



World Health  
Organization

European Region

A close-up photograph showing clear water being poured from a red plastic funnel into a red plastic container. The water is captured mid-pour, creating a dynamic splash. In the background, a white plastic bucket is visible. The entire image is overlaid with a semi-transparent orange banner at the bottom containing the title text.

# Emergency preparedness, readiness and response plan for **cholera** in the WHO European Region



---

# Emergency preparedness, readiness and response plan for **cholera** in the WHO European Region

---

## Abstract

Since mid-2021, the world has been facing an upsurge in the number, size and occurrence of cholera outbreaks. The simultaneous progression of several outbreaks, compounded with complex humanitarian crises and fragile health systems, and further aggravated by climate change, poses challenges to outbreak response and containment. Cholera is a disease of inequity, disproportionately affecting the world's poorest and most vulnerable communities. Despite its global impact, many at-risk countries do not have an effective cholera prevention, readiness and response plan to help curtail the spread of this deadly disease. However, ending the public health impact of cholera could be within our reach. WHO aims to support countries to tackle the seventh cholera pandemic by interrupting disease transmission, facilitating quick case management, minimizing socioeconomic impact on communities and ensuring continuity of essential health and social services. This document provides overarching guidance and facilitates coherence on strategic objectives and priority activities for cholera preparedness, readiness and response in the WHO European Region – primarily focusing on two priority countries: Türkiye and Ukraine. The plan is intended for use by WHO country offices in the European Region and collaborating stakeholders as a supplement to the WHO Global strategic preparedness, readiness and response plan for cholera.

## Keywords

CHOLERA

EMERGENCY PREPAREDNESS

EUROPE

WORLD HEALTH ORGANIZATION





Document number: WHO/EURO:2024-9276-49048-73118

© World Health Organization 2024

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition: Emergency preparedness, readiness and response plan for cholera in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2024”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

**Suggested citation** Emergency preparedness, readiness and response plan for cholera in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2024. Licence: CC BY-NC-SA 3.0 IGO.

**Cataloguing-in-Publication (CIP) data.** CIP data are available at <http://apps.who.int/iris>.

**Sales, rights and licensing.** To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <https://www.who.int/about/policies/publishing/copyright>

**Third-party materials.** If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**General disclaimers.** The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

All photos: ©WHO

# Contents

Acknowledgements .....	iv
Abbreviations .....	v
Introduction.....	1
Background .....	2
Cholera as a public health risk in priority countries in the WHO European Region.....	4
Türkiye .....	4
Ukraine .....	6
Central Asia.....	8
Preparedness and readiness activities.....	10
<b>Pillar 1  </b> Leadership, coordination, planning and monitoring.....	11
<b>Pillar 2  </b> Risk communication, community engagement and infodemic management.....	12
<b>Pillar 3  </b> Surveillance and outbreak investigation .....	13
<b>Pillar 4  </b> WASH.....	14
<b>Pillar 5  </b> Laboratory diagnostics and testing .....	15
<b>Pillar 6  </b> Infection prevention and control .....	16
<b>Pillar 7  </b> Case management .....	17
<b>Pillar 8  </b> Operational support and logistics.....	18
<b>Pillar 9  </b> Continuity of essential health and social services.....	20
<b>Pillar 10  </b> Vaccination .....	21
Resource needs.....	22
References .....	23
Bibliography .....	25

# Acknowledgements

The core development group of this plan was comprised of five programmes of the WHO Health Emergencies Division at the WHO Regional Office for Europe: The Country Health Emergency Preparedness and International Health Regulations Programme, the Infectious Hazard Management Programme, the Health Emergency Information and Risk Assessment, the Risk Communication, Community Engagement and Infodemic Management and the Emergency Operations Programme. Technical input was provided by the Water and Climate Programme of the European Centre for Environment and Health. In addition, the WHO headquarters Country Readiness Strengthening department shared knowledge and experience to support the plans development. The core development group would like to thank additional input received from WHO Country Office colleagues from Ukraine and Türkiye.

## List of contributors:

The following WHO headquarters, Regional Office, and Country Office colleagues were involved in the development and review of this document and their contribution is gratefully acknowledged: A Aregay, O Babanin, S Ciobanu, A Coutino Rehse, S Datta, S Enkhtsetseg, S Gheorghita, H Gray, O Izhyk, L MacDonald, S McQueen Patterson, T Marszalek, K Nahapetyan, L Palumbo, H Papowitz, R Pebody, I Perehinets, D Pfeifer, N Piven, J Pires, T Schmidt, O Schmoll, A Tahirukaj, N Tran Minh, J Zwetyenga.



# Abbreviations

<b>CFR</b>	Case fatality rate
<b>ECDC</b>	European Centre for Disease Prevention and Control
<b>EHS</b>	Essential health services
<b>SPRRP</b>	Strategic preparedness, readiness and response plan
<b>GTFFC</b>	Global Task Force on Cholera Control
<b>IPC</b>	Infection prevention and control
<b>OCV</b>	Oral cholera vaccine
<b>PCR</b>	Polymerase chain reaction
<b>PRSEAH</b>	Preventing and responding to sexual exploitation, abuse and harassment
<b>RCCE</b>	Risk communication and community engagement
<b>RCCE-IM</b>	Risk communication, community engagement and infodemic management
<b>RDT</b>	Rapid diagnostic test
<b>SOP</b>	Standard operating procedures
<b>WASH</b>	Water, sanitation and hygiene
<b>WASH-FIT</b>	Water and sanitation for health facility improvement tool





# Introduction

This document provides overarching guidance and facilitates coherence on strategic objectives and priority activities for cholera preparedness, readiness and response in countries in the WHO European Region – bridging between preparedness activities and the implementation of a response plan.

It is informed by the Global strategic preparedness, readiness and response plan for cholera (Global cholera SPRRP) (WHO, 2023a) as well as the work of the Global Task Force on Cholera Control (GTFCC) and complements the respective country plans within the WHO European Region. This version of the plan focuses on Türkiye and Ukraine as priority countries, with the central Asian subregion as a secondary priority. The outlined activities are set to cover the period December 2023–April 2024.

The plan is intended to be used as a supplementary guidance document to the WHO Global cholera SPRRP for WHO country offices in the WHO European Region, as well as for collaborating stakeholders.



# Background

Cholera is an extremely virulent acute diarrheal disease caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. It affects both children and adults and can kill within hours if left untreated. Severe cases need rapid treatment with intravenous fluids and sometimes antibiotics. It is a major health risk in many parts of the world, affecting millions of people every year. Despite its global impact, many at-risk countries do not have an effective cholera prevention, readiness and response plan that can help curtail the spread of this deadly disease. Cholera is a disease of inequity as it continues to disproportionately affect the world's poorest and most vulnerable communities. Every case of cholera is preventable with access to safe water, proper sanitation and hygiene services and oral cholera vaccines (OCV), and in most cases death can be prevented by early rehydration (WHO, 2023b). Ending the public health impact of cholera could be within our reach, however WHO and its partners are observing a significant drain in cholera funding.

Since mid-2021, the world has been facing an acute upsurge in cholera – the seventh cholera pandemic – characterized by the number, size and occurrence of multiple outbreaks; the spread of cholera to areas previously decades free of cholera; and alarmingly high mortality rates. The simultaneous progression of several cholera outbreaks, compounded with complex humanitarian crises and fragile health systems and aggravated by climate change, poses challenges to outbreak response and risks the further spreading of cholera to other countries.

As of 6 December 2023, 22 countries globally are reporting cases of cholera, with active cholera outbreaks reported from the WHO African, Eastern Mediterranean, South-East Asian and Western Pacific regions and the WHO Region of the Americas (Fig 1). The mortality associated with the current outbreaks is of particular concern as many countries are reporting higher case fatality rates (CFRs) than in previous years. The average CFR reported globally in 2021 was 1.9% – a significant increase above the acceptable <1%. As of August 2023, the worldwide CFR ranges between 0 and 3.4%.<sup>[1]</sup> The overall capacity to respond to multiple outbreaks continues to be strained due to the global lack of resources, including shortages of OCV, as well as overstretched public health and medical personnel, who are concurrently dealing with multiple disease outbreaks and other health emergencies.

On 26 January 2023, WHO declared the global cholera situation a Grade 3 Emergency (WHO, 2023c) under the Emergency Response Framework (WHO, 2017). Based on the current situation, including the increasing number of outbreaks and their geographic expansion, as well as scarcity of vaccines and other resources, WHO assesses the risk at global level as very high. WHO headquarters has activated a global Incident Management Support Team, activating all ten global SPRRP thematic pillars and mobilizing the necessary operational capacities and resources across all three levels of the Organization. The overall aim is to reduce cholera-related morbidity and mortality by interrupting transmission of the disease and by containing and preventing major outbreaks through prompt detection, quick case management, as well as minimizing the socioeconomic impact of cholera epidemics on communities while maintaining continuity of essential health and social services.

As of the end of 2023, no active outbreaks of cholera have been reported in the WHO European Region. However, under the International Health Regulations (2005) (WHO, 2016) and together with European Centre for Disease Prevention and Control (ECDC), the WHO Regional Office for Europe has been monitoring the situation across the Region. As most MS would not notify cholera cases to WHO under IHR, as their risk assessment would not warrant so, another source of information has been through event-based surveillance (EBS) by using the Epidemic Intelligence from Open Sources (EIOS) tool under the all-hazard daily media screening and/or the official website of national public health entities in the Member States in the Region. On few occasions, NFPs in the Region were pro-actively prompted by WHO to report their cholera cases, including travel-associated, via IHR channels on a regular basis.

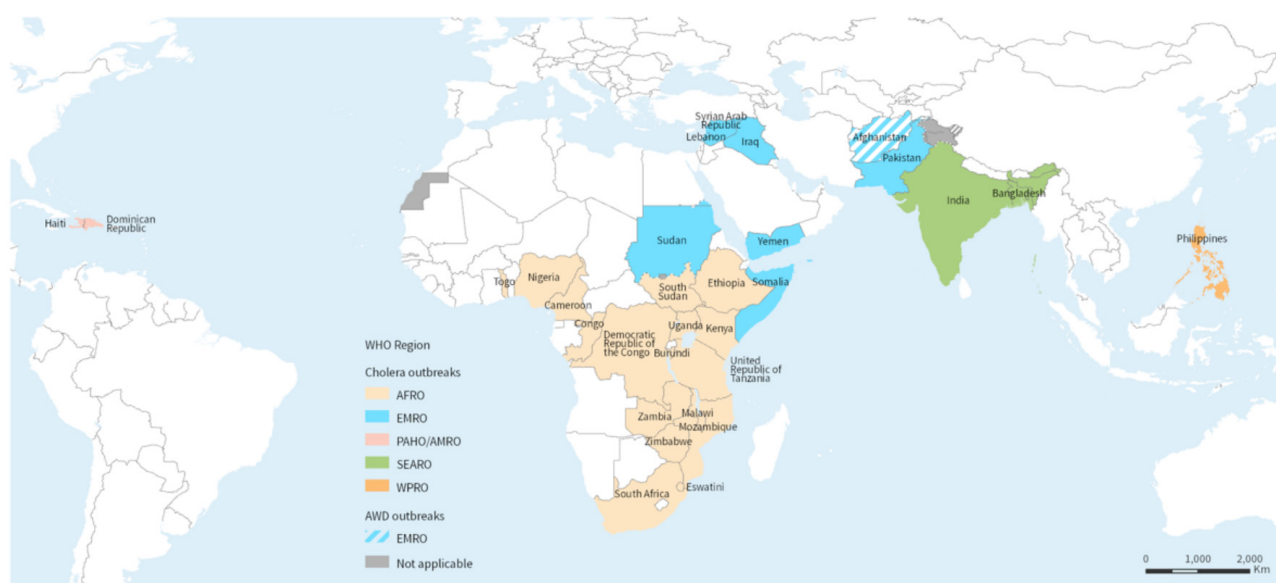


<sup>1</sup> This does not include the CFRs in Uganda and Republic of the Congo due to the relatively low total incident numbers.

2022–2023 biennium, 63 confirmed and five probable cases of cholera have been reported from nine WHO Member States in the European Region, of which 56 (82%) had travelled to a cholera-affected country. The remaining 12 autochthonous cases were either directly linked to an imported case, linked to consumption of food which had been privately imported from a cholera-affected country, or no known link was identified. Additionally, on 11 November 2022, Israel reported an environmental detection of toxigenic *Vibrio cholerae* serogroup O1 in environmental samples in the Yarmuch stream upon its entry into the country. The assumed source of the importation was from Syria. Israel reported no increases in cases of diarrhoea or clinical cases of cholera in surrounding areas. A few suspected cholera cases in humanitarian settings in the Region have been discarded after verification with national public health authorities. We are aware that the total reported cases in the Region, most of which are travel-associated, are likely to be considerably underreported as do not trigger national reporting mechanisms after being captured by robust surveillance systems.

WHO has developed a dynamic country risk assessment as part of its global cholera response, identifying and then categorizing high-priority countries into one of three designations: Acute Crisis; Active Outbreak; or Preparedness/Readiness, based on a combination of an epidemiological situation analysis; the analysis of public health response capacity and needs; and an understanding of contextual factors that could worsen or improve the current situation in each country.

Two countries in the WHO European Region have been identified as high priority and placed under the Preparedness/Readiness risk level (Global cholera SPRRP Priority 3): Türkiye and Ukraine. The WHO Regional Office for Europe has also identified the central Asian region as secondary priority for preparedness, readiness and capacity-building. A WHO European Region Cholera Coordination Cell was set up on 18 November 2022, with the aim of strengthening preparedness and coordinating operational readiness implementation within the WHO European Region prioritizing the most at-risk countries.



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization  
Map Production: WHO Health Emergencies Programme  
Map Date: 15 December 2023

 World Health Organization  
© WHO 2023. All rights reserved.

Notes: AFRO: African Regional Office; AWD: acute watery diarrhoea; EMRO: Eastern Mediterranean Regional Office; PAHO/AMRO: Region of the Americas; SEARO: South-East Asia Regional Office; WPRO: Western Pacific Regional Office.

Source: WHO (2023d).

# Cholera as a public health risk in priority countries in the WHO European Region

## Türkiye

On 6 February 2023, a series of large earthquakes hit southern Türkiye, followed by hundreds of aftershocks. The initial earthquakes resulted in thousands of lives lost and more at risk due to ongoing aftershocks, destruction of infrastructure, and risk of acute health hazards in internally displaced populations (WHO Regional Office for Europe, 2023). The government of Türkiye, together with their national institutions and disaster management organizations, mounted a timely and extensive response on all fronts. Initial support from WHO included health sector coordination and medical procurement (including cholera contingencies) in support of the Ministry of Health. The United Nations Children's Fund has also provided support to the Ministry of Health post-earthquake, including through the relocation of children to safer locations and the procurement and provision of critical supplies (i.e. hygiene kits, vaccines, cold chain equipment, Interagency Emergency Health Kits and cholera contingencies).

Following initial efforts in the earthquake response, on 15 March 2023, flooding occurred within the affected areas in the Adiyaman and Sanliurfa provinces, with official statistics reporting 17 deaths in the floods (Relief web, 2023). Global incidents and trends show that there is a high risk for outbreaks of diarrhoeal diseases such as cholera in the weeks and months following earthquakes and flooding, especially in areas with endemic cholera and a lack of essential services, such as water, sanitation and hygiene (WASH) services and health care, with summer months and high temperatures exacerbating this risk (Kirschner et al, 2008). A focus on cholera therefore remains of importance in Türkiye beyond the initial earthquake/flooding emergency response phase.

Additionally, since the earthquake occurred across the border between Syria and Türkiye, border points have been temporarily opened. Northwest Syria has reported ongoing cholera outbreaks in several regions, including in those areas which border Türkiye. Between 18 September 2022 and 4 November 2023, a total of 170 823 suspected cholera cases (including 974 confirmed cases and 24 deaths; CFR <1%) have been reported in Northwest Syria (Health Cluster Türkiye Hub, 2023). Given the recent cholera epidemiological trends in Syria (Acute Crisis risk level) (WHO, 2023a), there is therefore an increased risk of cholera outbreaks in Türkiye, especially in the formal and informal camps and other temporary housing settings along the border between Syria and Türkiye.









## Ukraine

According to national data, cases of cholera in Ukraine were registered in 1998 (Autonomous Republic of Crimea (one case); and Donetsk (two cases)); 1999 (Dnipropetrovsk (two cases); Donetsk (four cases); Odesa (one case); and Zaporizhzhia (three cases)), 2007 (33 cases in Sumy) and 2011. In 2011 cases were reported in Mariupol, Donetsk, between May and August 2011, with 33 cases of cholera (32 adults and one child) and 25 carriers (22 adults and three children) confirmed with toxigenic strain of *Vibrio cholerae*, serogroup O1 Ogawa. No deaths from cholera were reported during any of these outbreaks.

On 24 February 2022, the Russian Federation launched a war against Ukraine inciting intense hostilities across the country, which is ongoing at the time of writing. This triggered a massive humanitarian crisis and one of the world's largest population displacements, with as of September 2023 almost a third of Ukraine's population displaced: almost four million people internally displaced within Ukraine and over six million people residing across borders in neighbouring countries (International Organization for Migration, 2023a; 2023b). The conflict has also resulted in a massive infrastructure destruction, including a previously unseen number of attacks on health-care facilities – drastically compromising health-care provision. The war also has led to disrupted WASH services in different parts of the country as a result of infrastructural damage or the lack of electricity, increasing the risk of waterborne disease outbreaks, including cholera. General living conditions for those who have remained in Ukraine – especially in areas close to the frontline – have acutely worsened, including through limited access to shelter, safe water and food.

In July 2022, the WHO Country Office in Ukraine carried out a dynamic and progressive risk analysis at subnational level based on pre-identified risk factors (i.e. cholera preparedness/readiness levels, previously documented outbreaks, intensity of the conflict, and capacity of health-care provision in general and of outbreak response specifically). Six oblasts in the eastern and southeastern parts of the country were rated to be at very high risk and a further five at high risk of a cholera outbreak entailing the risk of cholera deaths.

On 6 June 2023, Kahovske Vdskh in Kherson oblast was destroyed, causing large scale flooding, massive displacement and environmental damage to the areas surrounding the Dnipro River (United Nations, 2023). A number of public health consequences were anticipated from this event, including a rise in cholera risk. On 19 June 2023, it was reported that at least 30% of water samples taken from surface water bodies and recreation areas were not meeting hygienic standards (out of 579 samples, 185 did not adhere), with those living in the Odessa oblast considered to be at the greatest danger of contracting cholera, as there were significant and constant breeches of sanitary-chemical, microbiological and toxicological standards (Ministry of Health of Ukraine, 2023a). On 26 June 2023, the Ministry of Health of Ukraine stated that “to date, not a single confirmed case of cholera has been registered in Ukraine in Zaporizhzhia, Kherson, Mykolaiv, Dnipropetrovsk and Odessa oblasts”, following circulating rumours of a cholera outbreak (Ministry of Health of Ukraine, 2023b). The risk for cholera outbreaks however remains high or very high in many parts of the country and regular assessments are ongoing.

The WHO Country Office in Ukraine is supporting the Ministry of Health and the Public Health Center to strengthen surveillance and diagnostics capacity as well as outbreak preparedness and response. As part of these efforts, the Ministry of Health has drafted the *National Technical Guidance on Epidemiological Surveillance which is currently under review for approval*.





*WHO representative talks to a displaced family in Krasnohorivka, a conflict-affected area of Ukraine.*

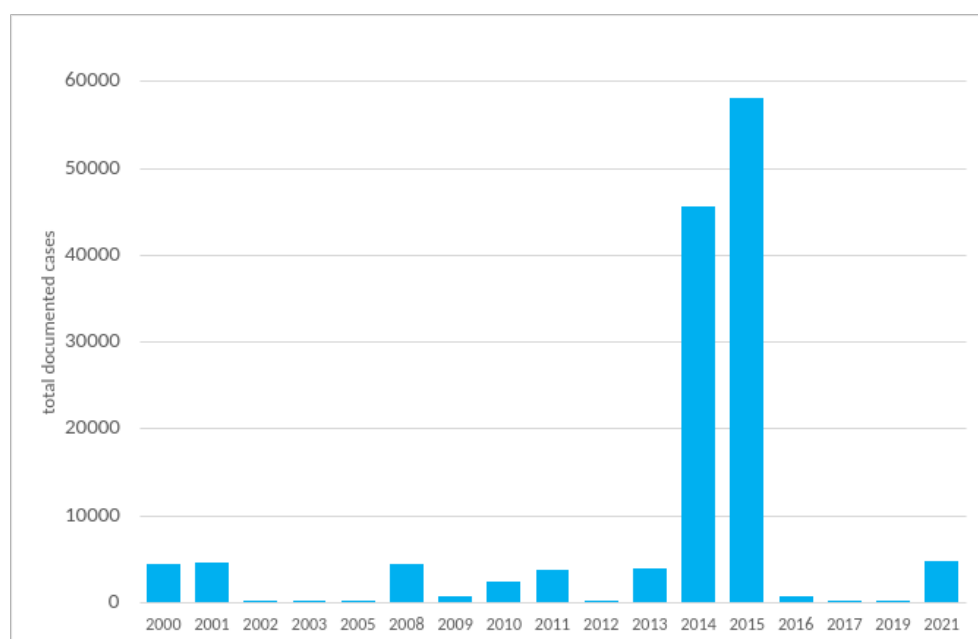




## Central Asia

Tajikistan, Turkmenistan and Uzbekistan neighbour Afghanistan which is cholera prone (Fig. 2), and along with the other central Asian WHO European Region Member States – Kyrgyzstan and Kazakhstan – experience a high level of (workforce related) cross-border mobility, increasing the risk of cholera importation from Afghanistan to the WHO European Region. The overall humanitarian situation in crisis-torn Afghanistan has been rapidly deteriorating since 2021 (WHO, 2023e) when the Taliban returned to power and between January and 9 December 2023, 215 227 cases of acute watery diarrhoea,[1] including 99 deaths, were reported through the sentinel site surveillance system in Afghanistan.

Fig. 2. Yearly number of cholera cases in Afghanistan between 2000 and 2021



Source: authors using data from WHO (2023f).



<sup>2</sup> There is a lack of possibility for the systematic specific testing of cholera in Afghanistan.





# Cholera-related objectives in the WHO European Region

## ■ Strategic Objective

Reduce cholera-related mortality, by preventing major outbreaks, and minimize the impact of cholera epidemics on communities while maintaining continuity of essential health and social services.

## ■ Specific Objectives

**The specific objectives are to:**

- improve prevention, preparedness and readiness, and timely response to cholera outbreaks;
- strengthen planning, preparedness, capacity-building, surveillance, detection, case management and monitoring of interventions;
- engage and empower communities to drive and sustain readiness and response to cholera outbreaks, and to adopt and sustain preventative, protective and care-seeking behaviours; and
- enhance multi-partner and multisector coordination, including partnerships with governments, nongovernmental organizations, civil society, other United Nations agencies, donors and other partners, to deliver a coordinated public health response.



## Preparedness and readiness activities

To achieve the outlined objectives, the interventions must be implemented in a coordinated manner through a multidisciplinary preparedness, readiness and response structure. According to the GTFCC Roadmap 2030, activities which focus on robust community engagement; strengthening early warning surveillance and laboratory capacities; health systems and supply readiness; and establishing rapid response teams, can significantly reduce the number of deaths from cholera (GTFCC, 2019).

The priority activities, aligned with the ten Global cholera SPRRP pillars (WHO, 2023a) and informed by Axis 1 of the GTFCC Global Roadmap to 2030 (GTFCC, 2019), are based on the specific WHO European Region response objectives for cholera. They are particularly aligned with the Global cholera SPRRP in priority category of preparedness/readiness and emphasize actions that can ensure effective mobilization in the early stages of response.



## PILLAR 1 |

# Leadership, coordination, planning and monitoring

### Core activities

- Map cholera preparedness/readiness resources as well as norms and standards.
- Strengthen preparedness, readiness and response platforms at national and subnational levels.
- Support priority countries in identifying and implementing readiness activities aligned with WHO checklists.
- Map and engage with national and subnational cholera stakeholders through existing partner coordination mechanisms, including through tabletop exercises.
- Support the development and update of cholera contingency plans, testing these plans through simulation exercises.
- Inform and prepare stakeholders on Preventing and Responding to Sexual Exploitation, Abuse and Harassment (PRSEAH) measures, by conducting relevant rapid or comprehensive risk assessments and ensure planning based on results.

### Target achievements and indicators

- Multisectoral emergency coordination mechanisms are in place.
- At least one tabletop exercise testing cholera contingency plans is conducted in each priority country.
- Emergency Operations Centres can be fully activated within 6 hours and are able to contact and activate all necessary cholera stakeholders within 1 hour.
- Up-to-date cholera contingency plans are in place and available to relevant stakeholders.
- National resource mobilization plans for cholera control and elimination are implemented.
- A PRSEAH comprehensive risk assessment has been conducted in each priority country.



## PILLAR 2 |

# Risk communication, community engagement and infodemic management

### Core activities

- Conduct rapid assessments of community knowledge, attitudes, perceptions, behaviours, structural barriers, drivers, levels of trust and social norms that could impact cholera transmission.
- Identify trusted, accessible communication and feedback channels used by at-risk communities (e.g., mass media, social media, influencers, radio and print).
- Map existing risk communication, community engagement and infodemic management (RCCE-IM) materials and identify gaps.
- Provide training on cholera to RCCE-IM focal points.
- Develop a risk communication message bank with public health advice on cholera, which is translated into relevant local languages and tested with intended audiences.
- Promote through two-way communication channels, risk communication messages to high-risk communities on prevention and signs/symptoms of cholera, early care seeking, and what to do if a case is detected.
- Map relevant civil society organizations in priority countries that support outreach to community members on readiness and response (including those working on WASH).
- Set up and/or strengthen social listening systems and infodemic management for cholera.

### Target achievements and indicators

- At least 80% of at-risk communities in priority countries have social mobilization mechanisms based on the results of surveys or studies.
- At least two trainings have been provided to RCCE-IM focal points on social mobilization networks and risk communication and community engagement (RCCE) materials and messages.
- Two-way communication networks for RCCE messaging have been mapped, i.e., on platforms of social networks such as Twitter/X, Facebook and Mastodon.
- Communication channels have been established with civil society organizations relevant to the most at-risk communities.
- At least 80% of at-risk communities have partnerships with local media (e.g. radio and TV) for disseminating key messages on cholera.





## PILLAR 3 |

# Surveillance and outbreak investigation

### Core activities

- Share both environmental surveillance (drinking-water quality, wastewater) and syndromic/clinical surveillance guidelines with priority countries and support the preparedness of corresponding national surveillance systems.
- Provide training to priority countries on the use of surveillance tools such as signal/event detection, case definitions, line list templates, case investigation forms and preposition these in sufficient quantities.
- Support WHO country offices and ministry of health/national teams to strengthen event-based surveillance (e.g., Epidemic Intelligence from Open Sources, EIOS) and community-based surveillance activities for cholera in priority countries.
- Establish regional surveillance mechanisms and coordination structures with partners (EC, ECDC, RKI, Pandemic Hub etc.), strengthening information sharing around cross-border surveillance.
- Map high-risk areas in priority countries, including documentation of response capacity (e.g., cholera treatment centres and stockpiles), jointly with partners (e.g., HERA).

### Target achievements and indicators

- A training package on water-related disease surveillance and outbreak management is available in the languages of at-risk communities for the priority countries.
- Public health personnel are trained on cholera surveillance and water-related disease outbreak management in at least 80% of at-risk communities.
- Health facilities are involved in cholera surveillance in at least 80% of at-risk communities.
- Priority countries have operational EBS systems in place for timely detection of cholera signals/events.
- Priority countries have conducted a subnational cholera risk assessment and/or mapping using one or more tools such as Vulnerability and risk analysis and mapping (United Nations, 2009), or the Strategic toolkit for assessing risks (WHO, 2021a).
- Priority countries have (re-)identified at-risk communities within the last three months.



## PILLAR 4 | WASH

### Core activities

- Undertake readiness/preparedness assessments for water and sanitation services for cholera and other waterborne diseases, with focus on at-risk communities.
- Map existing water sources and supplies, and identify priority contamination risks that require mitigation, by applying the WHO-recommended water and sanitation safety planning principles (WHO, 2022a).
- Support the uptake of risk-based approaches for the monitoring of source water and drinking-water quality by providing supplies and/or training, as needed.
- Support countries in improving capacities for environmental surveillance of wastewater for cholera and other pathogens in emergency contexts.
- Conduct capacity building on water-related disease surveillance and outbreak management, as well as on risk-based surveillance and the management of drinking-water supplies in emergencies.
- Map and possibly review existing training plans and protocols for WASH in emergencies, including training at community level.
- Assess WASH conditions and services in health-care facilities, including waste management and environmental cleaning, and apply the Water and sanitation for health facility improvement tool (WASH-FIT) (WHO, 2022b).
- Support health-care facilities in establishing effective and safe medical waste management.

### Target achievements and indicators

- Priority countries have emergency WASH equipment and supplies in place in at least 80% of at-risk communities.
- At least 80% of at-risk communities have WASH emergency protocols in place, addressing, for example, alternative water supply and treatment, waste management, cleaning and disinfection procedures, and the promotion of handwashing with soap.
- A hand hygiene and safe drinking-water awareness campaign is implemented in at least 80% of at-risk communities.
- A functioning medical waste management system is available in at least 80% of at-risk communities.
- At least 80% of health-care facilities have been assessed regarding WASH conditions and services and improvement actions are identified and prioritized.



## PILLAR 5 |

# Laboratory diagnostics and testing

### Core activities

- Conduct comprehensive assessments of national laboratory capacity for cholera detection and sample referral, including identification of gaps and needs.
- Assess the regional network for referral of suspected cholera samples for confirmation and typing, and identify gaps for support.
- Conduct capacity-building training for national staff on laboratory diagnostics for outbreak response.
- Disseminate standard and GTFCC-recommended guidelines and standard operating procedures (SOPs), supporting the update of national protocols for sample collection, storage, transport and testing in line with GTFCC.
- Conduct assessment of laboratory supplies and ensure the appropriate prepositioning of supplies as well as procurement of rapid diagnostic tests (RDTs), culture media and polymerase chain reaction (PCR) tools for confirmation.
- Facilitate quality control and external quality assurance mechanisms in coordination with national reference laboratories.
- Support national trainings for cholera RDTs, drug susceptibility testing and culture techniques, as well as trainings for central Asian countries on PCR confirmation

### Target achievements and indicators

- Access to 24/7 laboratory services to test for electrolytes, glucose, renal dysfunction and haemoconcentration is in place and easily accessible to health-care facilities.
- A prepositioned stock of RDTs and Cary-Blair transport media is in place in 80% of the at-risk communities.
- Priority countries have the capacity for both culture techniques and drug susceptibility testing.
- At least 80% of at-risk communities have staff trained on SOPs for sample collection, packaging, labelling and transport.



## PILLAR 6 |

# Infection prevention and control

### Core activities

- Support national and subnational partners to adapt plans for surge capacity and Infection prevention and control (IPC) resources specific to cholera (e.g., personal protective equipment, hand hygiene and disinfection supplies).
- Conduct a baseline IPC assessment in health-care facilities utilizing the Infection prevention and control assessment framework at the facility level (WHO, 2018) or the Assessment tool of the minimum requirements for infection prevention and control programmes at the national level (WHO, 2021a), and WASH-FIT (WHO, 2022b).
- Conduct a baseline IPC assessment at national level utilising IPCAT or WHO global survey on minimum requirements for infection prevention and control programmes at the National level (WHO, 2021b).
- Conduct training of health workers on IPC risk assessment and practical measures, including the use of standard and transmission-based precautions to prevent and control health-care associated infections at health and care facilities.
- Coordinate any existing IPC outbreak response team to revise, adapt and disseminate plans, policies, guidelines, training and other IPC related activities. If an IPC outbreak team does not exist, establish one with the inclusion of key IPC committee members and with clear roles and responsibilities.
- Assess IPC and WASH supply needs in cholera treatment centres/units and oral rehydration points (e.g. sodium hypochlorite, soap, alcohol-based hand rub and personal protective equipment), ensuring availability of supplies to enable safe and hygienic care in health service settings.
- Enable charting and monitoring of symptoms in hospitalized patients that may indicate health-care-associated infection.

### Target achievements and indicators

- At least 80% of health facilities in at-risk communities have an IPC triage system.
- At least 80% of health facilities in at-risk communities have cholera-adapted IPC guidelines and SOPs in place.
- IPC trainings of health-care workers have taken place at health-care facilities in 80% of at-risk communities within the last 12 months.
- Priority countries have a protocol in place for the safe and dignified burial for cholera-related deaths (including disinfection and transport).





## PILLAR 7 |

# Case management

### Core activities

- Update mapping of health-care facilities, including detailing gaps in human resources, infrastructure (isolation and bed capacity) and access to cholera kits.
- Update mapping of health partners who can support case management activities – include potential sites and partners for different levels of care (cholera treatment centre/unit and oral rehydration points).
- Update or develop cholera case management guidelines and SOPs, ensuring their distribution.
- Update guidance for the establishment of oral rehydration points, in coordination with RCCE counterparts.
- Conduct training of medical staff on identification, reporting, treatment and referral procedures, including the rational use of antibiotics.
- Test antimicrobial susceptibility to define the local resistance profile when considering antibiotic therapy and in order to provide evidence to define/adapt treatment.

### Target achievements and indicators

- Temporary or permanent case management facilities are identified with a referral system in place for at least 80% of at-risk communities.
- 100% of at-risk communities have guidelines, SOPs, clinical pathways and other monitoring tools for cholera case management in place.
- Triage procedures for acute diarrhoea cases are in place, including an assessment of dehydration in addition to vital signs.
- At least 80% of at-risk communities have trained staff and Update mapping of health-care facilities, including detailing gaps in human resources, infrastructure (isolation and bed capacity) and access to cholera kits available for managing cholera cases.
- Ten national multidisciplinary rapid response teams (RRTs) have been established with clear terms of reference in each priority country.
- Trained RRTs have adequate equipment and logistics support to enable deployment within twelve hours of a cholera alert in each high-risk district.
- All RRTs have access to and are trained in SOPs/guidelines for investigation, risk assessments and case management.



## PILLAR 8 |

# Operational support and logistics

### Core activities

- Support the Ministry of Health and partners to regularly update stock status and equipment inventories including at the regional and provincial levels.
- Procure and preposition laboratory material, cholera kits and related supplies sufficient to initiate a first response (1000 cases/month) in high-risk districts of priority countries.
- Conduct mapping of available warehouse and storage capacities in potential epidemic areas.
- Develop contingency plans for logistics and procurement at subnational levels.
- Map and ensure adequate available stock of essential cholera-related supplies in WHO warehouses.
- Secure funds for procurement and logistics support for potential cholera outbreaks in priority countries.

### Target achievements and indicators

- Priority countries have prepositioned essential stocks for cholera response at national and subnational levels.
- A functional stock monitoring system exists at national and subnational levels.
- Contingency plans for logistics and procurement are in place in 80% of at-risk communities.
- WHO warehouses are able to provide adequate essential cholera-related supplies in line with response plans for priority countries.









## PILLAR 9 |

# Continuity of essential health and social services

### Core activities

- Review hospital and health-care facility contingency plans and scale up readiness to activate in the event the country shifts to an acute crisis.
- Enhance awareness of the necessity of service continuity planning, updating existing business continuity plans to include service delivery innovations as well as good practices on equity.
- Identify essential health services (EHS) to be maintained, implementing planned alternative service platforms e.g., telemedicine where appropriate.
- Identify marginalized and vulnerable populations to be included in the service continuity plans of priority countries.
- Establish the position of a focal point to coordinate the continuity of EHS.
- Ensure that evaluation and revision processes do not disrupt routine functions and services.

### Target achievements and indicators

- Health-care facility contingency plans are in place and reviewed for 80% of at-risk communities.
- EHS continuity plans are in place in 80% of at-risk communities, reflecting the needs of vulnerable populations.
- A focal point for the coordination of EHS is in place.





## PILLAR 10 |

# Vaccination

### Core activities

- Support the development of a national vaccine deployment plan using behavioural insights to understand issues around drivers and barriers to vaccination uptake, introducing training and RCCE as needed.
- Review previously identified geographical areas and populations to be targeted and develop contingency plans for the implementation of OCV campaigns.
- Conduct orientation sessions for the national and provincial health department on OCV introduction and use during an outbreak.
- Obtain emergency use approval from the national regulatory authority on the importation and use of OCV in countries where OCV is not registered.
- Prepare OCV documents for the International Coordination Group on Vaccine Provision so that they are ready to be disseminated if needed (WHO, 2023g).
- Provide technical support with OCV roll-out monitoring and evaluation.

### Target achievements and indicators

- A national vaccine deployment plan is in place, with updated geographical target areas.
- Prospective technical and logistics partners for mass immunization are identified at the national level, including for campaign implementation, monitoring and adverse event monitoring.
- At least one OCV is licensed with a full marketing approval.
- Procedures for importing and clearing vaccines at the point of entry are established.



## Resource needs

The following summary reflects the resources needed to implement the prioritized core activities in the WHO European Region as outlined in this report.

Pillar / Strategic Priority	Funds Required (in US\$)
1. Leadership, coordination, planning and monitoring	146 500
2. RCCE-IM	150 500
3. Surveillance and outbreak investigation	140 000
4. WASH	405 000
5. Laboratory diagnostics and testing	3 002 700
6. IPC	1 000 000
7. Case management	128 000
8. Operational support and logistics	105 000
9. Continuity of essential health and social services	110 000
10. Vaccination	217 500
<b>TOTAL</b>	<b>5 405 200</b>



- WHO (2021b). Strategic toolkit for assessing risks: a comprehensive toolkit for all-hazards health emergency risk assessment. Geneva: World Health Organization (<https://iris.who.int/handle/10665/348763>).
- WHO (2021b). WHO global survey on minimum requirements for infection prevention and control programmes at the National level. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/news-room/articles-detail/who-global-survey-on-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level>).
- WHO (2022a). Sanitation safety planning - Second edition. Geneva: World Health Organization (<https://iris.who.int/handle/10665/364586>).
- WHO (2022b). WASH FIT: A practical guide for improving quality of care through water, sanitation and hygiene in health care facilities. Second edition. Geneva: World Health Organization (<https://iris.who.int/handle/10665/353411>).
- WHO (2023a). Global strategic preparedness, readiness and response Plan for cholera. Geneva: World Health Organization (<https://www.who.int/publications/m/item/global-strategic-preparedness--readiness-and-response-plan-for-cholera>).
- WHO (2023b). Cholera. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/news-room/fact-sheets/detail/cholera>).
- WHO (2023c). Cholera – Global situation. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON437>).
- WHO (2023d). Multi-country outbreak of cholera. Geneva: World Health Organization ([https://www.who.int/docs/default-source/coronaviruse/situation-reports/20231207\\_multi-country\\_outbreak-of-cholera\\_sitrep\\_9.pdf?sfvrsn=ee3f1c54\\_3&download=true](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20231207_multi-country_outbreak-of-cholera_sitrep_9.pdf?sfvrsn=ee3f1c54_3&download=true)).
- WHO (2023e). Afghanistan. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/about/accountability/results/who-results-report-2020-2021/country-profile/2021/afghanistan>).
- WHO (2023f). Interactive summary visuals of cholera data officially reported to WHO since 2000 Geneva. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/activities/supporting-cholera-outbreak-response/interactive-summary-visuals-of-cholera-data-officially-reported-to-who-since-2000>).
- WHO (2023g). International Coordinating Group (ICG) on Vaccine Provision. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/groups/icg/about>).
- WHO Regional Office for Europe (2023). Türkiye and Syria earthquakes. In: WHO Regional Office for Europe [website]. Copenhagen: WHO Regional Office for Europe (<https://www.who.int/europe/emergencies/situations/turkiye-and-syria-earthquakes>).
- United Nations (2009). Vulnerability and Risk Analysis and Mapping (VRAM) Platform for Health Risk Reduction. New York: United Nations ([https://unstats.un.org/unsd/geoinfo/rcc/docs/rcca9/ip/9th\\_UNRCCA\\_econf.99\\_IP29.pdf](https://unstats.un.org/unsd/geoinfo/rcc/docs/rcca9/ip/9th_UNRCCA_econf.99_IP29.pdf)).
- United Nations (2023). Kakhovka dam disaster a health crisis in the making: WHO. In: UN News [website]. New York: United Nations (<https://news.un.org/en/story/2023/06/1137612>).



# Bibliography

- GTFCC (2019). Cholera outbreak response, Field manual. GTFCC (<https://www.gtfcc.org/wp-content/uploads/2020/05/gtfcc-cholera-outbreak-response-field-manual.pdf>).
- GTFCC (2022). Technical note, Environmental Surveillance for Cholera Control. GTFCC (<https://www.gtfcc.org/wp-content/uploads/2022/10/gtfcc-technical-note-environmental-surveillance-for-cholera-control-october-2022.pdf>).
- GTFCC (2022). Interim Guiding Document to Support Countries for the Development of their National Cholera Plan, Advance copy. GTFCC (<https://www.gtfcc.org/wp-content/uploads/2020/11/gtfcc-interim-guiding-document-to-support-countries-for-the-development-of-their-national-cholera-plan.pdf>).
- GTFCC (2023). GTFCC [homepage]. GTFCC (<https://www.gtfcc.org/>).
- GTFCC (2023). Public health surveillance for cholera, Interim guidance. GTFCC (<https://www.gtfcc.org/wp-content/uploads/2023/02/gtfcc-public-health-surveillance-for-cholera-interim-guidance.pdf>).
- WHO (2023). Cholera fact sheet. In: World Health Organization [website]. Geneva: World Health Organization (<https://www.who.int/news-room/fact-sheets/detail/cholera>).



