molasses, and water. After exploring various alternatives, the program settled on a simple formula: "one pinch of salt and a fistful of molasses added to a half liter of water." This straightforward approach ensured ease of preparation for families. The program focused on face-to-face education, utilizing a simple "7 points to remember" mantra to convey essential health messages to the doorsteps of the rural population, where most diarrhea cases occurred.

  OTEP was a socio-behavioral movement aimed at introducing a new technology to society, encouraging a shift from age-old, traditional, culture-based responses to a scientific understanding of diarrhea treatment. It reached over 13 million households, making ORS preparation a widespread practice. The initiative effectively reduced mortality from diarrhea to near zero, with over 80% of patients using ORS.

  The knowledge of Oral Rehydration Therapy (ORT) has become ingrained in Bangladeshi culture, with mothers passing it on to their children and the OTEP program was completed with the last mother taught in 1990 as vigorous promotion was no longer necessary. Additionally, the program has been leveraged by social marketing and private pharmaceutical companies, resulting in millions of ORS sachets being produced in the country, with the most popular brand being ORsaline, which is made widely available through all local pharmacies and grocery stores, significantly addressing a pressing health problem in the country.



CASE STUDY 2 – Care groups in Haiti

- **Main implementor partner: World Relief**

- **Brief description of the intervention:**

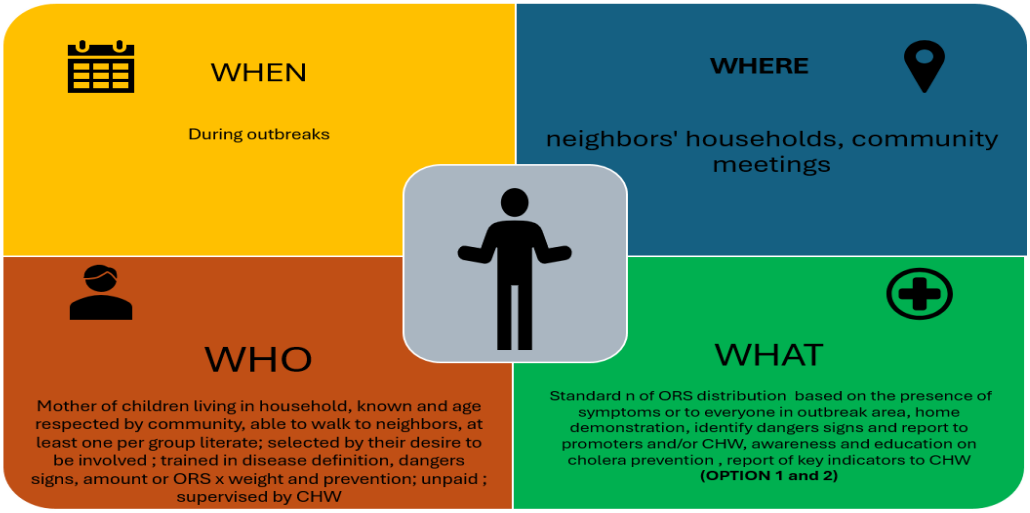
World Relief, a community-level implementer in Haiti for over 35 years, introduced the **Care Groups** strategy to combat cholera. The model was especially valuable in Haiti, where ongoing gang violence, political instability, and climate-related disasters intensified public health challenges. The project trained small groups of volunteer mothers, known as **mother leaders**, to promote cholera prevention and distribute ORS to their neighbors, targeting communities with limited access to health facilities and few community health workers (CHWs).

The program significantly improved health behaviors, raising ORS awareness by 20 percent. The network of mother leaders played a key role in making referrals, reporting key indicators, and countering misinformation during outbreaks. In a country where 50% of the population requires humanitarian aid, the Care Groups extended health promotion to areas with internally displaced persons (IDPs) in which 54% of whom are women and children.

The project reached over 13,980 people directly through volunteers and staff and further engaged family and community members, including school-aged children, grandmothers, and men, during home visits. This involvement fostered rapid changes in hygiene practices, making them accessible and popular. Care Groups also created safe spaces for women to share their experiences, address fears, and provide mutual support, effectively responding to both psychosocial and health needs in the community.

Funded by USAID BHA, the project has continued in the same areas, with three more Care Group cycles planned to expand the number of trained mother leaders. World Relief also implements Care Groups in Kenya, Malawi, Burundi, and South Sudan. In Haiti, the Care Groups specifically focus on cholera outbreaks and operate in four-month cycles. During an outbreak, CHWs can mobilize mother leaders to re-initiate their visits. The model, however, is adaptable for year-round implementation and

can cover a wide range of reproductive, maternal, newborn, and child health (RMNCH) interventions, with cholera modules integrated.



B. Community programs that include ORS distribution for non-cholera illnesses, highlighting opportunities for decentralized cholera treatment.

This section focuses on existing community-led initiatives that currently provide ORS for non-cholera illnesses. These programs could leverage existing resources and community structures, allowing them to effectively address both non-cholera and cholera-related diarrhea issues.

Depending on the context, they may apply a different option. *Description of both **OPTION 1** and **OPTION 2** can be found on page 7.*

This flexibility enhances the responsiveness of local health systems to cholera outbreaks, ultimately improving health outcomes in vulnerable populations.

Location	Intervention& Main implementor partner	Main characteristics (WHO, WHAT, WHERE, WHEN)
Bangladesh	**Depot-Holder Program** **NGO Service Delivery Program**	**WHO:** Depot-holders (DH) are community volunteer women who are paid an honorarium through the sale of commodities, should have worked previously as a volunteer, minimum of class five education, be a mother of at least 2 children, have familiarity with the local people and with easy transportation access to her home. . **WHAT**: DH keeps home supply of contraceptives and ORS packets which are provided by the NGO. DH then distributes both of those commodities to women and all their family members, provides counselling and health education, record keeping

		and refers and accompany clients with complications to satellite clinics. **WHERE:** the main activity is to distribute contraceptives and ORS from the home of the DH, but they also do at satellite clinics and at the client's homes **WHEN:** continuously through the year *** Currently:** ongoing program
Resources available: • Effectiveness of depot-holders introduced in urban areas: evidence from a pilot in Bangladesh - PubMed (nih.gov) • pnacn674.pdf (usaid.gov)		
Ethiopia	**Health Extension Program for iMCC** **Ministry of Health**	**WHO:** Health extension workers (HEW) are mostly women from 18-30 years of age, government employees, minimum 10th grade education, preferably reside in the community where the candidate will be serving; received 1 year training; are paid a government salary; supervised by the Primary Health Center team. **WHAT:** Promote health, prevent disease and treat uncomplicated, non-severe illnesses (immunization; tuberculosis; Integrated Community Case Management of Newborn and Childhood Illness (including diarrhea); HIV/AIDS and sexually transmitted diseases; maternal, newborn and child health and community-based health information systems) **WHERE:** Health post, community households and various community venues **WHEN:** continuously through the year *** Currently:** ongoing program
Resources available: • Ethiopia Overview | Exemplars in Global Health • perrychwprogramsinbrazilethiopiaandnepal2016.pdf (exemplars.health) • https://doi.org/10.1186/1478-4491-11-39		
Nepal	**Female Community Health Volunteer Program for iMCC** **Ministry of Health**	**WHO:** Female Community Health Volunteer (FCHV) women of 25-45 years old, preferably literate, married, fewer than 2 children, primary education completed, involved in social work-type in their communities, lack involvement in political parties and are from marginalized groups;

		received 18 days training; non-financial incentives such as clothing, training or participating in a national campaigns, access to small loans and a bicycle ; supervised by Village Health Workers and Maternal and Child Health Workers **WHAT:** Provide basic services and health education on maternal and child health care including local monthly mother groups meetings, counselling, family planning, child health which includes diarrhea in children with distribution of ORS and zinc. **WHERE:** at the FCHV home or at client ´s homes **WHEN:** continuously through the year *** Currently:** ongoing program
Resources available: • Nepal Overview | Exemplars in Global Health • perrychwprogramsinbrazilethiopiaandnepal2016.pdf (exemplars.health) • Female Community Health Volunteers in Community-Based Health Programs of Nepal: Future Perspective - PMC (nih.gov)		

C. Community programs or interventions that do not regularly include ORS distribution nor cholera treatment, presenting opportunities for decentralized cholera treatment

In decentralized cholera treatment efforts, it is crucial to look beyond the conventional health sector and leverage existing community-based infrastructures that can play an important role. These structures, which span **health and non-health sectors**, provide untapped opportunities to strengthen cholera prevention and improve access to ORS.

This section explores this approach and presents possible options through low resource-intensive efforts, allowing for scalable and sustainable cholera prevention.

Health Sector-Related Interventions:

1. Community-based medical distribution systems

Community-based medical distribution systems are well-established across many countries to facilitate the provision of essential medicines and health services, often targeting chronic or long-term health needs such as HIV/AIDS, tuberculosis (TB), and malaria. These systems have been shown to be highly effective in **decentralizing health services** and bringing care closer to communities, especially in resource-limited settings. By repurposing such models for cholera

treatment and ORS distribution, significant strides can be made to address gaps in cholera response, particularly in rural or hard-to-reach areas.

- **Pharmacy Distribution**: Local private pharmacies are underutilized but are a critical node in healthcare systems in both urban and rural areas. In many countries, pharmacies serve as key points for distributing medications for conditions including HIV, such as antiretroviral (ART) refills. Pharmacies are a source of many commodities, among them ORS. With adjustments, such as reduced cost or free delivery, pharmacies could support decentralized cholera response.
    - *Example*: Community Pharmacies for ART Refill in Nigeria.
    - *Link*: Community pharmacies for ART refills, Nigeria | Differentiated service delivery
- **Community Points of Distribution**: Various models of care use community-based points to distribute, especially medication for chronic illness. Such models could be adapted by including ORS distribution through similar platforms. These community distribution points, often managed by trained local health workers or volunteers, have proven successful in decentralizing care and reducing the burden on health facilities.
    - *Example*: Points of Distribution for ART and TB preventive Therapy (PoDis) in DRC
    - *Link*: Community-based points of ART distribution (PODI) and TB service integration, Democratic Republic of Congo (DRC) | Differentiated service delivery

2. Workplace Health Clinics

Workplace health clinics offer a unique opportunity to decentralize health services, particularly in industries such as mining, manufacturing, and agriculture, where large populations of workers congregate daily. These clinics, primarily designed for occupational health and safety, often provide primary healthcare services for diseases such as Mesoamerican Nephropathy, tuberculosis, HIV/AIDS, and other work-related health issues. Expanding their services to include cholera prevention and ORS distribution can significantly enhance reach, particularly among workers and their families.

- **Mining Sector**: In Southern Africa, the mining industry has developed extensive health programs to combat TB among workers, with on-site clinics providing direct access to healthcare. Given the potential for waterborne diseases like cholera to affect mining communities, particularly in remote locations, these clinics are an ideal channel for cholera education and ORS distribution. They can also serve as a rapid response network during cholera outbreaks, ensuring that workers and their families are protected.
    - *Example*: TB programs in the Southern Africa mining sector.
    - *Link*:FrameworkfortheHarmonizedManagementofTuberculosisintheMiningSector.pdf (worldbank.org)
- **Apparel Industry**: In Lesotho, workplace health initiatives in the textile industry have played a critical role in fighting HIV/AIDS, with clinics set up at factories providing free health services to workers. Similar interventions could be extended to include cholera prevention, particularly since these industries often employ vulnerable populations living in areas with poor sanitation.

- *Example*: Lesotho Apparel Industry's HIV/AIDS initiatives.
- *Link*: Lesotho—Apparel Lesotho Alliance to Fight Aids (ALAFA) Project · DAI: International Development

3. School-Based Health Programs

Schools, as central hubs of community life, offer a compelling opportunity for the integration of health programs. Many countries have implemented school health programs that focus on promoting hygiene, nutrition, and disease prevention. These programs could be expanded to incorporate cholera-related education and ORS distribution, ensuring that children and their families are equipped with the knowledge and resources to prevent and respond to outbreaks.

- **Health and Nutrition Integration**: In UNICEF programs in Malawi and South Sudan among others, school-based programs aimed at improving adolescent nutrition have been successful in enhancing both health and educational outcomes. Adding cholera education and ORS distribution to these existing interventions would ensure that children and their families are better prepared in case of cholera outbreak. Furthermore, in areas where school feeding programs are already in place, distributing ORS alongside regular food supplies could increase access to lifesaving treatment during outbreaks.
  - *Example*: School-based health and nutrition programs in Malawi.
  - *Link*: School Health and Nutrition Manual: A guide for program planning and implementation in Malawi | Save the Children's Resource Centre

- **Hygiene Promotion**: In Ghana, school-based hygiene promotion initiatives have significantly reduced the incidence of preventable diseases like malaria and diarrheal diseases. These programs, which teach children the importance of handwashing and sanitation, could incorporate cholera education and distribution of ORS, creating a ripple effect as children bring this knowledge home to their families.
  - *Example*: WASH School Program in Ghana.
  - *Link*: Slide 1 (washghana.net)

4. Community Water, Sanitation and Hygiene (WASH) interventions

Community WASH programs focus on improving access to clean water and sanitation facilities, which are essential to prevent waterborne diseases. These interventions are not specifically designed for the delivery of cholera treatment, they can be leveraged to enhance cholera prevention and response by integrating ORS distribution into their activities.

- **Community-Led Total Sanitation (CLTS):** This approach empowers communities to eliminate open defecation through behavioral change and improved sanitation practices. In Sierra Leone, CLTS has been successful in transforming hygiene behaviors and improving public health outcomes. Although not originally focused on cholera, these programs can incorporate cholera education and distribute ORS during community meetings and training sessions.

- *Example:* CLTS Programs in Sierra Leone
- *Link:* https://www.unicef.org/mena/sites/unicef.org.mena/files/press-releases/mena-media-Field_Note_-_Community_Approaches_to_Total_Sanitation.pdf

Non-Health Sector-Related Interventions:

1. Community Leadership and Traditional Roles

Traditional community leaders and respected community figures, such as elders, chiefs, traditional healers and religious figures, hold significant influence over the behavior and practices of their communities. Leveraging their authority to promote cholera prevention and distribute ORS can be an effective strategy for expanding reach, particularly in rural or isolated areas where trust in formal healthcare systems may be limited.

- **Traditional Birth Attendants (TBAs)**: TBAs, who are often the first point of contact for women in rural areas during pregnancy and childbirth, are trusted figures within their communities. In countries like Tanzania, TBAs have been successfully integrated into maternal health programs, providing a valuable link between communities and health services. By training TBAs to educate communities about cholera prevention and distribute ORS, their existing networks could be leveraged to enhance cholera response in hard-to-reach areas.
  - *Example*: TBAs and maternal health programs in Tanzania.
  - *Link*: Delivering at home or in a health facility? health-seeking behaviour of women and the role of traditional birth attendants in Tanzania - PMC (nih.gov)

- **Grandmother Groups**: Programs like Zimbabwe's *Friendship Bench* initiative, which engages elderly women to provide mental health support, demonstrate the power of using respected community figures to address health challenges. Similarly, grandmothers in other regions could be mobilized to support cholera prevention efforts by distributing ORS and educating families about proper sanitation and hygiene practices.
  - *Example*: The Friendship Bench in Zimbabwe.
  - *Link*: The Friendship Bench

2. Community Livelihood Programs

Livelihood programs that bring communities together to improve economic outcomes also provide a valuable platform for integrating health interventions. Such programs are well-organized, with regular meetings and communication among members, making them ideal for disseminating public health information and distributing cholera treatment resources including ORS.

- **Women's Farming Cooperatives**: These cooperatives focus on empowering women in agriculture, increasing their household incomes, and improving food security. Integrating

health interventions into their existing activities would allow wide-reaching dissemination of cholera prevention messages and the distribution of ORS kits.

- *Example*: Women Farmers of Nepal.
- *Link*: Women farmers of Nepal take charge of their lives and livelihoods | UN Women – Headquarters

- **Cooperative Groups in Malawi**: Cooperative groups in Malawi focus on agriculture and microenterprise, bringing people together for mutual support and development. Leveraging these groups for cholera awareness and ORS distribution could ensure timely access to treatment in rural areas.
  - *Example*: Cooperative Groups in Malawi.
  - *Link*: Background | Family Farming Knowledge Platform | Food and Agriculture Organization of the United Nations (fao.org)

3. Community Governance Structures

Local governance structures such as community councils, ward-level committees, and village heads are often responsible for coordinating public health efforts in their communities. These governance bodies could play a crucial role in organizing and implementing cholera prevention campaigns and ORS distribution.

- **Malaria prevention campaigns**: In Uganda, community councils have been instrumental in organizing malaria prevention campaigns, distributing mosquito nets, and ensuring adherence to public health guidelines. A similar model could be employed for cholera prevention and response, with local councils distributing ORS and/or mobilizing communities during outbreaks.
  - Example: Malaria Consortium Community-based interventions
  - *Link*: 2023philanthropyreport.pdf (malariaconsortium.org)

3. Conclusions

This report provides **potential opportunities** for governments and implementing partners to identify ways to expand cholera response strategies by **integrating community-based approaches and leveraging existing community programs**. Our exploration of various community initiatives highlights options to broaden decentralized cholera treatment, strengthening early responses to outbreaks and reducing cholera-related deaths within communities.

The success of community-based programs relies on **robust collaboration** between local efforts and the broader health system, where effective linkages with formal health structures are essential for training, supervision, referrals, and logistical support. Furthermore, strong community connections play a crucial role in reaching the most vulnerable populations and sustaining program effectiveness.

A **comprehensive approach** that extends beyond traditional health sector interventions allows stakeholders to fully leverage community knowledge, resources, and capabilities. Initiatives such as community health worker programs, volunteer networks, care groups, and partnerships with local leaders provide timely access to life-saving cholera prevention and treatment measures. Additionally, cross-learning among countries and sectors can foster innovative, context-specific solutions

Although each country must **tailor its strategies to fit its unique context**, the case studies presented offer valuable insights that can serve as examples to strengthen and adapt community health programs to cholera responses. For instance, highly endemic countries may require tailored approaches that prioritize multisectoral interventions (PAMI) in key areas, but all countries can benefit from proactive preparedness. Given ongoing challenges, a proactive approach enables countries to position themselves more effectively to manage cholera outbreaks. Investing in early preparedness measures within community resources, such as adding ORS to emergency preparedness kits, can make a critical difference in reducing the impact of outbreaks.

The **choice between implementing delivery package,** Option 1 or Option 2, should be based on specific local contexts and available resources. Delivery Package Option 1 maximizes impact by providing comprehensive care directly in the community, optimizing outcomes—particularly where health systems are strained—though it may involve complexities with untrained volunteers. In contrast, Delivery Package Option 2 is more feasible and replicable across different settings, utilizing available resources, but it may not alleviate the burden on health facilities.

In conclusion, this report emphasizes opportunities to **prioritize community-driven approaches in cholera response strategies**, as long-term success in reducing cholera's impact relies on collaboration and effective use of community resources globally.

ANNEXES

ANNEX 1. Methodology

a. **Overview of the evaluation design and methodology**

The aim of the methodology is to identify a diverse range of good practice community programs or interventions across geographical contexts. The methodology was developed to be proportionate to project resources, scale and timeframes. It was recognized at the outset that the intention of the methodology is not a systematic review, neither was aimed to identify best practice services, but to identify good practices that illustrate what can be done and to demonstrate the wider potential of community-based decentralized cholera treatment.

Phase I. Initial mapping phase

Below is a sequential description of the various methods planned for implementation during this initial phase, highlighting the systematic approach and methodological refinement.

Method designation	Description
Identification of stakeholders	Mapping of stakeholders to decide who needs to be fully engaged/primary stakeholders or consulted/secondary stakeholders. *Collaborative-continued brainstorming preceded stakeholder interviews, involving the main evaluation steering committee to develop a strategic stakeholder list. An initial round of 10 exploratory interviews with key stakeholders guided the design of the guidance report.*
Desk review	The evaluation involved published literature, grey literature, websites and videos. Literature reviews were completed in English, French and Spanish to identify potential services that had been identified or referenced in academic literature. Additional documents were included in the second phase as more data were gathered from stakeholders participating in the evaluation process. *A comprehensive list of key documents (Annex 4. References) is compiled to ensure thorough review.*
Semi-structured interviews	After conducting stakeholder mapping and developing an interview topic guide for each stakeholder type, interviews were conducted with several key informants. The snowball methodology will be utilized for additional interviews based on preliminary findings. *Pre-interview information was shared with the respondent to become aware about their contribution and ensure relevant and productive participation in the evaluation. Interviews notes will be taken by the evaluator. Interviewees will be provided with ample time to share their*

	insights by writing or verbally, asking consent and assured data protection measures throughout the process.

Phase II. Evaluative assessment and analysis

The evaluation process is based on qualitative and quantitative data gathered from the desk review and interviews, which will be manually analyzed to extract key themes and insights guided by the evaluation questions. Following a structured and systematic approach, findings were organized and categorized under the main primary and secondary objectives of the evaluation.

The analysis began concurrently with data collection, allowing for an iterative process of data interpretation and synthesis. Throughout the evaluation, findings transcribed and organized into a word format for easy access by the evaluation commission via OneDrive.

Phase III: Validation of selected services as good practices

The validation of selected services as good practices depended on the robustness of the available supporting evidence. Services with strong documentation—such as peer-reviewed research, detailed monitoring reports, or national and international recognition—required less additional validation. Conversely, services with limited evidence underwent more thorough scrutiny.

Given the remote nature of this evaluation, on-site visits are not feasible. Instead, validation involved remote interviews with experts, service providers, local stakeholders, and a review of existing documentation. This process was conducted in close collaboration with the steering committee body to ensure the validity and reliability of the findings.

Services that successfully meet the validation criteria are featured in the final guidance document, offering practical examples and recommendations for implementation in diverse settings.

Risks and limitations

The most critical limitation of this evaluation is its reliance on remote methods, which excluded site visits and direct observations. This constraint meant that validation of services depended heavily on experts' interviews and existing documentation, which may have introduced biases or inaccuracies in the information.

The variability in the quality and completeness of documentation across different services affected the consistency and reliability of the data collected. The ability of countries, particularly low- and middle-income ones, to promote or publish data on their services restricted the pool of available services and potentially overlooked some effective practices. To address this, a snowball methodology was employed leveraging GTFCC collaborating networks. This approach helped identify a more diverse range of services, aiming to ensure balanced representation despite the challenges in documentation and data availability.

It is important to note that the services highlighted in this document do not necessarily represent global best practices, nor do they exclude other potentially effective practices. The information

provided is meant to offer a broad spectrum of examples that can be adapted to various contexts and needs.

These limitations underscore the necessity for cautious interpretation of the findings and the need for flexibility in applying the identified practices and opportunities to different settings.

ANNEX 2. A check list to understand better the existing opportunities to implement Community-Based Cholera Treatment

To effectively decentralize cholera treatment, an **assessment of existing community structures and programs is very important**. This should ideally be done well before the confirmation of an outbreak and especially in known endemic cholera areas to ensure readiness before the next outbreak occurs. This approach can help ensure that cholera treatment strategies are integrated with ongoing community programs and adapted to local conditions, facilitating faster access to ORS, **OUTSIDE, DURING cholera outbreaks and through CONTINOUS** activities in the community, ensuring interventions are both effective and sustainable.

The table below outlines some of the criteria and considerations for assessing **community readiness and capacity**. While not exhaustive, it highlights core criteria identified through expert interviews and desk reviews. By focusing on these areas, national bodies and implementers can better identify existing resources, address potential gaps, and leverage community strengths.

Assessment Criteria	Key Questions for Assessment	Indicators for Functionality
Identification of vulnerable community groups	- Who are the most vulnerable groups in the community (e.g., children under five, elderly, marginalized populations)? - Do these groups have adequate access to health services and ORS? - Are current interventions targeting these groups effective?	- List of vulnerable groups - Assessment of access to health services and ORS
Access to Clean Water	- Is there a reliable and safe source of water for ORS preparation in cholera-affected areas? - How are water sources monitored for safety? - What can be done to ensure clean water is available for ORS distribution?	- Mapping of clean water sources - Water safety test results
Health System Structure & Transport	- Can the current health system support community-based cholera treatment and rapid ORS distribution?	- Number and distance to health facilities

	- Is the transportation infrastructure adequate for distributing supplies and referring patients, especially in cholera hotspots? - How can transportation be improved to ensure timely response?	- Availability of transport for health emergencies - Response times for patient transport
Existing Community Health Programs	- Are there existing community health programs (e.g., maternal and child health, HIV, malnutrition) that could be leveraged for cholera and ORS interventions? - How can these programs be adapted or integrated into cholera treatment efforts?	- List of community programs - Opportunities for integration - Assessment of program reach and required adaptations
ORS Distribution Programs	- Are there existing community programs that already distribute ORS? - How effective and widespread are these programs? - Can their coverage be expanded to include cholera treatment and prevention?	- List of programs distributing ORS - Coverage and effectiveness reports - Opportunities for expansion
Non-Health Sector Community Structures	- What non-health sector community structures (e.g., local leaders, religious groups, livelihood associations) can support cholera and ORS distribution efforts? - How can these structures be mobilized to enhance cholera response efforts?	- List of community structures and roles - Opportunities for integration and adaptation
Community Health Care Workforce	- Are there enough trained community health workers (CHWs) and volunteers to support decentralized cholera treatment? - What are their remuneration and supervisory mechanisms? - What additional training or support is needed for this workforce? - Are there task-shifting strategies in place to optimize workforce performance?	- Number of CHWs - Proportion of paid/unpaid CHWs - CHW training levels and supervisory mechanisms
Security Constraints	- Are there security risks that could hinder cholera interventions? - How can programs be adapted to work in high-risk areas? - What security protocols are needed to protect health workers and ensure safe ORS distribution?	- Security risk assessments - Reports of incidents affecting intervention
Stigma & Cultural Factors	- What cultural barriers or stigma exist around cholera treatment and ORS use? - How can these barriers be addressed?	- Community attitudes reports

	- Are there trusted community figures who can help bridge cultural gaps in cholera response efforts?	- Stigma-related barriers to intervention
Supply Chain & Logistics	- How effective is the current supply chain for ORS and other critical supplies? - Are there any bottlenecks in distribution? - How can supply chain systems be strengthened to ensure timely availability of ORS, especially before the peak cholera season in endemic areas?	- Supply chain plans - ORS availability and distribution efficient

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