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CHOLERA PREPAREDNESS AND RESPONSE STRATEGY FOR THE WHO EASTERN MEDITERRANEAN REGION 2025–2028



**World Health
Organization**

Eastern Mediterranean Region

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The development of the Cholera Preparedness and Response Strategy for the WHO Eastern Mediterranean Region (2025–2028) represents an important milestone in collaborative efforts to control and eliminate cholera as a public health threat across the Region. Cholera continues to disproportionately affect vulnerable and underserved communities, particularly in countries affected by conflicts, displacement, disrupted health systems, and limited access to clean water and sanitation. This strategy provides a coordinated, multidisciplinary framework that aligns with the Global Roadmap to End Cholera by 2030 to guide Member States of the WHO Eastern Mediterranean Region toward effective prevention of, preparedness for and response to cholera outbreaks and epidemics.

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Abbreviations and Acronyms

AWD	acute watery diarrhoea
CFR	case fatality rate
CHW	community health worker
CTC/U	cholera treatment centre/unit
EMRO	WHO Regional Office for the Eastern Mediterranean
FCV	fragile, conflict-affected and vulnerable
FETP	Field Epidemiology Training Programme
GTFCC	Global Task Force on Cholera Control
HEPR	health emergency preparedness and response
HF	health care facilities
HRH	human resources for health
ICG	International Coordinating Group on Vaccine Provision
IHR	International Health Regulations
IPC	infection prevention and control
IV	intravenous
M&E	monitoring and evaluation
NGO	nongovernmental organization
JEE	joint external evaluation
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
LMIC	low- and middle-income countries
MoH	ministry of health
NCP	national cholera plan
OCV	oral cholera vaccine
OPT	occupied Palestinian territory
ORP	oral rehydration point
ORS	oral rehydration salts
PAMI	priority area for multisectoral intervention
PPE	personal protective equipment
RCCE	risk communication and community engagement
RDT	rapid diagnostic test
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WASH FIT	Water and Sanitation for Health Facility Improvement Tool
WHO	World Health Organization

Executive summary

Acute watery diarrhoea (AWD)/cholera remains a significant public health concern in the WHO Eastern Mediterranean Region, with major outbreaks impacting multiple countries. The burden of cholera outbreaks has increased dramatically over the past few years. In 2024, nine countries – Afghanistan, Djibouti, Iraq, Lebanon, Pakistan, Somalia, Sudan, the Syrian Arab Republic and Yemen – reported almost 80% of the global burden of AWD/suspected cholera, with over 643 000 cases including 2354 deaths.

Cholera outbreaks in the Region are driven by a complex interplay of environmental, economic, social and political factors. The **key determinants of cholera** in the Region include: 1) inadequate health system capacities; 2) inadequate water, sanitation and hygiene (WASH) in households and WASH/IPC in health care facilities; 3) ineffective intersectoral coordination, partnerships and funding; and 4) other contributing factors such as climate change, environmental, governance, social and political factors that result in displacement, and overcrowding with inadequate access to WASH and health care, particularly in developing countries.

This regional cholera strategy aligns with the Global Task Force on Cholera Control (GTFCC) Roadmap for ending cholera by 2030, the WHO Health Emergencies Preparedness and Response (HEPR) Framework and the WHO Global Cholera Strategic preparedness, readiness and response plan, with the overarching goal of **reducing cholera-associated morbidity and mortality in the WHO Eastern Mediterranean Region by the end of 2028**. To achieve this goal, four specific objectives have been developed: 1) strengthening overall multisectoral coordination for cholera control, 2) enhancing early detection of cholera outbreaks and rapid response, 3) increasing access to quality case management and 4) improving water, sanitation and hygiene (WASH) in community and health care settings. Each of these objectives is linked to a milestone, a set of priority actions and key performance indicators to monitor progress. This strategy also addresses key cross-cutting areas that are highly impacting cholera control in the Region such as risk communication and community engagement (RCCE), prevention and response to sexual exploitation, abuse and harassment (PRSEAH) and gender mainstreaming, as well as evidence generation and research.

WHO at the global, regional, and national levels will play a central role in monitoring the progress of the actions outlined in this strategy and the overall performance. Key performance indicators (KPIs) will serve as the primary tools for monitoring progress annually. A mid-term review will also be conducted to monitor progress against the preset milestones and develop an improvement/acceleration plan if needed. WHO country offices (WCOs) will be supported in developing tailored monitoring and evaluation plans that reflect the unique contexts and needs of each country.

Given the context of the Region, implementation of this strategy could face some **operational challenges** that impede achievement of its goals and targets in a timely manner. Major challenges include: 1) worsened humanitarian situation and deteriorated security in some countries; 2) the presence of multiple other competing health priorities at ministries of health; 3) persistent shortages of domestic and external financial resources needed for implementation; 4) shortages of human resources for health, particularly at the subnational level; and 5) a global shortage of the essential cholera supplies. To mitigate these challenges, WHO will work closely with ministries of health and humanitarian and development partners to ensure that conditions for smooth implementation are in place.

1 Background

Cholera is a highly infectious acute diarrhoeal bacterial disease caused by the bacterium *Vibrio cholerae* which poses major public health challenges in many countries worldwide. Left untreated, cholera infection may result in rapid dehydration and even death. When detected early, however, up to 80% of cholera-infected cases can be successfully treated with oral rehydration salts (ORS). Cholera can be prevented through improved water, sanitation and hygiene (WASH) practices, as well as by using the oral cholera vaccine (OCV)(1).

Seven distinct pandemics of cholera have been recorded over the past two centuries. The seventh pandemic, which is still going on now, started in 1961. During the first two decades, following (re)introduction, many countries transitioned to become cholera endemic. While global incidence greatly decreased in the late 1990s, cholera remains prevalent in the WHO African and Eastern Mediterranean regions.

Since mid-2021, the world has been facing an acute upsurge of the seventh cholera pandemic characterized by increased number, magnitude and concurrence of multiple outbreaks, as well as spread to areas free of cholera for decades and alarming high mortality rates (2). The global case fatality ratio (CFR) in 2021 stood at 1.9%, the highest in over a decade, far exceeding the acceptable rate of less than 1% (Figure 1). In 2022, the seventh cholera pandemic surged, with double the global number of cholera cases reported to WHO (472 697) compared to 2021 (223 370); 44 countries reported cholera cases, up from 35 in 2021. Countries that had not reported cholera in many years, including Lebanon and the Syrian Arab Republic, reported large outbreaks in 2022 (3).

Given the situation, WHO classified the global resurgence of cholera as a Grade 3 emergency in January 2023. From 1 January to 24 November 2024, a cumulative total of 733 956 cholera cases and 5162 deaths were reported from 33 countries across five WHO regions. The number of cases and deaths reported in November 2024 are 37% and 27% higher, respectively, compared to the same month in 2023. The number of cholera cases and CFR reported globally in 2023 increased to 535 321 and 0.70% from 472 697 and 0.50% in 2022 (**Figure 1**). Based on the current situation – and in particular: 1) the increasing number of outbreaks and geographical expansion; 2) the complex humanitarian context of many countries; 3) continuous risk of spread; and 4) shortages of essential cholera supplies and limited response capacity (supplies, human resources) – WHO still assesses the risk at the global level as very high and cholera remains a global threat to public health and an indicator of inequity and lack of social development.

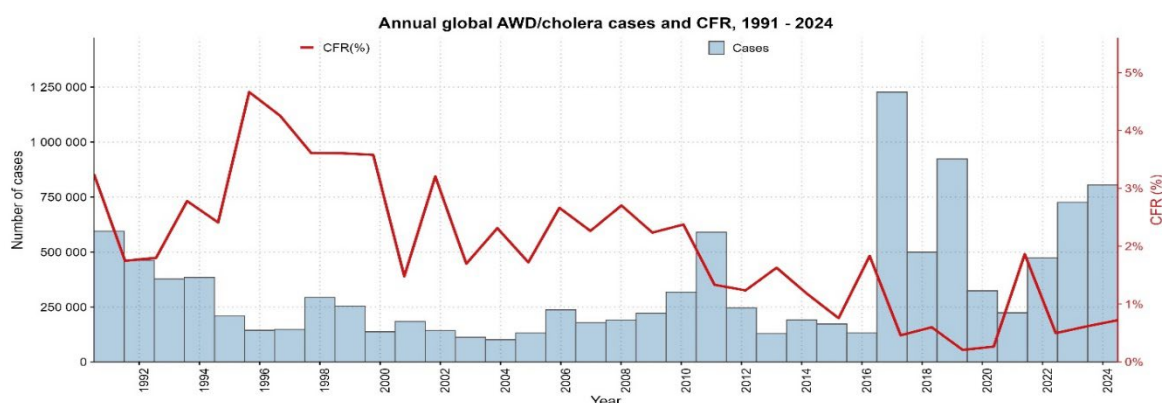


Figure 1. Global trends in annual cholera cases and mortality, 1991–2024.

Several key factors have influenced the spread of cholera, particularly in regions facing environmental challenges, conflicts and inadequate public health infrastructure. Heavy seasonal rainfalls and flooding have overwhelmed sanitation systems, leading to mixing of sewage and drinking water and creating ideal conditions for cholera transmission. This water contamination, exacerbated by flooding and heavy rains in areas with poor sanitation infrastructure, has significantly increased the risk of cholera outbreaks (4).

Ongoing conflicts and mass displacement, such as in Sudan, have also heightened the risk of cholera. Displaced populations often live in crowded conditions with limited access to clean water and sanitation, making them more vulnerable to outbreaks. The overwhelmed health systems in conflict-affected countries further hamper effective response efforts. Additionally, many cholera-affected countries lack robust health infrastructure and surveillance systems, complicating the detection and management of cholera cases. For example, the health system in Sudan has been severely impacted by war, leading to shortages of medical supplies and health workers (5). The movement of people due to conflict, natural disasters, or economic factors extends the geographic reach of cholera outbreaks, as migrating populations may carry the disease to new areas (6).

In response to these ongoing global outbreaks, the Global Task Force on Cholera Control (GTFCC), with its secretariat based at WHO, was revitalized in 2014. The GTFCC is a network of more than 50 partners active in cholera control globally, including academic institutions, nongovernmental organizations (NGOs) and United Nations agencies. Through the GTFCC, and with support from donors, WHO has been working to: promote the design and implementation of global strategies to contribute to capacity development for cholera prevention and control globally; provide a forum for technical exchange, coordination and cooperation on cholera-related activities to strengthen country capacity to prevent and control cholera; support countries to implement effective cholera control strategies and monitor progress; support countries in long-term control or elimination of cholera through the development of national cholera plans (NCPs); and disseminate technical guidelines and operational manuals (1).

In October 2017, GTFCC partners launched a strategy for cholera control, *Ending cholera: a global roadmap to 2030* (7). The Global Roadmap is a country-led strategy which aims to reduce cholera deaths by 90% and to eliminate cholera in as many as 20 countries by 2030. It focuses on three strategic axes:

- early detection of and quick response to contain cholera outbreaks;
- a targeted multisectoral approach to prevent cholera recurrence; and
- effective mechanisms for coordination of technical support, advocacy, resource mobilization and partnership at local and global levels.

To support and accelerate this global effort, the Seventy-first World Health Assembly passed resolution WHA71.4 in May 2018 promoting cholera control, endorsing the Global Roadmap and reinforcing global commitment to eliminating cholera by 2030.¹

¹ [chrome-extension://efaidnbmninnibpcapjpcglclefindmkaj/https://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R4-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R4-en.pdf)

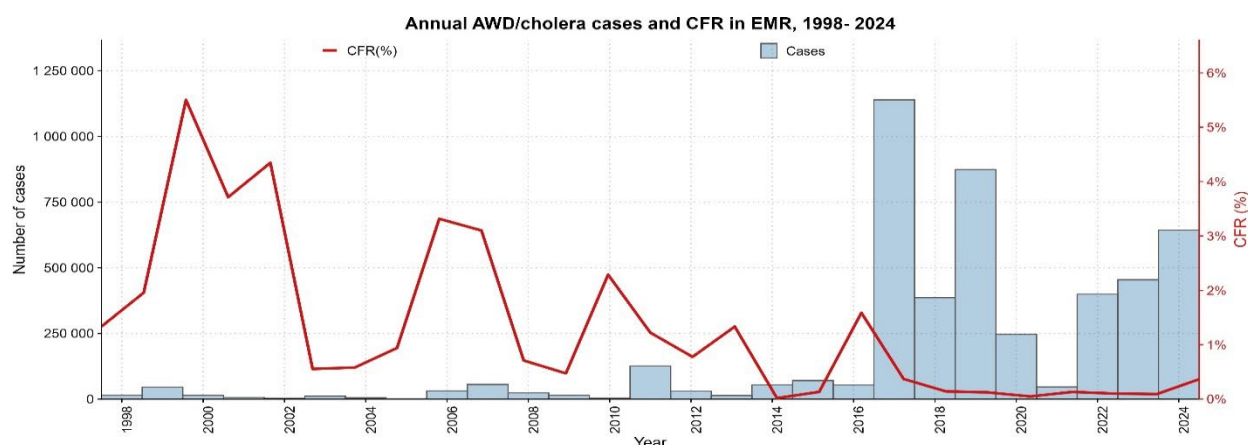


Figure 2. Trends in AWD/cholera cases and mortality in the Eastern Mediterranean Region, 1998–2024².

2 The current cholera situation in the Eastern Mediterranean Region

Despite huge efforts exerted by WHO and partners, cholera control continues to face many challenges in the Eastern Mediterranean Region. The Region was home to nearly 767 million people as of September 2024 (8). Acute watery diarrhoea (AWD)/cholera continues to be one of the major outbreaks affecting several countries, and the burden of cholera outbreaks has dramatically increased over the past few years (**Figure 2**). Cholera outbreaks in the Region are spreading and crossing international borders, with population movements exacerbated by conflicts, climate change and economic factors.

In 2021, three countries in the Region (Afghanistan, Somalia and Yemen) officially reported acute watery diarrhoea (AWD)/cholera outbreaks with over 50 000 suspected cases – including 60 associated deaths (CFR 0.1%). The highest number of cases was reported from Yemen (48 546), while Somalia recorded the highest CFR (0.8%).

In 2022, the first cholera outbreak in over 10 years was reported in Lebanon and the Syrian Arab Republic, while Pakistan recorded its largest outbreak in decades. Cumulatively, eight Member States in the Region reported over 350 000 AWD/cholera cases including 395 deaths: Afghanistan (AWD cases: 242 562; deaths: 87), Islamic Republic of Iran (confirmed cases: 367; deaths: 7), Iraq (suspected cases: 11 097; deaths: 24), Lebanon (suspected cases: 5422; deaths: 23), Pakistan (confirmed cases: 1002; deaths: 43), Somalia (suspected cases: 15 653; deaths: 88), Syrian Arab Republic (suspected cases: 70 220; deaths: 102) and Yemen (suspected cases: 21 178; deaths: 21). In Afghanistan and Somalia, children aged under-five years were disproportionately affected, comprising 55% and 65% of cases, respectively.

In 2023, eight countries – Afghanistan, Iraq, Lebanon, Pakistan, Somalia, Sudan, Syrian Arab Republic and Yemen – reported AWD/suspected cholera outbreaks, with over 430 000 cases including 415 deaths (Figure 3). The highest number of cases (almost a quarter of a million cases) was reported from Afghanistan, while Sudan reported the highest CFR (2.7%).

² Data was reported by countries to WHO.

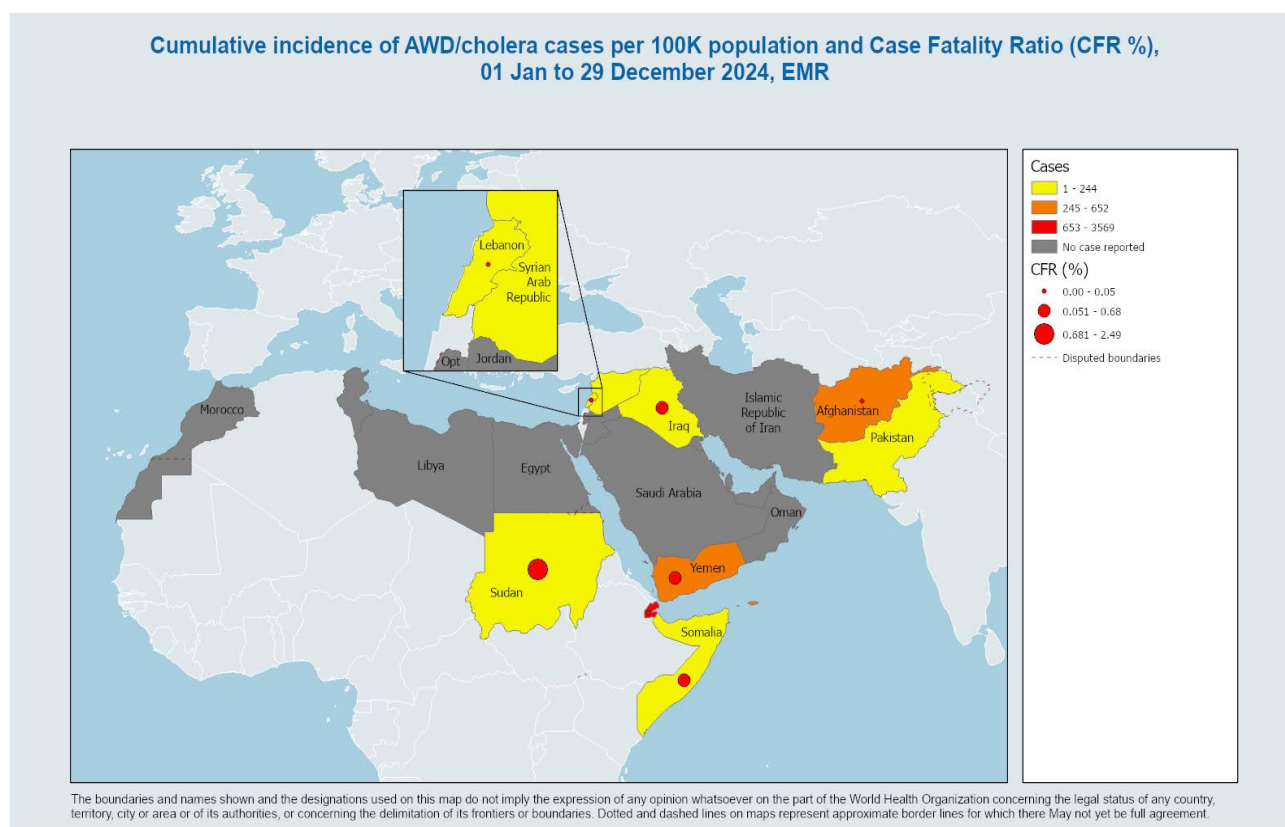


Figure 3. Attack rate and case fatality ratio of cholera in the nine cholera-affected countries of the Eastern Mediterranean Region, 2024³

In 2024, nine countries of the Region reported almost 80% of the global burden of AWD/cholera. As of 29 December (end of epi-week 52), over 643 000 AWD/ suspected cholera cases including 2354 associated deaths were reported in the Region. Yemen reported the highest number of suspected cholera cases (260 738 cases) while Sudan reported the highest number of cholera-associated deaths (1253, CFR 2.5%). Other countries reporting high numbers of cases include Afghanistan (175 463 AWD with dehydration cases, 84 deaths, CFR 0.05%), Pakistan (77 483 cases), Somalia (22 065 cases, 151 deaths, CFR 0.7%) and Sudan (50 329 cases, 1253 deaths, CFR 2.5%).

3 Problem statement

Cholera outbreaks in the Region are driven by a complex interplay of environmental, economic, social and political factors (9). Of its 22 countries and territories, nine are currently classified as fragile, conflict-affected and vulnerable (FCV): Afghanistan, Iraq, Lebanon, Libya, occupied Palestinian territory, Somalia, Sudan, Syrian Arab Republic and Yemen (10). This classification significantly overlaps with the countries in the Region affected by cholera (Figure 3).

³ Inadequate reporting and weak surveillance systems in several countries of the Region suggests potential under- or overreporting of cases and makes the interpretation of epidemiological data challenging.

As of September 2024, there were 69 infectious disease outbreaks – including cholera – reported from the Region, and over 107 million people in need of humanitarian assistance, comprising around 14% of the Region’s population (8). These ongoing humanitarian crises in the Region make cholera control extremely challenging and complicated.

In general, key determinants of cholera spread in the Region (Figure 4) include:

- inadequate health system capacities;
- inadequate WASH in households and WASH/IPC in health care facilities;
- ineffective intersectoral coordination, partnerships and funding; and
- other contributing factors such as climate change, environmental, governance, social and political factors that result in displacement and overcrowding with inadequate access to WASH and health care.

These determinants were also highlighted in the cholera readiness, preparedness and response capacities survey conducted between February and June 2023 among Member States in Region. Eight countries responded to the survey, four of which – **Afghanistan, Iraq, Sudan and Syrian Arab Republic** – are priority countries in this strategy. The survey results provide critical insights into the Region’s capacity to manage and mitigate cholera outbreaks, underscoring the need for coordinated, context-specific interventions to address both immediate outbreaks and long-term cholera control.

3.1 Health system capacity

The ongoing conflicts, internal and cross-border displacement exacerbate existing inequalities, disrupt health services, contribute to brain drain (11–13) and weaken health systems, making the Region vulnerable to widespread cholera outbreaks (**Figure 4**). Several AWD/cholera-affected countries are also responding to multiple other disease outbreaks including dengue, chikungunya, measles and other vaccine-preventable diseases. This also strains the overall capacity to respond to cholera, particularly in countries with limited resources, leading to further spread among high-risk populations. In addition, poor governance, underfinancing of health systems in some low- and middle-income countries (LMICs), shortages of skilled human resources for health and poor access to essential supplies and pharmaceuticals further contribute to health system underperformance.

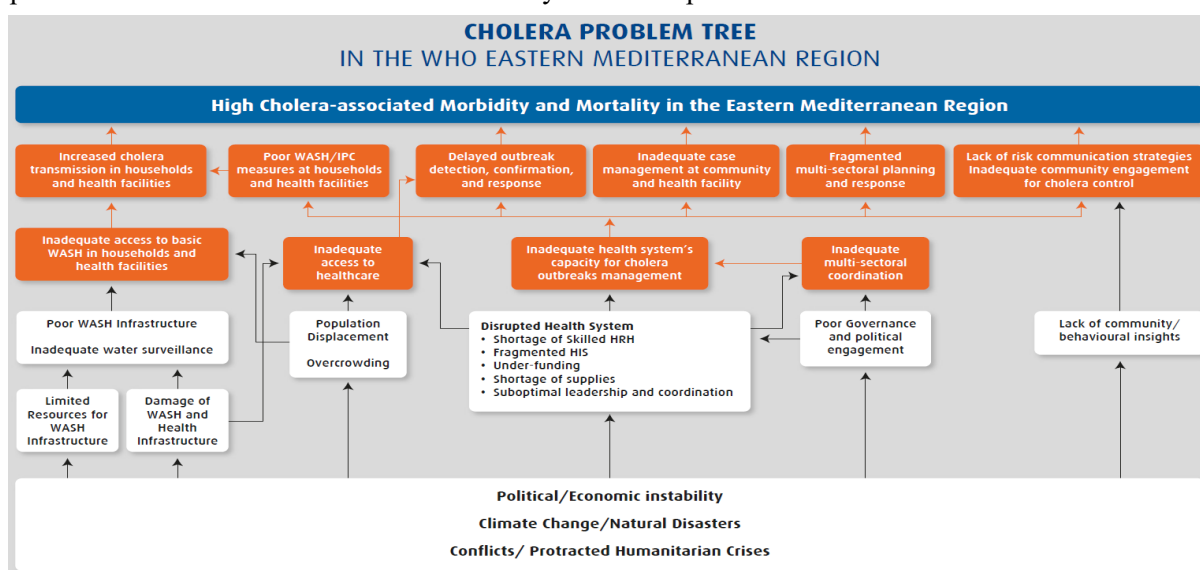


Figure 4. Cholera problem tree in the Eastern Mediterranean Region

3.1.1 Surveillance and laboratory capacity

The capacity of the health system to detect, confirm and respond to cholera outbreaks is still inadequate in the AWD/cholera-affected countries in the Region. Transmission of cholera in those countries is often exacerbated by suboptimal capacity to detect and manage the first identified cases promptly. This weakness is reflected in delayed outbreak detection due to lack of surveillance data. The absence of standardized surveillance data further complicates the identification of priority intervention areas, leading to the inefficient allocation of limited resources. **Disease surveillance systems** in general in many AWD/cholera-affected countries of the Region are fragmented and largely driven by donor funding, often relying on earmarked resources. In 2018, findings from joint external evaluations (JEEs) in 14 countries of the Region revealed only moderate capacity for interoperable, interconnected, electronic real-time reporting systems (14). Specifically for cholera, the lack of standardized surveillance tools, stockouts of essential diagnostics and supplies such as rapid diagnostic tests (RDT), and shortages of human resources further exacerbate the situation. Insufficient capacity of surveillance and laboratory personnel at the subnational levels is also another challenge. Appropriate reporting of cholera-associated death is also one of the main surveillance gaps. Difficulties in reporting community deaths and facility deaths separately may mask elements that could help identify the target interventions for effective responses.

Our survey revealed that while all four responding countries (Afghanistan, Iraq, Sudan and the Syrian Arab Republic) have established the foundational elements of a standardized cholera surveillance system at the national level – such as clear case definitions and standard operating procedures (SOPs) for alert generation, reporting, and initiating outbreak responses – there are significant gaps at the community level. Except for Sudan, countries are either still developing or piloting community-based surveillance mechanisms, including the dissemination of community-level case definitions and the training of community volunteers, or they have not yet established such systems. These findings underscore the need for multi-faceted approaches to strengthen cholera surveillance systems. This includes regular assessments of health facility-based surveillance to identify gaps between the strategy and actual implementation, ensuring

In the most recent (2023) IHR States Parties Self-Assessment Annual Report (SPAR), eight cholera-affected countries in the Region reported an average score of 50 under “**Capacity 4: Laboratory**”, ranging from 36 to 60, whereas non-cholera affected countries in the Region scored 86 on average (15). This indicates lack of **C4.1** national laboratory capacity in specimen referral and transport system, **C4.2** implementation of biosecurity regime, **C4.3** laboratory quality system, **C4.4** lab testing capabilities, and **C4.5** effective national lab diagnostic network. All of these components contribute to poor case identification/confirmation and delays in reporting/notification from the subnational levels, preventing timely public health interventions (4).

Our survey revealed significant variations in laboratory capacity for cholera detection and confirmation across countries. Afghanistan and Sudan reported having SOPs and trained staff for sample collection, packaging and transport in at least 80% of high-risk districts. In contrast, Iraq has yet to establish these mechanisms, while the Syrian Arab Republic is still in the process of preparing them. The capacity to conduct culture, PCR and drug susceptibility testing also varied (C4.4): neither Iraq nor the Syrian Arab Republic have PCR capabilities, whereas Afghanistan does. Regarding the mechanism for sequencing circulating Vibrio cholerae on a regular basis, only the Syrian Arab Republic reported having such a system in place. This variation in laboratory capacity, particularly in testing and confirming cholera cases, remains a significant gap in cholera control efforts across the affected countries.

The lack of governmental transparency and willingness to report and share cholera data in a timely fashion in accordance with the international health regulations (IHR 2005) is another undermining factor for regional surveillance efforts, making it difficult to control cholera outbreaks effectively (16). This reluctance to share information hinders timely public health responses and complicates regional coordination and resource mobilization.

Cross-border transmission of cholera further complicates surveillance, particularly in countries with borders with numerous unofficial porous points of entry (PoE) and frequent movement by travellers between areas with different levels of cholera endemicity. Inadequate surveillance at PoE and adjacent border areas and limited cholera awareness among affected communities make it challenging to monitor and control the spread of the diseases. For instance, in 2022 Lebanon reported the first cholera outbreak in decades, which was initially detected among displaced Syrians (17). Similarly, in Yemen a recent cholera outbreak was detected among migrant communities in Shabwah governorate between October and December 2023 (18), highlighting the critical need for enhanced surveillance at both national and cross-border levels.

3.1.2 Cholera case management

People infected with cholera may experience mild to severe watery diarrhoea and vomiting, with resultant dehydration. Almost 20% of people infected with *V. cholerae* develop acute watery diarrhoea and approximately 20% of these will develop severe dehydration. CFR for untreated patients may vary from 30% to 50%. The clinical management of cholera patients is straightforward – primarily oral rehydration, antibiotics, and intravenous rehydration for severe cases – and, when provided rapidly and appropriately, the CFR should remain below 1% (19).

In the Eastern Mediterranean Region, gaps in cholera surveillance, inadequate reporting and inability to document community deaths make it challenging to get the true mortality estimates of cholera, particularly at the subnational level. AWD/cholera-affected countries usually demonstrate relatively acceptable cholera-associated mortality rates (CFR) at the national level (**Table 1**). However, mortality rates at subnational levels are frequently higher than the acceptable CFR level. For example, in Sudan, where a massive cholera outbreak has been ongoing since mid-July 2023, some cholera-affected states reported a CFR higher than 10%. Weak surveillance systems and lack of standardization of reporting in many countries of the Region suggest potential under- or overreporting of cases and deaths. This makes the interpretation of epidemiological data and comparison between countries challenging.

Table 1. Trends in case fatality rate (CFR) in AWD/cholera-affected countries in the Eastern Mediterranean Region, 2022–2023*⁴

Country	CFR in 2022	CFR in 2023
Afghanistan	0.036 % (suspected cases: 242 562; deaths: 87)	0.045 % (suspected cases: 222 230; deaths: 101)
Iraq	0.22 % (suspected cases: 11 097; deaths: 24)	0.57% (suspected cases: 1232; deaths: 7)
Lebanon	0.42% (suspected cases: 5422; deaths: 23)	0 % (suspected cases: 2197; deaths: 0)
Pakistan	4.29 % (confirmed cases: 1002; deaths: 43)	0 % (confirmed cases: 200; deaths: 0)
Somalia	0.56% (suspected cases: 15 653; deaths: 88)	0.25 % (suspected cases: 18 304; deaths: 46)
Sudan	NA	2.72 % (suspected cases: 8804; deaths 240)
Syrian Arab Republic	0.15 % (suspected cases: 70 220; deaths 102)	0.0039 % (suspected cases: 18 0288; deaths 7)
Yemen	% (suspected cases: 21 178; deaths 21)	0.43 % (suspected cases: 3279; deaths 14)

Several factors contribute to increased AWD/cholera-associated mortality in affected countries in the Region.

- Physical inaccessibility of health care facilities

In countries with ongoing active conflicts, there is usually significant damage to infrastructure, particularly health facilities. Hospitals and basic health facilities are often damaged or destroyed, leading to a critical shortage of health care services. A striking example is Yemen, where repeated airstrikes have not only devastated health facilities but also damaged water systems (20, 21). This destruction creates an environment ripe for cholera outbreaks, as the collapse of infrastructure directly impacts the population's ability to access adequate health care and proper WASH in good time.

In other cholera-affected countries in the Region where there are no active conflicts, health care infrastructure is insufficient, particularly in rural and underserved areas. Inadequate access to cholera treatment caused by the limited number of treatment facilities including oral rehydration points (ORPs) at the community level results in delayed treatment, contributing to the increased mortality from cholera.

- Inadequate triage and referral system

The lack of a proper triage and referral system further undermines cholera treatment, particularly for mild and moderate cases at the community level. Given the limited number of health care facilities, especially in rural and conflict-affected zones, many patients struggle to receive timely treatment. The absence of structured triage mechanisms means that mild and moderate cases, which could be

⁴ Due to lack of standardization of reporting, it is difficult to monitor cholera-associated mortality trends and compare between countries. It is also difficult to differentiate between facility and community deaths and CFR.

effectively managed at the community level with ORS, often go untreated or progress to severe dehydration necessitating admission to health care facilities. This not only increases the burden on already overwhelmed treatment facilities but also leads to higher mortality rates, as patients face critical delays in accessing life-saving care. Therefore, strengthening community-based triage and referral systems is essential to ensure prompt case management and reduce cholera-related morbidity and mortality in the Region.

- Shortages of cholera health supplies

In-country shortages of health supplies needed to manage cholera outbreaks further complicate cholera case management, particularly in conflict settings. Supply chains are often disrupted due to logistical challenges and the destruction of transport routes and warehouses, leading to critical shortages of essential items such as personal protective equipment (PPE), ORS, IV fluids, and antibiotics (21).

In several countries within the Region such as Afghanistan and Sudan, inaccessibility due to remoteness or seasonal conditions negatively impact the timely distribution of essential supplies to subnational levels. This indicates a need to have sub-national hubs covering the cholera hotspots, with essential supplies being prepositioned ahead of the cholera season.

In our survey, the Syrian Arab Republic indicated that it is in the process of establishing pre-positioned essential stocks for cholera control and response at both national and subnational levels, covering at least 80% of high-risk districts. Additionally, the Syrian Arab Republic has implemented a functional stock monitoring system at the national level and in at least 80% of these districts. Iraq also reported having pre-positioned essential stocks; however, the country lacks a functional stock monitoring system at the national level. Afghanistan confirmed that it has both pre-positioned essential stocks and a functional stock monitoring system at the subnational level. Information regarding Sudan was unavailable at the time of the survey.

- Limited human resources for health

Brain drain and high turnover due to the challenging political, social, and economic contexts result in a significant gap in trained health personnel, particularly in low-resource and conflict-affected countries. Current projections imply that health workforce shortages will continue in the Region, and will account for over 20% of the global shortfall that is anticipated by 2030 (22). The combined shortage of health care providers needed for cholera case management and public health personnel – including the rapid response teams (RRTs) – needed for the overall response hinders effective outbreak management and exacerbates the spread of the disease. In the cholera treatment facilities, shortage of health care providers during cholera outbreaks leads to overcrowding at health facilities and subsequent staff fatigue due to the increased demand for treatment. Insecurity in conflict zones limits the ability of health care workers to reach affected populations, exacerbating the situation by preventing the timely treatment and containment of cholera cases. Moreover, conflicts often put health care workers in danger and force many to flee or abandon their posts (23).

- Inadequate quality of cholera case management

Inconsistent quality of cholera case management presents a significant challenge. This inconsistency stems from a lack of standardized treatment protocols and referral systems across countries. A key contributing factor is the brain drain, in addition to the lack of institutionalized and continuous capacity development for health care workers, which is a critical aspect of fundamental health system strengthening (24). As a result, many health care providers lack the skills and tools necessary to effectively manage severe cholera cases, particularly those with comorbidities and complications, and vulnerable populations like pregnant women (25) and malnourished children (26).

Malnutrition exacerbates the severity of cholera and complicates treatment, creating a vicious cycle where cholera worsens malnutrition, which in turn hinders recovery. This issue is particularly acute in countries facing protracted emergencies like Yemen, where projections from the Integrated Food Security Phase Classification (IPC) indicate that by the end of 2024, 609 808 children will be acutely malnourished, with 118 570 expected to suffer from severe acute malnutrition (SAM) – a 34% increase from 2023 levels (27). In addition, approximately 222 918 pregnant and breastfeeding women are anticipated to be malnourished, placing them at especially high risk of severe cholera. These figures highlight the critical need for an integrated approach to address both cholera and malnutrition, especially among the most vulnerable populations.

Our survey revealed that while some countries (Afghanistan, Iraq and the Syrian Arab Republic) have treatment guidelines and protocols ready in high-risk districts, the real challenge lies in translating these guidelines/protocols into effective action on the ground. This gap between strategy and implementation often stems from a range of practical barriers, including inadequate resources, limited capacity, logistical constraints and complex field realities. As a result, even in presence of well-established case management protocols, countries may struggle to ensure high-quality care and produce tangible outcomes in the field, highlighting the need for stronger operational support, capacity-building of community staff and frontline health workers, supportive supervision, adaptive management, and continuous evaluation to bridge the gap

3.1.3 Oral cholera vaccination

Oral cholera vaccines (OCV) are safe and effective tools recommended to complement other cholera prevention and control measures. Due to the global shortage of OCV, the International Coordinating Group on vaccine provision (ICG) has temporarily suspended the standard two-dose vaccination regimen for cholera outbreak response campaigns and recommended a single-dose strategy instead in October 2022.

In 2022 and early 2023, five countries in the Region implemented reactive OCV campaigns. Those campaigns reached to almost 7.4 million people (above one-year of age) in high priority subnational locations. Lebanon, Pakistan and the Syrian Arab Republic conducted single-dose OCV campaigns, while Somalia and Yemen conducted two-dose campaigns, as the latter two countries implemented their campaigns before the ICG's decision. All five countries have reported a relatively high OCV coverage at the national level ranging between 70-96% (**Table 2**) with notable coverage variations at subnational levels. Although the impact of the OCV campaigns was not properly documented in the Region, a decline in the number of confirmed cases and deaths was observed in January 2023 coinciding with the administration of OCV in Lebanon (28). Challenges to effective implementation of reactive OCV campaigns in the Region include a lack of political will, inadequate operational and logistical capacities at the subnational levels, remoteness and inaccessibility, volatile security situations, and refusals and vaccination hesitancy. On the other hand, preventive vaccination is mainly hindered by the global shortage of OCV, lack of updated hotspot mapping and inadequate planning capacities in several countries.

Table 2: OCV implementation in the Eastern Mediterranean Region, 2022–2023⁵

No.	Country	Date	Target population	Vaccinated	Coverage
1	Lebanon	November 2022–February 2023	1 500 000	1 040 683	70%
2	Pakistan	July–September 2022	2 926 132	2 807 781	96%
3	Somalia	January–October 2022	934 511	888 092	95%
4	Syrian Arab Republic	December 2022–January 2023	1 993 169	1 859 329	93%
5	Yemen	February–March 2022	761 904	669 467	88%

3.2 Water, sanitation and hygiene (WASH)

Cholera is a clear indicator of poverty and social exclusion, primarily affecting poor and vulnerable populations who lack access to essential services, particularly WASH infrastructure and health systems. Data show that inadequate investment in WASH infrastructure is a key risk factor for cholera outbreaks. Globally, from 2010 to 2021 97% of cholera cases occurred in countries with the lowest levels of water and sanitation services. Only three out of 34 countries with the most deficient WASH systems reported no cholera cases during this period, underscoring the critical role that robust WASH infrastructure plays in preventing the spread of cholera (29).

3.2.1 WASH in households and communities

One of the major contributing factors to cholera outbreaks in the Region is inadequate household access to safe drinking water and basic hygiene and sanitation in many cholera-affected countries. The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) data show that in 2022 (30):

- **78 million** people (10% of the Region’s population) had no access to basic **water** services (i.e., drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing); 59 million of those people lived in rural areas.
- **138 million** people (18% of the Region’s population) had no access to basic **sanitation** services (i.e., use of improved latrine facilities that are not shared with other households), with 103 million of those people living in rural areas.
- **222 million** people (28% of the Region’s population) lacked basic **hygiene** services or lacked data on basic hygiene services (i.e., availability of a handwashing facility with soap and water at home), with 146 million of those people living in rural areas.

In particular, those in FCV contexts are worse off across WASH indicators as well as WASH-related health indicators. Overall, they have a significantly lower probability of accessing safely managed drinking water (43%) than people in more stable areas (82%).

⁵ Source: Country reports to WHO, 2023.

Table 3. Basic and safely managed WASH coverage in households in cholera-affected countries in the Eastern Mediterranean Region, 2022 (30)

Country	Basic hygiene service coverage ⁶		Safely managed drinking water service coverage ⁷		Safely managed sanitation service coverage ⁸	
	Rural	Urban	Rural	Urban	Rural	Urban
Afghanistan	44%	59%	28%	36%	51%	70%
Iraq	97%	98%	48%	65%	50%	44%
Lebanon	NA		48% (national level)		26% (national level)	
Pakistan	80%	92%	47%	57%	40%	NA
Somalia	19%	32%	NA		22%	44%
Sudan	11% (national level)		NA		NA	
Syrian Arab Republic	81%	87%	0%		0%	
Yemen	NA		0%		NA	60%

During armed conflicts, WASH systems may be subjected to damage and destruction; to denial of essential consumables and supplies; and to deterioration and, eventually, collapse. Sieges and blockades by parties of the conflict lead to fuel shortages, restricting access to clean water and wastewater treatment capacity, and raising the price of water trucking (31). Displacement caused by conflicts adds further challenges, as it often forces populations into overcrowded settings with inadequate access to clean water and sanitation facilities, sewerage and waste disposal systems. These conditions are highly conducive to the spread of cholera, as displaced individuals are frequently left with no choice but to rely on contaminated water sources.

Religious events and other large-scale public gatherings often involve high population density at the same location, with significant domestic and international travel. This environment can heighten the risk of infectious disease spread including cholera. In the 19th century, cholera outbreaks during Hajj pilgrimage resulted in considerable mortality globally with almost 200 000 deaths. On the other hand, recent reports highlight an increased incidence of diarrheal disease among pilgrims from diverse regions (32). Cholera accounted for several outbreaks after the Hajj in 1984–86. In Iraq, the annual Arba'een pilgrimage, which hosts more than 20 million attendees, has also been associated with water- and foodborne diseases as a key public health threat. Contaminated water sources, unsafe food handling and inadequate hand hygiene are frequently cited causes of diarrheal illnesses among Arba'een pilgrims. Similarly, foodborne outbreaks have been documented during the Hajj, with improper food storage identified as a principal contributing factor.

Thus, during cholera epidemics or in settings with a high risk of cholera, it is critical to monitor fecal contamination of all sources of drinking water, regardless of the source (e.g., urban water supply networks, water trucking, private sellers, boreholes), to ensure that at-risk or affected populations have access to safe, potable water in sufficient quantity (33). For this, two tests are considered essential: free

⁶ Availability of a handwashing facility with soap and water at home.

⁷ Drinking water from an improved source that is accessible on premises, available when needed and free from faecal and priority chemical contamination.

⁸ Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated off-site.

residual chlorine (FRC) and fecal indicator bacteria (FIB) tests. The presence of thermotolerant coliforms, *Escherichia coli*, and fecal streptococci is an indicator of fecal contamination (34). Surveillance of those indicators is easy to implement and more effective in characterizing an overall transmission risk of fecal pathogens compared to direct searches for *V. cholerae*. Particularly in the context of an ongoing epidemic, evidence of fecal contamination of a drinking water source indicates a risk of cholera transmission even if *V. cholerae* has not been found in the specific sample analyzed.

However, to date many countries lack comprehensive government plans for safe water provision and improved sanitation, and even where plans exist, there is insufficient financial investment to implement them (31). The absence of political engagement and prioritization of water access further aggravates the situation, as water and sanitation remain low on political agendas. And more than half of the countries/territories in the Region had insufficient data to estimate national coverage of basic hygiene services.

3.2.2 WASH/infection prevention and control in health care facilities

Inadequate WASH and infection prevention and control (IPC) practices including the implementation of proper isolation measures have impeded an effective response to cholera. Below are some of the key WASH-related indicators in the Region in 2023 (30):

- **74%** of health care facilities had basic water services (i.e., water is available from an improved source⁹ on premises). **27%** of health care facilities had basic sanitation services (i.e., usable improved sanitation facilities,¹⁰ including at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility).
- **60%** of health care facilities had basic hand hygiene services (i.e., functional hand hygiene facilities are available at points of care, and within five meters of toilets).
- **29%** of health care facilities had basic health care waste management services (i.e., waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely).
- **34%** of health care facilities had basic environmental cleaning services (i.e., cleaning protocols are available, and staff with cleaning responsibilities have all received training).

Cholera treatment facilities provide inpatient care for patients during outbreaks. Proper case management and isolation of patients is essential to prevent deaths and help control the spread of cholera. Ensuring that health care facilities located in cholera hotspots are equipped with WASH/IPC services could have a large impact on ending the disease by preventing disease transmission within the structure and the surrounding area (35). In this context, “health care facilities” encompass all formally recognized facilities that provide health care, including primary, secondary and tertiary, public and private (including faith-run), and temporary structures designed for emergency contexts, including cholera treatment centres (CTCs) and cholera treatment units (CTUs).

⁹ Improved water sources are those which by nature of their design and construction have the potential to deliver safe water. These include piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

¹⁰ Improved sanitation facilities are those designed to hygienically separate human excreta from human contact. These include wet sanitation technologies – such as flush and pour flush toilets connecting to sewers, septic tanks, or pit latrines – and dry sanitation technologies such as dry pit latrines with slabs, and composting toilets.

Table 4. Basic WASH Coverage in health care facilities in cholera-affected countries in the Eastern Mediterranean Region¹¹, 2023(30)

Country	Basic water service	Basic sanitation service	Basic hand hygiene service	Basic waste management service	Basic environmental cleaning services
Afghanistan	79%	2.5%	Total: NA (Hospital: 29%)	82%	84%
Iraq	68%	2.8%	49%	21%	25%
Pakistan	75%	16%	55%	3.9%	34%
Somalia	42%	20%	43%	12%	14%
Sudan	27%	6.5%	17%	3.3%	1.5%
Syrian Arab Republic	66%	15%	84%	NA	6.6%
Yemen	47%	4%	28%	37%	17%

Despite the availability of guidance and technical notes from GTFCC on WASH in cholera treatment facilities, challenges remain in ensuring effective implementation and long-term sustainability. These challenges are primarily due to limitations in human resources, capacity and funding. Additionally, the specific gaps in WASH and IPC within health care facilities vary across countries (Table 4), highlighting the need for context-specific, country-adapted approaches to address them effectively.

In our survey, neither Afghanistan, Iraq, Sudan nor the Syrian Arab Republic clearly confirmed the availability of functioning medical waste management systems in at least 80% of cholera high-risk districts. However, Afghanistan and Syria reported that they are in the process of development of WASH protocols (waste management, water treatment, cleaning and disinfection, handwashing with soap), whereas Iraq confirmed the availability of such a plan already. These results indicate more support is needed in implementation of WASH/IPC plans at health care facilities, including capacity-building and procurement

3.3 Coordination, funding and partnerships

A coordinated multisectoral approach for cholera control is essential for early warning, joint risk assessment/planning and resource mobilization, integration of key public health interventions such as WASH and OCV, efficient prepositioning and distribution of essential supplies, joint monitoring and evaluation, and sustaining multidisciplinary surge capacity to improve outbreak preparedness and response.

In the Eastern Mediterranean Region, poor coordination of cholera outbreak response is one of the major overarching challenges particularly in FCV countries. At country level, the response by different humanitarian actors is often fragmented due to dysfunctional cluster systems and the absence of national cholera coordination bodies. This leads to inadequate information sharing, outdated hotspot mapping, lack of joint multisectoral preparedness and response plans and inefficient resource use (36). A recent study from Yemen highlighted the dysfunctional integration and coordination between international health and WASH actors in relation to response to the current cholera outbreak. This was mainly due to lack of clarity on the different roles and responsibilities and competition over

¹¹ Data from Lebanon were not available for 2023.

funding (36). In some countries of the Region, the subnational coordination for cholera response is either lacking or ineffective, making subnational levels completely dependent on national coordination. This will indeed slow access to data and resources, and ultimately slows decision-making processes and outbreak response.

The identification of priority areas for multisectoral interventions (PAMIs) is critical for national cholera control and elimination strategies. This exercise, which necessitates multisectoral collaboration and coordination, helps guide countries to develop NCPs for control/elimination. According to the GTFCC, six of the AWD/ cholera-affected/prone countries in the Region – Afghanistan, the Islamic Republic of Iran, Iraq, Lebanon, Pakistan and the Syrian Arab Republic – have never conducted a PAMI identification exercise (37). This will impair the reliability of their national cholera preparedness and response plans.

Funding for sustained cholera control programmes is critically inadequate. Economic instability and poverty in many countries minimize domestic contributions, hindering the development of necessary WASH and health infrastructure. Long-term infrastructure improvement plans are underfunded, and financial support is often insufficient to address the root causes of cholera outbreaks. Additionally, there is a lack of joint advocacy materials and structures, leading to a failure to mobilize domestic and external resources effectively. In Pakistan, the limited cholera outbreak response capacity of some flood-affected provinces and the explosion of cholera cases in 2022 were attributed to the chronic underfunding of the health care system (38). Furthermore, external resources for humanitarian response have recently been affected by the global economic crisis and donor fatigue. Amid a massive cholera outbreak, UNICEF, the WASH cluster lead, indicated that its crisis response in Sudan was only 56% funded by the last quarter of 2024 (39). In Yemen, the country reporting the highest burden of cholera in the world, the funds provided to the WHO-led Health Cluster in 2024 represented just less than 50% of the total budget needed to provide critical services – including response to cholera and other disease outbreaks – to the most vulnerable people(40).

Our survey revealed that all responding countries – Afghanistan, Iraq, Sudan and the Syrian Arab Republic – had established national multisectoral coordination mechanisms for cholera, such as national taskforces, as well as similar coordination mechanisms at the subnational level for at-risk areas. Additionally, they had identified key performance indicators to monitor cholera preparedness and response activities. Afghanistan, Sudan, and the Syrian Arab Republic had developed resource mobilization plans for cholera control (including investment plans involving partners and governments), while Iraq had yet to develop such a plan. The survey highlights gaps in implementing multisectoral plans and operationalizing coordination and evaluating their effectiveness in practice.

Strategic partnerships are vital for enhancing cholera outbreak preparedness and response, especially in fragile settings like the Eastern Mediterranean Region, where health systems face political instability, insecurity and resource limitations. Besides their instrumental role in resource mobilization, partner networks such as the Global Outbreak Alert and Response Network (GOARN) and standby partners (SBP) can offer highly specialized technical expertise to support cholera outbreak control efforts and build capacities in affected countries (41). However, the full potential of these partnerships in responding to cholera outbreaks in the Region is hindered by complex deployment environments – particularly in FCV countries, lengthy bureaucratic approval procedures at the national level and a lack of dedicated funding mechanisms for rapid country-based deployments. To address these challenges, streamlined deployment protocols, flexible sustainable funding arrangements, and context-specific coordination mechanisms are essential to enhance the timeliness and effectiveness of partner support in cholera outbreak settings. WHO needs to develop and implement effective partnerships for cholera

control/elimination at both regional and national levels, with the objective of strengthening partnerships to boost cholera preparedness, enable early control and secure sustainable financing. For this, key activities and actions are proposed to *a) build and sustain partnerships at regional and country levels, b) enhance operational readiness and response through partnerships, and c) mobilize financial resources and promote sustainability for cholera control.*

3.4 Climate change

Climate change and extreme weather events further strain water resources and sanitation systems, contributing to cholera outbreaks in the Region. Global warming and changes in weather patterns are causing frequent and intense weather events that usually lead to massive population displacement and other negative consequences, particularly in developing countries.

Among cholera-affected countries in the Region, **Pakistan** has been among the top 10 most climate-affected countries during the period 2000–2019, and **Afghanistan** was also ranked among the 10 most affected countries in 2019 (42). Between 2022 and August 2024, **Pakistan** reported the highest number of meteorological, hydrological and climatological hazards (Table 5) among the eight cholera-affected countries in the Region, including unprecedented floods affecting more than 30 million people all over the country. The floods damaged most water systems in affected areas, forcing more than 5 million people to rely solely on contaminated drinking water from ponds and wells. Consequently, a sudden rise in cholera cases was noticed in some of the flood-affected districts in Pakistan, with more than 13 000 suspected cholera cases reported from 16 flood-affected districts in Balochistan (43).

The Greater Horn of Africa also experienced the longest drought during the past several years. The onset of El Niño in October 2023 led to unusual rains, resulting in floods in several countries. This was followed by dry conditions affecting Somalia and surrounding countries. Somalia faced an upsurge of suspected cholera cases as conflict and a multi-season drought displaced millions of people, many into camps lacking access to safe water and sanitation (44).

Table 5. List of meteorological, hydrological and climatological hazards in cholera-affected countries in the Eastern Mediterranean Region, 2022–August 2024¹²

Country	Drought	Extreme temperature	Flood	Storm	Wildfire	Total events	No. of affected populations
Afghanistan		2	11			13	1 017 407
Iraq			1	2		3	23 017
Lebanon		2				2	3 999 200
Pakistan		3	12	4	1	20	33 200 269
Somalia			6			6	3 556 419
Sudan	1		2			3	12 505 529
Syrian Arab Republic			2	1		3	375 251
Yemen			6	1		7	828 172
Total	1	7	40	8	1	57	55 505 264

¹² EM-DAT:

<https://www.emdat.be/#:~:text=EM%2DDAT%20contains%20data%20on,research%20institutes%2C%20and%20pres%20agencies>

4 Strategic goal and objectives

In alignment with the GTFCC roadmap for ending cholera by 2030, the WHO HEPR Framework and WHO global cholera strategic preparedness, readiness and response plan, the overarching goal of this regional cholera strategy is **to reduce cholera-associated morbidity and mortality in the Eastern Mediterranean Region by the end of 2028**. To achieve this goal, four specific objectives have been established, which are contextualized to the problem statement above for the Region, each addressing a critical component of cholera control. These objectives are also aligned with the three main axes proposed by GTFCC roadmap, as well as the “5C” s of WHO’s HEPR framework, which is a comprehensive framework for countries and health emergency stakeholders towards an ecosystem approach to health emergencies prevention, preparedness and response (Table 6).

- **Objective 1: To strengthen overall multisectoral coordination of cholera control** by establishing/strengthening coordination mechanisms and developing national cholera control plans (NCP) or roadmaps.
 - **Milestone:** by the end of 2028, five cholera-affected countries have updated NCPs.
- **Objective 2: To enhance early detection of cholera outbreaks and rapid response** by strengthening disease surveillance systems and build capacities for timely response and containment.
 - **Milestone 1:** by the end of 2028, 90% of the outbreaks in five cholera-affected countries to be detected within seven days, notified within one day, and response initiated within seven days.
 - **Milestone 2:** by the end of 2028, 80% of reported suspected cholera cases to be laboratory tested during the first seven days of the outbreak.
- **Objective 3: To increase access to quality cholera case management** services in cholera treatment facilities and the community.
 - **Milestone:** by the end of 2028, five cholera-affected countries have improved capacities for management of cholera cases at national, subnational and community levels, ensuring that at least 80% of suspected cholera patients receive timely and appropriate treatment at cholera treatment facilities or community-based ORPs and as measured by improvements in the CFR.
- **Objective 4: To improve WASH** by enhancing water quality surveillance (WQS) in communities and ensuring adequate standard basic WASH and IPC services at health care facilities.
 - **Milestone 1:** by the end of 2028, five cholera-affected countries implement WQS in communities,
 - **Milestone 2:** by the end of 2028, five cholera-affected countries implement the WASH for Health Facility Improvement Tool (WASH FIT) and develop improvement plans for PAMI/cholera hotspots.

Table 6. Alignment of the regional cholera strategy (2025–2026), GTFCC Roadmap and WHO HEPR Framework

Regional cholera preparedness and response strategy (2025–2028)		GTFCC Roadmap (7)	WHO HEPR Framework (45)
Specific objective	Objective component		
Objective 1: To strengthen overall multisectoral coordination of cholera control	All-levels coordination and collaboration mechanisms	Axis 3: Coordination of human, technical, and financial resources Axis 2: Prevention of disease occurrence by targeting multisectoral interventions in cholera hotspots	C5: Emergency coordination
	- PAMI identification and NCP development - Monitoring and evaluation (M&E) - Advocacy and resource mobilization - Effective partnerships - Supply forecast and management capacity	Axis 3: Coordination of human, technical, and financial resources Axis 1: Early detection and response to contain outbreaks (effective supply management)	
Objective 2: To enhance early detection of cholera outbreaks and rapid response	- Surveillance (including community-based surveillance and case-based surveillance, RRT, PoE & cross-border disease surveillance) - Laboratory confirmation - Reporting & data management - Oral cholera vaccination - Community-based approach	Axis 1: Early detection and response to contain outbreaks Axis 2: Prevention of disease occurrence by targeting multisectoral interventions in cholera hotspots	C1: Collaborative surveillance
	Health care workers' capacities in case management		
Objective 3: To increase access to quality cholera case management at health facilities and communities	- Timely access to facility- and community-based cholera treatment - Timely access to case management supplies	Axis 1: Early detection and response to contain outbreaks (effective supply management)	C3: Safe and scalable care C4: Access to medical countermeasures
	- WASH and IPC standards at health facilities - Water quality surveillance	Axis 1: Early detection and response to contain outbreaks (WASH/IPC)	
Objective 4: To improve WASH in communities and health facilities	WASH/IPC coordination	Axis 3: Coordination of human, technical and financial resources	C2: Community protection C5: Emergency coordination

5 Key activities and actions

Below are the key actions/activities under each strategic objective. Detailed activities and corresponding indicators are listed in the log frame (**Annex**).

Objective 1: To strengthen overall multisectoral coordination on cholera control by establishing/strengthening coordination mechanisms and developing multisectoral roadmaps/plans.

To achieve this strategic objective, in all cholera-affected countries in the Region, WHO will:

- Support operationalization of coordination and collaboration mechanisms at all levels (global, regional, cross-border, national and subnational), including with partners like GTFCC, GAVI, and UNICEF, and enhance collaboration through broad-based, high-level multisectoral national policy committees:
 - Support building national capacities to implement multisectoral coordination to address fragmented cholera response;
 - Support the establishment of multisectoral national and subnational cholera coordination committees/bodies;
 - Improve cross-border/cross-regional coordination through operationalizing coordination committees and supporting coordinated joint planning/simulation exercises and response activities, such as cross-border OCV campaigns and training activities;
 - Advocate for ministerial/government support to enhance multisectoral collaboration and engagement with high-level regional/global bodies;
- Engage with national decision-makers and advocate for timely declaration/notification of cholera outbreaks under IHR (2005);
- Support/facilitate PAMI exercises in cholera-endemic and non-endemic countries and the development of multisectoral, multi-year NCPs for cholera control/elimination;
- Support comprehensive monitoring and evaluation (M&E) to ensure successful implementation of preparedness/response interventions and improve their impacts;
- Build and sustain partnership networks at regional and national levels and enhance operational readiness and response through partners;
- Support coordinated mobilization of financial and other resources for sustainable cholera control including the development of multisectoral resource mobilization plans and investment cases;
- Support the building/strengthening of supply management capacity (including forecast) at the regional, national and subnational levels to ensure the timely availability of essential cholera supplies.

Objective 2: To enhance early detection of cholera outbreaks and rapid response by strengthening disease surveillance systems and build capacities for timely response and containment.

To achieve this strategic objective, in all cholera-affected countries in the Region, WHO will:

- Support equipping surveillance units at national and subnational levels with the necessary resources, skills, updated tools, materials and job aids;
- Support the establishment of sentinel surveillance systems or networks for cholera and other acute diarrhoeal diseases;
- Improve the recording, monitoring and reporting of mild and moderate cholera cases as contributors to CFR metrics;

- Strengthen an integrated community-centred approach, including building the capacity for community-based surveillance;
- Support the identification and notification of “probable” cholera outbreaks, as outlined in the updated (2024) GTFCC cholera surveillance guidelines;
- Enhance and build laboratory capacity for cholera confirmation – including genomics – by ensuring the availability of updated guidelines/protocols, diagnostics and supplies (RDT, culture and PCR), and technical expertise;
- Develop testing strategies and capacities for other AWD-causing pathogens, preferably using multiplex laboratory tests – especially where the proportion of AWD/cholera in under-five children is high;
- Streamline cholera data and strengthen data management for evidence-based planning and adaptation at global, cross-border, regional, national and subnational levels;
- Strengthen regional and national mechanisms for cholera data storage and security;
- Advocate for and support country-based approval of OCV use for reactive and preventive campaigns;
- Support countries to timely access OCV for reactive/preventive campaigns using the different allocation mechanisms,
- Strengthen/build national and subnational capacities for the planning, implementation, documentation and monitoring of OCV campaigns;
- Enhance timely cholera outbreaks verification/investigation, early response and monitoring by building the capacity of multidisciplinary public health teams such as RRTs at all levels and supporting national FETP training programmes.

Objective 3: To increase access to quality case management services in the cholera treatment facilities and community.

To achieve this strategic objective, in all cholera-affected countries in the Region, WHO will:

- Support the establishment of formal cholera treatment networks in high-risk areas/PAMIs, ensuring the availability of triage systems and referral mechanisms between different service nodes (home ORS, ORPs, CTU, CTC);
- Build the capacity of the health care workers in updated cholera case management protocols and treatment guidelines, including on-the-job and refresher trainings;
- Build capacities for adequate and specialized care of malnourished children, persons with co-morbidities, pregnant women and the elderly with cholera;
- Support the availability of cholera essential supplies (ORS, IV fluids, antibiotics and IPC) at cholera treatment facilities and community ORPs;
- Enhance outreach activities to hard-to-reach communities (due to conflict, insecurity, floods, etc) where there is a major concern about adequate case management;
- Advocate for and improve community access to ORS for mild cases;
- Strengthen the identification, tracking and monitoring of community deaths;
- Develop and implement innovative retention strategies to address persistent issues of staff turnover and burnout;
- Support evidence-based RCCE approaches and strategies to address challenges in health-seeking behaviour and treatment hesitancy.

Objective 4: To improve water, sanitation and hygiene (WASH) by enhancing water quality surveillance in communities and ensuring adequate and basic WASH/IPC standards and supplies at health facilities.

To achieve this strategic objective, in all cholera-affected countries in the Region, WHO will:

- Provide technical guidance and capacity-building in WASH and IPC at health facilities by supporting implementation of WASH FIT and IPC minimum requirements at cholera treatment facilities;
- Enhance WASH/IPC infrastructure in health facilities and cholera treatment facilities;
- Optimize critical WASH/IPC supplies in cholera treatment facilities;
- Support the development and implementation of water and sanitation safety planning at cholera treatment facilities;
- Build the capacity for effective water quality surveillance in the community by supporting the development of legislation/regulations for private suppliers and delivering technical guidelines, supplies and training programmes;
- Support RCCE in household water treatment and storage and hygiene promotion programmes;
- Support regular water quality monitoring in both households/communities and health facilities;
- Support regular assessment of WASH in healthcare facilities and improve WASH and IPC conditions;
- Support and advocate for integrated health-WASH interventions in national and subnational cholera preparedness and response plans.

6 Cross-cutting areas

This strategy also addresses key cross-cutting areas that are highly impacting cholera control in the Region such as risk communication and community engagement (RCCE), prevention and response to sexual exploitation, abuse and harassment (PRSEAH) and gender mainstreaming, as well as evidence generation and research.

6.1 Risk communication and community engagement (RCCE)

Community engagement is at the core of effective cholera control, covering all areas from WASH, case management, surveillance, fostering collaboration between health responders and affected communities, enhancing intervention success and promoting sustainable practices (**Figure 5**) (7). Building trust between health systems and local populations encourages individuals to seek medical help, adhere to health recommendations and participate in public health initiatives. This is particularly important in fragile settings where distrust may be prevalent.

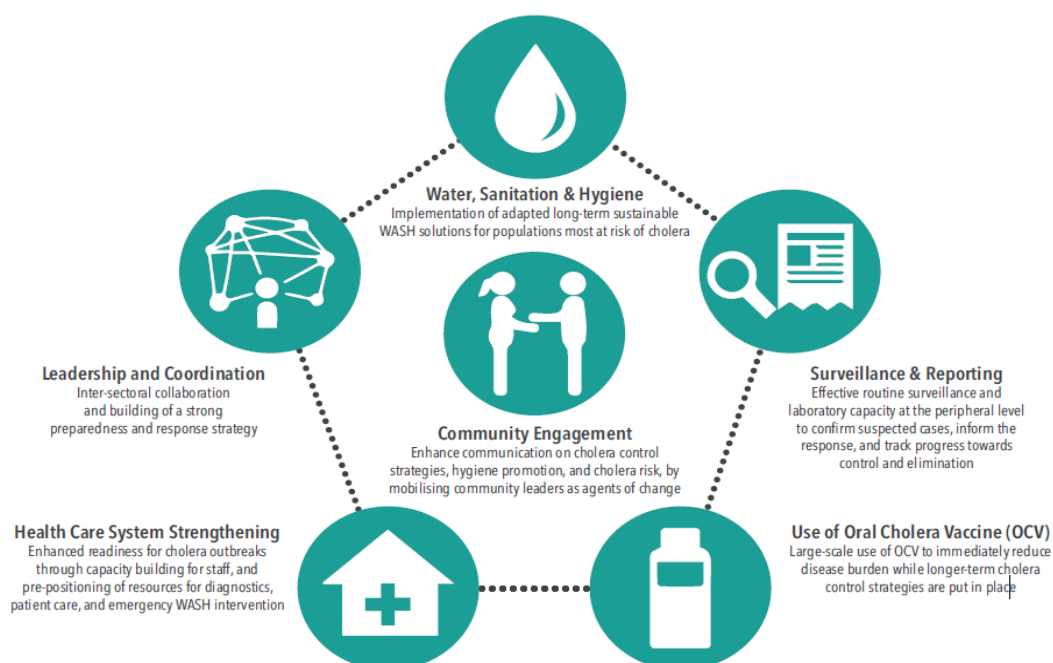


Figure 5. Multisectoral interventions to control cholera (adopted from GTFCC Roadmap)

Engaging communities improves surveillance and reporting and ensures timely detection and intervention as local communities are often the first to identify cholera cases and can promote early use of ORS and health care seeking. Moreover, community feedback allows for the adaptation of prevention strategies such as OCV, making hygiene practices, safe water use and sanitation methods more culturally appropriate and effective. Community engagement also promotes vital WASH practices such as building latrines and ensuring safe water access, addressing the root causes of cholera outbreaks. Furthermore, it plays a key role in managing misinformation. By using trusted local influencers to share accurate information, health authorities can combat fear and rumours that may hinder response efforts.

However, in many cholera-affected countries where community engagement is not institutionalized and therefore not adequately funded or staffed, there is often a disconnect between health authorities and the communities they serve. This disconnect can lead to a lack of behavioural insights that are critical for designing effective cholera prevention strategies (**Figure 5**) (47). By placing community engagement at the core of cholera control, this regional strategy aims to strengthen both immediate responses to cholera outbreaks and long-term resilience in affected areas.

*Our survey revealed a significant gap in social mobilization mechanisms for cholera prevention and control. Both **Iraq** and **Sudan** reported lacking social mobilization mechanisms based on survey or study results, and they also do not have trained community volunteers to deliver key messages on cholera prevention. The **Syrian Arab Republic** is currently in the process of developing such a structure, while **Afghanistan** has a social mobilization mechanism in place, though it is limited to certain districts. This highlights the need for comprehensive community engagement efforts across all affected countries to ensure effective cholera prevention and control at the community level.*

Key **actions** proposed under RCCE include the following:

- Support socio-behavioural/cultural studies and research to understand the root causes of cholera outbreaks in the Region;
- Strengthen/advocate for an integrated community-centred approach, including community-based surveillance, case management and RCCE in high-risk areas/PAMIs;
- Build RCCE/infodemic capacity at all levels to develop and implement context-specific strategies, interventions and inclusive materials for addressing the root causes of cholera including improper community practices such as open defecation;
- Develop and implement RCCE strategies for promoting cholera-related hygiene practices such as hand washing and food safety;
- Enhance RCCE capacity to develop context-specific strategies promoting the uptake of evidence-based interventions such as OCV and water chlorination, and addressing community refusals and hesitancy;
- Collaborate with partners to develop innovative strategies to engage affected communities in prevention and response to cholera outbreaks.

6.2 Prevention of response to sexual exploitation, abuse and harassment (PRSEAH)

The intersection of cholera outbreaks and sexual misconduct poses a critical challenge in health emergencies. By adopting a comprehensive and integrated strategic framework, we can effectively mitigate risks, prevent and ensure capacities for response to SEAH allegations to protect vulnerable populations, and uphold the highest standards of ethical conduct in our humanitarian operations.

Preventing and addressing sexual misconduct in cholera response

Cholera outbreaks often create power imbalances between aid workers and affected communities, increasing the risk of sexual exploitation, abuse and harassment (PSEAH). The essential services provided during these crises, such as medical treatment and WASH facilities, can be misused by perpetrators. Recognizing this vulnerability and proactively integrating PSEAH prevention and response mechanisms into every aspect of the cholera response strategy is imperative.

Sexual misconduct, encompassing exploitation, abuse and harassment, perpetrated by humanitarian personnel severely undermines the rights and well-being of those they are meant to serve. Such behaviour is fundamentally incompatible with the core values of the UN organizations including WHO, which are committed to “do no harm.” Preventing and responding to sexual misconduct is a shared responsibility, requiring a concerted effort from all levels – individuals, managers, leaders and the Organization as a whole – to achieve a zero-tolerance environment. WHO has developed a comprehensive three-year strategy to address this critical issue, incorporating best practices across the UN system and valuable input from all Member States.

Guiding Principles:

- **Zero tolerance:** Uphold an unwavering commitment to zero tolerance for sexual exploitation, abuse and harassment (SEAH) by all personnel.
- **Victim-centred:** Prioritize the safety, dignity and well-being of affected individuals, ensuring access to confidential reporting and support services.
- **Integrated approach:** Systematically integrate SEAH prevention and response into all aspects of health emergency operations, including related cholera control interventions.
- **Accountability:** Establish clear lines of responsibility and accountability at all levels, from individual personnel to organizational leadership.

- **Transparency:** Foster a culture of transparency and open communication, encouraging the reporting of concerns without fear of reprisal.

WHO's commitment to preventing and addressing sexual misconduct extends to all health emergencies, including cholera outbreaks. By integrating PSEAH principles into its emergency response operations, WHO strives to safeguard vulnerable populations and ensure the highest standards of conduct among humanitarian workers. The Emergency Response Framework (ERF) serves as the foundation for implementing PSEAH measures at the country level, clearly defining roles and responsibilities to ensure seamless integration across all levels of graded emergencies in the following areas:

- **Prevention**
 - Risk assessment: Conduct comprehensive risk assessments to identify and mitigate potential SEAH risks in contexts of cholera outbreaks.
 - Awareness raising: Sensitize all personnel and create awareness on SEAH prevention, identification and reporting procedures.
 - Community engagement: Partner with affected communities to raise awareness, establish safe reporting mechanisms and empower victims /survivors to engage.
- **Response**
 - Prompt investigation: Ensure prompt, impartial and thorough investigation of all SEAH allegations.
 - Accountability measures: Ensure that in-country mechanisms for reporting and responding to allegations of sexual misconduct are effectively linked to regional and global structures for appropriate disciplinary measures for perpetrators, and endeavour to address any systemic issues that may undermine the enforcement of accountability.
- **Survivor/victim support**
 - Collaborate and support interagency mechanisms to strengthen capacities for the provision of support to victims/survivors, in line with the UN Victim support protocol.
 - Support ministries of health to enhance capacities for medical care and psychosocial support to victims and survivors of SEA.

Table 7: Key PSEAH actions and activities for cholera control

Area	Actions	Activities
Cholera treatment	Community involvement	Involve community members, especially women and vulnerable groups, in the planning and distribution of cholera treatment supplies to ensure their needs and safety concerns are addressed.
	Clear codes of conduct	All personnel involved in the cholera response, including health care providers, aid workers, volunteers and community leaders, must adhere to strict codes of conduct that explicitly prohibit SEA.
	Confidential reporting mechanisms	Establish safe and accessible channels for reporting SEA concerns without fear of retaliation. This empowers survivors and enables prompt action against perpetrators.
	Vetting and training	Conduct thorough background checks on all personnel and provide comprehensive training on PSEAH prevention and response.
WASH in emergencies	Gender-sensitive WASH design	Ensure WASH facilities are designed to consider the specific needs and safety concerns of women and girls, including adequate lighting, privacy and separate facilities.
	Female WASH staff	Employ and train female WASH staff to provide support and address the specific needs of women and girls in a culturally sensitive manner.
	Community-led WASH	Empower communities to manage and maintain WASH facilities and collaborate with local organizations specializing in the prevention of gender-based violence to strengthen community support systems.
RCCE	Capacity-building of RCCE staff	Provide comprehensive training to RCCE staff on PSEAH prevention and response, emphasizing the importance of maintaining professional boundaries and respecting the dignity of all community members
	Inclusive communication approaches	Develop communication materials that are inclusive and culturally sensitive, emphasize the importance of PSEA and address the specific needs and concerns of different groups in collaboration with PSEA Network, GBV and child protection service providers
	Safe complaints and feedback mechanisms	Set up feedback systems and communication channels that are accessible and safe for all community members, especially women and girls, to report SEA concerns or seek information without fear of stigma or reprisal.

6.3 Mainstreaming a gender lens in cholera control

Integrating a gender lens into cholera control requires addressing the distinct vulnerabilities and roles that different genders play in relation to cholera prevention and response. To operationalize this approach, several key actions should be considered:

- **Collecting and analyzing sex- and age-disaggregated data in cholera response** is crucial for understanding the differential impact of cholera on various groups. Additionally, in the clinical setting, understanding the outcomes of pregnant women is important as they are considered among the high-risk populations for severe cholera. All these data inform targeted interventions, ensuring that the unique challenges faced by women, men, boys and girls are addressed appropriately. The data should be interpreted by considering the influence of gender roles on cholera transmission, for example in domestic settings, where women and girls often take on tasks such as fetching water and caring for sick family members, thus increasing their exposure. By understanding these roles, interventions can be tailored to meet the specific needs of different genders (48).
- **Engaging women in decision-making processes** for cholera prevention strategies is another key element. Ensuring representation of different community member groups (i.e., both male and female

members) ensures that their perspectives and needs are considered, which can improve the effectiveness of health education campaigns and community initiatives. Training women in community surveillance, RRT and safe water handling practices, for example, not only empowers them to take preventive action but can also make the services more accessible to women and girls (48).

- **WASH** facilities must also be designed with gender considerations in mind to ensure accessibility for all community members. Safe and private sanitation options for women and girls are especially critical. Furthermore, the design and management of WASH and IPC in HF must consider a variety of user needs, including women in labour and menstruating women. Women are a particularly important and common user group as they comprise the vast majority of frontline health care workers, which makes them particularly vulnerable to the risk of infection from poor hygiene. The planning, design and management of WASH services in health care facilities must therefore consider the accessibility, safety, privacy, social appropriateness or acceptability, and comfort of these many different users (46).
- Furthermore, **regular assessments** of how gender dynamics influence cholera vulnerability can be integrated into programme evaluations. Gender analysis allows for adjustments to strategies, ensuring they are responsive to the needs of affected populations. Continuous feedback from communities is also essential, enabling cholera control programmes to remain relevant and effective through ongoing improvements.

By applying these key actions, cholera control programmes can become more effective, equitable and responsive to the needs of all community members, ultimately contributing to better health outcomes during cholera outbreaks.

6.4 Evidence generation and research

Research on cholera in the Region is crucial to address the persistent challenges posed by the disease, considering the recent upsurge of cholera cases. The research areas outlined below are examples of potential topics that countries could explore to advance cholera control in the Region. As part of this regional strategy, a Region-specific research agenda is proposed to highlight some major knowledge gaps.

Given the cultural and contextual specificity of the countries of the Region, WHO and its partners will engage in a thorough research prioritization exercise. This will ensure that research efforts are aligned with each country's specific context, needs, priorities and strategic direction/goals. Such prioritization will help focus resources on studies that have the greatest impact in reducing cholera incidence, guiding prevention and control measures, and addressing the unique challenges faced by individual countries within the Region.

- Epidemiology and surveillance

It is essential to investigate the trends, patterns and causes of cholera outbreaks, especially in conflict-affected countries such as Sudan and the Syrian Arab Republic. By understanding the transmission dynamics, researchers can predict future outbreaks and design tailored interventions to mitigate their impact on vulnerable populations. Additionally, identifying populations at higher risk due to socioeconomic factors like poverty, displacement and lack of access to clean water and sanitation is also critical for effective prevention efforts. Strengthening surveillance systems is essential to monitor cholera cases effectively and make informed decisions on cholera control. Research on data utilization and analytics can enhance outbreak prediction models and optimize response strategies.

- Vaccination strategies

Assessing the effectiveness of the oral cholera vaccination (OCV) campaigns – including the impact of the single-dose OCV strategy on the high-risk populations – is crucial for improving outbreak control. Research should focus on understanding barriers to vaccination uptake and developing context-specific strategies to enhance coverage. Additionally, investigating new vaccine formulations or delivery methods could boost immunization efforts and strengthen cholera prevention.

- WASH

Research is needed to assess how improvements in water quality, sanitation and hygiene can reduce the incidence of cholera in some settings. Evaluating the effectiveness of existing WASH infrastructure and identifying gaps in service provision will help guide interventions. Furthermore, exploring innovative solutions for water purification and sanitation in low-resource settings could significantly enhance control efforts.

- Climate change and environmental factors

The relationship between climate change and its consequences, such as droughts and floods, and cholera outbreaks must be studied in detail. Environmental changes can influence water availability and quality, thereby affecting cholera transmission risks. Geospatial studies using geographic information systems (GIS) can map outbreaks in relation to environmental factors, helping to identify hotspots and guide targeted interventions.

- Community and public health interventions

Effective community engagement strategies are vital for promoting awareness of cholera prevention and early detection and treatment of suspected cholera cases. Research should examine local perceptions and behaviours to inform the design of culturally appropriate health education campaigns. In parallel, there is a need to evaluate clinical management protocols to improve patient outcomes, particularly in resource-limited settings where access to health care may be restricted, as well as the impact of community access to ORPs.

7 Monitoring and evaluation (M&E)/learning

- **WHO's regional team** will play a central role in tracking progress in implementing the actions outlined in this regional cholera preparedness and response strategy and overall performance. The key performance indicators, as detailed in the strategy's log frame (**Annex 1**), will serve as the primary tools for monitoring progress annually. Periodic one-to-one meetings and discussions with the target countries will be conducted to monitor implementation at national level and provide guidance and support. A mid-term review will also be conducted to monitor progress against the preset milestones and develop an improvement/acceleration plan if needed. In addition, the WHO Regional Office will support WHO country offices (WCOs) in developing tailored monitoring and evaluation (M&E) framework and plans that reflect the unique contexts and needs of each country.
- **WCOs** will work closely with ministries of health (MoH)/national cholera task forces to develop contextualized M&E plans. They will also oversee the implementation of activities at national and subnational level, ensuring that data is collected, analysed and used to inform adjustments to cholera control efforts as needed.

- **Across all levels** – regional, national and subnational – WHO will document best practices, success stories and challenges encountered throughout the implementation of national cholera control plans and roadmaps. This documentation will be shared with countries (and the public, if possible) to facilitate learning and promote the adoption of successful strategies across the Region. By fostering a learning environment, WHO aims to continuously improve cholera control efforts and contribute to the overall goal of eliminating cholera as a public health threat.

8 Challenges

Given the context of the Eastern Mediterranean Region, implementation of this strategy could face operational challenges that impede the timely achievement of its goals and targets. Major anticipated challenges include:

- worsening humanitarian situation and deteriorated security in some countries;
- a lack of the political will and the presence of multiple other competing health priorities;
- inability to mobilize domestic and external resources needed to implement the strategy;
- shortage of human resources for health (HRH), particularly at the subnational levels;
- persistent global shortages of essential cholera supplies (RDTs and OCV).

To mitigate these challenges, WHO will work closely with ministries of health and humanitarian and development partners to ensure that conditions for smooth implementation are in place. WHO will put more efforts on advocacy and raising awareness among decision-makers/policy-makers about the long-term health, economic and social impacts of cholera and the importance of increasing investments in cholera control. On the other hand, WHO will also continue supporting priority countries in developing resource mobilization plans and strategies aiming at securing sustainable funding for cholera prevention and control by engaging both governmental and nontraditional donors. WHO will continue facilitating and improving access to critical cholera supplies through strategic partnerships with global, regional and national manufacturers. While enhancing national capacities for cholera supplies/logistics planning and management, WHO will work with partners such as GAVI to facilitate and ensure that cholera-affected countries have timely access to essential cholera supplies such as RDTs and vaccines. Furthermore, WHO will support the priority countries to strengthen their readiness measures by having stockpiles of essential supplies linked to efficient distribution mechanisms and context-specific plans.

Through the health system strengthening approach, WHO will continue supporting the priority countries to design and implement need-based training programmes for the local health care professionals and community health workers on the management of infectious disease outbreaks including cholera. This includes supporting field epidemiology training programmes (FETP) and establishing rapidly deployable public health teams (RRT) at subnational levels. Building the capacity of local nongovernmental organizations (NGOs), community-based organizations (CBOs) and other active community structures could also help to mitigate the impacts of HRH shortage in remote/hard-to-reach areas. For this, WHO will work closely with the partners to provide continuous capacity-building programmes using different training modalities.

9 Conclusion

The context of the WHO Eastern Mediterranean Region is very conducive to cholera outbreaks. Due to the high burden that cholera puts on population health in the Region, immediate robust actions need to be taken by WHO, ministries of health and other key partners to control the situation. By

implementing this comprehensive regional cholera preparedness and response strategy, the Region can work towards achieving the Global Cholera Roadmap 2030 targets through reducing the burden of cholera and improving overall public health outcomes.

By enhancing overall coordination, strengthening detection and response capacities, improving access to timely and quality case management, and addressing the underlying determinants of cholera transmission such as WASH, this strategy aims to build more resilient health systems capable of preventing and controlling future cholera outbreaks. Strong leadership, collaboration, effective partnerships and sustained commitment at the national, regional and global levels are essential to achieve these goals.

This strategy should be complemented by country-based implementation plans focusing on high-priority interventions that are urgent, feasible, impactful and cost-effective. As such, WHO will facilitate in-country discussions among relevant stakeholders aiming to develop context-specific, well-coordinated cholera control plans. WHO will also continue providing guidance and technical support, and mobilizing the resources needed to successfully implement this regional strategy and country-based national cholera plans.

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Annex1: Logical framework, cholera, Eastern Mediterranean Region, 2025–2028

Overall GOAL	Reduced cholera-associated morbidity and mortality in the WHO Eastern Mediterranean Region by 2028		
Goal	To reduce the burden and impact of cholera outbreaks in the WHO Eastern Mediterranean Region from 2025 to 2028.		
Specific objective 1 TARGET	Indicators of Success/ Objective Component	Sources of Verification	Proposed Actions/Activities (Responsible)
To strengthen overall multisectoral coordination on cholera control by establishing/strengthening coordination mechanisms at all levels and developing multisectoral roadmaps. TARGET: By the end of 2028, five (5) cholera-affected countries have an updated multisectoral multi-year national cholera plan (NCP)/roadmap.	PROCESS: 1. <i>All-levels coordination and collaboration mechanisms</i> 1.1 By the end of 2028, all cholera affected countries have a national multisectoral task force, comprised of relevant ministry focal points, local partners, other UN organizations, and clusters, with ToR and information sharing mechanisms. 1.2 By the end of 2025, WHO/EMRO establishes and strengthens the regional coordination mechanism, involving relevant departments and units, with clear ToR.	OUTPUT: Updated multisectoral multi-year cholera national plan/roadmap shared. PROCESS: 1. Nomination of focal points and ToR of national multisectoral national task force shared. 2. Nomination of focal points and ToR of the regional coordination mechanism shared.	1.1 Support operationalization of multisectoral cholera coordination and collaboration mechanisms at cross-border/national/subnational/regional/global levels with a clear mechanism of data sharing and analysis of response activities. (WCO): - Map all national partners in cholera preparedness and response with a specific focus on (WASH & RCCE). - Support building national capacities to implement multisectoral coordination to address fragmented cholera response: provide guidance, training, resources, and tools. - Support establishing of multisectoral national and subnational cholera coordination committees/bodies. - Develop SOPs and tools for multi-sectoral reporting and information sharing. 1.2 Develop standardized protocols and tools for reporting cross-border cholera cases and information sharing. (EMRO) 1.3 Develop/update multisectoral cholera preparedness and response plans and conduct simulation exercises. (WCO & EMRO) 1.4 Strengthen linkages between the regional cholera coordination mechanism (dedicated cholera cell) and the other specialized coordination mechanisms (e.g. RCCE) to ensure support and guidance for the establishment of national and sub-national coordination mechanisms. (EMRO) 1.5 Engage in different coordination platforms -including the cross-regional ones- and contribute to joint/integrated cholera preparedness and response activities. (EMRO & WCO)
	2. <i>PAMI identification and NCP development</i> 2.1 By the end of 2028, all cholera affected countries have completed the identification or	3. PAMI results/reports shared.	1.6 Engage with key national stakeholders in multisectoral discussions to advocate for PAMI and NCP development. (WCO) 1.7 Mapping of available data at each cholera affected country/sector. (WCO) 1.8 Facilitate PAMI exercises and endorsement workshops. (EMRO & WCO)

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Specific objective 1 TARGET	Indicators of Success/ Objective Component	Sources of Verification	Proposed Actions/Activities (Responsible)
	update of PAMI using the updated GTFCC method.		1.9 Develop PAMI report, disseminate to the relevant stakeholders, and share for GTFCC review. (WCO) 1.10 Facilitate the development of multisectoral multi-year national cholera plan (NCP) and ensure the integration of PAMI results into cholera response. (WCO & EMRO).
	3. <i>Monitoring and evaluation (M&E):</i> 3.1 By the end of 2028, EMRO supports every cholera-affected country to conduct an after-action review within three months of the end of every cholera outbreak.	4. After-action reviews and reports generated and shared	1.11 Develop detailed national M&E frameworks for cholera preparedness and response plans/NCPs. (WCO supported by EMRO) 1.12 Conduct an after-action review within three months of the end of each outbreak. (WCO & EMRO) 1.13 Share lessons learned through the response to cholera outbreaks with national/regional stakeholders. (WCO & EMRO)
	4. <i>Advocacy and resource mobilization:</i> 4.1 By end of 2026, EMRO and WCOs mobilize resources and promote sustainability of cholera control funding.	5. Multisectoral multi-year national cholera resource mobilization plans from five cholera-affected countries shared	1.14 Mobilize and engage with national decision-makers to build the capacities to timely announce/declare cholera outbreaks under IHR (2005). (WCO & EMRO) 1.15 Support coordinated resource mobilization for cholera-affected countries by developing multisectoral proposals. (WCO & EMRO) 1.16 Use disease burden, cost-effectiveness and return on investment (ROI) data to create compelling funding proposals, investment cases and briefs. (WCO) 1.17 Engage bilateral/multilateral donors and financial institutions and explore innovative financing (e.g., blended finance, insurance-based models). (EMRO & WCO) 1.18 Prioritize high-impact interventions aligned with donor priorities (e.g., GAVI). (WCO) 1.19 Access humanitarian funds: Advocate for inclusion of cholera preparedness and response in pooled and emergency funds (e.g., CERF, country-based pooled funds, OCHA rapid response windows). (WHO all levels) 1.20 Advocate for increased domestic funding for cholera preparedness and response and engage the private sector: Involve private actors in financing, logistics, innovation and service delivery with clear mutual agreements. (WCO)
	5. <i>Effective partnerships</i>	6. National cholera partnership networks developed with	1.21 Build and sustain partnerships at regional, national and subnational levels (WCO & EMRO)

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	5.1 By the end of 2028, EMRO and WCOs build and sustain partnerships at regional and national levels 5.2 By the end of 2028, EMRO and WCOs enhance cholera operational readiness and response through partnerships.	clear TORs in five cholera-affected countries	- Stakeholders/partners mapping: Identify cross-sectoral partners (health, WASH, education, logistics) and assess their mandates, capacities and coverage to spot synergies and gaps. (WCO) - Establish information sharing and preparedness networks: Create regional/national cholera networks aligned with Ending Cholera: A Global Roadmap to 2030, focusing on early detection, rapid response and long-term prevention. (EMRO & WCO) - Facilitate information sharing: Standardize tools for situation reporting and epidemiological updates to support evidence-based decisions. (EMRO) - Leverage community networks: Engage trusted local actors for risk communication, behaviour change promotion and community ownership. (WCO) - Develop national/regional rosters of cholera experts to support rapid deployment to cholera-affected countries/areas. (WCO&EMRO) 1.22 Enhance operational readiness and response through partnerships: - Joint preparedness assessments: Collaboratively assess gaps using tools like WHO's Cholera Preparedness Checklist. (WCO) - Prepositioning of supplies: Develop joint logistics plans and hubs to stock cholera kits, IV fluids, ORS, and WASH materials strategically. (EMRO and WCO). <i>(Linked to Act. No.1.23/ supply management)</i> - Leverage existing networks: Utilize expertise from standby partners (SBP) and GOARN for rapid deployment during outbreaks. (EMRO & WCO)
	6. <i>Supply forecast and management capacity</i> 6.1 By the end of 2028, WHO supports every cholera affected country to build national capacity for cholera supply management.	7. Updated evidence-based cholera supply plans developed in five cholera-affected countries and shared	1.23 Support capacity-building for cholera supply planning, F&Q, procurement, storage and monitoring of stocks targeting WCO and relevant ministries. (EMRO) 1.24 Identify/forecast essential cholera supply needs of each cholera-affected country based on the previous epi data and supply utilization data. (WCO) 1.25 Develop/update cholera supply plans by using updated F&Q tools. (WCO) 1.26 Establish supply-hubs at national subnational levels to ensure timely availability of essential supplies in cholera hotspots/PAMI. (WCO).

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To enhance early detection of cholera outbreaks and rapid response by strengthening disease surveillance systems and build capacities for timely response and containment. TARGET: By the end of 2028, 90% of the outbreaks in five cholera-affected countries to be detected within seven days, notified within one day, and response initiated within seven days.	OUTPUT: By the end of 2028, all cholera-affected countries, have cholera surveillance improvement plans PROCESS: <i>Timely detection of cholera cases and outbreaks and rapid response</i> - By the end of 2028, all cholera-affected countries use updated cholera surveillance protocols and tools (including standardized case and outbreak definitions, line list, reporting forms) in line with WHO and GTFCC guidelines. - By the end of 2028, all cholera-affected countries have been through national surveillance training programmes with a ToT package available. - By the end of 2028, all AWD/ cholera-affected countries have improved rapid response capacities to cholera outbreaks.	OUTPUT: - Surveillance improvement plans shared. PROCESS: - WCO periodic situation reports/databases/line list and EMRO database. - Report of the rapid self-assessment of cholera surveillance system using GTFCC tool to identify priority gaps for improvement shared. - Updated surveillance tools shared. - Attendance sheet: Number of people who received surveillance training at the national and subnational levels. - All national cholera preparedness and response plans have a section on the community-centred approach for cholera control. - AWD testing strategies shared.	2.1 Equip surveillance units at national and subnational levels with necessary tools, materials, resources, equipment and expertise: - Conduct a rapid assessment of cholera surveillance system using GTFCC method. (WCO). - Provide updated tools, equipment, digitalization and job aids as needed. (WCO & EMRO) - Conduct trainings of surveillance staffs at all levels (national and subnational) using updated surveillance tools (case definition, reporting forms, line list, etc.). (WCO & EMRO) - Conduct supportive supervisory visits to surveillance units at subnational levels. (WCO) - Review surveillance coverage and establish/strengthen a network of sentinel sites for early detection of cholera outbreaks. (WCO) - Advocate for better engagement of the private sector in cholera surveillance activities. (WCO) - Integrate cholera data (including community surveillance data, health facility data) to the national reporting systems for rapid data collection and analysis. (WCO) - Develop a national network/roster of cholera surveillance and data experts to strengthen cholera data management. (WCO) - Support the development and implementation of context-specific retention strategies for surveillance staff, particularly, in FCV countries. (WCO & EMRO) 2.2 Support building the capacity of multidisciplinary public health teams in cholera outbreak preparedness and response planning (including during mass-gatherings), outbreak verification, investigation, and timely response: - Support development of training materials and resources on cholera outbreak response. (EMRO) - Conduct training of RRTs in all cholera-affected focusing on PAMI/hotspots using updated tools and materials. (EMRO & WCO) - Support RRTs with the needed tools, materials, and equipment. (WCO)

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			- In collaboration with partners, support FETP at national and subnational levels. (EMRO & WCO) 2.3 Develop and implement a community-centred approach and integrate behavioural science into cholera response (WCO): - Collect social and behavioural data through KAP studies or community focus group discussions to inform the risk assessment and response planning, both for RCCE interventions and broader operational response. - Identify effective modes of communication to engage with high-risk population/ community through the interpersonal communications training and community conversation kits (CCK) packages. - Develop and implement targeted RCCE strategies and tools to address root causes of cholera and enhance the uptake of control interventions. - Conduct training programs for MoH RCCE/health promotion/communication staff on online and offline listening techniques and infodemic management. - Develop regional taxonomy for online listening and share with cholera-affected countries for translation and local contextualization. - Set up hotlines (or other community-trusted feedback mechanisms) for community reporting, as deemed necessary. Train hotline staff and integrate feedback into overall surveillance data.
2. By the end of 2028, 80% of reported suspected cholera cases to be laboratory tested during the first seven days of the outbreak	2. <i>Laboratory confirmation of cholera cases</i> 2.1 By the end of 2028, all cholera-affected countries have standard AWD/cholera testing strategies in line with WHO and GTFCC guidelines. 2.2 By the end of 2028, all cholera-affected countries have a	7. SOP for lab specimen referral and transport shared. 8. All NCPs/roadmaps have a section on cholera RDT and laboratory testing strategies, including specimen collection, referral and transport procedures.	2.4 Enhance laboratory capacity for cholera confirmation: - Conduct capacity/needs assessment of CPHL and major labs in PAMIs/hotspots. (WCO supported by EMRO) - Update/develop national AWD testing strategies. (WCO & EMRO) - Develop/update AWD/cholera sample management protocols, including collection, handling, storage and transportation. (WCO & EMRO) - Update/develop AWD testing protocols/strategies in labs, with a quality assurance protocol, including test verification. (WCO and EMRO)

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	system in place for referral and transport of cholera lab specimens for diagnostics and/or confirmation from subnational to national level (modified from IHR SPAR indicator C4.1). 2.3 By the end of 2028, at least 80% of peripheral health facilities located in cholera hotspots/PAMI in five cholera-affected countries have access to functional cholera confirmatory laboratory. (modified from GTFCC indicator 5). 2.4 By the end of 2028, all cholera-affected countries have a national contingency stockpile of RDT with subnational distribution plans, as a part of F&Q plan.	9. CPHL data on RDTs done, number of referred samples received and their source, quality of samples received, number tested by culture/PCR, culture and sensitivity results, and turnaround time for results feedback. 10. WCO sitreps (incl. number of samples tested and number of samples positives per health facility in cholera hotspots and level of confirmation). 11. National RDT distribution plan, as well as monthly stockpile and procurement status shared.	• Improve reporting of cholera lab results: provide SOPs, tools, guidelines and training. (WCO & EMRO) • Establish/maintain a national stock of essential cholera laboratory supplies- including RDTs- with detailed distribution plans to subnational levels. (WCO) (<i>Linked to Act. No.1.25 & 1.26/supply management</i>) • Equip key laboratories in identified PAMI with essential reagents and supplies to ensure no stock-outs for more than two weeks in a one-year period, as a part of the implementation of F&Q plan (EMRO & WCO). (GTFCC indicator 5) • Improve national cholera supplies procurement and distribution leveraging on partners' support (e.g. GAVI's RDT application). • Develop updated training materials and resources on cholera lab confirmation. (WCO & EMRO) • Conduct trainings of 1) laboratory staff in testing and 2) field staff in sample collection and management in PAMI-identified areas and follow up with assessment of implementation following trainings. (WCO & EMRO) • Build genomics and AMR capacity at CPHL: provide training, equipment, guidelines, SOPs and protocols. (EMRO)
	3. <i>Cholera data standardization</i> 3.1 By the end of 2028, all cholera-affected countries report periodically on a standardized dataset of cholera-related indicators, including number of cases, deaths, CFR, that are disaggregated by sex and age.	12. Regional cholera data hub/ repository with updated indicators from cholera-affected countries in the Region.	2.5 Streamline cholera data/strengthen data analysis and evidence-based response planning and adaptation: • Develop an integrated regional cholera data hub. (EMRO) • Build national capacity to report on a standard cholera minimum dataset. (EMRO) • Develop and distribute data-sharing and reporting protocols. (EMRO & WCO) • Conduct capacity-building of surveillance units to conduct timely data analysis, collate, triangulate, and disseminate cholera-related data, including surveillance, lab, case management, WASH, community-based surveillance and others, to identify trends in the disease, gaps in the response and hotspots. (EMRO)

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	3.2 By the end of 2028, EMRO has a cholera data repository/hub .		- Support the utilization of historical or retrospective data to understand cholera transmission dynamics. (WCO) - Develop and disseminate periodic information products to key stakeholders to facilitate evidence-based cholera control planning. (WCO) - Strengthen regional and national mechanisms for cholera data storage and security: provide SOPs/data-sharing protocols, digital platforms/tools, training.
	4. <i>OCV capacity</i> 4.1 By the end of 2028, all AWD/cholera-affected countries have improved capacities for oral cholera vaccination (OCV).	13. All NCPs/roadmaps have a section on use of OCV for both response and prevention. 14. High OCV coverage (>95%) at subnational levels/PAMIs documented.	2.6 Strengthen national and subnational OCV planning and implementation capacities: - Support building the capacity of NITAGs and advocacy for OCV approval. (WCO & EMRO and HQ). - Build national and subnational OCV planning capacity, including micro-planning workshops. (WCO, EMRO) - Support the swift deployment of OCV for reactive/preventive use in coordination with partners including technical support for the development of ICG/GAVI requests and multi-year plans. (WCO, EMRO& HQ) - Build capacity for monitoring and documenting vaccination coverage and AEFI (throughout the campaign and post-campaign) at the national and subnational levels. (WCO, EMRO) - Build the capacity of health workers in OCV vaccination skills and effective vaccine management (EVM). (WCO) 2.7 Develop and implement RCCE strategies focusing on OCV uptake and addressing vaccination hesitancy. (WCO). (<i>Linked to Act. No. 2.3/community-centred approach</i>).
	5. <i>Cholera community-based surveillance</i> 5.1 By the end of 2028, all cholera-affected countries have structured community-based surveillance (CBS) and event-	15. National CBS strategy shared.	2.8 Establish/strengthen community-based surveillance as part of an integrated community-centred approach, including CBS (<i>Linked to Act. No 2.3, 3.4, and 3.7</i>): - Review/update/adapt CBS tools for cholera data management and reporting. (WCO) - Identify key community health workers (CHWs) and community programmes through the community mapping exercise. (WCO)

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	based surveillance mechanisms, including streamlined data recording, management and sharing mechanism. 5.2 By the end of 2028, all cholera-affected countries establish online/offline social listening mechanisms to complement community-surveillance and reporting.		• Develop training materials/resources and guidance and share with concerned stakeholders. (EMRO&WCO) • Build/strengthen existing capacities of community health workforce in interpersonal communication, contact tracing, surveillance, case referral and reporting. (WCO) • Develop and disseminate targeted communication products and RCCE tools for each high-risk population to encourage early identification/reporting of symptoms and seeking prompt care. (WCO) 2.9 Set up hotlines (or other community trusted feedback mechanisms) for community reporting, as deemed necessary. Train hotline staff and integrate feedback into overall surveillance data.

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Specific objective 3	Indicators of success/ objective component	Sources of verification	Proposed actions/activities (responsible)
To increase access to quality case management services in the cholera treatment facilities and community. TARGET <i>By the end of 2028:</i> - All affected sub-national areas in five cholera-affected countries should have community CFR <1% within one month after the response of a cholera outbreak with the overall goal of zero community deaths. - All affected sub-national areas in five cholera-affected countries should have CFR <1% at treatment facilities within one month after the response to a cholera outbreak.	PROCESS: <i>Quality of clinical care</i> - By the end of 2028, all cholera-affected countries have updated national cholera case management (CM) protocols, including referral guidelines, in line with WHO and GTFCC guidelines. - By the end of 2028, all PAMIs in five cholera-affected countries have been through case management trainings with a ToT package available.	IMPACT: - Mortality data (CFR) of country situational reports, community-based surveillance (CBS) reports and dashboard. - Reports from treatment facilities including ORPs with cholera mortality data. PROCESS: - Copy of national SCM protocol shared. - Attendance sheet: Number of people who received SCM training at the national and subnational levels.	3.1 Equip cholera treatment facilities with the necessary protocols/guidelines, tools, resources, and expertise: - Review/update/adapt the CM/IPC protocols/guidelines. (WCO & EMRO) - Conduct integrated training programs for health care workers in SCM and IPC using updated protocols and guidelines. (EMRO & WCO) - Develop M&E tools to conduct regular assessments of quality of care (e.g., protocol-following rate) and patient outcomes. (EMRO) - Conduct supportive supervision visits to cholera treatment facilities. (WCO) - Map cholera treatment facilities and conduct regular facility-based assessments. (WCO) - Regularly monitor antibiotics sensitivity and AMR (<i>Linked to Act. No. 2.4/Lab. capacity</i>). (WCO) - Develop and implement innovative retention strategies for health care workers, particularly in FCV countries. (WCO). 3.2 Establish/support patient care pathway, including triage and referral systems between the ORPs/community to CTC/CTUs, any referral hospitals if needed (WCO and EMRO): - Develop triage/referral protocols and distribute to the treatment facilities including ORPs. (WCO) - Train health care providers including CHWs on “when and where to refer cholera patients”. (EMRO and WCO)
	<i>Access to essential case management/IPC supplies</i> - By the end of 2028, all cholera-affected countries should have a national contingency stockpile of cholera kits and other essential supplies with	- Monthly report on stockpile status in accordance with the F&Q plan. - Monthly report on stockpile status in accordance with the F&Q plan.	3.3 Ensure access to essential treatment/IPC supplies (<i>Linked to Act. No 1.23/ supply management</i>): - Conduct trainings for health facility managers on stock management at facility level to ensure availability of oral rehydration solutions (ORS), intravenous fluids, adequate HR, treatment, laboratory and IPC supplies. (EMRO) - Develop national stock of essential treatment & IPC supplies with detailed distribution plans to subnational levels. (WCO)

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	distribution plans to the subnational levels. 2.2 By the end of 2028, 80% of cholera treatment facilities in five cholera-affected countries have no stockouts for essential supplies.		Develop a mechanism to link facility-level inventory and the national inventory system. (EMRO & WCO)
	3. <i>Community-based case management</i> 3.1 By the end of 2028, at least 50% of the population living in PAMI in five cholera-affected countries have access to ORS within a 30-minute walk from their home (modified from GTFCC Index 8). 3.2 By the end of 2028, all cholera-affected countries have CHWs/responders training on identifying suspected cholera cases, early case detection, early treatment, and referral.	5. List/location of ORS-providing facilities or programmes (e.g., CHWs, village focal points) per hotspots.	3.4 Strengthen/establish integrated community-based case management (<i>Linked to Act. No 2.3, 2.7, 2.8 & 2.9 / community-centred approach</i>): - Develop/update a national policy on community-based treatment of cholera. (WCO) - Review and update community-based treatment and testing protocols. (WCO and EMRO) - Establish/support temporary treatment centres/ORPs in PAMI/high-risk areas. (WCO) - Ensure CSOs/community representatives have a role at CTCs to reinforce communication and reporting. - Establish acceptable community feedback mechanisms at CTCs and ORPs to gather feedback on patient care and treatment. (WCO) 3.5 Develop and implement evidence-based RCCE strategies focusing on cholera treatment: seeking behaviour, ORS use and appropriate IPC measures at households and facilities (WCO). (<i>Linked to Act. No 2.3, 2.7, 2.8 & 2.9 / community-centred approach</i>).

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Specific objective 4 TARGET	Indicators of success/ objective component	Sources of verification	Proposed actions/activities (responsible)
To improve water, sanitation and hygiene (WASH) by strengthening water quality monitoring in communities and ensuring adequate WASH/IPC standards and supplies at health facilities. TARGET: <i>By the end of 2028:</i> - Five cholera-affected countries in the Region implement effective Water Quality Surveillance (WQS) in communities. - Five cholera-affected countries in the Region implement the WASH for Health Facility Improvement Tool (WASH FIT) and develop improvement plans for PAMI/ cholera hotspots.	OUTCOME % of cholera treatment facilities complying with WASH/IPC minimum requirements. <i>(*Target will be set according to the country's baseline)</i> OUTPUT 1. <i>WASH/IPC at Health Facilities (HF)</i> 1.1 % of HFs/cholera treatment facilities with adequate sanitation. 1.2 % of HFs/cholera treatment facilities with hand hygiene facilities. 1.3 % of HFs/cholera treatment facilities with safe water access.	OUTCOME JMP annual reports. PROCESS Improvement plans for WASH at health facilities shared.	4.1 Technical guidance and capacity-building on WASH/IPC at health facilities: - Update technical guidance documents on WASH/IPC and cholera control to be adopted by countries for their national context and in local languages (water quality monitoring, WASH FIT, tools for drinking water and sanitation, hand washing, health care waste management, IPC assessment tools, SOPs, IPC promotional materials, etc.). (EMRO and WCO) - Develop/update standardized training packages and conduct trainings regarding WASH, health care waste management and IPC in cholera treatment facilities. (EMRO) - Develop/maintain national/subnational contingency stockpiles of essential WASH supplies for health facility supplies with detailed distribution plans to subnational levels. (WCO). <i>(Linked to Act. No. 1.23/supply Management)</i>. - Conduct regular facility-based assessments (using WASH FIT) and develop improvement plans. (WCO) 4.2 Enhance collaboration and data sharing in WASH/IPC at health facilities <i>(linked to Act.No.1.1/ multi-sectoral coordination and collaboration at all levels)</i>: - Support the establishment of subnational WASH/IPC committees to oversee implementation, M&E and maintenance, - Develop and support implementation of epi-WASH data-sharing protocols and analysis for the WASH and health sectors. (WCO) - Foster partnerships with academic institutions and technical experts for ongoing WASH/IPC support and expertise. (EMRO) <i>(Linked to Act. No. 1.21/effective partnership)</i>. 4.3 Establish a regional revolving stock for WASH supplies, particularly those related to drinking water quality (DWQ) monitoring for rapid response to cholera. (EMRO)

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	2. <i>Water Quality Surveillance</i> 2.1 Water quality surveillance plan prepared and implemented. 2.2 Increased number of health workers trained in WQS.		4.4 Enhance water safety at community level: • Support updating/development of national water safety legislation and plans (water quality monitoring/ surveillance). (WCO & EMRO) • Build the capacity for effective WQM: provide updated guidelines, resources, supplies, equipment and training. (WCO) • Establish/maintain national stock of essential water monitoring supplies with detailed distribution plans to subnational levels. (WCO) (<i>linked to Act. No. 1.23/supply Management</i>) • Promote and advocate for sustainable WASH infrastructure upgrades to improve access to safe and clean water and sanitation facilities. (WCO)
	3. <i>RCCE and hygiene promotion</i> 3.1 Hygiene coverage in the community increased.		4.5 Develop and implement evidence-based RCCE strategies focusing on improving the uptake of cholera preventive measures, such as water chlorination, addressing hesitancy and promoting hygienic practices such as hand washing, food safety and appropriate sanitation. (WCO). (<i>Linked to Act. No.2.3, 2.7, 2.8, 3.4, & 3.5/community-centred approach</i>) 4.6 Advocate for and support implementation of integrated health/WASH interventions in high-risk areas/PAMI, and cholera-affected communities. (WCO). (<i>Linked to Act. No. 1.5/multisectoral coordination and collaboration at all levels</i>).