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# **UNICEF Cholera Toolkit**

**v. 1.0**

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**December 2012**

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The Toolkit is a living document and will be updated as new guidance and tools emerge. Please send your comments, suggestions and new materials to incorporate in the toolkit to [cholera@unicef.org](mailto:cholera@unicef.org)

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## Acronyms

<b>AoR</b>	Area of Responsibility (Cluster Approach)
<b>AWD</b>	Acute Watery Diarrhoea
<b>AWP</b>	Annual Work Plan
<b>BCA</b>	Basic Co-operation Agreement (UNICEF)
<b>BCC</b>	Behaviour Change Communication
<b>C4D</b>	Communication for Development
<b>CA</b>	Cluster Approach
<b>CAP</b>	Common Appeals Process
<b>CATS</b>	Community Approaches to Total Sanitation
<b>CBO</b>	Community Based Organisation
<b>CCC</b>	Core Commitments for Children in Humanitarian Action (UNICEF)
<b>CCPD</b>	Common Country Programme Document (UN)
<b>CEE/CIS RO</b>	Central and Eastern Europe and the Commonwealth of Independent States Regional Office (UNICEF)
<b>CERF</b>	Central Emergency Response Fund
<b>CHAP</b>	Common Humanitarian Action Plan
<b>CHF</b>	Common Humanitarian Fund (UN)
<b>CHW</b>	Community Health Worker
<b>CLA</b>	Cluster Lead Agency
<b>CLTS</b>	Community Led Total Sanitation
<b>CO</b>	Country Office (UNICEF)
<b>COTS</b>	Cholera Outbreak Training and Shigellosis
<b>CPD</b>	Country Programme Document (UNICEF)
<b>CRC</b>	Convention on the Rights of the Child
<b>CRC</b>	Contracts Review Committee (UNICEF)
<b>CSC</b>	Communication for Social Change
<b>CSO</b>	Civil Society Organizations
<b>CTC</b>	Cholera Treatment Centre
<b>CTU</b>	Cholera Treatment Unit
<b>DCT</b>	Direct Cash Transfer (UNICEF)
<b>DaO</b>	Delivering as One (UN)
<b>DHR</b>	Division of Human Resources (UNICEF)
<b>EHO</b>	Environmental Health Officer
<b>EMOPS</b>	Office for Emergency Programmes (UNICEF)
<b>EPF</b>	Emergency Programme Funds (UNICEF)
<b>ERC</b>	Emergency Relief Co-ordinator (OCHA)
<b>ERF</b>	Emergency Response Fund (UN) – also known as a HRF or by other names
<b>ESARO</b>	Eastern and Southern Africa Regional Office (UNICEF)

<b>EWARN</b>	Early warning alert and response network
<b>FA</b>	Flash Appeal
<b>FBO</b>	Faith Based Organisation
<b>GIS</b>	Geographical Information System
<b>GM</b>	Gender Marker (CAP)
<b>GPS</b>	Global Positioning System
<b>HACT</b>	Harmonised Approach to Cash Transfer (UN)
<b>HC</b>	Humanitarian Co-ordinator (UN)
<b>HCT</b>	Humanitarian Co-ordination Team (UN)
<b>HIV</b>	Human Immunodeficiency Virus
<b>HP</b>	Hygiene Promotion
<b>HQ</b>	Headquarters (used in this instance for UNICEF HQ)
<b>HR</b>	Human Resources
<b>HRBA</b>	Human Rights Based Approach
<b>HRF</b>	Humanitarian Response Fund (UN) – also known as a ERF or other names
<b>HWTS</b>	Household water treatment and safe storage
<b>HWWS</b>	Handwashing with soap
<b>IEC</b>	Information, Education and Communication
<b>IKA</b>	In-Kind Assistance
<b>IM</b>	Information Management
<b>IND</b>	Immediate Needs Document (UNICEF)
<b>INGO</b>	International Non-Governmental Organisation
<b>IO</b>	International Organisation
<b>IOM</b>	International Office for Migration
<b>KRA</b>	Key Results Areas (UNICEF)
<b>LFA</b>	Logical Framework Analysis
<b>LNGO</b>	Local Non-Governmental Organisation
<b>LoU</b>	Letter of Understanding (CERF)
<b>LTA</b>	Long Term Agreement (UNICEF)
<b>MENARO</b>	Middle East and North Africa Regional Office (UNICEF)
<b>MoU</b>	Memorandum of Understanding
<b>MTSP</b>	Mid-Term Strategic Plan (UNICEF)
<b>NatCom</b>	National Committees for UNICEF (established for the sole purpose of fundraising for UNICEF)
<b>NFI</b>	Non-Food Item
<b>NGO</b>	Non-Governmental Organisation
<b>OCHA</b>	Office for the Co-ordination of Humanitarian Affairs
<b>OHCHR</b>	Office of the UN High Commissioner for Human Rights
<b>OR</b>	Other Resources (UNICEF)
<b>ORC</b>	Oral Rehydration Corner - also sometimes called an Oral Rehydration Therapy Corner (ORTC/ORC) or an Oral Rehydration Point (ORP)

<b>ORE</b>	Other Resources – Emergencies (UNICEF)
<b>ORP</b>	Oral Rehydration Point (also sometimes called ORTC/ORC)
<b>ORS</b>	Oral Rehydration Solution
<b>PAHO</b>	Pan-American Health Organisation, Regional Office of WHO for Latin America and the Caribbean
<b>PCA</b>	Project Co-operation Agreement (UNICEF)
<b>PHAST</b>	Participatory Hygiene and Sanitation Transformation
<b>PLA</b>	Participatory Learning and Action
<b>PLWHA</b>	People Living with HIV/AIDS
<b>PoUWT</b>	Point of Use Water Treatment
<b>PoUWT&amp;SS</b>	Point of Use Water Treatment & Safe Storage
<b>RC</b>	Resident Co-ordinator (UN)
<b>RDT</b>	Rapid Diagnostic Test
<b>RO</b>	Regional Office (UNICEF)
<b>ROSA</b>	South Asia Regional Office (UNICEF)
<b>RR</b>	Regular Resources (UNICEF)
<b>SSA</b>	Special Service Agreement (UNICEF)
<b>SSFA</b>	Small Scale Funding Agreement (UNICEF)
<b>TACRO</b>	The Americas and Caribbean Regional Office (UNICEF)
<b>ToTs</b>	Training of Trainers
<b>UNICEF</b>	United Nations Children’s Fund
<b>WASH</b>	Water, Sanitation & Hygiene
<b>WCARO</b>	West and Central Africa Regional Office (UNICEF)







# 1. Introduction

## 1.1. Background to the Toolkit

Cholera is on the rise with an estimated 1.4 billion people at risk in endemic countries and an estimated 3 million to 5 million cases and 100,000-120,000 deaths per year worldwide.<sup>1</sup> In many endemic countries, children under 5 account for more than half of the global incidence and deaths. Cholera has remained endemic in some Asian countries for centuries, has become endemic in an increasing number of African countries with epidemics throughout the years, and has recently returned to the Americas with on-going transmission in Haiti and the Dominican Republic. New, more virulent and drug-resistant strains of *Vibrio cholerae* continue to emerge, and the frequency of large protracted outbreaks with high case fatality ratios has increased, reflecting the lack of early detection, prevention and access to timely health care. These trends are concerning, signal a growing public health emergency and have gained the interest and investment of UNICEF at all levels.

UNICEF currently provides strategic technical support and guidance, surge capacity, training, supplies and logistical support for cholera and diarrhoeal disease (DD) outbreak prevention, preparedness and response worldwide. Its multi-sector approach – health, water, sanitation and hygiene (WASH), nutrition, education, protection and other sectors as well as services for emergency operations and supply management– offers the possibility of an integrated effort towards risk reduction, preparedness, capacity building and response in cholera and DD outbreaks.

Multiple resources – both internal and external – are compiled and consolidated in this UNICEF Cholera Toolkit, to make them easily accessible and widely available for use by UNICEF and partners globally.

### Summary of Annexes

#### Annex 1A

UNICEF's mandate and guiding principles

## 1.2. UNICEF's roles and responsibilities

UNICEF supports child survival and development, mainly focussing on the sectoral areas of Child Protection, Education, Nutrition, Health, Communications for Development (C4D) and Water, Sanitation and Hygiene (WASH). Its programmes comprise strategic and 'upstream' work including strengthening of governments and their systems and other national actors as well as 'downstream' programme implementation. Many country programmes work across the development – humanitarian spectrum and provide an opportunity to build capacity through risk-informed programming and preparedness for emergencies, including disease outbreaks such as cholera.

UNICEF works in countries at the request of national governments or by agreement with them. It works in support of and in partnership with national government institutions, local government, and a range of civil society and other organisations, such as NGOs and the Red Cross/Crescent Movement.

### 1.2.1. Integrated cross-sectoral approach to cholera

To reduce the risks from cholera, including limiting the spread of outbreaks and preventing deaths, an integrated approach is needed with collaboration across the Health, WASH and other related sectors and crosscutting areas (such as C4D, education, nutrition, protection) as well as key services such as emergency operations and SD.

<sup>1</sup> WHO. (2011d). Cholera – Fact Sheet N° 107. Geneva, Switzerland, World Health Organization. Available at: <http://www.who.int/mediacentre/factsheets/fs107/en/index.html>.

For all cholera-related activities, UNICEF Health and WASH Sections at all levels should work closely together with other key sectors, such as C4D and supporting services. See **Annex 1A** for an overview of UNICEF's mandate, guiding principles and approaches.

## UNICEF's roles in cholera prevention, preparedness and response

### Advocacy:

- Advocate with partners to increase the visibility and resource mobilization for cholera control at all levels, including the work on prevention and preparedness

### Co-ordination:

- Provide support and technical input into national co-ordination mechanisms and taskforces through UNICEF's relevant sectors: Health, WASH, Communications for Development (C4D), Nutrition, Education, Protection and services, such as Supply Division (SD) and Office for Emergency Programmes (EMOPS). UNICEF's Core Commitment for Children in Humanitarian Action (CCCs) includes its supporting role in sectoral co-ordination.
- Act in some cases as the relevant cluster lead (i.e., for WASH, Nutrition, Education) if the cluster system has been activated at the national level.
- Function as a key partner participating in sectoral (i.e., for Health, WASH, C4D, etc.) technical meetings and consultations at the global level.

### Assessments, planning and prioritisation:

- Contribute to the national cholera risk and needs assessment, as well as cholera preparedness and response planning.
- Especially in endemic countries, contribute and influence to identify cholera at-risk areas and to include cholera as a risk factor within the national definition of sectoral strategies, planning and prioritisation for all cholera related sectors (i.e. Health, WASH, C4D, etc.).

### Surveillance, early warning systems and alert mechanisms:

- Support the Ministry of Health (MoH) and WHO to collect surveillance and early warning data through UNICEF Health and WASH programmes in country and across borders.
- Support the MoH and WHO to implement an alert system and ensure rapid notification, verification and response from UNICEF WASH, Health and C4D programmes at minimum and key implementing partners for action.
- Contribute to outbreak investigation through UNICEF Health and WASH programmes
- Integrate cholera as part of UNICEF's internal Early Warning/Early Warning system to ensure preparedness and response to outbreaks are in place and considered as part of UNICEF's responsibilities.

### Service delivery:

- Provide technical support with MoH, WHO and partners to develop guidelines and training materials or to ensure that existing guidelines and materials are operational.
- Support MoH, WHO, and partners to train national and international partners on all aspects of cholera management, including co-ordination, information management, surveillance, case management, WASH and C4D approaches.
- Identify, develop agreements with, support and build capacity of non-governmental organizations (NGOs) to deliver services for surveillance, case management, C4D and WASH interventions.
- Provide supplies for setting up cholera treatment centres, case management and WASH interventions, including procurement locally, regionally or globally from SD, as well as shipping, storage and distribution of supplies in country.

### Communication (*advocacy, behaviour change communication, communication for social change and social mobilization*):

- Function as a key partner in co-ordination mechanisms for communication for behaviour and social changes and social mobilization interventions.
- Develop and implement risk communications and behaviour and social change communication strategies with government and key partners or ensure existing strategies are operational and support their implementation.
- Provide technical support to develop or use existing information, education and communication (IEC) messages and supporting materials, and to plan and implement campaigns.

### Cholera prevention and control in UNICEF's regular programming:

- Address cholera prevention and control as an opportunity and responsibility in UNICEF's regular programming across all relevant sectors as an aid organisation that is present before, during and after cholera outbreak occurs.

**See Section 4.4 for additional details.**

## 1.3. Purpose, target audience and structure of the Toolkit

### 1.3.1. Purpose

The UNICEF Cholera Toolkit aims to provide UNICEF Offices, counterparts and partners with one source of information for prevention (or risk reduction) and control of cholera outbreaks, preparedness, response and recovery – including integration with regular/development programmes.

The Toolkit aims to provide guidance primarily for the Health and WASH sectors; nevertheless guidelines are presented in an integrated manner, to avoid the continuation of ‘silo’ approaches for cholera prevention, preparedness and response. In addition, the Toolkit includes specific content linked to Education, Nutrition, C4D, Protection and other relevant sectors.

### 1.3.2. Target audience

The primary target audience for this Toolkit is UNICEF staff at all levels and across all divisions and sections in the UNICEF Country, Regional and HQ Offices. It may however also be useful for government counterparts and partners such as NGOs, UN and Civil Society Organisations (CSOs) working in cholera prevention, preparedness and response.

### 1.3.3. Structure of the Toolkit

The Toolkit comprises this ‘Main Document’ , a series of ‘Annexes’ (templates, checklists, spread sheets and more detailed reference information) and a selection of ‘Additional Resources’ (an electronic library including published papers, IEC materials, cholera guidelines, training packages, examples of mapping and a range of other practical information). Links to web-based resources are included throughout the electronic version of the Main Document.

Complementarily, a set of ‘Roadmaps’ (graphic instructions on how to use the different elements of the Toolkit for specific purposes such as developing a preparedness plan or setting up an outbreak response plan) are provided as part of the Main Document.

#### Key reference publications:

- ❏ UNICEF, *Delivering better results for children: A handy guide on UN coherence* (2010).  
[http://www.unicef.org/unreform/Handy\\_Guide\\_FINAL\(1\).pdf](http://www.unicef.org/unreform/Handy_Guide_FINAL(1).pdf)
- ❏ UNESCO, *UNICEF water, sanitation and hygiene strategies for 2006-2015* (2005).  
[http://www.unicef.org/about/execboard/files/06-6\\_WASH\\_final\\_ODS.pdf](http://www.unicef.org/about/execboard/files/06-6_WASH_final_ODS.pdf)
- ❏ UNESCO, *UNICEF joint health and nutrition strategies for 2006-2015* (2005).  
[http://www.unicef.org/about/execboard/files/06-8\\_health\\_and\\_nutrition\\_final\\_ODS.pdf](http://www.unicef.org/about/execboard/files/06-8_health_and_nutrition_final_ODS.pdf)
- ❏ UNICEF, *Core Commitments for Children in Humanitarian Action* (2010).  
[http://www.unicef.org/publications/files/CCC\\_042010.pdf](http://www.unicef.org/publications/files/CCC_042010.pdf)



## 2. Cholera – the basics

### 2.1. Overview of Chapter 2

This chapter provides important background and contextual information for understanding the types and characteristics of cholera bacteria, the mechanism for infection, means of transmission and risk factors, and gender and age considerations for infection.

#### Summary of Annexes

Annex 2A	Vibrio cholera - ecology data
Annex 2B	Common misunderstandings about cholera

### 2.2. Cholera: history, classifications and mechanism of action

#### 2.2.1. History and classifications

Cholera is one form of acute, watery diarrhoea, a symptom that can be caused by any number of bacteria, viruses and parasites. Cholera is caused by a bacterium (gram-negative rod), *Vibrio cholerae*. There are about 200 serogroups of *V. cholerae*, but only two, *V. cholerae* O1 and O139 are known to cause the specific disease known as cholera<sup>2</sup>. Serogroup O1 is further divided into three serotypes, Inaba, Ogawa, and the rare Hikojima and into two biotypes, classical and El Tor.

In its most severe form, cholera is one of the swiftest lethal infectious diseases known –characterized by an explosive outpouring of fluid and electrolytes within hours of infection that, if not treated appropriately, can lead to death within hours. In places where drinking water is unprotected from faecal contamination, cholera can spread with stunning speed through entire populations. These two characteristics of cholera have yielded a reputation that evokes fear and often panic. However, with prompt and appropriate treatment, mortality can be kept low. Furthermore, cholera outbreaks can be prevented or controlled through a combination of public health interventions, predominately through disease surveillance and early warning, provision of safe water, adequate sanitation, health and hygiene promotion and early detection and treatment.

To date, there have been seven cholera pandemics, six of which have been most likely due to the classical biotype. The current pandemic began on the Indonesian island of Sulawesi in 1961 and resulted from the El Tor biotype. During this current pandemic, the classical form seems to have been almost entirely replaced by El Tor, which survives well on zooplankton and other aqueous flora and fauna. This fact is commonly cited as one reason for the persistence of the current pandemic, along with the fact that El Tor evokes less durable immunity than does the classical biotype.

From a clinical standpoint, cholera caused by the El Tor biotype has a higher proportion of asymptomatic cases, who are silent excretors of infectious *V. cholerae*. However, most experts agree that recently the proportion of all cases of symptomatic cholera presenting with severe dehydration has increased and that this trend is attributable to the emergence of a variant strain of El Tor that produces the classical cholera toxin. Generally, the majority of people infected are asymptomatic (approximately 75 per cent). Of the symptomatic cases (25 per cent), a minority leads to severe cholera (20 per cent of those with symptoms, or 5 per cent of all infected cases) with a greater proportion presenting mild to moderate disease (80 per cent of those with symptoms, or 20 per cent of all infected).

<sup>2</sup> The letter 'O' refers to the serogroup-specific lipopolysaccharide cell wall (O) antigen.

## 2.2.2. Mechanism of action

It is very important to understand that the cholera bacterium itself is not responsible for disease; it does not invade the cells of the bowel wall, nor does it cause any destruction of the intestine or cross the intestinal barrier. Its behaviour differs from the bacterium that causes shigellosis, for example, which crosses the intestine, invades intestinal cells and causes an inflammatory response, all of which result in a bloody diarrhoea that is distinct from the watery diarrhoea that characterizes cholera.

*Vibrio cholerae* acts by attaching to cells that line the intestine where it produces a toxin that interferes with the normal cellular processes of absorption and secretion of fluid and electrolytes. Specifically, the cholera toxin activates an enzyme system that helps regulate the flow of fluid and electrolytes across the bowel wall and 'locks' a part of what is normally a bi-directional 'pumping' mechanism into a one-way outflow position. Secretion of fluid therefore exceeds absorption, leading to a potentially massive depletion of fluid and electrolytes from the body, causing dehydration. Up to 50 per cent of infected people could develop severe dehydration with high mortality risk if left untreated. The diagram in Figure 1 demonstrates this mechanism and explains why the fundamental principle of cholera treatment is rapid replacement of fluid and electrolytes lost. If replacement is handled efficiently and effectively, mortality can be kept to less than one per cent of those displaying clinical symptoms.

The incubation period for cholera ranges between 12 hours and five days, a relatively short period allowing for quick progression to onset of symptoms, shedding of the bacteria and transmission, and resulting in explosive outbreaks. The duration of the disease lasts as little as one day and up to one week in rare cases, with the usual duration being three days until the diarrhoea stops. Shedding of bacteria, however, continues in symptomatic patients from two days to two weeks and in asymptomatic ones for a few days.

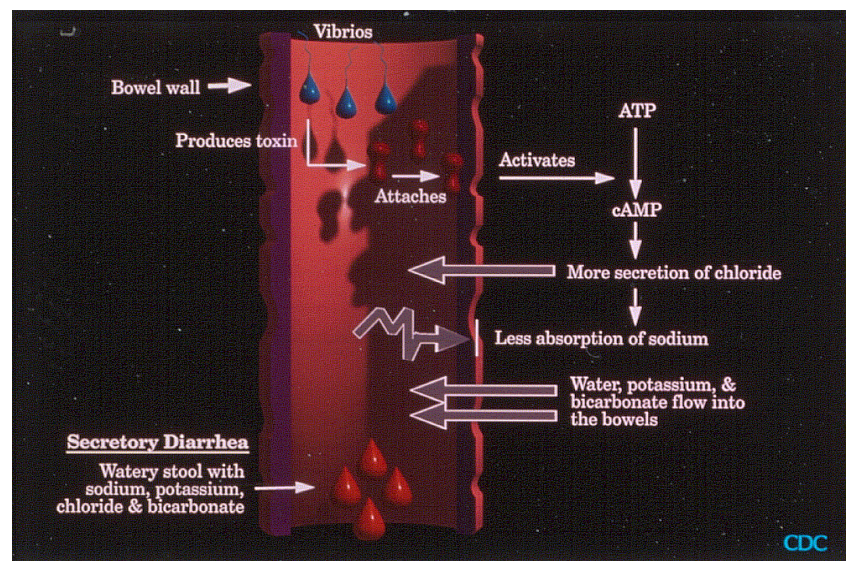


Fig 1 - Mechanism of cholera action (source: CDC)

Additional detail on the mechanism of cholera can be found in [an animated online presentation](http://lifesciences.envmed.rochester.edu/curriculum/SEPAClass/MM.swf) produced by the Department of Microbiology and Immunology at the University of Rochester. See <http://lifesciences.envmed.rochester.edu/curriculum/SEPAClass/MM.swf>

## 2.3. Epidemiology & risk factors

### 2.3.1. Epidemiology

According to the World Health Organization (WHO), the number of reported cases of cholera has increased over four fold since 2000. In 2011, 58 countries reported a total of 589,854 cases and 7816 deaths to the WHO. However, this number is considered to be a significant underestimate due to poor surveillance and underreporting. Nevertheless, cholera is on the rise with an estimated 1.4 billion people at risk in endemic countries and an estimated 3 million to 5 million cases and 100,000-120,000 deaths per year worldwide.<sup>3</sup> In many cholera-endemic countries, children under five years old account for more than half of the global incidence and deaths. These figures represent less than one per cent of all estimated cases of diarrhoea and less than 10 per

<sup>3</sup> WHO. (2011d). Cholera – Fact Sheet N° 107. Geneva, Switzerland, World Health Organization. Available at: <http://www.who.int/mediacentre/factsheets/fs107/en/index.html>.



cent of estimated diarrhoea deaths annually. However, cholera's historical impact, frequent occurrence in explosive outbreaks, dramatic clinical picture, regular attacks on adults as well as children, highly contagious nature and potentially high lethality, make it one of the most conspicuous, and most feared, diseases.

Cholera has remained endemic in some Asian countries for centuries. It has become endemic in an increasing number of African countries with epidemic peaks throughout the years. Recently it returned to the Americas with ongoing transmission in Haiti and the Dominican Republic. New, more virulent and drug-resistant strains of *Vibrio cholerae* continue to emerge, and the frequency of large protracted outbreaks with high case fatality ratios has increased, reflecting the lack of early detection, prevention and access to timely health care.

### Cholera occurs in both endemic and outbreak settings

**Endemic:** Country settings where cholera cases have been reported for three of the past five years (WHO), or where cholera cases are constantly present in a given geographic area or population group (WHO EWARN)

**Outbreak:** Endemic or non-endemic country settings where more cases of cholera occur than are expected in a given area, or among specific group of people, over a particular time period (WHO EWARN).

*An 'outbreak' is more limited in geographic scope and number of people affected than an 'epidemic', which signifies a greater magnitude and degree of propagation.*

In endemic countries, where people may have been exposed to cholera on numerous occasions during their lifetime, many people, especially adults, possess a level of acquired immunity that can protect them during outbreaks (in other words, prior infection gives protection against re-infection and less severe illness for several years, although probably not for life). In these endemic settings, children, who are less likely than adults to have been exposed, are the most vulnerable to symptomatic infection and severe illness and death. On the other hand, when outbreaks occur in countries where cholera is not endemic, all people, children and adults, are equally susceptible to the disease and the consequences of infection.

#### 2.3.2. Transmission – the 'faecal-oral' route

The predominant route for cholera transmission is faecal-oral. **In an epidemic, there is only one way to contract cholera: by swallowing something (usually water or food) that has been contaminated with faecal matter that contains *V. cholerae*.** Consequently, if faecal material is not ingested orally, the spread of cholera can be completely stopped and infection can be entirely prevented. Other frequently cited risk factors represent different routes of getting to this single end-step. For example, people coming together at a funeral for cholera victims do not get cholera simply by virtue of their attendance at the mass gathering; they must consume food and/or drink that have been prepared by people whose hands have been contaminated with faecal matter which contains *V. cholerae*. Occasionally cholera is acquired from eating inadequately cooked shellfish that have accumulated *V. cholerae* in their natural environment; however, during an epidemic it is the faecal-oral route that is significant.

Although the transmission of cholera is sometimes described as "person-to-person", this conception can be misleading because the term "person-to-person" has been used in different ways by different authors. Cholera is not transmitted through the air or merely by being in close proximity to someone else who has it. Transmission generally occurs through the faecal-oral route, whether the intermediary is water, food, hands or other means. Cholera can also be transmitted by vomitus; however, there are more *V. cholerae* per gram of watery diarrhoea, and therefore many more grams of watery diarrhoea than of vomitus to transmit the disease effectively.

**Cholera cannot occur where the bacterium is not present**, but if the bacterium is already present or is introduced within a setting, **adequate levels of public sanitation, safe water supply and personal hygiene will inhibit its transmission.** *Vibrio cholerae* of many different subgroups are found in virtually all coastal water, especially in the tropics and sub-tropics. Toxigenic *Vibrio cholerae* O1 have been identified in the environment along the Gulf Coast of North America, in certain rivers of Australia, as well as in many locations afflicted by epidemics in many parts of the world. Only certain regions remain cholera endemic, particularly in the tropics and

subtropics, and the presence of the disease is likely to relate to both environmental and socioeconomic factors.<sup>4</sup> Even if cholera is brought into a more developed country, the disease is unlikely to spread because of the relatively high level of coverage of safe water and sanitation. However, even when environmental conditions are grossly inadequate, families and individuals can protect themselves from ingesting cholera by taking appropriate measures personally and at home as discussed later in this Toolkit. **At all times, the key is to keep faecal material from being ingested by mouth.**

At the beginning of a cholera outbreak, large numbers of people can become infected from a single contaminated water or food source. Most tend to become infected from surface water, well or piped water sources rather than from food, although contaminated foods at mass gatherings can pose the risk of infecting large groups of people. When a number of people are infected, depending on their degree of over-crowding and water, sanitation and hygiene practices, **multiple overlapping faecal-oral transmission routes can advance the spread of the disease.** Therefore, while priority should be given to identifying and blocking the main source of contamination, it is also extremely important to work on blocking all other possible transmission routes at the same time.

A final point about transmission: Cholera is more infectious and communicable when propagated through the stool of an infected person versus when it exists in the environment, a mechanism known as a hyper-infectivity state.

### 2.3.3. Risk factors

The risk of transmission, illness and death from cholera is proportional to the interaction of cholera with the host and the environment. It should be stressed again that **the only way to become infected with cholera is to ingest the bacteria orally.**

**Table 1 – Cholera risk factors**

<b>Risk factors for transmission</b>	<ul style="list-style-type: none"> <li>Poor access to and use of water and/or limitations to monitoring and maintaining water quality</li> <li>Practice of open defecation / poor access to and use of appropriate sanitation</li> <li>Poor hygiene practices (handwashing, safe food preparation)</li> <li>Crowded settings: dense urban slums, refugee or displaced sites, institutions (schools, prisons) gatherings (weddings, funerals)</li> <li>Seasonal upsurges: increase spread during dry season with water shortages or during rainy season with flooding and contamination of water sources</li> <li>Displacement or population movements</li> </ul>
<b>Risk factors for severe illness and death</b>	<ul style="list-style-type: none"> <li>Low level of immunity to cholera (children and non-endemic settings)</li> <li>Underlying conditions: malnourished, elderly, children, pregnant, chronic diseases, AIDS, low gastric acidity (elderly, infants, persons on antacids or gastric acid inhibitors), persons with blood group O</li> <li>Lack of access to early detection and proper treatment (including individual knowledge and beliefs)</li> </ul>

#### **Note: Consideration of the impact of climate change on cholera risk:**

Climate change increases the risk of cholera in several ways: (1) the growth of bacteria, like *Vibrio vulnificus* and *Vibrio cholerae* (non-O1 and non-O139), in the sea and brackish waters substantially increases at higher temperatures and (2) severe disaster events damage water and sanitation infrastructure and create conditions conducive to faecal-oral contamination and higher transmission risk. Both warmer sea surface temperatures and extreme weather are influenced by El Niño Southern Oscillation variability. Examples of this pattern have been observed in areas of South America, and the Bay of Bengal, and in the Great Lakes Region of Africa.<sup>5,6</sup>

<sup>4</sup> Lipp, E., Huq, A., Cowell, R.R., 'Effects of global climate on infectious disease: the Cholera Model,' *Clinical Microbiology Reviews*, vol. 15, no. 4, Oct 2002, pp. 757-770. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC126864/?tool=pubmed>

<sup>5</sup> Lipp, E., Huq, A., Cowell, R.R., 'Effects of global climate on infectious disease: the Cholera Model,' *Clinical Microbiology Reviews*, vol. 15, no. 4, Oct. 2002, pp. 757-770.

Extensive research over the last two decades has linked cholera burden in many parts of the world to predictable changes in climatic conditions such as sea surface temperatures, ambient temperatures and rainfall patterns. Based on this evidence, multiple global collaborative projects are working to establish cholera early warning systems using climatic data and models.

### Noteworthy characteristics of *Vibrio cholerae* (*V. cholerae* 01 and 0139)

#### Infective dose & concentrations:

- The infective dose, the amount of bacteria required for the disease to develop, is related to a person's health status and the conditions in their stomach. For example, someone with lower levels of gastric acid in their stomach, i.e., higher pH, require a lower infective dose because *V. cholerae* do not survive in acidic environments.
- The dose at which 50 per cent of people will become infected is approximately  $10^6$  (1,000,000) *V. cholerae* bacteria.
- A single infected organism, e.g., a copepod or plankton, in surface waters can carry  $10^4$ - $10^6$  *V. cholerae* bacteria, and rice water diarrhoea from an infected person can contain  $10^7$ - $10^9$  *V. cholerae* per milliliter of volume.

#### Survival times:

- A few hours on dry surfaces
- 1-35 days at 2-4°C (ice box temperature)
- 1-14 days at room temperature
- 5-24 days in well water
- 1-2 years in warm coastal waters, estuaries
- 28-35 days in ice cubes in an ice chest
- 1-2 days on metal utensils
- possibly over 6 months in frozen seafood.

#### Survival limits:

- At 65°C, almost all pathogens die within 12 seconds, although some cholera bacteria die at a temperature as low as 48°C (Note: the WHO guideline is to bring water to a rolling boil, which provides confidence that all bacteria are killed).
- *V. cholerae* survives best in alkaline waters and less well in acidic environments (pH range for *V. cholerae* survival is from 5 to 9.6).

#### Reservoirs for multiplication; growth and doubling times:

- The *Vibrio cholerae* bacterium is known to multiply in the human intestine, in interaction with copepods associated with water-borne zooplankton and phytoplankton, and on moist, warm, non-acidic foods, such as cooked rice, grains and seafood.
- The time needed for cholera growth to begin on suitable foods is less than one hour at greater than 30°C and somewhat longer at 22°C.
- At 22°C, the time needed for the bacteria to double in number is less than one hour.

For further details and reference information with respect to cholera risks, see **Annex 2A**.

#### **2.3.4. Cholera considerations by gender and age**

Age and gender differences with respect to roles, social norms and personal behaviours vary by context and can lead to distinctions in exposure sensitivity to the *V. cholerae* and to likely outcomes when severe cholera is contracted. Vulnerability may also vary in endemic and epidemic contexts.

<sup>6</sup> Bompangue Nkoko, D., Giraudoux, P., Plisnier, P., Tunda, A.M., Piarroux, M., Sudre, B., Horian, S., Tamfum, J.M., Ilunga, B.K., Piarroux, R., 'Dynamics of cholera outbreaks in Great Lakes Region of Africa, 1978-2008,' *Emerging Infectious Diseases*, vol.17, no.11, Nov 2011. <http://www.cdc.gov/eid>.

### Examples of how age and gender may affect susceptibility to infection:

- Women and girls often bear greater responsibility for the prevention of cholera because of their traditional roles in the preparation of food, collection and treatment of water, construction and cleaning of sanitation facilities, and enforcement of household hygiene.
- Women and girls are more likely to bear responsibility for the care of sick and dying family members, including washing and disinfecting clothes and bedding, preparing the bodies for burial, and preparing food for gatherers at funerals.
- Men are more mobile and more likely to eat outside the home, making them more vulnerable to infection due to poor hygiene in food outlets. In addition, more men undertake economic migration, and workers with high mobility, such as truck drivers and merchants, comprise a potentially high-risk group.
- Children (from age 6 months to 10 years) may be at relatively higher risk of infection than young babies because they frequently put objects in their mouths, spend considerable time in settings with poor hygienic conditions such as schools, possess a less-developed understanding and practice of hygiene, have more mobility and acquire less immunity than older people due to greater levels of environmental exposure.

For clarifications of common misunderstandings related to cholera, see **Annex 2B**.

### Valuable resources for information covered in this section:

- ❏ **COTS Program:** Chapter 1-2. <http://www.ideact.nl/cots/entirecots.pdf>
- ❏ Médecins Sans Frontières, **Cholera Guidelines** – 2004, 2<sup>nd</sup> ed., Chapter 1, September 2004. [www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf](http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf)
- ❏ Ministry of Health and Population in Haiti/U.S. Centers for Disease Control and Prevention, '**Haiti Cholera Training Manual: A Full Course for Healthcare Providers**', pages 4-8, [http://www.cdc.gov/haiticholera/pdf/haiticholera\\_trainingmanual\\_en.pdf](http://www.cdc.gov/haiticholera/pdf/haiticholera_trainingmanual_en.pdf) (French version)
- ❏ **WHO**, 64th World Health Assembly Resolution: '**Cholera: mechanism for control and prevention**,' January 2011. [http://apps.who.int/gb/ebwha/pdf\\_files/EB128/B128\\_R7-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/EB128/B128_R7-en.pdf)
- ❏ **WHO**, **Weekly epidemiological record**, '**Cholera, 2011**,' 3 August 2012. [http://www.who.int/wer/2012/wer8731\\_32.pdf](http://www.who.int/wer/2012/wer8731_32.pdf)
- ❏ *The Lancet*, **Seminar on Cholera, 2012** [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)60436-X/fulltext#article\\_upsell](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)60436-X/fulltext#article_upsell)
- ❏ **WHO**, **Bulletin of the World Health Organization**, '**The Global Burden of Cholera**,' 24 January 2012. <http://www.who.int/bulletin/volumes/90/3/11-093427/en/>
- ❏ **WHO**, Global Task Force on Cholera Control, '**Prevention and control of cholera outbreaks: WHO policy and recommendations**.' <http://www.who.int/cholera/technical/prevention/control/en/index.html>
- ❏ **WHO**, Global Task Force on Cholera Control, **Cholera Country Profiles**. <http://www.who.int/cholera/countries/en/index.html>

## 3. Understanding the situation and monitoring

### 3.1. Overview of Chapter 3

This chapter covers information required to understand and monitor the situation and to make informed decisions for prevention, preparedness and response, including how to determine an outbreak and its magnitude, scale for response and monitor and report when there is no outbreak.

#### Summary of Annexes

Annex 3A	Algorithm for alert verification and outbreak investigation
Annex 3B	Cholera outbreak rapid assessment template
Annex 3C	Information on laboratory, RDT and environmental testing
Annex 3D	Sample alert register
Annex 3E	Alert system template
Annex 3F	Line listing template and additional information
Annex 3G	Example of data collection spread sheet (Excel) <b>(TBD)</b>
Annex 3H	Epidemiologic indicators and analysis of data
Annex 3I	Epidemic curves and interpretation
Annex 3J	Example of planning sheet (excel) <b>(TBD)</b>
Annex 3K	Template for daily reporting

### 3.2. Cholera-related assessment and monitoring

Knowing the characteristics of a given area – access to services, cultural factors determining family care behaviours, etc. – to determine its level of risk and capacity to handle cholera is a necessary part of any cholera prevention and preparedness strategy and following plan of action.

During a cholera outbreak, a close monitoring of the situation (cases reported and where they come from) and continuous assessment of the situation will allow actions to be undertaken in a timely manner to contain the disease, limit its spread and reduce mortality. Collaboration among all concerned sectors (especially health and WASH) is of the utmost importance.

Chapter 3 covers only assessment and monitoring related to cholera cases and reporting (during an outbreak). Monitoring of programmatic interventions is covered in sections 7, 8 and 9.

The following scheme identifies the different elements of assessment and monitoring suggested to be included as part of prevention, preparedness and response to cholera.

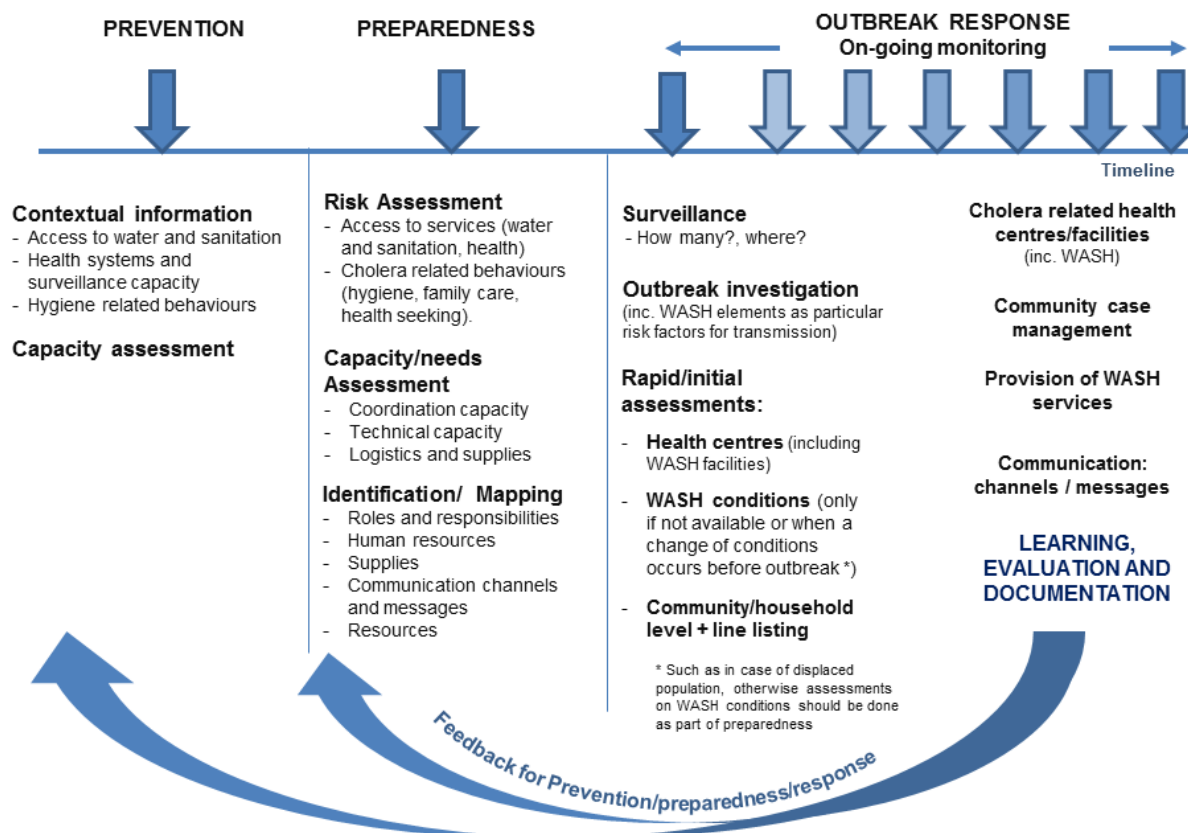


Fig 2 – Suggested elements for assessments and monitoring related to cholera prevention, preparedness and response

### 3.3. Determining an outbreak and its magnitude and scale

Determining an outbreak and its magnitude and scale includes the following key actions (adapted from [WHO EWARN Guidelines 2012](#)).<sup>7</sup> Actions may not necessarily occur in the order presented and can be taken at the same time.

**Tip:** Data must be collected on a routine basis, shared immediately, and used to promote action

The vital role of data cannot be understated. Timely, relevant data must be collected regularly, analysed for use and shared immediately with key multi-sectoral partners (health, WASH, communication, education, media, government and local officials, communities, and donors) to prompt and support urgent action, and to adjust response interventions based on changing epidemiology and the quality of response operations.

<sup>7</sup> WHO, 'Outbreak surveillance and response in humanitarian emergencies: WHO guidelines for EWARN implementation.' Geneva, 2012. [http://whqlibdoc.who.int/hq/2012/WHO\\_HSE\\_GAR\\_DCE\\_2012\\_1\\_eng.pdf](http://whqlibdoc.who.int/hq/2012/WHO_HSE_GAR_DCE_2012_1_eng.pdf)

### 3.3.1. Action 1: Trigger and verify an alert

The detection of unusual numbers of cases of acute watery diarrhoea (AWD) reported through traditional surveillance methods or through rumours coming from the community or media should trigger an alert. Alerts must be verified within 24 hours of notification. If cholera is suspected, an outbreak investigation must follow.

To review an algorithm for alert verification and outbreak investigation (both adapted from WHO EWARN 2012), see Figure 2 and **Annex 3A**.

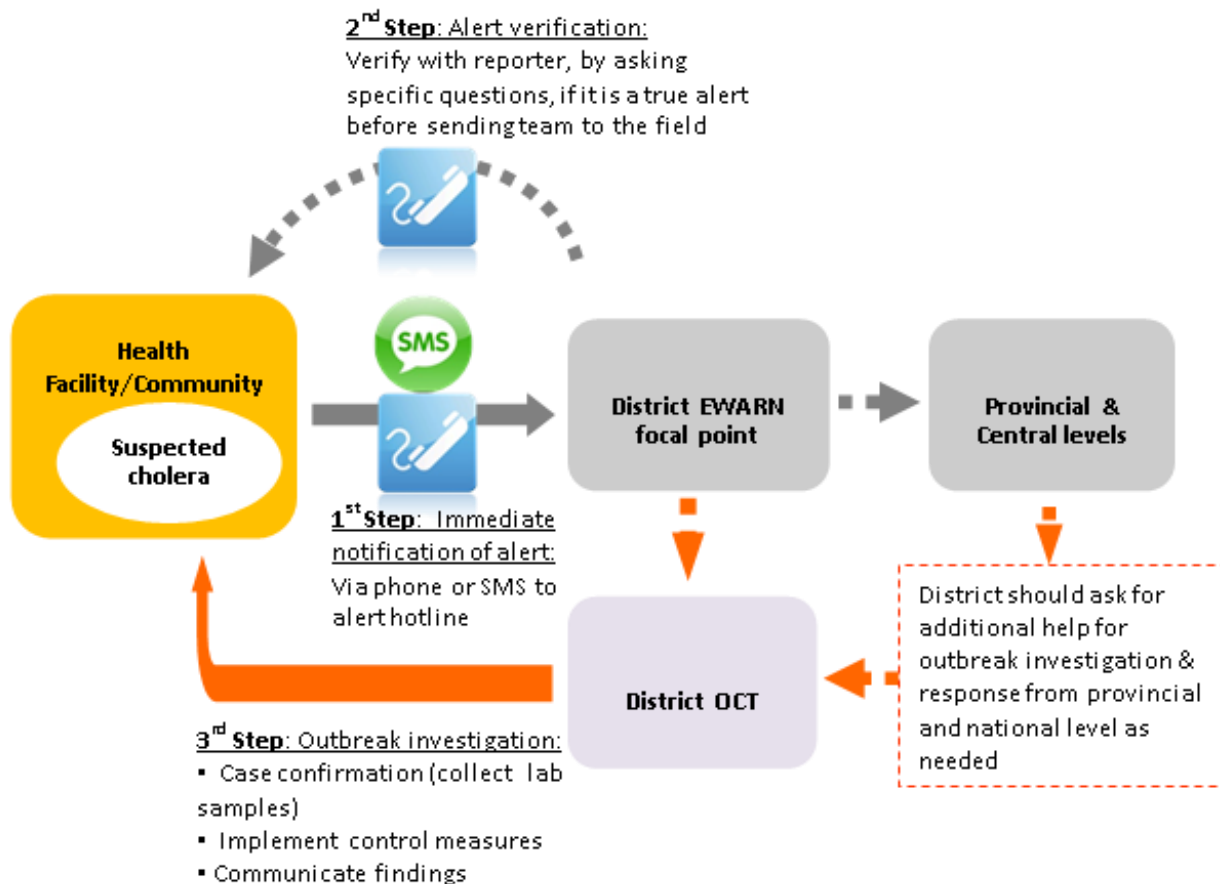


Fig 3 – Steps in the process of notification, alert verification and outbreak investigation and response (WHO EWARN system)

#### Triggers to signal an alert for suspected cholera, to be verified within 24 hours

**In non-endemic areas:** There is a rapid increase of the number of children over 5 years of age or adults who develop AWD.

**In an endemic area:** There is a rapid increase in the number of cases of AWD compared to the expected number of cases\* based on trends from previous years.

\*Expected number of cases – This figure is determined by analyzing past AWD data in the affected province, district, village, etc. Ideally, surveillance data should be collected and reviewed at the district level, or even smaller areas, before being aggregated at higher levels, which will lead to more sensitive outbreak detection. A monthly (or even better a weekly) average number of cases for the non-epidemic years can be compared to the current situation.

Alerts can be verified by asking a few simple questions which can be done by phone or SMS.

- What are the age, signs and symptoms of the suspected case(s)?
- What was the date of onset of symptoms of the first and most recent cases?
- What was the location and date of the health consultation?
- Where was the place of residence at onset of illness?
- Where are cases occurring (including any geographical, personal and time relationships between cases, e.g., same community, attended the same school, wedding, health centre, funeral)?
- What is the situation status or outcome to date, i.e., case management, death?

### 3.3.2. [Action 2: Conduct an outbreak investigation](#)

Once an alert is verified and cholera is suspected, an Outbreak Investigation must be conducted to confirm cholera, to identify the population at risk and to rapidly put in place control measures. Response speed is critical; suppression of information, failure to recognize an outbreak or slowness to respond can result in an epidemic of greater magnitude and in the preventable loss of life.

A multi-disciplinary Outbreak Investigation team (rapid response team) should deploy immediately to study the occurrence. The team can consist of a team lead (either separate or a member of the technical team), an epidemiologist, a microbiologist to collect lab samples, a clinician, a WASH/environmental health specialist, a social mobilization/communication expert and a representative from the local community.

**Action 2A: Perform field investigation to gather initial information (Health and WASH):** Information gathered from health centres and communities will help the investigation team confirm a cholera outbreak and form an initial understanding of the origins and scale of the outbreak. The team can also use the opportunity to make a quick assessment of Health and WASH response capacity. During this investigation the team will:

- Visit the health facility to:
  - Examine cases, if possible, or discuss signs and symptoms with a clinician.
  - Look for additional cases in the facility register (see [IDSR Guidelines](#), pages 126-127, for conducting a register review).<sup>8</sup>
  - Assess case management capacity at the facility (see Annex 3B);
- Visit the household, community, place of work or school, and interview case contacts to:
  - Assess WASH conditions (including identification of behaviours related to cholera) where appropriate (see **Annex 3B**).
  - Search for other suspected cases and deaths (see [IDSR Guidelines](#), pages 128-129, for contact recording form);
- Collect stool samples from the first 5-10 suspected cholera cases. A cholera outbreak can only be confirmed using a stool culture, which also provides information on antimicrobial susceptibility. While the stool culture is being analysed, rapid diagnostic tests (RDT) combined with clinical and epidemiologic information can help support or oppose suspicions of a cholera outbreak. It is not necessary, in the midst of an outbreak, to confirm the status of every patient in order to provide appropriate cholera treatment. See **Annex 3C** for more information on laboratory testing, RDTs and environmental testing.

**Action 2B: Confirm cholera outbreak:** An outbreak of cholera can only be confirmed by stool culture. The definition of a confirmed case is a suspected case in which *Vibrio cholerae* 01 or 0139 has been isolated in the stool.

<sup>8</sup> WHO, *Technical Guidelines for Integrated Disease Surveillance and Response in the African Region*, 2010.  
<http://www.afro.who.int/en/clusters-a-programmes/dpc/integrated-disease-surveillance/features/2775-technical-guidelines-for-integrated-disease-surveillance-and-response-in-the-african-region.html>



### **Tip: Initiating response measures**

At this point if the assessment is suggestive of a cholera outbreak (even before confirmation by stool culture) the investigation team should notify the MoH, or lead government body, to initiate response measures including gathering the multi-sectoral cholera taskforce, setting up an early warning, alert and response system in all at-risk administrative areas, developing a clear method of communicating information to key partners, reviewing and updating the national response plan, assessing resource needs, distributing messages to the community, etc. See Sections 5, 7, 8 and 9 for prevention, preparedness and response interventions.

### **Note on International Health Regulations (IHR):**

Cholera is a disease requiring notification to WHO under the IHR. It can cause significant public health impact and can spread rapidly. See the IHR website (link) to review the algorithm for the assessment and notification of public health events. Note that there should be no restriction on travel or trade due to cholera. For more information, see IHR at <http://www.who.int/ihr/en/>.

### **3.3.3. Action 3: Set up an early warning alert and response network**

(this type of system can have a number of name such as disease early warning system (DEWS), integrated disease surveillance and response (IDSR), adapt for local terminology).

An EWARN is composed of people who:

- Collect information on trends of cases and deaths, in health facilities or in the community
- Inform the next reporting level for appropriate action to verify and investigate
- Implement any necessary control measures.

The EWARN system requires the necessary resources to record, transmit (SMS, phone, email, radio) and manage data, as well as for transportation and adequate supervision for field investigation and rapid response (See WHO [EWARN Guidelines, Section 2-4](http://whqlibdoc.who.int/hq/2012/WHO_HSE_GAR_DCE_2012_1_eng.pdf) for more information on the EWARN structure, management and network; [http://whqlibdoc.who.int/hq/2012/WHO\\_HSE\\_GAR\\_DCE\\_2012\\_1\\_eng.pdf](http://whqlibdoc.who.int/hq/2012/WHO_HSE_GAR_DCE_2012_1_eng.pdf)).

If there is an existing EWARN, coverage should be expanded and reporting frequency increased as required. Ideally, an EWARN should be established during the preparedness phase in areas of high risk for cholera outbreaks. If there is no EWARN in place, it needs to be established to ensure immediate alert notification of “hot spots” for rapid response and daily and weekly reporting and analysis for response and adjustment of programs.

### **Action 3A: Set up an immediate alert notification for “hot spots” to identify and report on:**

- New cases and deaths in areas that have not reported
- Upsurges of cases and deaths in areas that have already reported cases
- Alarming gaps in supplies, human resources, accessibility or security.

The alerts should be immediately reported to a central notification cell, such as the Zimbabwe C4 (see Annex 5A), that signals Health, WASH and other relevant staff for response actions. Such notifications often make use of telephone, cell phone, text messaging and other means of rapid communication. Access to supportive services such as free “hotlines” for immediate alerts is increasingly being provided by mobile communications companies during outbreaks.

See **Annex 3D** for a sample alert register, and **Annex 3E** for a sample alert template.

### **Action 3B: Establish or strengthen the EWARN**

- 1) Develop and communicate a case definition agreed by all partners for the outbreak. The case definition and instructions on where and how to report suspected cases should be circulated widely. Personnel at health

facilities at all levels of the health system should be taught how to recognize cholera and how to report it. It is important that a common case definition is used consistently.

### Examples of case definition *during* an epidemic

- AWD with or without vomiting in a patient aged 5\* years or more (WHO 2012) **OR**
- Any individual experiencing 3 or more liquid stools with or without vomiting during a 24 hour period (MSF 2004)

\*Although the WHO case definition uses an age range of over 5 years (over the age of 2 was also previously used) it is important to note that children under 5 are still affected by cholera and still need to be registered in the line listing (see below) and need to be treated immediately for AWD.

- 2) Establish line listing of cases by all health facilities receiving cases. Cholera registers should be prepared in advance and distributed widely as needed; every facility should keep a line listing in a dedicated cholera register. A line listing helps tabulate and analyse case information by establishing the system of data collection and monitoring during a cholera outbreak, including information such as patient name, age, gender, address, date of onset of symptoms, date of first visit, degree of dehydration, treatment and outcome. See **Annex 3F** for a sample line-listing form and further details on data.

Information can be gathered from patients and their relatives in a treatment facility, when staffing resources allow, which can assist in the identification of possible transmission risks which will help establish more focussed responses. Once an outbreak has been confirmed, diagnosis of patients can rely on symptoms alone, i.e., during an outbreak of cholera in a defined area, almost every case of AWD with or without vomiting will be due to cholera.

Data from line listings should be analysed and used at the facility/local level and transmitted to the central level daily (if early in the outbreak) and weekly. Data can also be entered into a spreadsheet for quick interpretation of trends in numbers and pictorially through graphs. See **Annex 3G** for an example of a data collection sheet (generic to be developed).

- 3) Collect information on cases and deaths through active surveillance to complement official reporting channels. It is important to employ a variety of means to actively review information obtained from communities (i.e., rumours), religious leaders, political authorities, press reports, blogs, and any other unofficial information sources. Not all cases or deaths are seen at a health facility and may be left unnoticed and not included in the alert system.

#### 3.3.4. **Action 4: Describe the epidemic**

Regular and timely epidemiologic updates are necessary to describe the progress and trends of the cholera outbreak and to monitor response actions. Updates can be performed daily (especially at the beginning of an outbreak), weekly or monthly, depending on the progression of the outbreak.

Data should be used to inform action. It should be monitored at the lowest administrative level to update response interventions and at national or regional levels to support advocacy and fundraising, predict spread, estimate resource needs and signal neighbouring countries of epidemic proximity. See **Annex 3H** for the definition of data, calculation methods and analysis.

Data should be analysed and reported using a mix of numbers, graphs and maps to describe:

- Person: who is affected (data broken down by sex, age, or risk factor);
- Time: trends over time (see Action 4B);
- Place: location/place (see Action 4C).

See the information in **Annex 3F** on line-listings for more information on understanding person, place and time from collected data.

#### **Action 4A: Conduct daily reporting**

Cases, deaths and the case fatality rate (CFR) (**Annex 3H**) need to be reported on a daily basis to signal trends and initiate or adjust response interventions. The analysis of these trends should be conducted at the lowest administrative level to allow immediate adjustment of the prevention and case management interventions. Information for daily reporting of cases and deaths can be drawn from alerts and facility-reported data from line listing. For details, see **Annex 3K for a daily reporting template**.

#### **Action 4B: Conduct weekly reporting**

Weekly reporting involves more analysis than daily reporting and provides a more robust picture of an epidemic's time trends, which can be illustrated in tables, line graphs or histograms. It covers daily and cumulative case data reported over the course of a week (incidence rate), CFR and attack rates (AR) (see **Annex 3H**). Weekly data can also be described by age or gender to yield a more detailed analysis of trends. For an example, please refer to [Zimbabwe weekly epidemiologic bulletins](http://www.who.int/hac/crises/zwe/sitreps/epi_archive/en/index3.html) at [http://www.who.int/hac/crises/zwe/sitreps/epi\\_archive/en/index3.html](http://www.who.int/hac/crises/zwe/sitreps/epi_archive/en/index3.html).

Epidemic curves (see **Annex 3I**) are used to determine whether cases are clustered in time, place or by person, i.e., by age and sex, to predict when the peak of the outbreak might occur; to develop hypotheses explaining exposure and disease, i.e., the source of the outbreak and the mode of transmission; and to estimate the end of the outbreak. Each facility should establish an epidemic curve, as well as district, provincial, and national epidemic curves, and they should be updated frequently and regularly.

#### **Action 4C: Create epidemiologic maps**

Maps are a useful tool to determine the geographic origin and likely path of cases; to monitor their progress, the CFR and AR; and to prioritise preventive and preparedness actions in surrounding areas and across borders. Spot maps or hand-drawn maps can show where, how and why the outbreak is moving and the locations of cases, roads, water sources and health facilities in more than larger country-level maps.

#### **Action 4D: Identify sources of transmission**

Analysis of the information gathered or estimated in Actions 2, 3 and 4 should help identify the source of transmission through the observation of common patterns among reported cholera cases. Assessments of cholera transmission from particular bodies of water, food outlets or other sources may rely on case control studies, sanitary surveys around water points, inspections of food hygiene and safety at food outlets, and testing of thermo-tolerant coliform, such as *E. coli*, in water sources as an indicator of the faecal contamination level and the potential risk of the presence of *V. cholerae*. Additional studies, including laboratory tests and environmental studies, can be conducted as necessary, although they can be time and resource consuming and the capacity limited in low-income countries.

### **3.3.5. Action 5: Estimate the populations at risk and number of expected cases**

The estimation of risk is based on a number of combined factors that include water, sanitation and hygiene coverage; environmental factors such as seasonality or flooding; levels of crowding; population displacement and movement; systemic capacity to respond; population immunity; and other factors such as marginalization, economic stress and water supply limits faced by populations.

#### **Action 5A: Estimate the populations at risk**

Estimates of at-risk populations will reflect broad numbers in locations based on pre-determined risk factors (see Section 2. 3.3) and will typically include the entire population in a defined geographic area (village, camp, province, etc.). See **Annex 6C for details on risk and capacity assessment**. While these populations are at risk of

exposure, not everyone will become infected or demonstrate symptoms that require medical care (see Action 5B) and will therefore not be counted as cases in the reporting system.

Risk assessment methods can include: reviews of existing data on coverage, use and knowledge of safe water, sanitation and hygiene services and health services, observation, sanitary surveys, measurement of residual chlorine, key stakeholder interviews and focus group discussions.

Targeted prevention interventions to reduce the spread of disease - including water, sanitation and hygiene efforts, communications measures and oral cholera vaccines where indicated - should be focussed on populations at risk of exposure. These areas should undertake preparations to manage cases through community and health staff capacity building (see Chapters 7 and 9 for communication and WASH interventions).

**Tip: Start water, sanitation, hygiene and communication interventions in at-risk areas before cases occur**

Areas that are identified to be at risk should be immediately targeted for WASH and communication activities in order to prevent transmission to and within these areas. EWARN system strengthening and capacity building for health staff to improve case detection and management is also critical in these areas. See Sections 7 and 9 for response interventions.

**Action 5B: Estimate the expected number of cases**

The number of new cases expected - and ultimately the magnitude of an outbreak - is very difficult to predict and depends on many different factors. An estimated attack rate (AR) can be used to determine potential numbers of cases and therefore areas that require significant attention and supplies for case management and infection control. The AR can be estimated using the historical AR data in that area or what is likely based on known parameters from previous outbreaks globally. The estimated AR should be based on an assessment of risk performed with partners. It is often a best guess and should be rounded up to ensure there are adequate supplies (which can be used to address other diarrhoeal disease efforts after the outbreak). The estimated AR used for planning purposes is different from the cumulative attack rate calculated after an outbreak to determine the effects of control measures (see Annex 3H).

**Estimated attack rates (AR) for epidemic planning**

- 0.5-2%: low-medium risk settings (less crowded, open settings, rural or may have better access to services)
- 2-5%: higher risk settings (crowded places with poor water and sanitation, urban slums or camps)
- over 5%: typically very high risk settings (high population density, poor water, sanitation and health services, low population immunity and high vulnerability)

*Note:* The AR can exceed 5%, as in Haiti and Goma where populations have had little immunity and risk factors are many.

These AR estimates can be used to approximate the number of people expected to become ill (and who will seek medical care) among the populations at risk of exposure. These quantities will be used to determine the number and type of treatment facilities and their medical supply and WASH needs.

The following estimates (from MSF guidelines 2004) can be used to estimate the amount of resources needed during a specified time period for an outbreak:

- For all settings: The proportion of cases expected to be seen before the peak of the epidemic is 40%;

- For low-medium risk settings: The peak of the epidemic is expected to be reached after 1.5-3 months, and the duration of the epidemic is 3-6 months (slower time to spread across the population due to low population density and open setting)
- For higher risk settings: The peak of the epidemic is expected to be reached after 1-2 months, and the duration is 2-4 months
- For very high risk settings: The peak of the epidemic is expected to be reached after 2-4 weeks, and the duration is 1-3 months (quicker time to spread across the population due to high population density with other risk factors) .

From the estimates of AR the following percentages of illness are expected:

- 80% of those that are ill will have mild to moderate illness and seek care (they may or may not be hospitalized)
- 20% of those that are ill will have severe dehydration requiring hospital care.

See **Annex 3H** for a [planning excel spread sheet](#) that can help in calculating how many cholera treatment centres, staff, supplies, etc. would be required to cover initial supply and resource needs.

### 3.3.6. [Action 6: Formulate and share conclusions and recommendations](#)

After reviewing the analysis of the results, formulate conclusions and recommendations about the outbreak based on the following considerations:

- Situation is confirmed as a cholera outbreak
- The population affected and at populations at risk
- Possible causes of the cholera outbreak and laboratory results, source of infection, mode of transmission, AR, CFR and possible risk factors
- Measures already initiated to contain the outbreak
- Recommendations made for controlling the situation and for further investigation/studies
- Information shared with all stakeholders.

### 3.3.7. [Monitoring of EWARN systems](#)

Surveillance and early warning systems need to be monitored to ensure their quality on a regular basis, specifically to review:

- The number of sites collecting data that are reporting weekly data (graphed to show trend from previous weeks)
- The completeness and timeliness of reports (proportion of reports received per week) with trends
- The proportion of alerts responded to within 24 hours from notification and the number of alerts confirmed as outbreaks
- The details of specific alerts: date and time, location, whether a response was initiated, the outcome and mapping.

Regular supervision of health staff is also necessary to make sure the case definition is applied, the line listing is completed properly, data are being used for analysis and shared with key partners for action, reporting forms are available and the number of alerts that were not reported and the reasons are known.

## 3.4. [Monitoring when there are no cases](#)

Monitoring epidemiologic data when there is no outbreak of cholera is important and should be incorporated into the existing surveillance system with an early warning and alert component. This need is particularly important in:

- Endemic settings: High-risk areas and before seasonal upsurges
- High-risk contexts: in endemic settings where cholera exists or non-endemic ones where it may be introduced, for example in a displaced site characterized by little access to WASH and health care interventions, significant crowding and population movement.

Areas that are identified to be at risk should have an early warning and alert system in place and should undertake enhanced prevention and preparedness efforts.

**Key resources:**

- ❏ *MSF Cholera guidelines: Chapter 2* (2004) <http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf>
- ❏ *Outbreak surveillance and response in humanitarian emergencies: WHO guidelines for EWARN implementation* (2012)  
[http://whqlibdoc.who.int/hq/2012/WHO\\_HSE\\_GAR\\_DCE\\_2012\\_1\\_eng.pdf](http://whqlibdoc.who.int/hq/2012/WHO_HSE_GAR_DCE_2012_1_eng.pdf)
- ❏ *Technical Guidelines for Integrated Disease Surveillance and Response in the African Region* (2010)  
<http://www.afro.who.int/en/clusters-a-programmes/dpc/integrated-disease-surveillance/features/2775-technical-guidelines-for-integrated-disease-surveillance-and-response-in-the-african-region.html>

## 4. Cholera prevention

### 4.1. Overview of Chapter 4

This chapter covers outlines the individual and community behaviours and practices that can help to prevent cholera infection and transmission.

#### Summary of Annexes

##### Annex 4A

Guidance Note on the use of oral cholera vaccines for UNICEF (2012)

### 4.2. How to prevent cholera through improved water, sanitation and hygiene

#### The single most important principle for preventing cholera transmission

Keep faecal matter away from water and food and kill cholera bacteria that have contaminated food or water prior to consumption.

The following table identifies specific actions, which if implemented by a large proportion of the population and by supporting practitioners, can prevent the transmission of cholera. In the longer term, eliminating cholera transmission<sup>9</sup> will require sustained efforts on making water and sanitation services accessible and used, appropriate hygiene practices adopted (which usually requires changing personal and social behaviours) and health care services accessible and of good quality.

While the table indicates specific actions and outcomes to be achieved, Section 4.4 discusses recommendations for the prevention of cholera through expanding and scaling-up existing programmes to cover cholera prone areas, as well as including cholera as an overt consideration for the prioritisation and planning of sectoral interventions in health, WASH and other cholera concerned sectors.

<sup>9</sup> Section 2.2 of this Toolkit discussed the transmission routes for cholera

Table 2 - Community-focussed actions which will prevent the transmission of cholera

Target outcome	Household, community and institutional practices – Actions required (may involve sustained behaviour change)	Practitioners – Actions required
<b>People have access to and use safe water supply for drinking</b>	<ul style="list-style-type: none"> <li>• Water is taken from protected water sources</li> <li>• Effective water treatment is practiced<sup>10</sup>, such as boiling (up to a rolling boil)<sup>11</sup>, use of proven filters or appropriate chlorine dosing.</li> <li>• Boiled or treated water for drinking, making juices, other drinks and ice.</li> <li>• Water is stored safely in a covered container with a tap, narrow neck or with a cover and a dedicated implement for extracting the water.</li> </ul>	<ul style="list-style-type: none"> <li>• Water services are made available providing water which is treated and has residual chlorine.</li> <li>• Water quality is systematically monitored and action (including training on how to maintain water safety) is taken where quality is not adequate.</li> <li>• Education through behavioural change communication, education and mobilisation and information dissemination on safe drinking water practices is undertaken through multiple channels.</li> <li>• Household water treatment and storage, including systems, materials, supply chains and follow up is undertaken.</li> <li>• Water purification materials, storage containers and instructions for their use are distributed and their use is monitored.</li> </ul>
<b>Households, communities, institutions and food outlets practice safe food hygiene</b>	<ul style="list-style-type: none"> <li>• Food is always prepared in a clean environment.</li> <li>• People preparing food wash their hands with soap after visiting the toilet, before preparing food, feeding the child or handling water.</li> <li>• Food that has been is always served hot.</li> <li>• Avoid raw or undercooked shellfish.</li> <li>• Market vendors only sell unpeeled and unsliced fruit.</li> <li>• All food is covered to protect it from flies and other insects.</li> <li>• Fruits and vegetables that are eaten raw are always washed first with safe water and chlorine.</li> <li>• Utensils are always cleaned with hot water and soap.</li> <li>• Utensils are always stored and kept clean.</li> <li>• Special handwashing facilities with soap are kept for customers and promote their use.</li> <li>• Special care is taken to make sure food is safe at gatherings.</li> </ul>	<ul style="list-style-type: none"> <li>• Food providers are trained on environmental health and food safety.</li> <li>• Hygiene education is provided through various channels, including social mobilisation sessions on food safety for households and institutions.</li> <li>• Regular inspections are undertaken according to environmental health regulatory framework/ standards of food outlets and institutions, such as schools, workplaces, prisons. Corrective actions are taken when standards are not met.</li> </ul>

<sup>10</sup> WHO (2011) *Drinking Water Quality Guidelines*, 4<sup>th</sup> edition which provide information on dosing and other proven treatment methods (i.e. not all filters are effective). [http://www.who.int/water\\_sanitation\\_health/publications/2011/dwq\\_guidelines/en/](http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/)

<sup>11</sup> WHO (2011) *Drinking Water Quality Guidelines*, 4<sup>th</sup> edition (p143) recommends that water is brought to a rolling boil. As nearly all pathogens are killed at 65°C for 12 seconds even in turbid water, WHO no longer places a time limit nor a modification for altitude on its recommendation for boiling (personal communication: Margaret Montgomery and Bruce Gordon, 8 May 2012).



Target outcome	Household, community and institutional practices – Actions required (may involve sustained behaviour change)	Practitioners – Actions required
<b>Infants are exclusively breastfed and if needed, given safe fluids and food</b>	<ul style="list-style-type: none"> <li>Babies under 6 months are exclusively breastfed</li> <li>Older infants continue to be breastfed and are also given complementary foods prepared hygienically</li> <li>Where formula milk is used it is prepared hygienically using boiled water that remains hot enough to kill bacteria in the formula (but cooled before serving)</li> </ul>	<ul style="list-style-type: none"> <li>Advocacy, communication and social mobilisation sessions, including mothers' support group sessions, for and promotion of exclusive breastfeeding for infants under 6 months of age and promotion of breastfeeding with complementary feeding for older infants (including education on food hygiene for caregivers)</li> </ul>
<b>The environment is free from excreta because people dispose of it safely</b>	<ul style="list-style-type: none"> <li>Latrines with functional hand-washing facilities are used and kept clean</li> <li>People do not defecate in the open (if people don't have access to a latrine – they always bury their faeces)</li> <li>Children's faeces are disposed of safely in a latrine or buried</li> <li>Excreta disposal facilities are provided in markets, other public places and institutions with functional and well managed hand-washing facilities</li> <li>Excreta disposal facilities are culturally appropriate and a sustainable cleaning and a maintenance system is established for communal or public facilities</li> <li>Especially vulnerable groups are catered for.</li> </ul>	<ul style="list-style-type: none"> <li>Advocacy for and facilitation of processes to encourage community led sanitation action</li> <li>Support to government authorities to ensure institutions and public places have adequate accessible latrines with functional hand-washing facilities as well as systems to ensure they are cleaned and maintained</li> <li>Communication for behaviour and social change interventions for latrine use and maintenance and free open defecation communities.</li> </ul>
<b>People wash their hands with soap and water at critical times</b>	<ul style="list-style-type: none"> <li>Hands are washed with water and soap at the critical times (after defecation or handling faeces, before preparing food, feeding a child or eating)</li> <li>If soap is not available then ash or another appropriate disinfectant is used</li> <li>Because a shared cloth or towel can become contaminated hands should be dried in the air</li> <li>Particular care is taken at funerals and other gatherings to ensure facilities for hand-washing with soap are available and used at critical times (including after contact with the deceased and his/her clothing, bedding, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Behaviour and social change communication, education and social mobilisation activities on the importance of handwashing with soap at critical times are undertaken</li> <li>Construction, operation and maintenance (including provision of soap) of handwashing facilities is supported in all public places, particularly next to public latrines and in food preparation and serving areas.</li> </ul>
<b>Environmental hygiene is adhered to in markets and other public places</b>	<ul style="list-style-type: none"> <li>Drainage systems are kept clean</li> <li>Solid waste is safely disposed of to prevent fly breeding</li> <li>Functional and clean latrines, with handwashing facilities and safe water, are available.</li> <li>Particular care is taken with the disposal of solid waste which also includes faeces in plastic bags which are collected in a formal system ('flying toilets')</li> </ul>	<ul style="list-style-type: none"> <li>Municipal authorities are supported to establish and sustain an effective solid waste collection and management systems in urban areas with particular attention to markets and other public places.</li> <li>Solid waste education and communication sessions are undertaken within schools and market places.</li> </ul>

These activities are critical for prevention of cholera. Additional interventions will be needed in formulating appropriate responses. See Section 9.1 for further details on community-focussed actions for cholera response.

### 4.3. Use of cholera vaccines

Vaccination is becoming increasingly important to cholera control for a number of reasons, including: the availability of new, improved, less expensive and prequalified vaccines; growing awareness of large and protracted epidemics receiving extensive response operations and media coverage; increased interest by partners and donors in new technologies to address the worrisome growth in incidence of cholera worldwide; and, closer collaboration with technical vaccine experts and partners who implement traditional cholera control efforts.

There are currently two WHO pre-qualified cholera vaccines. Both offer the major advantage of being relatively easy to administer in a short time and of depending more reliably on functioning health systems and their partners than on the actions of families or individuals.

#### Vaccination: A recommended defence

Engagement with governments, WHO and partners is recommended to consider oral cholera vaccine (OCV) use pre-emptively in endemic, at-risk and humanitarian settings and reactively in outbreaks. In all contexts, the decision-making process must be based on a sound risk assessment.

**Vaccination does not replace the need for improved WASH education at all levels, nor does it replace the need for rapid diagnosis and appropriate management of cases that occur. It should also not be allowed to detract from necessary on-going attention to diarrhoeal diseases of other origin, which remain a major cause of childhood mortality in all developing countries.**

It has become increasingly clear that the appropriate implementation of a mass cholera vaccination program should be considered as a potentially important element of any cholera prevention and control effort, together with the other areas of intervention discussed in this Toolkit.

See **Annex 4A** for:

- Specifications of the two pre-qualified vaccines;
- General considerations on the use of OCVs;
- Pre-emptive and reactive use of OCVs - why, when and how to use them, as well as who should administer them, where, and what additional feasibility considerations should be made during large outbreaks and humanitarian crises);
- UNICEF's role as a supporting agency;
- Contact details for technical support and to access OCVs;
- Link to CDC and WHO Webinar, "Cholera and Cholera Vaccines: an update for UNICEF."

Note: Although OCVs are covered in this Section of the Toolkit, they are used pre-emptively as a preparedness measure and reactively in response to outbreaks. They are intended to prevent the spread of cholera and to reduce mortality through preventing infection.

#### Key resources:

- ❏ WHO, Weekly epidemiological record, Cholera vaccines: WHO position paper, 26 March 2010. <http://www.who.int/wer/2010/wer8513.pdf>
- ❏ WHO, *Oral cholera vaccines in mass immunization campaigns: Guidance for planning and use*, 2010. [http://whqlibdoc.who.int/publications/2010/9789241500432\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241500432_eng.pdf)

- ❑ WHO, *Background paper on the integration of oral cholera vaccines into global cholera control programs*, 2009.  
[http://www.who.int/immunization/sage/1\\_Background\\_Paper\\_Cholera\\_Vaccines\\_FINALdraft\\_13\\_oct\\_v2.pdf](http://www.who.int/immunization/sage/1_Background_Paper_Cholera_Vaccines_FINALdraft_13_oct_v2.pdf)
- ❑ WHO, *Technical Working Group on creation of an oral cholera vaccine stockpile*, April 2012.  
[http://apps.who.int/iris/bitstream/10665/75240/1/WHO\\_HSE\\_PED\\_2012\\_2\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/75240/1/WHO_HSE_PED_2012_2_eng.pdf)
- ❑ WHO, *Global Task Force on Cholera Control, Oral cholera vaccines use in complex emergencies: what next?* Meeting report, December 2005.  
[http://www.who.int/cholera/publications/cholera\\_vaccines\\_emergencies\\_2005.pdf](http://www.who.int/cholera/publications/cholera_vaccines_emergencies_2005.pdf)

#### 4.4. Incorporating cholera prevention into development / regular programming

The risk of cholera is the highest among the most marginalized populations, where water, sanitation and health related services are at the lowest coverage. Preventing cholera demands an overall strengthening of measures towards reduction of diarrhoeal diseases – improving access to the above mentioned services and hygiene related behaviours – and putting in place cholera specific measures in the most at risk areas. Increasing emphasis and bringing additional resources to existing diarrheal disease programs so they can scale up should be part of any cholera prevention strategy.

Through a mix of (1) scaling-up and expanding existing development programs (health, WASH, C4D, among others) to target cholera prone areas and (2) through integrating cholera as an overt consideration into the planning and implementation of development programs; the risk of cholera can be minimized and cholera be prevented. Nevertheless elimination of cholera will only be possible if the gains are sustained over the time.

##### 4.4.1. Scaling-up and expanding existing programs in cholera prone areas:

Development programmes' gains on improving access to water, sanitation and hygiene, access to health care including ORS and zinc, and achieving behaviour change related to hygiene and family care practices contribute to the reduction of diarrhoeal diseases and reduce the risk of cholera. The following interventions<sup>12</sup> have been identified as key for control and reduction of diarrhoeal diseases. Advocacy and support of national efforts, including resource mobilization, to scale up and expand them to cover cholera prone areas will contribute to the prevention and elimination of cholera in endemic and high risk settings:

- Community based approaches to stop open defecation and increase sanitation demand.
- Improve availability of water sources and adoption of household water treatment and safe storage.
- Behaviour change interventions to encourage appropriate hygiene practices (especially handwashing with soap), early and exclusive breastfeeding, supplementation of vitamin A, among others.
- Measles and rotavirus vaccinations for diarrhoea prevention.
- Fluid replacement to prevent dehydration, zinc treatment and continued feeding through ensuring the availability of low-osmolality ORS and zinc and health promotion in communities at high risk for diarrhoea.
- Strengthen early detection of diarrhoeal diseases and epidemiologic monitoring systems.
- Case management programmes for diarrhoea and other top causes of morbidity and mortality including malnutrition, i.e., Integrated Management of Childhood Illnesses (IMCI), Integrated Community Case Management (ICCM), Community Management of Acute Malnutrition (CMAM) and infant and young child feeding (IYCF).
- Improving monitoring systems, to be flexible to adapt and adjust to increased cases of AWD.
- Create linkages between development diarrhoeal disease programs and emergency programs for cholera preparedness and early response.

<sup>12</sup> Adapted from the WHO/UNICEF 7-point plan for diarrhoeal disease control  
[http://www.unicef.org/media/files/Final\\_Diarrhoea\\_Report\\_October\\_2009\\_final.pdf](http://www.unicef.org/media/files/Final_Diarrhoea_Report_October_2009_final.pdf)

#### 4.4.2. Integrate cholera as an overt consideration into existing development programs:

For endemic areas, cholera should be a specific consideration of the planning and delivering of any development programme. The list below highlights areas where the inclusion of cholera would be necessary as a mean to eliminate cholera transmission / prevent it to occur and improve health outcomes:

- In all concerned sectors (i.e. health, WASH, education, etc.) integrate cholera into the definition of strategies and plans of action, as well as in the allocation/ prioritisation of resources.
- Integrate cholera into the national risk assessment for risk-informed programming as a way to define specific actions for cholera preparedness and response.
- Integrate, within the national surveillance system, an early warning and response network in areas at high risk of cholera.
- Support the Ministry of Education and other curricula development institutions for pre-school, school, college and university level education to incorporate cholera into standard curricula at all levels.
- In collaboration with training institutions, support the integration of cholera as part of the professional training for health, WASH, education, nutrition, community development, media professionals.
  - Include within training for diarrhoea case management such as IMCI or iCCM, the detection, management and reporting of AWD focussed on staff working in cholera high risk communities
- Include cholera and diarrhoeal disease prevention messages (key family practices) in regular communication for development interventions.
- Build capacity of staff within institutions that run development programs to include cholera prevention, preparedness and response at national and sub-national levels.
- Build capacity and provide resources for use of oral cholera vaccines (OCV) in priority areas, where appropriate.

#### **Opportunities for UNICEF to include cholera prevention into development programmes**

In cholera endemic/at risk countries, UNICEF CO should include cholera as a consideration during the preparation of the Situation Analysis, Country Programme Document and Action Plan, Mid-Term Reviews and other programming and planning processes. In the same way, all concerned sectors within UNICEF should consider cholera prone areas during the definition of priority areas of intervention, especially those indicated in Section 4.4.1 above.

All work plans and collaboration with governmental institutions and partners (including project cooperation agreements for the implementation of regular programmes) should consider the opportunity to incorporate the actions mentioned in Section 4.4.2. or others aimed to increase specific capacity and awareness towards cholera prevention, preparedness and response.

Cholera risk must be factored within part of UNICEF CO's preparedness and contingency planning (including Early Warning/ Early Action).

#### **Key resources:**

- ❏ *Diarrhoea: Why children are still dying and what can be done WHO, UNICEF 2009*  
[http://www.unicef.org/media/files/Final\\_Diarrhoea\\_Report\\_October\\_2009\\_final.pdf](http://www.unicef.org/media/files/Final_Diarrhoea_Report_October_2009_final.pdf)
- ❏ *Pneumonia and diarrhoea: Tackling the deadliest diseases for the world's poorest children UNICEF (2012)*  
[http://www.unicef.org/media/files/UNICEF\\_P\\_D\\_complete\\_0604.pdf](http://www.unicef.org/media/files/UNICEF_P_D_complete_0604.pdf)
- ❏ *WHO/UNICEF Joint Statement: Clinical management of diarrhoea (2004)*  
[http://whqlibdoc.who.int/hq/2004/WHO\\_FCH\\_CAH\\_04.7.pdf](http://whqlibdoc.who.int/hq/2004/WHO_FCH_CAH_04.7.pdf)

## 5. Coordination, responsibilities and information management

### 5.1. Overview of this chapter

This chapter covers the rationale and structures for cholera outbreak prevention, preparedness and response, including the role of task forces and co-ordination committees. It also considers the meetings, sources of information and the importance of information management to understanding and containing cholera risks. The need for communications and the challenges presented by situations when cholera is present but not declared are reviewed, as are stakeholder roles and responsibilities overall.

#### Summary of Annexes

##### Annex 5A

Comparison of co-ordination structures - Ethiopia & Zimbabwe

### 5.2. Co-ordination for cholera prevention, preparedness and response

#### 5.2.1. Purpose of co-ordination for cholera prevention, preparedness and response

Effective prevention, preparedness and response for cholera require co-ordination and communication across multiple sectors and at different levels. The speed of response has significant bearing on the containment and impact of an outbreak.

The purpose of co-ordination is to:

- Ensure coherence of the prevention, preparedness or response activities through the development of collaborative plans and agreement on technical standards
- Avoid both gaps and duplication, and promotes complementarity
- Make the most effective use of all actors, including government partners, resources, funding and supplies
- Undertake collaborative assessments, leading to aligned planning and response assumptions
- Effectively share information
- Build capacities
- Mobilise resources
- Instigate timely monitoring, reporting and decision making
- Increase the efficiency and timeliness of early warning system
- Establish common thresholds for triggering interventions.

#### 5.2.2. Co-ordination structures for prevention, preparedness and response

Activities that will lead to the prevention of cholera (and infectious diarrhoeal diseases of all varieties) over the longer term should be undertaken as part of developmental efforts to build systems, structures and services. In particular, such efforts should provide greater access to improved water supply, sanitation and hygiene, promotion of health and hygiene promotion, reduction of malnutrition, use of ORS and zinc, and for the treatment of acute watery diarrhoea, particularly in children. Cholera-specific prevention activities and advocacy may be justified in high to medium risk countries and wherever possible should be considered a focus area for attention in existing co-ordination platforms.

Ideally, these pre-existing co-ordination structures can also ensure the incorporation of appropriate preparedness actions to be taken in advance of any possible cholera outbreak, thereby building sustainable capacity among national stakeholders and facilitating collaborative programming between development and emergency focussed actors.

The structure required to effectively co-ordinate a cholera response will depend on the scale and location of the outbreak, described in the following table:

**Table 3 – Suggested structures for cholera coordination by level/scale**

Context	Co-ordination		Comment
	Level	Focus	
An outbreak in a cholera- endemic area limited to one district with typical outbreak case numbers for the time of year	District	Primarily co-ordination of planning and implementation of response activities	Action may be managed through co-ordination <b>at the district level</b> with requests for additional supplies and support from national level, if required
An outbreak in a cholera endemic area that becomes much larger than the usual pattern and increases risks of crossing district boundaries	Sub-national or regional with support from national	Primarily technical, organizing logistics and supplies, providing supervision, supporting training and conducting risk and needs assessments, implementing support strategies and monitoring of activities	Response might require <b>district or regional-based co-ordination</b> mechanisms, plus additional <b>support from national level</b> including from existing sectoral and inter-sectoral co-ordination groups ( <i>such as an existing cholera or disease control co-ordination committee</i> ).
An explosive outbreak in a country which usually only has small outbreaks or a country which has not experienced cholera for many years	National (with additional support at sub-national level as required)	Primarily high-level liaison, strategic decision making, setting standards and delivering guidance, developing strategies for prevention and response, advocacy and resource mobilization and monitoring activities	Action might justify initiating either national disaster management or cholera-specific co-ordination mechanisms at <b>national, regional and district levels</b> . International support is also likely to be needed.
An outbreak that occurs near to or across country boundaries	National and cross-border	Primarily to ensure sharing of data, monitoring of trends and risks, response action and the movement of populations with associated transmission risks	Action would require co-ordination between authorities (national and local authorities) on either side of the border. International Health Regulations should be respected and international authorities duly notified.

### Establishment of co-ordination structures

- Support existing government-led national, regional and district co-ordination mechanisms wherever possible.
- Keep co-ordination structures as simple as possible, respecting meeting timings and restricting reports to a needs basis.
- Provide direct linkage to senior government officials to ensure directives are issued for critical action.
- Consider how mechanisms will work at national level and link with the structures at regional or district levels (line management and communication channels).
- For federal countries or unions, be clear on the structures for each state, as they may differ.
- If cholera occurs near borders – establish cross-border co-ordination and communication linking authorities and key actors.
- Health and WASH sectors should be proactive in ensuring close collaboration, e.g., joint meetings, regular information sharing and joint assessments, logistics, interventions, planning and monitoring, and inclusion of other relevant sectors (such as Education, etc.).
- Make the most of civil society, particularly organisations with significant cholera response expertise such as medical NGOs, NGOs/CBOs and FBOs with experience in community mobilisation for cholera response.

### 5.2.3. Outbreak task forces or co-ordination committees

The Ministry of Health coordinates all departments responsible for preventive health and epidemiology and is usually the overall lead agency in cholera prevention, preparedness and response. Engagement is required from Ministries and Departments responsible for emergency/disaster preparedness, water, sanitation, education, community development, social protection, local government, public information, communication and finance. It is always beneficial to involve and engage civil society, the Red Cross-/Red Crescent movement, UN agencies and other responsible bodies, such as medical research institutions.

In a country that has experienced large-scale outbreaks, the existence of a stand-alone *cholera task force* is more likely. For cholera endemic countries, which do not tend to face large outbreaks, or in countries which have not had cholera for some years, cholera is more likely to be covered by a more general outbreak task force or co-ordination mechanism. A National Disaster Preparedness and Management Agency (or the like) may exist in addition to a cholera task force and may or may not have epidemic control as part of its mandate. Irrespective of format and name, the core functions of a cholera co-ordination unit will be:

- Preparing for epidemic
- Co-ordinating among sectors and sharing information
- Collaborating at regional and international levels
- Conducting risk and needs assessments
- Collecting and reporting of information on cholera cases and deaths
- Organising any relevant training
- Procuring, storing and distributing of essential supplies
- Implementing, supervising, monitoring and evaluating control activities.

Co-ordination arrangements may necessitate the creation of sub-committees, advisory or technical working groups tasked with the following focus areas:

- Overall co-ordination (usually an strategic advisory group)
- Surveillance and information exchange
- Case management and laboratory services
- Environmental health / water, sanitation and hygiene
- Advocacy, communication for behaviour and social change and social mobilisation
- Communication and resource mobilisation
- Distribution and utilisation of supplies and associated logistics

#### **Membership composition of a national cholera task force**

A national cholera task force should be broadly representative. The size should balance inclusivity against the need for rapid decision making for quick and effective implementation. A typical task force might include:

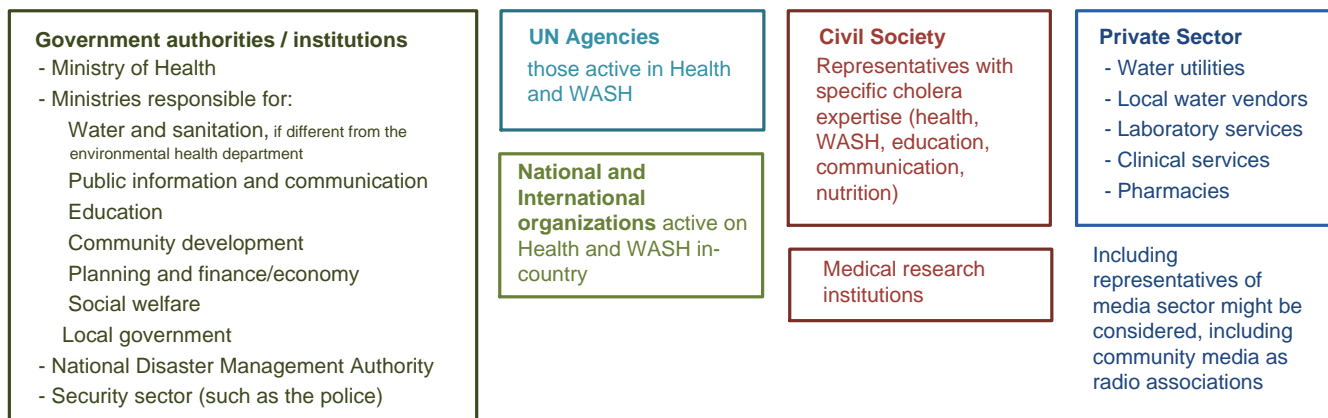


Fig 4 – Suggested members of a typical cholera national taskforce/coordination platform

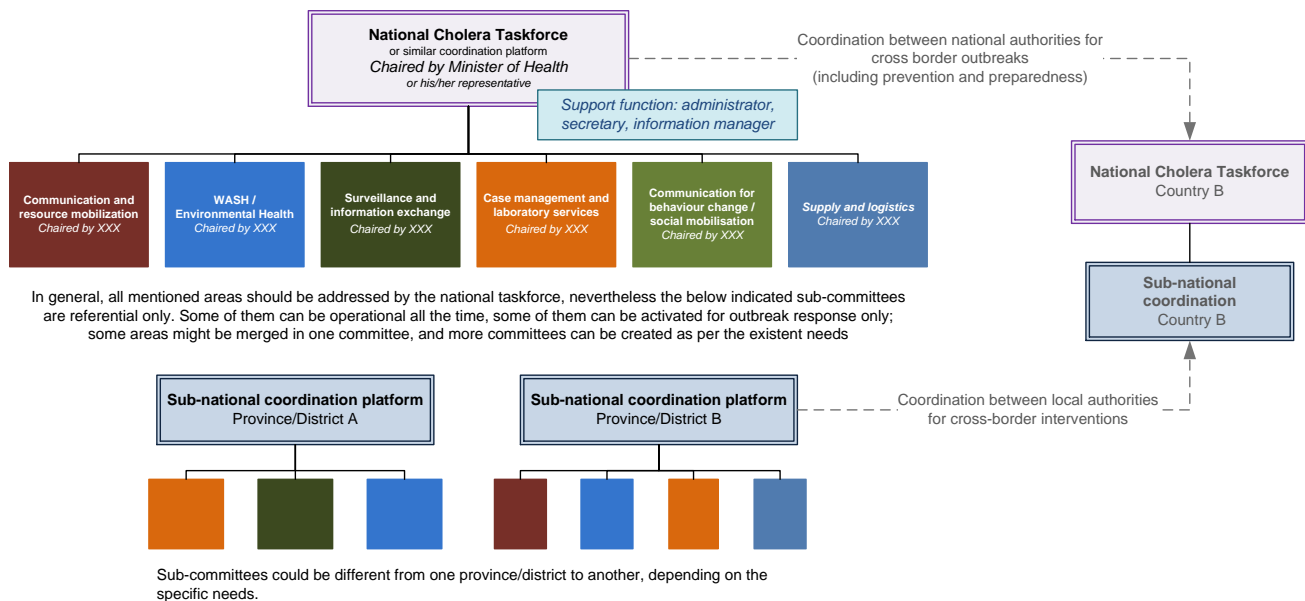


Fig 5 – Example of coordination arrangements for cholera preparedness and response

Membership composition may change by context. For reference, see the co-ordination structures utilized in two major epidemics with different contexts - in Ethiopia and Zimbabwe - shown in **Annex 5A: Comparison of Co-ordination Structures**, with some observations on their relative strengths and weaknesses.

During a cholera outbreak it is very important to identify organizations that have significant proven experience in responding to cholera and can help lead and guide other stakeholders in the response. A number of international institutions, agencies and organisations may be able to provide technical support. Unqualified individuals or organizations should not be allowed to manage cholera control activities, especially those relating to health care, until they have received adequate training. In epidemic situations where cholera outbreaks have not occurred before, training of national personnel will be a critical priority.

### The Inter Agency Standing Committee Cluster Approach

The roles of the IASC Cluster Approach in a cholera response is limited to the following scenarios:

- When a national government is unable to cope with the scale of the cholera outbreak and requires additional emergency operational assistance, or
- When the Cluster Approach is already functional due to another large-scale disaster in-country

Under these circumstances, the roles of the individual clusters would be:

- To support government to undertake its role in cholera response and specifically to support national cholera task forces with operational support for co-ordination, logistics, mobilisation of resources, technical advice and capacity building / training of partners.
- To co-ordinate across sectors with close collaboration between Health and WASH, and linkages also to Nutrition, Education, Protection and Logistics
- To support the MoH in implementing the cholera task force.

For further information on the Cluster Approach, refer to the Cluster Co-ordination Handbooks for WASH (WASH Cluster Co-ordination Handbook)<sup>13</sup> and Health Clusters (Health Cluster Guide).<sup>14</sup> These guides provide a range of useful information for supporting government-led sectoral and inter-sectoral co-ordination efforts.

<sup>13</sup> Global WASH Cluster Co-ordination Project, *Water, sanitation and hygiene (WASH) Cluster Co-ordination Handbook; A practical guide for all those involved in the Water, Sanitation and Hygiene Cluster (for field review)*, January 2009. <http://www.washcluster.info/?q=download/file/fid/450>



### Challenges presented by national cholera task forces

In large outbreaks, a national cholera task force is likely to be activated, with instructions for full engagement from senior government officials. However, the high level of commitment required for participation in the task force is difficult to sustain due to:

- Inconsistent representation by stakeholders, both in terms of changing personnel and of sustained priority given to engagement, not to mention a perceived domination of the group by Health professionals
- Perceptions by civil society representatives of being overlooked or limited either in number of agency representatives or ability to contribute.

#### 5.2.4. Meetings and information required to manage cholera risks

A cholera task force or co-ordination mechanism should meet periodically during periods before seasonal outbreaks in which attention is focussed on prevention and preparedness. UNICEF and WHO should lobby for and facilitate a comprehensive preparedness review two months prior to the normal outbreak season.

During the response period, stakeholders should meet frequently (at least weekly) during the outbreak period. At the peak of an outbreak, the task force or committee managing the direct response, for example at district level, will need to meet daily to discuss the progression of the cholera outbreak and, the status of and gaps in the response, and to prioritise actions and disseminate data.

The coordinator chairing any meeting should possess technical knowledge and co-ordination skills regardless of his/her normal work sector. Meetings should have a prepared agenda and stated objective and be kept as short and focussed as possible. Actions points arising from the meeting should be disseminated as fast as possible and followed up

Information is critical for stakeholder engagement and actions, but it is only useful if shared with those stakeholders who are responsible for acting on it. In cholera outbreaks, these stakeholders include:

- General public – who require information to protect themselves
- Media - who disseminate information widely to the general public
- Responders at local, national, regional, sub-regional levels, e.g., government, UN, civil society, NGOs/CBOs, private sector, community leaders, who need to understand the situation, what needs to be done where and when, the resources needed and gaps in available resources.

The following table identifies the types of information required to effectively manage cholera outbreaks.

**Table 4 - Types of information required for managing cholera outbreaks**

Types of information needed in cholera outbreaks	Why it is needed	Where is it discussed in this Toolkit?
Contextual information and the basics of cholera: <ul style="list-style-type: none"> <li>- How to prevent cholera and what to do if a person is infected</li> <li>- How and where to obtain assistance (usually free of charge)</li> <li>- Details about CTCs and ORPs</li> </ul>	<ul style="list-style-type: none"> <li>• To inform the public about what they need to do to protect themselves effectively.</li> </ul>	Chapters 2, 4, 8 and 9

<sup>14</sup> Inter-Agency Standing Committee (WHO), Global Health Cluster, *A practical guide for country-level implementation of the Health Cluster*, 2009. [http://whqlibdoc.who.int/hq/2009/WHO\\_HAC\\_MAN\\_2009.7\\_eng.pdf](http://whqlibdoc.who.int/hq/2009/WHO_HAC_MAN_2009.7_eng.pdf)

Types of information needed in cholera outbreaks	Why it is needed	Where is it discussed in this Toolkit?
Epidemiologic data and assessment information on risks and needs	<ul style="list-style-type: none"> <li>To understand how the outbreak is progressing, what the needs and priority response actions are and how to communicate persuasively with the public.</li> <li>To adapt response to emerging circumstances.</li> </ul>	Chapters 2 and 3
<ul style="list-style-type: none"> <li>Capacity for response - who is doing what, where, when and availability of resources (human, supplies, logistics, finances)</li> <li>Monitoring gaps and needs, i.e., knowing when and where stockouts occur, and having a plan for emergency resupply when they are reported.</li> </ul>	<ul style="list-style-type: none"> <li>To be able to identify capacity for responding and gaps in the response so that they can be addressed.</li> </ul>	Chapters 5, 6, 7,8,9 and 10
Data and information on the progress, efficiency and effectiveness of the response	<ul style="list-style-type: none"> <li>For learning, reporting on, accountability and improvement of the response effort.</li> </ul>	Chapters 3, 8 and 9

### 5.2.5. Co-ordination and communication when cholera is present but not declared

A cholera outbreak can have significant political ramifications. Governments may decide, for political and/or economic reasons, not to declare an outbreak when it occurs. WHO clearly states that food related bans are not required; however some past outbreak announcements had drastic consequences on trade. During outbreaks in Peru (1991) and in Tanzania, Kenya, Uganda and Mozambique (1998), seafood was banned for import by EU regulations (the last time a ban occurred on seafood imports).

If a cholera outbreak has potential international implications, it must be reported under the terms of the International Health Regulations. At the local level, governments may insist on referring to the disease by less threatening terms, like 'Acute Watery Diarrhoea (AWD)' or '001 disease'. Since cholera labeling appears to trigger significant reactions, non-declaration may be associated with concern over negative impacts on tourism, national pride or politics (since a cholera outbreak can be seen as a failure of government to deliver adequately on WASH and to address the level of poverty in a country).

The non-declaration of a cholera outbreak can pose a number of challenges to the response, including:

- Increased sensitivity among the government, UN, and civil society actors, thereby limiting information sharing, planning and response.
- Delayed action by some key actors (including government, UN, donors, NGOs) to take direct actions to control the outbreak, hence limiting funds available and actors involved in the early response
- Delay use of the media to inform communities
- Difficult cross-border communication because the disease is not officially defined
- Lose early opportunities to reduce the spread of the disease (*Note: It can be very difficult to determine, monitor, and share with relevant authorities the antimicrobial susceptibility of circulating V. cholerae strains if the government does not want cholera declared*).

**Tip: Co-ordination and communication when cholera is not declared.**

- Use UNICEF’s role in protecting the rights of children as an advocacy tool with the government.
- Proactively support co-ordination and action within the existing limitations, e.g. by supporting efforts from organisations already working on development programmes in the area.
- Build relationships and trust with the medical, WASH and other practitioner staff working on the response. Even when a government is not declaring the outbreak, practitioners on the ground are often working hard to do their best to respond within the limitations. If they trust that you will not put them in a difficult or dangerous position with the political authorities, they will welcome support for improving the response.
- Help to form a bridge between the government practitioners and other organisations with significant experience in responding to cholera where the links do not already exist.
- Do not waste time debating language but stress with both governments and populations the seriousness of the disease if there is reluctance to the use of the word ‘cholera’, but there is acceptance of the term ‘AWD’ (or another term, particularly with respect to. then the need to respond promptly and use mass media to inform large populations with key information
- Emphasize AWD prevention, and treatment and referral systems in on-going development activities, particularly at community level..
- Encourage senior representatives (for example, the Humanitarian Co-ordinator or UN Resident Coordinator and Heads of Agencies) to lobby government officials to recognise the problem and explain why it is in their interest to use internationally accepted terminology. \
- Provide evidence, where available, to support lobbying efforts, e.g., WHO written declarations that trade restrictions on seafood are no longer applicable, etc. Also, highlight the likely impacts if the outbreak becomes extensive, including the costs to the country, and share examples of other large outbreaks.

**5.3. Stakeholder responsibilities related to cholera**

The stakeholders outlined in the following table may be involved in cholera prevention, preparedness and response. The range of stakeholders involved will depend on the scale of the outbreak.

**Table 5: Potential stakeholders in cholera prevention, preparedness and response and their responsibilities / actions**

Stakeholder category / level of importance	Description	Possible responsibilities / actions
<b>Primary stakeholders:</b> <i>Household- and community-based Human Rights Based Approach (HRBA) - rights holders</i>	<b>Including:</b> Girls, boys, women, men, i.e., <i>all community members, including infants, youth, older persons, single heads of household, orphans, people with disabilities, persons living with HIV/AIDS (PLWHA), etc.</i> children in and out of school; food and water vendors.	<ul style="list-style-type: none"> <li>• Community cholera preparedness planning and action, participating in local task forces or working groups.</li> <li>• Managing and maintaining household and community based water points and latrines and hand-washing facilities</li> <li>• Using safe water, undertaking safe excreta disposal and practising safe personal and food hygiene.</li> <li>• Practising safe infant feeding, hand-washing with soap at critical times (after defecation or handling faeces, before preparing food, feeding a child or eating), and using and maintaining latrines.</li> <li>• Using ORS for rehydration and helping others to reach a health facility quickly when sick</li> <li>• Peer education on undertaking safe water,</li> </ul>

Stakeholder category / level of importance	Description	Possible responsibilities / actions
		sanitation and hygiene practices and the importance of safe infant feeding and use of ORS <ul style="list-style-type: none"> <li>• Selling and using safe water to prepare foods and beverages to be spent</li> <li>• Practising safe food hygiene in food outlets</li> <li>• Monitoring of new cases and informing health professionals</li> </ul>
<b>Secondary stakeholders:</b> <i>Community-based HRBA duty bearers</i>	<b>Including:</b> Schools / teachers; Religious institutions / leaders; Village-level community health workers ( <i>and other extension workers</i> ); respected community members ( <i>leaders, traditional birth attendants, elders, etc.</i> ); community groups ( <i>women, youth, sports</i> ); community-level private sector ( <i>shop keepers selling household water treatment products, ORS, etc.</i> ); people who may be influential in the local area ( <i>staff of local colleges and well-known local people/celebrities</i> ); women's and youth groups and/or clubs ( <i>and other community groups</i> ); community media ( <i>such as community radio or TV stations, local theatre and mobile cinema/video groups</i> ).	<ul style="list-style-type: none"> <li>• Cholera prevention through supporting WASH interventions</li> <li>• Community cholera preparedness planning and action, including health and hygiene promotion</li> <li>• Mobilising community members to adopt healthy and safe behaviours and practices and engaging communities in cholera prevention activities and local cholera task forces.</li> <li>• Providing education and motivating school children on measures for cholera prevention and response</li> <li>• Providing leadership and motivation for community members and religious followers on measures for cholera prevention and response</li> <li>• Facilitating discussions within communities to de-stigmatise cholera</li> <li>• Providing feedback to authorities on the quality of services provided to communities</li> <li>• Selling ORS, soap and water treatment chemicals or equipment</li> </ul>
<b>Tertiary stakeholders:</b> <i>District, regional, national or international HRBA duty bearers</i>	<b>Including:</b> Local government ( <i>departments including health, water, education, community development, agriculture<sup>15</sup></i> ); ministries ( <i>health, water, communication, disaster preparedness, social welfare, community development</i> ); semi-autonomous institutions ( <i>with responsibilities for nutrition, medical research, etc.</i> ); educational establishments ( <i>universities, colleges and other training establishments, e.g., those training epidemiologists, doctors, nurses, social workers, public health, environmental health, or water and sanitation professionals</i> ); private sector ( <i>providing supplies, supporting promotional efforts</i> );	<ul style="list-style-type: none"> <li>• Cholera prevention through supporting WASH interventions and, where appropriate, vaccinations</li> <li>• Preparedness planning and associated actions</li> <li>• Co-ordination at cross-border, national, regional and district levels</li> <li>• Surveillance and epidemiological studies</li> <li>• Outbreak investigation</li> <li>• Planning, prioritising actions and managing the outbreak response</li> <li>• Provision of technical guidance and standards</li> <li>• Surveillance and epidemiological studies</li> <li>• Laboratory confirmation of <i>V. cholerae</i></li> <li>• Water quality testing and monitoring</li> <li>• Establishment of cholera treatment sites</li> <li>• Clinical assessment and case management</li> <li>• Logistic and supply chain support to prevent shortages of critical treatment materials</li> <li>• Psychosocial support for cholera patients and their families</li> </ul>

<sup>15</sup> At local government level, sometimes cross-sectoral mobilisation teams work on projects outside of their own sector, and in larger outbreaks staff from outside of the usual sectors may be called in to support the response efforts

Stakeholder category / level of importance	Description	Possible responsibilities / actions
	influential national celebrities or sports stars; non-governmental organisations and the Red Cross Movement ( <i>national and international UN agencies and partners, e.g., WHO, UNICEF, OCHA</i> ); and donors ( <i>bi-lateral, unilateral, embassies, private</i> )	<ul style="list-style-type: none"> <li>• Integrated communication (media and interpersonal communication)</li> <li>• Mobilising the community</li> <li>• Supporting, encouraging and monitoring of the work of community workers</li> <li>• Providing WASH services</li> <li>• Training at all levels</li> <li>• Monitoring of food safety at food outlets</li> <li>• Monitoring and reporting</li> <li>• Funding</li> </ul>

## 5.4. Data and Information Management

Accurate and consistent, systematically collected data needs to be collated, analysed and evaluated prior to being presented to decision makers for action. This process not only needs to be timely, but requires continual updating and re-evaluation. Responders to cholera crises need to understand both the value and limitations of the data. Records permit generation of baselines and comparisons (temporal/geographic) against which decisions are better informed.

### 5.4.1. Information management cycle

Information management in the context of a cholera outbreak involves the collection, processing, analysis and dissemination of information.<sup>16</sup> The cycle of information management includes:

- a. Collection of raw data and information – through disease surveillance, outbreak investigations, inventories and usage rates of supplies and other assessments
- b. Organising data and information – presenting it in a way that can be shared, such as in an assessment report or a 'who is doing what where when' (4W) matrix (**template to be developed**)
- c. Analysis of the information and learning from it – exemplified by the analysis of epidemiologic data and identification of gaps in response by location
- d. Application of the knowledge enables decision making and action – exemplified by responding in the areas of greatest need and where gaps have been identified
- e. Monitoring of the activities – on-going collection of information and data for analysis and adjustment of response
- f. Dissemination of the aggregated, interpreted information with actions and activities needed or taken

Outbreak information needs to be accessible to everyone involved in the preparedness and response efforts in an appropriate and timely manner. The co-ordination mechanisms play a key role in making dissemination effective, manageable and useful.

### 5.4.2. How information should be managed

Coordinated decisions will need to be made on:

- What data need to be collected?
- Who will collect the data?

<sup>16</sup> A range of information in this section has been adapted from: Global WASH Cluster Co-ordination Project, *Water, sanitation and hygiene (WASH) Cluster Co-ordination Handbook: A practical guide for all those involved in the Water, Sanitation and Hygiene Cluster, January 2009, for field review.*

- How will the data be organised, i.e., collated, documented and stored (databases, GIS systems, electronic reports), and who will manage this process?
- Who will analyse the data and report on the findings (epidemiologist, WASH specialist, preventative health specialist, pharmacist)?
- How will the resulting information be disseminated (email, meetings, reports, radio, TV)?
- How will feedback be gathered on the information shared and fed back into the planning cycle (feedback from the general public, from response actors, from the media)?

For large cholera outbreaks, dedicated staff will usually be required for data and information management at different levels. Consider which of the following roles existing staff can undertake and which will require dedicated staff:

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| • Information manager           | • Data entry personnel            |
| • Epidemiologist                | • Environmental health specialist |
| • Database specialist           | • GIS specialist                  |
| • Media relations specialist    | • Web development specialist      |
| • Translation services provider | • Reports officer                 |

### **Tip: Data and information management.**

- Keep information management (IM) tools as simple as possible and information demands to a minimum.
- Conduct regular communication to help build networks and relationships, and to gather up-to-date information.
- Do not underestimate the workload involved in IM; recruit dedicated IM staff to support response for large outbreaks.
- Be aware of challenges in the collection of information, particularly due to manipulation of information (political, financial, cultural, capacity related).
- Provide formats and guidelines on information quality required, and utilise administrative support for follow-up.

Refer to the following sections for further information on specific aspects of information management:

- Sharing information through co-ordination – Section 5.2.4
- Co-ordination and communication where cholera is not declared – Section 5.2.5
- Working with the media, including guidance and tips and the Ministry of Communication or Information – Section 7.2.3
- Epidemic graphs and mapping – Section 3.3.5
- Monitoring and reporting – Section 3.3

### **Key resources:**

- ❏ World Conference on Social Determinants of Health Conference, *Intersectoral actions in response to cholera in Zimbabwe: From emergency response to institution building*, October 2011. [http://www.who.int/sdhconference/resources/draft\\_background\\_paper23\\_zimbabwe.pdf](http://www.who.int/sdhconference/resources/draft_background_paper23_zimbabwe.pdf)
- ❏ WASH/Health Cluster Somalia, *Roles and Responsibilities of Health, WASH and Communications for cholera response*, February 2012. [bit.ly/ULGaTH](http://bit.ly/ULGaTH)

## 6. Cholera preparedness

### 6.1. Overview of Chapter 6

Cholera preparedness is the process of ensuring readiness for a cholera outbreak in advance, so that the response will be more effective; staff know what they should do, the required supplies are available and the systems for co-ordination, communication, monitoring and support are agreed in advance. It is particularly important to undertake preparedness for cholera in countries with the following traits:

- Cholera is endemic
- There have been cholera epidemics in last 3-5 years
- Cholera outbreaks have occurred in nearby countries within the same geographical region (which could lead to cross-border transmission)

The Annexes to this Toolkit provide detailed information on steps and activities as well as examples of guidelines and workplans for preparedness and response.

#### Summary of Annexes

Annex 6A	Checklist for cholera preparedness and response
Annex 6B	Examples of cholera guidelines
Annex 6C	Risk and capacity assessment
Annex 6D	Preparedness and response plans: content and examples
Annex 6E	Suggested logical framework for cholera preparedness and response
Annex 6F	Main skills and training requirements for key cholera staff
Annex 6G	Capacity building: methods and examples of cholera training and materials

#### 6.1.1. Differences among preparedness, contingency and response planning

**Preparedness plan:** Identifies the steps required to prepare for a cholera outbreak, including gap analysis and capacity building activities (training, pre-agreement on standards, messages, etc.), pre-positioning of supplies, adapting and pre-positioning of IEC materials, identification of partners and pre-defined agreements for response implementation, among others. It also includes information on response in the event of an outbreak (a response plan), needs and required resources to address these needs.

**Contingency plan:** Considers different scenarios (small, medium and large outbreaks) and identifies preparedness measures and responses for each scenario. It is usually developed for an emerging crisis.

**Response plan:** Identifies the actions to be taken in response to a cholera outbreak, including who will do what, where, and when.

The process of achieving preparedness is ideally led and owned by the national government, through the provision of a framework for national commitment to action that outlines what the government and other stakeholders with proven capacity on cholera will be expected to do to support preparedness efforts at all levels. It should include longer-term capacity plans for cholera outbreak preparedness and response and sector-specific plans.

## 6.1.2. Elements of cholera preparedness

The following figure provides an overview of a number of cholera-related preparedness actions. This chapter examines some of these elements; others can be found in throughout the Toolkit.

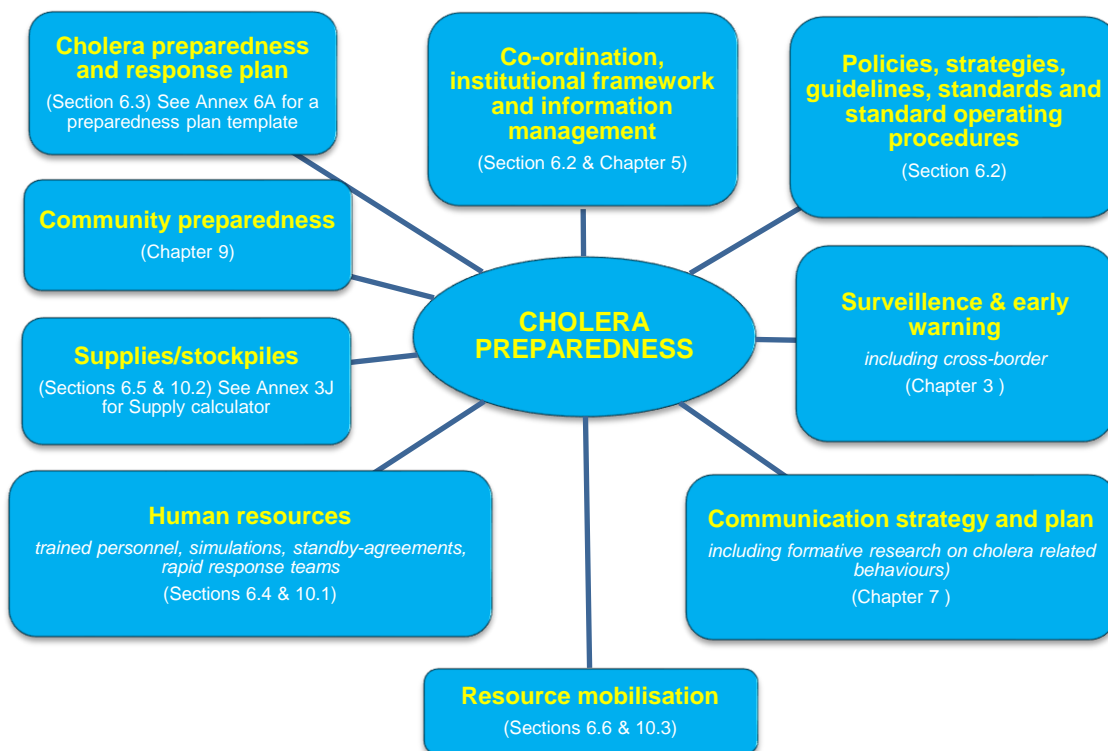


Fig 6 – Overview of cholera-related preparedness actions

These elements become actions in the process of preparedness. The order of the steps that need to be taken will vary according to the existing level of preparedness within the country. See **Annex 6A** to review a Checklist for Cholera Preparedness and Response with activities by element and **Annex 6E** for a suggested Logframe to monitor preparedness and response activities.

## 6.2. National policies, strategies and guidelines

Cholera is one hazard that should be considered as part of a national risk assessment undertaken by the national disaster management authorities and therefore incorporated into national disaster management preparedness and response plans as well as sectoral policies and strategies. See **Section 5.3** on key stakeholder's responsibility.

Cholera guidelines should include the required standards, whether national or international, outlined by WHO (such as for surveillance and early warning case management or water quality), or adaptations of these to suit national or sub-national contexts..

Based on the national context, preparedness efforts should support the government to develop inter-sectoral cholera guidelines (covering the sectors / areas of health, WASH, nutrition, protection, education, and communication) and to disseminate and train personnel in their use.

A number of useful cholera guidelines (developed by government, sectoral working groups, non-governmental organisations and research institutions) are summarised in **Annex 6B**, which presents cholera guideline examples, a summary with descriptions and links to the examples.



### 6.3. Preparedness & response planning

The purpose of a cholera preparedness and response plan is to:

- Establish a coherent framework for preparedness actions to which all actors can contribute
- Provide an overview of the availability of specific partners with their key cholera-related experience and skills
- Provide information and guidance against which resources can be mobilised
- Provide a framework for monitoring, evaluating and learning from the response.
- Assist, through the planning process, in developing relationships and partnerships with all key stakeholders.

#### 6.3.1. Cholera risk assessment and basic information for preparedness

As part of the preparedness planning process, it is important to do a risk assessment and to gather and analyse some basic information to identify the areas and populations that are at greatest risk of outbreak and where to target interventions. This assessment would also examine population vulnerability and capacities of communities and systems such as health and WASH. See **Annex 6C** for a risk and capacity assessment. Basic information can include:

- Information on past cholera trends and epidemics
- Seasonal patterns and risks of flooding
- Identification of risk areas for transmission and routes of possible transmission (coverage of WASH interventions, areas of high population density, population movements, etc.)
- Identification of vulnerable populations (marginalized, hard to reach, coverage of health services, disease trends of common illnesses that lead to morbidity and mortality, vaccination coverage)
- Identification and mapping of health facilities for case management and areas acceptable to set up CTCs, CTUs and ORPs
- Identification and mapping of water sources and contamination focuses (defecation fields, open sewerage, etc.)
- Capacity of health, WASH and other key sectors to respond (including HR, supply and funding resources).

#### 6.3.2. Content of a cholera preparedness and response plan

A cholera preparedness and response plan should include the following sections. See **Annex 6D** for detailed content within each section of the plan.

**Table 6: Suggested content of a cholera preparedness and response plan**

Plan section	Example of basic information
Statement of the problem	Basic epidemiologic information and level of response
Contextual information	Country facts, relevant information in WASH coverage, health capacity, needs assessment, co-ordination mechanisms
Strategic objectives and outcomes	Identification of main focus areas for development of objectives
Contingency scenarios (if a contingency plan)	Outlines of potential events, milestones and likely impacts
Strategies and actions for preparedness	Co-ordination and information systems, mapping of partners and health facilities, surveillance and early warning, information on behaviours and community participation, capacity for procurement and storage of supplies
Strategies and actions for response	Understanding the situation, delivery of services for case management and WASH, community interventions and communications.

Plan section	Example of basic information
Monitoring and reporting	Monitoring of data and programs
Procedures for operationalising, monitoring and revising the plan	Obtaining approval and activating plan, summary of responsibilities, communication procedures
Summary of cost estimates	Costs of materials, equipment, human resources

### 6.3.3. Ten key steps in preparedness and response planning

**Step 1:** Gather all key stakeholders involved in outbreak co-ordination and response for a planning workshop. This meeting is a good opportunity to define/reassess the cholera co-ordination and information management system. It is also an opportunity to build relationships and partnerships.

**Step 2:** Identify geographic areas and populations at risk: gather past information on AWD/cholera outbreaks and trends including routine epidemiologic data, past situation reports and maps, including possibly routine information on WASH and health coverage and any other contextual information such as seasonal data, conflict updates, locations of camps for refugees and displaced persons, etc. (see Section 2.3.3 for risks). If the information is not readily available, conduct desk reviews and field-level risk assessment to identify areas and populations at risk (see **Annex 6C** for risk and capacity assessment). Estimate the number of people that may be affected in case of an outbreak (see Section 3.3.5). Refer to **Annex 3J** for a planning spread sheet.

**Step 3:** If a preparedness and response plan, including communications, exists, review the plan and update it accordingly. If not, develop a plan (**Annex in development**).

**Step 4:** Review key guidelines, policies and procedures, as available. If they are out of date, update them with the latest standards.

**Step 5:** Identify and map partners (including who is going to do what where), health facilities, surveillance and early warning systems and WASH structures such as water points and sanitation systems. Analyse the capacity of the partners and these services for preparedness and response to an outbreak. For details, see **Annex 6C**.

**Step 6:** Identify national staff to be trained in various disciplines, with an estimated schedule, or those that should be trained according to the most affected areas. See **Annex 6F**.

**Step 7:** Estimate the current availability of supplies and supply needs based on a risk analysis, to include the existing procurement system and the logistics for storage and distribution. See **Annex 3J** for a planning excel sheet.

**Step 8:** Estimate the available funds and funding sources for prevention, preparedness and response.

**Step 9:** Conduct a simulation exercise, if possible, to practice the response processes before an outbreak occurs.

**Step 10:** Monitor the preparedness plan regularly and adjust accordingly. See **Annex 6E** for preparedness and response logframe and examples of objectives, expected results, outcomes, indicators and activities.

In countries vulnerable to cholera, preparedness plans should also be in place at sub-national levels, by region, district or equivalent area, depending on the size and structure of the country. The plans should be based on the framework established in the national plans, but focussed on the particular needs and priority areas for intervention for the specific context. Refer to Section 9.5 on community preparedness for cholera.

Because cholera crosses borders, cholera preparedness and response plans may also be needed at a higher regional level, i.e., at continental level, versus regional within a single country, to support the response and collaboration efforts among affected countries.

## 6.4. Human resources

### 6.4.1. Human resources required for cholera prevention, preparedness and response

Human resources need to be identified, trained and equipped for cholera prevention, preparedness and response activities, notably the following personnel and individuals: for:

- Health-related personnel – Clinicians; nurses; public health specialists; epidemiologists; laboratory technicians; pharmacists; stock/supply managers; hospital/clinic administrators; data recorders/analysts
- Support staff in health facilities – Site managers; logisticians; WASH specialists; chlorine makers; cleaners/laundry workers; guards; cooks
- Water, sanitation and environmental health personnel – Water and sanitation co-ordinators/public health co-ordinators; water and sanitation engineers/public health engineers; environmental health officers; water quality specialists
- Hygiene promotion and community-based workers – Hygiene promotion co-ordinators; field-level hygiene promoters; community mobilisers/community health workers
- Operational/support staff – Logisticians; supply officers; finance and admin officers; human resource officers
- Community- level leaders and professionals – Community leaders; religious leaders; other organisational leaders, including occupational and women’s organisation heads; teachers and head teachers; representatives of community-based organisations; prison wardens
- Media – News journalists, radio, television and a press/media experts (to support the government response).

Refer to **Annex 6F** for a listing of key personnel required to address cholera, the key skills they require for their jobs and the topics- which need to be included in their training.

Refer to Section 7.5.3 on human resources for social mobilization, Section 8.4.4 on human resources for health facilities and treatment sites, and **Annex 8G** for further details and numbers of staff required for different types of facilities.

#### *Job descriptions and back-up support*

It is important to have simple job or task descriptions for all staff, including any outreach workers (voluntary or paid) in order to clearly define what is expected of them. See **COTS cards** (<http://www.ideact.nl/cots/allpockets.pdf>).

Outreach staff should also be clearly informed of where they can obtain help and advice, e.g., if they are asked difficult questions in the field or if they feel they are not making progress in their work.

### 6.4.2. Speeding up deployment of personnel for cholera response ('surge')

Because cholera outbreaks can develop and spread very quickly, it is imperative to deploy personnel as rapidly as possible. The preparedness and response plan must identify the key personnel required for the response and include job description templates or terms of reference for anticipated posts. The availability of these documents will expedite recruitment processes.

The following procedures can also be used to speed up deployment:

- Instruction by Government for temporary movement of staff – shift support staff from outside the outbreak area to roles working on the response
- Use of trainee doctors and nurses – to work together with and support professionally qualified, experienced doctors and nurses working in the area(s) affected by the outbreak
- Stand-by agreements between partners – to facilitate immediate availability of staff at the onset of an outbreak (such agreements can be national, regional or global in scope)
- Memoranda of Understanding (MOU) – agreements with other sector actors for joint collaborative action on rapid response at the onset of an emergency

- Use of emergency staff rosters – pre-identification of human resources through UN organizations, NGOs and the private sector
- Use of global emergency standby partner staff – engagement of additional resources through the Global Outbreak Alert and Response Network (GOARN) or the cluster system.

### 6.4.3. Developing capacity for cholera

**Challenges in developing response capacity during an outbreak** – Building the capacity of personnel working in cholera response should be prioritised as an essential element of preparedness. It is very difficult to build capacity once an outbreak begins because personnel often work long, erratic hours and experience exhaustion and limitations to their ability to leave their posts. Nevertheless, during epidemics in places where cholera has not existed or occurred for some time, undertaking capacity building during the outbreak will be unavoidable.

**Co-ordinating capacity building** – Ideally the National Cholera Task Force or Outbreak Task Force should co-ordinate the processes of capacity mapping, capacity needs assessment and capacity-building plan development, implementation and monitoring.

**Longer term capacity building** – Over the longer term, prevention, preparedness and response should be incorporated into the curricula of all standard professional educational/training courses for medical, WASH, nutrition, community development and protection disciplines by government and academic institutions.

**Developing capacity for cholera** – The following table identifies steps in the development of a capacity-building plan, its implementation and monitoring. The right hand column identifies additional resources on capacity-building needs, examples of existing training materials and case study examples. Section 10.2 presents UNICEF’s various options for human resource mobilisation.

**Table 7 - Development of response capacity for cholera**

Steps	Further information
<b>Capacity mapping</b> - Assessment of sectoral capacities at each level on cholera prevention, preparedness and response	<ul style="list-style-type: none"> <li>• <i>Stakeholder analysis example</i> - Ministry of Public Health and Sanitation, Government of the Republic of Kenya (2011, DRAFT) Multi-sectoral cholera prevention and control plan, 2011-2012</li> <li>• <i>Capacity mapping example</i> - Tanzania WASH sector emergency preparedness</li> </ul>
<b>Capacity building needs assessment</b> - Identification of the capacity building needs, priority geographical areas of the country and priority target groups	<ul style="list-style-type: none"> <li>• <b>Annex 6F</b> - Key skills and training for cholera control</li> </ul>
<b>Capacity building plan</b> - Includes specific actions, methods, target groups and timeline(s). It includes the incorporation of prevention, preparedness and response lessons into the curricula of all standard professional educational/training courses for medical, WASH, nutrition, community development, protection disciplines.	<ul style="list-style-type: none"> <li>• <b>Annex 6G</b> – Capacity building for cholera – methods and examples</li> <li>• Section 8.4.4 – Human resources for health facilities and treatment sites</li> </ul>
<b>Identification of resources for capacity building</b> - finances, training materials, trainers, etc.	<ul style="list-style-type: none"> <li>• Section 6.6 – Resource mobilisation</li> </ul>
<b>Implementation</b> of the capacity building plan	
<b>Supervision of trainees</b> and <b>monitoring of impacts</b>	<ul style="list-style-type: none"> <li>• Chapters 8 and 9 – program monitoring and reporting</li> </ul>

## 6.5. Supplies / stockpiles

The pre-positioning of preparedness supplies/stockpiles for cholera can lead to greater efficiency in response. See the following tips for considerations in establishing preparedness stocks.

**Identification of required preparedness stocks and specifications** – Prepare listings of required supplies/stockpiles as part of a preparedness and response plan. See **Annex 3J** for a planning spreadsheet with key supplies.

**Cholera kits** – Identify key cholera kits available to partners, for example MSF, WHO or the Red Cross/Red Crescent movement. Remember that consumables within the kits have use-by-dates and may need replacement if the stocks are held for some time. See links in (insert item names).

- Medical supplies – see [WHO Interagency Diarrhoeal Disease Kit \(IDDK, http://bit.ly/PTPBhE\)](http://bit.ly/PTPBhE) - , **MSF Cholera Kits** (<http://1.usa.gov/OIGKt8>, also in French) and Laboratory supplies – see **WHO Enteric Disease Bacteriology Kit** (<http://bit.ly/RNy5PS>)
- WASH and general logistics supplies for establishment and infection control (WASH) of cholera related health facilities and sites (**Annex 3J**)
- Supplies for community-focussed WASH and Health – see (**Annex to be developed**)
- Supplies for communication interventions, i.e. pre-positioning of IEC materials and pre-identification of partners, especially partners working at community level. (**Annex to be developed**)

Specifications are available for key **WASH Cluster preparedness stocks** (<http://bit.ly/SPNyvp>) and for **Guidance on non-food items from the WASH Cluster Hygiene Promotion project** (<http://bit.ly/Qbb4Fa>).

**Preparedness stock mapping** – Undertake a mapping of existing preparedness stocks to which Health and WASH sector actors have access, and identify gaps in stocks. An example of preparedness stock mapping for emergency WASH is under development.

**Ownership, strategic storage options, insurance and logistics** – Options for the strategic storage of stocks need to be identified, ideally within existing stores with established stock control systems and appropriate temperature conditions. Logistics plans will be required for moving supplies to the main warehouse and to strategic storage locations. Each supply location should set reorder points based on estimated usage rates and estimated resupply times, and then adjust those re-order points based on operational success. The goal is to avoid stockouts throughout the system.

**Replacement and disposal of out-of-date consumables** – Tracking will be required of consumables with use-by-dates, such as antibiotics, intravenous drips, chlorine and other water treatment chemicals. Disposal options will also be required in consultation with the Ministry of Health or the responsible authority (such as the Environment Agency).

**Procedures for approval and customs procedures** – For certain supplies, such as water treatment chemicals and medicines, governmental approval/sanitary registry will be required before they can be imported and used in country. For supplies being imported, customs clearance will need to be negotiated. For medical supplies, additional checks may be required. Pre-arrangements with customs authorities can help accelerate processing.

### Tip: Cholera preparedness supplies.

- Work with the Ministry of Health medical stores – they will already have a supply and logistics system in place for regular health-related supplies that can sometimes also be used for cholera preparedness and response.
- Co-ordinate with partners such as the national Red Cross / Red Crescent Societies or the World Food Programme that may have strategically placed warehouses which can be used for strategic placement of supplies. The Logistics Cluster, if activated, may also be able to provide support.
- Consider using cholera kits, which include medical and logistical / WASH supplies (tents, jerry cans, ropes, plastic sheeting, latrine slabs, etc.), for the quick establishment of cholera-related health facilities, but are not as useful when a decentralised response is required, as in rural areas that require a range of smaller facilities. It may be relatively easy to split the medical items (such as IV drips and antibiotics) but not as easy to split the non-medical items (such as buckets, latrine slabs, tents). See **Annex 8E** for more information.
- Remember that cholera kits and water treatment kits with chemicals will include consumables with use-by dates. If the stocks or equipment are held for some time, the consumables will need replacing and old items will require disposal.
- Consider whether intervention must be requested from the Minister for Health to communicate with customs authorities in order to fast-track customs procedures when importing large quantities of urgent cholera supplies. This request should be made as soon as cholera has been identified (whether it has been declared or when the government has not declared it as cholera, but has acknowledged that there is an outbreak of an acute watery diarrhoeal disease).

## 6.6. Resource mobilization

**Areas requiring funding for cholera** – Resource mobilisation will be required to cover the cost of the following activities (in addition to the costs of co-ordination, management, human resources and logistics):

- **Prevention** – Water, sanitation and hygiene; promotion of breastfeeding; child nutrition; vaccine; communication and social mobilisation interventions.
- **Preparedness** – Planning at all levels; development of SOP and guidelines; purchase of pre-stocks; capacity mapping and needs assessment; capacity development; surveillance and early warning systems.
- **Response** – Outbreak investigation and assessments; equipment and supplies (medical, WASH, logistics, etc.); communication and behaviour change activities; social mobilisation interventions; on-going capacity development; monitoring and evaluation.

**Resource mobilisation options** – Options for resource mobilisation are likely to vary depending on whether funding is required for prevention, preparedness or response related activities as identified in the following table.

**Table 8 – Funding sources for cholera prevention, preparedness and response**

Activity	Funding sources
<b>Cholera prevention</b>	Large-scale, preventive WASH interventions may be funded by development banks and bilateral donors (as part of longer-term development programmes - often as part of a Sector Wide Approach <sup>17</sup> ). Smaller scale interventions, supported by civil society and the private sector are increasingly involved.

<sup>17</sup> Sector Wide Approach <http://www.who.int/trade/glossary/story081/en/>

Activity	Funding sources
<b>Cholera preparedness</b>	UNICEF works to encourage the government, development partners (donors) and others to integrate preparedness activities into longer-term development programming. Specific fundraising for preparedness activities may be more challenging in endemic contexts where cholera outbreaks are usually small or medium in size. Funds are likely to be more accessible in the periods after a large-scale outbreak. It may also be possible to integrate cholera preparedness efforts into general emergency preparedness proposals in support of national disaster management efforts.
<b>Cholera response</b>	Funds for preparedness and response activities may be available from: <ul style="list-style-type: none"> <li>• Bilateral and multilateral donors such as: USAID, EU, ECHO, DFID, NORAD.</li> <li>• Emergency funds; Emergency Programme Fund (only UNICEF); consolidated appeals and pooled funding mechanisms; Central Emergency Response Fund (CERF); Consolidated Appeals Process (CAP); Common Humanitarian Funds (CHF); Emergency Response Funds (ERF); and Transitional and Early Recovery Appeals.</li> </ul>

For further information on the resource mobilisation options available to UNICEF and partners for addressing cholera, please refer to Section 10.2 and **Annex (to be developed)**.

### Key resources:

#### Human resources

- ❏ **MSPP Haiti/CDC: Haiti Cholera Training Manual:** A Full Course for Health Care Providers (2011) (Also in French). [http://www.cdc.gov/haiticholera/training/hcp\\_materials.htm](http://www.cdc.gov/haiticholera/training/hcp_materials.htm)
- ❏ **MSPP/CDC: Community health worker training materials for cholera prevention and control** (2011) (Also in French). [http://www.cdc.gov/haiticholera/training/chw\\_materials.htm](http://www.cdc.gov/haiticholera/training/chw_materials.htm)
- ❏ **COTS – Cholera Outbreak Training & Shigellosis.** <http://www.ideact.nl/cots/entirecots.pdf>
- ❏ **IFRC (2008) Epidemic control for volunteers;** a training manual, IFRC Switzerland. <http://www.ifrc.org/Global/Publications/Health/epidemic-control-en.pdf>
- ❏ OXFAM-GB / UNICEF ESARO WASH sector cholera training **(LINK)**
- ❏ UNICEF (2006) Guidelines on external staff in emergencies; Standby Arrangements **(LINK)**
- ❏ **WHO (no date) Five keys to safer food: train the trainers course.** [http://www.who.int/foodsafety/consumer/keys\\_training/en/index.html](http://www.who.int/foodsafety/consumer/keys_training/en/index.html)

#### Supplies

- ❏ **UNICEF Supply calculator** <http://extquickrc01.unicef.org/denmark/do/danemergency.nsf/WebCalculation?ReadForm>
  - ❏ MSF cholera kit lists (medical and non-medical supplies for CTCs/CTUs) [http://www.cdc.gov/haiticholera/pdf/medicalsupplies\\_guidelines\\_en.pdf](http://www.cdc.gov/haiticholera/pdf/medicalsupplies_guidelines_en.pdf)
  - ❏ Specifications are available for key **WASH Cluster preparedness stocks.** <http://www.washcluster.info/content/emergency-wash-materials>
  - ❏ **Guidance on non-food items from the WASH Cluster Hygiene Promotion project.** <http://bit.ly/Qbb4Fa>
  - ❏ An example of preparedness stock mapping for emergency WASH in Tanzania **(LINK)**
- Cholera CTC WASH equipment list, Ethiopia **(LINK)**





## 7. Communicating for cholera preparedness and response

### 7.1. Overview of Chapter 3

This chapter highlights the two main areas of communication that play a central role in successful prevention, preparedness and response efforts with respect to cholera outbreaks: 1) communication for development (C4D) which focuses on local-level advocacy and behaviour and social change issues, and 2) media relations, advocacy and institutional communication.

#### Summary of Annexes

Annex 7A	Communication Strategies
Annex 7B	Communication Plan: template & example
Annex 7C	Communication preparedness workplan and checklist for cholera outbreaks
Annex 7D	Information on different communication activities and channels
Annex 7E	Key messages actions and behaviours for cholera prevention, preparedness and response
Annex 7F	Community beliefs and perceptions in relation to cholera
Annex 7G	Working with communities & troubleshooting
Annex 7H	IEC workplan template

### 7.2. Introduction to communication for cholera

Successfully controlling an outbreak of cholera requires the collaboration of many different stakeholders and the implementation of a variety of different interventions. Effective and strategic communication in varying forms (media and external relations, advocacy, hygiene promotion, behaviour change communication, communication for social change and social mobilisation, etc.) is at the heart of cholera preparedness and response. Effective and strategic communication is critical at all levels. Examples include:

- Communication with the general public on prevention, preparedness and response, often through the national, local and community media who can play a critical role
- Communication with donors and external communities to mobilise aid and financial support for the cholera preparedness and response
- Advocacy with policy and decision makers to ensure appropriate attention is focussed on the cholera outbreak, reaching the most affected and marginalised populations
- Inter-sectoral communication between practitioners through co-ordination structures
- Interpersonal communication with and between health workers, patients, service providers, affected families and communities
- Communication with NGOs/CBOs and Faith-Based Organizations.

Because of the cross-cutting nature of communication, this Toolkit includes a specific chapter as well as numerous references to the role of communication throughout. The table below provides an overview of the sections and chapters that relate directly to communication.

**Table 9 - Communication-related sections in this Toolkit**

Focus of this chapter	
Communication - introduction, co-ordination, planning and assessments	Section 7.2
Media and external relations	Section 7.2.3
Advocacy, social mobilisation and behaviour and social change communication in relation to cholera	Section 7.3 and 7.4
Additional activities related to communication and transfer of information within this Toolkit	
Surveillance, outbreak investigation, epidemiological data, monitoring and reporting	Chapter 3
Human resources – including capacity building / training	Section 6.4
Information for and dialogue with patients and their families	Section 8.5
Further technical details on service delivery: community focussed interventions	Chapter 9

Effective communication strategies fulfil five main criteria: they are based on research and evidence, are measurable, integrate a variety of different channels, mobilise a width of different actors and involve communities at different levels.

Communication is not just about providing information to affected communities; it should also facilitate participatory discussion in order to trigger community action and contribute to building rapport between communities and service providers. Finally, communication should advocate that government decision makers generate more resources and create better policies to fight against cholera.

Communication must be evidence-based, results-oriented and delivered first, fast and from the field in a consistent, compelling and coherent way, as per the right of communities to be informed. Doing so:

- Raises awareness and understanding and promotes behaviour and social change, employing national, local and community media, social networks/groups, NGOs/CBOs, mobile technologies/SMS
- Promotes advocacy to drive positive change at different levels, e.g., external relations with government, social media to get people engaged, community engagement via dialogue and action.
- Supports resource mobilization and fundraising, e.g., through international media, GWAs, global websites, op-eds, human interest stories, and international media visits.

See **Annex 7A** for a review of various types of communication strategies used to prepare and respond to cholera outbreaks.

### 7.3. How to develop a of a communication strategy and plan

The development of an evidence-based, inter-sectoral communication strategy and plan (media and C4D) is a vital first step in ensuring effective communication. It will help the prevention and response efforts by:

- Providing useful, consistent and timely information, facilitating discussion among families and communities at risk and promoting appropriate steps to protect their health, including identifying symptoms and seeking medical treatment early;
- Mobilizing key stakeholders, including affected communities, government departments, civil society, opinion shapers, community leaders, CBOs/FBOs and the media to contribute to mitigating the outbreak;
- Aligning with information management efforts (section 5.4) and updating families, communities, media and other key stakeholders about the course of the outbreak and the measures being taken to address it;
- Engaging community members, including children and women, and providing a platform for transparent feedback and suggestions from affected communities with regard to the effectiveness of cholera interventions so their voices can be heard.

The strategy and plan should address on-going and planned programmes and define the goals (including behavioural); describe the approaches and the material, financial and human resources required; identify specific activities to be implemented and identify the participant groups (commonly known as the target audience); define key messages to be developed with and for participant groups and the timetable and means to deliver them; and finally, outline the key monitoring activities.

When planning communication, it is critical to distinguish among participant groups to better focus the communication interventions. If the goal is to inform affected communities and support their resilience building, the communication channels to be used could be the national and sub-national media, community media, NGOs/CBOs, community workers or others. However, if the goal is to talk with potential donors, it is important to work with the international media. Communication approaches for urban and rural contexts may also vary, as might the ways to communicate with duty-bearers (service providers) and rights-holders (children, families and communities).

### 7.3.1. Steps in the development of a communication plan

Communication planning is an on-going process that needs to be updated regularly in light of on-going assessment and feedback from communities and key participant groups, particularly those from high-risk populations.

The following table<sup>18</sup> outlines the steps needed to develop an inter-sectoral communication strategy and plan. Further information on how to undertake the steps can be found in the Key Resources listed at the end of this chapter.<sup>19</sup>

**Table 10 - Steps in the development of an inter-sectoral communication strategy supporting preparedness<sup>20</sup> and response plans**

Before the outbreak occurs	Key players / partners
<p><b>Step 0 - Co-ordination:</b> Bring key inter-sectoral partners together (as a subgroup of the National Cholera Task Force) to coordinate the assessment, communication needs, planning and actions that need to be taken and assign the roles and responsibilities of the different partners and to identify the likely resources and funding available.</p>	<ul style="list-style-type: none"> <li>- Health, WASH, Education and communications experts (C4D and Comms/External Relations)</li> <li>- Government ministries</li> <li>- UN, NGO, IFRC/RC societies</li> </ul>
<p><b>Step 1 – Formative assessment and Identification of trusted communication channels</b></p> <ul style="list-style-type: none"> <li>- Collect and analyse any existing formative behavioural and socio-cultural research about cholera and/or hygiene and sanitation practices.</li> <li>- Using rapid research and participatory methods, identify gaps in knowledge, attitude, practices and social norms of different groups in the community.</li> <li>- Agree on key messages that are simple, direct and effective.</li> <li>- Perform a stakeholder analysis to identify primary, secondary and tertiary participant groups, their barriers and facilitating factors to adoption of behaviours.</li> </ul>	<ul style="list-style-type: none"> <li>- Communication experts of MoH, MoE and Communication and Public Information Department</li> <li>- UN, NGOs,</li> <li>- IFRC/RC Societies</li> <li>- Communication organisations, research agencies</li> <li>- Academic institutions</li> </ul>

<sup>18</sup> Adapted from WHO, *Outbreak communication planning guide*, 2008, WHO: Geneva, Switzerland.

<sup>19</sup> While it is important that Media Relations and C4D teams work together and complement each other, they do different jobs, often carried out by different staff/teams/sections. In addition, the National Committees via PFP play an important role with regard to fundraising and advocacy and the Palais Press Briefing in Geneva every Tuesday and Friday morning.

<sup>20</sup> See **ANNEX 7C** for a communication preparedness checklist

**Steps 2 and 3 - Development of the plan with the following components:**

- **Communication outline:** Communication objectives, participant groups, key messages, channels and activities.
- **Implementation plan:** Actions required, responsible and timeline
- **Monitoring plan:** Monitoring indicators (both process and outcome), monitoring activities, responsibilities and timeline. It is critical to closely monitor activities and evaluate the impact of communication interventions. Hence, a robust M&E plan should be in place from the onset of activities.  
\*Consider that both cultural and specific (local) languages have been considered and messaging and communications is refined and targeted appropriately.

- Communication task force
- UN, NGO, RC/RC Societies partners
- Outreach networks e.g. CHWs or Red Cross/Crescent volunteers
- National authorities

**When the outbreak occurs**

**Key players / partners**

**Step 4: Reflect, update and act** on the intersectoral communication plan that has been developed as a preparedness measure. Ensure that the plan is still valid and modify it as appropriate.  
Put the communication plan into action.

- Bring stakeholders together and review the communication strategy and plan following the rapid assessment.
- Broadcast information via the appropriate mass media or disseminate information via local channels on what families and communities can do to protect themselves from cholera and what to do if they get sick.
- Hold regular co-ordination meetings to obtain feedback from partners, to review if the plan is working and to identify additional actions.
- Carry out monitoring visits to the field to assess progress and identify remedial actions.

- Communication task force

**Step 5: Release information** in a transparent way on the outbreak as quickly as possible and provide information on the government's response and what actions affected and non-affected communities can take. This communication can be done through weekly radio (including community radios) and/or television broadcasts: by using print media or via interpersonal communication channels such as community dialogues, theatre groups, local leaders, etc. Identify a media spokesperson to be responsible.

See the Co-ordination and communication when cholera is not declared. Section 5.2.5.

- Co-ordination task force
- Media spokesperson

**Step 6 – Listening:**

- Develop a system for ongoing information gathering during the outbreak, e.g., making use of focus group discussions, suggestion or complaint boxes, participatory radio discussions, hotlines or individual interviews, etc., to ensure that the concerns of the population are heard and the barriers to changes in practice are understood.
- Raise the issues at higher level and monitor if actions have been taken.
- Obtain updates on health information from the surveillance system and other sources to ensure that unreached populations are identified and targeted as soon as possible.
- Develop and maintain a mechanism for an immediate response to rumours and misinformation.

- Affected community, local leaders.
- UN, NGO, RC/RC Societies partners
- Outreach workers
- Media organisations

After the outbreak	Key players / partners
<p><b>Step 7:</b> Communication activities should continue for some time after the outbreak is over, especially in the cholera-prone countries/ areas. In these countries/areas, as part of cholera prevention, cholera related messages should be mainstreamed within regular development programmes. Such activities may include the following:</p> <ul style="list-style-type: none"> <li>- Provide feedback to and hear feedback from affected communities and all partners on the results of the response communication activities, and preparedness for future outbreaks.</li> <li>- Hold meetings with all stakeholders, to review communication data, draw lessons learned, identify gaps and priority areas, and agree on way forward.</li> <li>- Produce and share key interventions, case studies, good practices, lessons learned and human interest stories with local, regional and global organizations, policymakers and donors.</li> <li>- Report back to donors</li> </ul>	<ul style="list-style-type: none"> <li>- Communication task force</li> </ul>

Refer to the **WHO media handbook wall chart and manual** at <http://bit.ly/RfPApD>. Media guides that detail the status of mass media communications have also been developed for a variety of countries and are available from the following website: <http://infoasaid.org/media-and-telecoms-landscape-guides>.

### 7.3.2. Identifying communication channels

The communication assessment will provide clues for identifying the best channels according to the current situation and the context. It is recommended that **both interpersonal methods AND community and mass media** methods are used for communication during a cholera outbreak. **See Annex 7D** for a description of the different types of communication activities and channels used in cholera responses.

### 7.3.3. Working with the media / crisis communication

Develop connections with national and sub-national media and with the media departments of the Ministry of Information and Communication and local radio stations before the emergency will mean that opportunities for collaboration and coherence of approach are identified early. If community radio stations are present in the country, they often play an important role in informing and generating dialogue with local communities.

The dialogue and sharing of information with affected communities and families is essential for cholera control efforts. News of a cholera outbreak can incite high emotions within a society and can inflame underlying tensions. It should be a high priority of those involved in cholera control to ensure that a calm analysis of the situation is undertaken to provide the appropriate basis for good decisions and to ensure frequent and effective communication with those who have the ear of the public. It is also important to inform and train media partners, including community radio personal and other information sources (such as local leaders), on key cholera issues and how the media and local information sources can support the country's preparedness and response. Media professionals can become important allies, particularly during outbreaks.

The first step in ensuring constructive communication with an external audience is to have one skilled designated spokesperson who can represent the situation on behalf of the cholera control authorities. Authority should be delegated for holding regular media conferences and issuing regular releases of information. While there may be situations where some data should be kept confidential, these are rare; in general information should be shared with the public when it is available, although care should be taken to make it comprehensible to a lay audience. Consider preparing media briefings with key, up-to-date information to be distributed during the press conference. All journalists should leave the press conference with the same information, including numbers, statistics and response.

## Making the most of media opportunities.

Many countries have a *public service requirement for radio and TV stations*, through which the government can channel public information announcements at no cost. These are often used in communicating details of elections or school arrangements.

In Pakistan, these channels were used for advocacy around the International Year of Sanitation and Global Hand-Washing Day. In Tanzania, the government regularly announces outbreak news during a regular weekly slot on one radio station.

Key information on how to prevent cholera and where to go for treatment, as well as information on the status of the outbreak and planned activities, should be broadcast as a public service.

Broadcasters are often looking for ideas for radio and television programmes, and collaboration can also mean that they are willing to fund more imaginative and interactive programmes such as 'phone-ins' during which people can ask questions about cholera, or short radio skits that use humour or drama to convey important messages.

The mass and community media can be made more interactive through the use of innovative broadcasting methods that allow audiences to provide feedback such as phone-ins, 'help-lines', talk shows or interactive texting. Where traditional media such as street theatre, interactive film shows or music are used, efforts should also be made to provide communities with a chance to comment and ask questions during or after the show.

In countries with established community radio networks, radio stations can act as dialogue facilitators, giving a voice to the voiceless through access to information. Community radio does not just broadcast content; it promotes community engagement and participation in its own development process. These stations can be strong allies with respect to cholera prevention and response.

Social media and new information and communication technologies (ICTs) also offer valuable opportunities for communication. ICTs can connect people across the globe for discussion, debate, and joint sharing and learning. They allow broad national or global social movements to form through on-line affiliations that connect offline groups and individuals and allow them to find each other and collaborate. ICTs, as well as community-based communication channels, enable individuals and communities to express demand for new services, better education and broader development outcomes. They can be useful communication channels for cholera preparedness, response and recovery.

### Tip: Communicating with the media

Include media communication in your action plan

- ✓ Be assertive in preventing, minimizing, or countering false rumours. Rumours are rife during cholera outbreaks and cultivating a constructive relationship with the mass media, preferably before an outbreak, can go far to prevent their potentially destructive impact.
- ✓ Release information to the public frequently and accurately; the guiding principle should be that the public has a 'right to know'. Authorities do not own the data; their job is to interpret and share it. Express empathy for victims and their families and communities early.
- ✓ Show competence and expertise releasing information in appropriate language adapted to the audience; overly technical jargon can add mystery and fuel suspicions, defeating the goal of information dissemination.
- ✓ Discuss with media representatives the balance that must be struck between disseminating news and providing a service to the affected population. Mass and community media can be a very useful way to deliver health and WASH communications to the public.
- ✓ See **Annex (to be added)**: UNICEF's global MoU with the World Association of Community Radio Broadcasters to facilitate local partnerships.

## 7.4. Developing messages; visual aids, relevant IEC and other communication materials

It is important to understand that **one-way messages alone are normally not effective in bringing about action or behaviour change**. All those involved in cholera prevention and response should be providing consistent information to participant groups in order to avoid confusion and misunderstanding. Different agencies do not necessarily have to communicate in the same way or use the same message, but they must aim to achieve the same action or result. For example, the key message may be, '*wash hands with soap and water at key times*'. Some agencies may choose to prioritise hand washing before eating and after defecation whilst others may choose to communicate the message, '*your neighbour is washing his hands with soap and water – are you?*'

See **Annex 7E**: Key messages actions and behaviours for cholera prevention, preparedness and response and UNICEF's **Behaviour change for communications (BCC) in emergencies: a toolkit** at: [http://www.unicef.org/ceecis/BCC\\_full\\_pdf.pdf](http://www.unicef.org/ceecis/BCC_full_pdf.pdf). Front line health workers including other service providers and community outreach workers at the community level health care facilities need clear guidelines on key health messages and behaviour.

### **Tip: Behaviour and social change communication**

- ✓ Dialogue and discussion can be very effective in identifying practical actions and motivating groups or individuals, but both mass media and interactive methods should be employed.
- ✓ Posters and leaflets are only one way to provide information to families and communities, and they have limitations particularly where literacy rates are low. Interactive drama/theatre groups, video sessions and community dialogue initiatives as well as mass media channels are likely to be more effective at promoting behaviour and social change.
- ✓ Pre-testing of visual aids and other IEC materials is of critical importance to ensure the acceptability, understanding and effectiveness of messaging. Cholera preparedness plans should attempt to review any existing material and where possible adapt these to the cholera response.
- ✓ New ways of communicating with communities should be explored, using traditional communication channels (folk groups, theatre plays, group discussions and school debates) and new media (cell phone SMS messages, social media, etc.).
- ✓ Clarity about which visual aids should be used to reach specific groups is important, i.e., health workers may need visual reminders to wash hands after patient contact and to remind them of the signs and levels of dehydration, but mothers of young children will need specific information on how to prepare and administer oral rehydration solution (ORS) to their children.
- ✓ T-shirts and caps with slogans may be useful for identifying outreach workers and trained community volunteers, and whilst unlikely to significantly impact their role in motivating communities and promoting behaviour change, they may enhance trust and their influence.
- ✓ Make messages specific and practical, not overly simplified; for example '*Drink clean water*' is not as clear as, '*Make your water safe by bringing drinking water to a rolling boil*'. In this case, if boiling is not feasible, include instructions about other methods such as chlorine liquid, tablets or powder, or water filters, and where these can be obtained.
- ✓ Identify and prioritise behaviours that will make the biggest difference to preventing and treating cholera (usually preparing drinking water and storing it safely; safely disposing of faeces; handwashing with soap at key times and heating food thoroughly; seeking treatment early; using ORS for rehydration).
- ✓ Ensure that communication is complemented by the provision of supplies where possible, e.g., chlorine tablets and or soap where people cannot afford them, or by a discussion on how to locally produce some supplies. Distribution should include information and training on how to use materials supplied as well as monitoring and support for consistent use.
- ✓ Ensure that resources/supplies/devices are available at community level. Do not promote anything that is not feasible/accessible or acceptable to communities.
- ✓ Identify barriers preventing people from taking the desired action, and work out ways to overcome them.
- ✓ Identify misunderstandings when they occur, and modify the communication strategy to minimize them.

Examples of cholera related visual aids from the following countries are available: Benin ([LINK](#)), Cameroon ([LINK](#)), Ethiopia ([LINK](#)), Haiti ([LINK](#)), Kenya ([LINK](#)), Mozambique ([LINK](#)), Somalia ([LINK](#)), Sudan ([LINK](#)), Tanzania ([LINK](#)), Uganda ([LINK](#)), Zimbabwe ([LINK](#)) as well as information on designing leaflets and posters ([LINK](#)).

## 7.5. Mobilising for community action

### 7.5.1. Involving communities

Communities are vital resources whose energy, knowledge and insights into ways to address cholera should not be ignored.

Ideally community groups should be facilitated to define the actions they can take to help prevent, prepare for or mitigate cholera. Attempts to impose pre-defined actions will often fail. (See Section 9.1 for further information).

The checklist below details key activities in relation to community mobilisation

**“Communities were not initially involved in the cholera response. This later changed through the establishment of community cholera management committees.”**

Source: CEPHI (2009) Zimbabwe Cholera

A training package/module is available to train community workers/volunteers on interpersonal communication to advance safe household water treatment and storage, and safe health, hygiene and sanitation practices for cholera prevention. The training outlines key messages to deliver in the event of an outbreak, on preparing and using ORS, seeking treatment, handling of vomit/faeces of sick person, etc.)	<input type="checkbox"/>
<b>Community workers have been trained</b> or arrangements made to train community workers/volunteers on cholera prevention and response before the cholera season or as soon as possible into an outbreak.	<input type="checkbox"/>
Arrangements with NGOs, CBOs or other partners for community-based activities in communication for cholera prevention and response are signed/drafted. Activities include: door-to-door activities, group discussions, identification of positive deviants and community dialogue and participatory activities to promote safe practices, mobilization of existing networks, or any other relevant intervention.	<input type="checkbox"/>
Agreements are signed with religious/traditional leaders and their associations to promote safe health, hygiene and sanitation practices for cholera prevention amongst communities.	<input type="checkbox"/>

Section 9.1 lists the key community-focussed cholera response strategies as well as possible community actions.

### 7.5.2. Key audience / participant groups for community action

Everybody in a community needs to know about how to prevent, prepare for and respond to cholera outbreaks, and, as many families as possible need to take action for an effective response. However, to be able to reach large numbers of families in a short timeframe it may be necessary to focus efforts on certain key groups or institutions such as:

- Community leaders
- Religious leaders, community volunteers and extension workers
- Schools - refer to **Annex 9E** (Cholera response actions in institutions or public settings) and the UNICEF toolkit for teachers on water, sanitation and hygiene for schools in emergencies for further information.
- Existing groups such as workers unions and co-operatives, women’s groups, youth groups

Key resource people from these groups can be rapidly trained (or preferably identified and trained through preparedness) and can then meet with their affiliates or congregations. Community meetings can also be organised to communicate with large groups of people.



Where resources allow, home visiting by volunteers or extension workers can also help to convey important information and mobilise household and community action.

### 7.5.3. [Human resources for community mobilisation](#)

Extension workers from various disciplines, e.g. health or agriculture, community development workers or social workers may have relevant experience in mobilising communities and need briefing on the key messages and concepts for cholera response. The national Red Cross/ Red Crescent Societies and local and national NGOs may have worked closely with communities and possess the ability to initiate mobilisation efforts to mitigate cholera. It may be possible to work through the existing administrative structures (see box in **Annex 7G**). However, it will be important to ensure that mobilisation efforts are coordinated and supported. Assigning responsibility to key personnel and ensuring that regular sub-sector meetings are held will help maximise the potential benefits of community action.

If no outreach networks already exist, it may be useful to identify and train community volunteers, but this effort needs to be planned, supported and owned by both the government and communities.

Inexperienced hygiene promoters may need a lot of extra mentoring and supervising in field by experienced staff. Water, sanitation, and hygiene promotion is not a defined profession, and personnel normally come from a variety of backgrounds and may lack experience working in water and environmental health disciplines or responding to cholera. There is a lack of experienced hygiene promotion personnel worldwide, and cholera preparedness planning efforts need to consider how this issue can be addressed within each national context, including the provision of adequate training.

Supervision and support for outreach workers is also important and could be provided by the existing supervision structures, or new personnel may need to be recruited and trained.

More information about community actions can be found in Chapter 9 and about developing capacity in Section 6.4.

### 7.5.4. [Community preparedness planning](#)

Community engagement aims at strengthening the capacity of communities to identify their own issues and development needs, assess their options and take action, including the ability to assess the impact of their actions and to analyse their capacity gaps. A variety of community-based communication channels - including courtyard meetings, local level dialogues with service providers, social mappings and action plans, community-based entertainment programmes, community radios and other local media channels and religious groups - can be used to empower people for meaningful participation and to create demand for quality services.

Supporting communities in areas particularly vulnerable to cholera in the development of community action plans is a key preparedness priority. Capable facilitation is required to raise awareness about the possible risks of cholera and to explain how action plans can be useful. An existing WASH or health-oriented community committee could develop a plan, or a community cholera co-ordination committee could be formed for the purpose of developing and supervising implementation of the plan.

Community action plans could detail:

- How to improve water, sanitation and personal and food hygiene practices of various groups in the community, e.g., through the use of handwashing stations
- How to make sure that all community members know how to prevent cholera and what to do if someone in their family or neighbourhood gets cholera
- How to support community members in visiting a health centre – especially those who have limited mobility or means to get there
- Where an ORS corner could be situated and who would manage it in the event of an outbreak
- What precautions could be taken at mass gatherings such as funerals and weddings.
- What improvements could be made to markets or public institutions such as schools
- How to monitor and report on cases and trends

- Who is available to help and what communication would be necessary in the event of an outbreak, e.g., targeting authorities, health personnel, etc.

The following sections provide additional guidance for supporting communities with cholera preparedness:

- Section 4 / Table 2 – The prevention of cholera (includes practical actions that can prevent cholera)
- **Annex 7D** – Communication activities and channels for cholera response
- **Annex 7E** – Key messages, actions and behaviours
- **Annex 7G** – Working with communities & troubleshooting
- Section 5.3 – Involvement of key stakeholders and sector responsibilities (includes a listing of stakeholders who may be involved in cholera response efforts at community level)
- Chapter 9 and **Annex 9** – Service delivery: community-focussed interventions (includes community-level actions in the household and in community- based institutional or public settings)

Country-specific examples of preparedness actions relating to community preparedness (most of which were undertaken after a cholera outbreak had started in neighbouring areas) are noted in the Key Resources section that follows.

#### Key resources:

- ❏ Example of an inter-agency communication plan for cholera Zimbabwe (**LINK**)
- ❏ Mass Media Workplan, for Cholera Response Zimbabwe (**LINK**)
- ❏ UNHCR guide to undertaking formative WASH assessments (**LINK**)
- ❏ WASH Sector Emergency Co-ordination Group, United Republic of Tanzania (2011, late draft) *Tanzania hygiene communication in emergencies guidelines – Toolkit E* (**LINK**)
- ❏ WaterAid Australia, International Water Centre, IRC International Water and Sanitation Centre (2011) *Promoting good hygiene practices: Key elements and practical lessons* (**LINK**)
- ❏ WHO (2008) *Outbreak communication planning guide*, WHO: Geneva, Switzerland  
<http://www.who.int/ihr/elibrary/WHOOutbreakCommsPlanngGuide.pdf>
- ❏ UNICEF Writing a communication strategy for development  
[http://www.unicef.org/cbsc/files/Writing\\_a\\_Comm\\_Strategy\\_for\\_Dev\\_Progs.pdf](http://www.unicef.org/cbsc/files/Writing_a_Comm_Strategy_for_Dev_Progs.pdf)
- ❏ UNICEF specific tools and guidance <http://intranet.unicef.org/PD/CBSC.nsf/Site%20Pages/Page0201>
- ❏ Community strategy, Haiti and norms and procedures and facilitators guide (French) – includes a plan and training materials to set up an outreach network
- ❏ AI.COMM, *Bringing the community together to plan for disease outbreaks and other emergencies*, USAID, <http://avianflu.aed.org/training.htm>
- ❏ Training / awareness raising sessions run in Ethiopia for community leaders and key field extension workers in Oromia region, Ethiopia (**LINK**)
- ❏ A dynamic cholera map [a map developed by the International Rescue Committee which can be seen on a computer showing the spread of cholera among villages over time], which was used to encourage communities in neighbouring areas to act to prevent cholera reaching their communities, Southern Nations National Peoples Regional State, Ethiopia (**LINK**)

## 8. Case management and infection control in health facilities and treatment sites

### 8.1. Overview of Chapter 8

This section covers service delivery for case management in treatment facilities, including infection control (WASH). A summary of cholera response strategies in health facilities and cholera treatment sites is outlined in **Annex 8A**. For community case management (CCM) and community-based strategies see Chapter 9.

#### Summary of Annexes

Annex 8A	Cholera response strategies in health facilities and treatment sites
Annex 8B	Summary of treatment guidelines: antibiotics and fluid replacement
Annex 8C	Preparation of ORS
Annex 8D	Infant and Young Child Feeding and cholera
Annex 8E	Establishing cholera treatment sites including infection control (WASH)
Annex 8F	Establishment of Oral Rehydration Points (ORP)
Annex 8G	Human resources for cholera-related health facilities and treatment sites
Annex 8H	CTC-CTU evaluation form
Annex 8I	Information for patients and their caregivers
Annex 8J	Mainstreaming protection into cholera response
Annex 8K	Sample weekly surveillance form

The following table provides an overview of the cholera response actions that are undertaken in a health facility or treatment site. The sections that follow cover them in more detail.

#### **Tip: Managing a patient with cholera**

The management of a patient with cholera entails the following five steps:

- ✓ Assess the patient for dehydration and classify according to degree (none, mild, moderate, severe)
- ✓ Rehydrate the patient rapidly (within four hours) in accordance with treatment guidelines, frequently monitoring and regularly re-assessing the patient's status
- ✓ Maintain hydration by addressing ongoing fluid and electrolyte losses with ORS until the diarrhoea stops
- ✓ Treat all patients suffering severe dehydration and, if possible, in-patients suffering moderate dehydration and ongoing profuse fluid losses, with an appropriate antibiotic (as determined by laboratory testing)
- ✓ Feed the patient a normal diet as soon as possible.

### 8.2. Clinical assessment

Cholera is similar to other acute watery diarrhoeal diseases in that the clinical signs are those of dehydration. At the same time, cholera is like no other form of diarrhoea; the excretion of fluid and electrolytes from the bowel can be so explosive and so rapid that a healthy adult can be dead within hours if not treated appropriately. In fact,

about half of those people with severe dehydration who are not treated die within 12 hours of the onset of symptoms.

After becoming infected with cholera, people are usually free of symptoms for 24-48 hours (the incubation period ranges from 12 hours to 5 days). Most people infected with cholera remain asymptomatic, and the majority of people who do become ill develop only mild or moderate dehydration that is relatively easy to correct (see Section 2.2). The figure commonly cited for the proportion of population that develop severe dehydration is around 2%-5% of all of those infected (or 20% of symptomatic will have severe symptoms, with 80% of symptomatic having mild to moderate symptoms), although recent reports show a much higher proportion of severe cases occurring during outbreaks, possibly due to a variant strain of *V. cholerae* O1 El Tor that produces *V. cholerae* O1 classical toxin. Severe cases, those presenting with severe dehydration, may also be due to ingestion of a larger infective dose of cholera bacteria, a delay in seeking treatment, or host factors such as malnutrition, pregnancy, or HIV/AIDS (see Sections 8.3.9 and 8.3.10).

### 8.2.1. Case definition of cholera

Whatever the cause, all suspected cholera patients should be managed in the same manner, except those with severe malnutrition (see Section 8.3.9) and those considered for treatment during pregnancy. The diagnosis of cholera through laboratory testing does not have to be done on all patients after initial clinical assessment, especially during the course of an outbreak, when all cases that meet the standard case definition should be considered to be cholera.

#### Case definition of cholera

##### Suspected case:

- **Outside an outbreak:**
  - In an area where the disease is not known to be present (non-endemic area), a person 5 years of age or older develops severe dehydration or dies from AWD; or
  - In an endemic area, a person develops AWD with or without vomiting
- **During an outbreak (epidemic):** A person aged 5 (sometimes 2) years or older, who develops AWD with or without vomiting (WHO 2012), **OR** any individual experiencing 3 or more liquid stools with or without vomiting during a 24-hour period (MSF 2004).

**Confirmed case:** A suspected case in which *Vibrio cholerae* O1 or O139 has been isolated by stool culture

The reason this definition focuses on children over 5 years of age and adults is that there are many different causes of acute watery diarrhoea in younger children that can result in severe dehydration. Severe dehydrating diarrhoea is rare in adults, and cholera is one of the few conditions that can be responsible for it. **However, children under the age of 5 still get infected with cholera and it is still important to register cases in the line-listing and immediately treat all children under 5 with AWD regardless of the case definition.**

### 8.2.2. Signs and symptoms of cholera

The first symptoms of cholera are usually painless watery diarrhoea, frequently followed by vomiting. Fever is unusual.

The volume of stool excreted during an episode of severe cholera is far greater than with any other common cause of diarrhoea and may be as much as 250ml/kg body weight in a 24-hour period. Although the stool is often described as resembling 'rice water', a light brownish-liquid with flecks of solid matter in it, this is not always the case. Given the loss of copious fluid and electrolytes, dehydration can develop quite rapidly.

## Signs and symptoms of dehydration

The signs and symptoms that correspond to different degrees of dehydration are:

- 3%-5% loss of normal body weight (mild dehydration): avid thirst
- 5%-8% loss of normal body weight (moderate dehydration): rapid pulse, weakness, dry mouth and eyes
- >8% loss of normal body weight (severe dehydration): decreased or absent urine flow, sunken eyes, weak or absent pulse, wrinkled skin, stupor, coma

**Note:** The diagnosis of dehydration in a severely malnourished child is very difficult, as is its management.

With any degree of dehydration, the skin turgor, or elasticity, decreases. This symptom is probably the most useful, and most reliable, sign of dehydration, especially in children. To determine if skin turgor has been lost, take a pinch of the skin of the abdomen of the patient. As a rule of thumb, if the skin returns to place immediately, there is no dehydration; if it returns in less than three seconds, there may be some, or moderate, dehydration; if it takes more than three seconds, along with one other sign (such as lethargy, sunken eyes, weak pulse, or difficulty drinking), there is severe dehydration.<sup>21</sup> ([COTS Chapter 2.6](#))

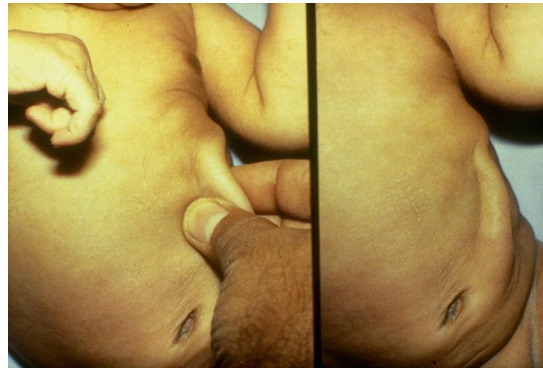


Fig 6 – Assessing elasticity of the skin

### 8.3. Treatment

Rehydration is the first priority in the treatment of cholera. Rehydration is accomplished in two phases: 1) rapid intake of replacement fluids, and 2) maintenance of hydration. In addition, antibiotic therapy is usually recommended for severely and moderate dehydrated patients. Lactated Ringer's solution (LRS) is preferred over isotonic sodium chloride solution because saline does not correct metabolic acidosis. The rate of intravenous infusion in severely dehydrated patients is recommended at 100ml/kg/hr. See additional details on intravenous rehydration in Section 8.3.1.

The goal of the maintenance phase is to preserve normal hydration status by replacing ongoing losses. In this phase, the oral intake route is preferred, if possible, and the use of ORS at a rate of 500ml-1000ml/hr is recommended. For IV fluid treatment protocols, see **Annex 8B**.

With appropriate and competent treatment, rehydration should be achieved within four hours. Steps in the treatment of a patient with suspected cholera are to:

1. Assess for dehydration
2. Rehydrate the patient and monitor frequently, then reassess hydration status
3. Maintain hydration; replace ongoing fluid losses until diarrhoea stops
4. Administer an oral antibiotic to the patient with severe dehydration
5. Feed the patient.

This section focuses on case management in facilities; however, early detection and management of cases at the community level can ensure rapid initiation of rehydration therapy and save lives. See **Section 9.11** for information on Community Case Management of cholera.

<sup>21</sup> As a demonstration, pinch the back of your forearm: it should return to its place immediately; pinch the skin on the back of your hand: it should return to place slowly; pinch the skin over your knuckle: it should return to place very slowly (>2 seconds).

### 8.3.1. Intravenous rehydration

In cases of *severe dehydration*, intravenous fluids are recommended. It is important to use a solution that replaces both water and electrolytes. Lactated Ringer's solution, sometimes called Hartmann's solution, is preferred. If this is not available, normal (0.9%) saline solution can be used, but a full complement of electrolytes should be replaced as soon as possible (as soon as the patient can drink) by the simultaneous administration of ORS. The initial rate of infusion should be quite rapid. Dextrose solution should NOT be used as it lacks the necessary salts. See **Annex 8B** for additional reference information on rehydration.

Intravenous administration of fluid and electrolytes is not a benign procedure. Patients should be monitored as frequently as possible. The risk of over-hydration is real and can cause death in cholera units/centres from congestive heart failure and pulmonary edema. Any site where intravenous fluids are being administered must have appropriately trained personnel in sufficient numbers to ensure close monitoring of all patients receiving treatment. The importance of monitoring **cannot be understated** in assessing the patient's improvement. If the patient is not fully rehydrated after 3-4 hours, the administration of fluids and electrolytes intravenously should continue.

Wherever a patient with severe dehydration due to cholera is being treated, optimally in a CTC or CTU, a 'cholera cot' must be available. A cholera cot is a bed with a hole in the centre through which defecation can take place into a bucket. In addition to providing the patient a meaningful degree of dignity, a cholera cot allows even non-professional staff to assess the quantity of fluids lost. The volume of fluid lost should be measured every few hours and the rate of infusion of intravenous replacement calculated accordingly. Fluid losses do not have to be replaced milliliter for milliliter, but the quantity of stool lost is an excellent guide to the amount of fluid that needs to be replaced.



Fig 7 – Cholera cots

### 8.3.2. Oral rehydration

In case of *moderate dehydration*, rehydration can usually be achieved orally. If a patient with moderate dehydration cannot drink, or is vomiting, ORS can be administered by naso-gastric tube, if the clinical staff can insert one. It is important to consider with caution whether to proceed to intravenous rehydration. Not only is the procedure invasive and risky, as described in the note above, but it also requires a bed and potentially deprives a severely dehydrated patient of life-saving treatment.

See **Annex 8B** to review the WHO recommended quantities of ORS for treating moderate dehydration and for the rates of administration.

#### **Tip:** How to encourage adults and children to take ORS

Experience has shown that health personnel need to be quite assertive in getting both adults and children to ingest adequate amounts of ORS to correct dehydration. Putting patients in a large room with a barrel of ORS and instructing them to "keep drinking" is insufficient. One proven method is to observe patients drinking a teaspoon of ORS every minute, or 300ml per hour for children. Adults should be instructed to drink as much as they can tolerate until their hydration status returns to normal. If patients do not improve after several hours, the amount of ORS ingested should be increased to the level tolerated by the patient. If signs of severe dehydration or intractable vomiting appear, intravenous rehydration should be commenced.

Cases of *AWD without signs of dehydration* do not need to be treated at a facility. If there is adequate space at an oral rehydration point/corner, they can be shown how to prepare ORS, taught how to use it at home, and given other key information on preventing and managing cholera. See **Annex 8C** for preparation of ORS and a [CDC poster on how to make and use ORS](http://www.cdc.gov/cholera/pdf/posters/11_229310-J_ORS_print.pdf), at [http://www.cdc.gov/cholera/pdf/posters/11\\_229310-J\\_ORS\\_print.pdf](http://www.cdc.gov/cholera/pdf/posters/11_229310-J_ORS_print.pdf). Patients who are sent home for self-treatment should be provided recommendations for prevention of dehydration in new or suspected cholera cases in their village/area or family, and they should be asked to return if they:

- have an increased number of stools
- eat or drink poorly
- begin to vomit
- have any other signs of deteriorating status.

See **Annex 8I** to review information for patients and caregivers at the treatment centre and upon discharge. As LRS is the vastly preferred formulation for intravenous fluid replacement, so is the WHO formulation of ORS (low osmolarity) for oral rehydration.

### Composition of commercially manufactured Oral Rehydration Solution (ORS)

The composition of ORS, for preparation in one liter of clean water (mmol/litre)

- Sodium – 75
- Chloride – 65
- Potassium – 20
- Citrate – 10
- Glucose – 75

For more information on specifications and use of ORS, see the [Rehydration Project](http://rehydrate.org/ors/low-osmolarity-ors.htm) at <http://rehydrate.org/ors/low-osmolarity-ors.htm>

Use of this fluid/electrolyte mixture in the recommended amounts is adequate to re-establish and maintain a normal state of hydration. It also averts the possibility of the patient developing important electrolyte imbalances, such as metabolic acidosis. Note that the glucose is present not for its energy value, which is minimal, but because its presence takes advantage of what is known as the 'glucose-sodium co-transport system' in the intestine, a mechanism that allows for the active absorption of sodium and water from the intestinal lumen across the intestinal cells. This mechanism is preserved in all acute watery diarrhoeas, including cholera.

#### 8.3.3. [Alternative rehydration solutions](#)

Cereal-based (rice-based) oral rehydration preparations can also be recommended for use in cholera but are not as readily available and can be complicated to prepare, as they generally require cooking. Clinical trials have shown that they may reduce stool volume and duration of diarrhoeal illnesses including cholera.

There are often many places, especially in the more rural areas of poorer countries, where ORS is not available in adequate quantities to meet demand during an outbreak of cholera. As a substitute - *and only when ORS is not available* - homemade rehydration solutions consisting of table sugar and table salt dissolved in water are used as stop-gap measure of last resort. One recipe, for example, calls for 6 teaspoons of sugar, ½ teaspoon of salt and 1 liter of clean water. For more information on homemade oral rehydration solutions, see the [Rehydration Project](http://rehydrate.org/solutions/homemade.htm#recipe) at <http://rehydrate.org/solutions/homemade.htm#recipe> ).

It must be emphasized that **established dehydration, whether moderate or severe, should always be treated with ORS**. Patients with moderate and/or severe dehydration should be taken to a facility where they can be monitored and treated by professional health staff trained in rehydration techniques and where adequate and appropriate supplies are available.

But whilst **homemade solutions are not treatments**, a patient can be given homemade sugar-salt solutions, soups, broths, or even plain water, until they can be provided appropriate treatment. Note that many Ministries of Health have recommended home formulations and have widely distributed their recommendations, while others

have discouraged the use of any rehydration fluids other than full-formula ORS. It is never acceptable to administer some drinks, such as teas and carbonated and/or sugary beverages, as they can aggravate fluid loss.

For additional reference, see the WHO position on the use of ORS **to reduce mortality from cholera** (<http://www.who.int/cholera/technical/en/index.html>) and key points to raise on a position for homemade sugar-salt solutions, which include:

- Rehydration should be started immediately, and ORS is the most effective formula to manage dehydration from cholera
- Homemade solutions using sugar and salt do not contain key ingredients in ORS, such as potassium and glucose (both easier metabolized than sugar)
- Homemade rehydration solutions using sugar and salt are an acceptable substitute for other causes of diarrhoea and not cholera
- It is recommend that sachets of ORS be made available for immediate use at the community level
- If ORS is not available, then homemade sugar and salt solutions can be used for immediate, interim use until the patient can be transferred to an ORP or facility for further treatment.

#### 8.3.4. Maintenance of hydration

After an adequate state of hydration has been established, treatment must continue until the diarrhoea stops. The amount of ORS required to maintain hydration varies greatly from one patient to another, but in all cases the amount of fluid and electrolytes that are lost decrease steadily with time (as the cells of the intestine that have been “poisoned” with cholera toxin slough off and newer, healthy ones replace them). If possible, patients who have presented with severe dehydration should be kept under observation until their diarrhoea has completely abated (usually 2-3 days, rarely up to 5 days) to ensure that there is no backsliding. Once the patient can be maintained on ORS there is no need to continue the use of a cholera cot.

#### 8.3.5. Importance of treatment by skilled clinical staff

##### **The importance of prompt treatment by skilled staff**

It is of vital importance to promptly refer suspected cholera cases to a care facilitate with quality services. It remains unfortunate that during cholera outbreaks case-fatality rates are higher in remote areas and that a considerable proportion of deaths occur before patients can reach designated health facilities. Once a patient reaches an appropriately skilled, staffed and equipped health facility alive, mortality should be negligible. A reasonable target for a CTU/CTC would be to have zero deaths in patients who have been receiving care for more than four hours. Achieving this goal depends entirely on the skill and experience of the facility staff.

Both intravenous and oral rehydration for cholera requires knowledge that health professionals do not routinely learn during their pre-service training programs. Important differences in patient outcomes have been documented between those with more and those with less experience. In a large outbreak, it is reasonable to appoint a specialized rehydration team to train government and national and international NGO personnel to ensure that health staff who are responsible for cholera patient care are well versed in the techniques of case management. In at least one instance, authorities have not allowed NGO personnel to provide treatment for cholera patients until they had been to a training course at a central facility.

#### 8.3.6. Use of zinc

Zinc has been shown to significantly reduce stool volume and to shorten the duration of illness. Zinc should be included in the management protocol and distributed with ORS including at oral rehydration points or by community-based health workers (according to national protocol). All children below the age of 15 years should receive a dosage of 10mg – 20mg per day of zinc along with ORS during the treatment of cholera. This routine



should be continued for 14 days at home following the end of the illness<sup>22</sup>. As with antibiotics, messages should be clear that this is a critical part of cholera management but not a replacement for rehydration.

### 8.3.7. Use of antibiotics

Both the WHO and MSF Guidelines for cholera control advise the use of antibiotics for the treatment of severe cases of cholera, by which they mean cases presenting with severe dehydration. Recently, it has become clear that the use of antibiotics reduces both stool volume and duration of illness in patients presenting with both moderate and severe dehydration.<sup>23</sup>

#### The importance of rapid rehydration versus antibiotic administration

Antibiotics are not necessary to ensure the survival of patients with cholera. The “cure” for cholera lies in rapid rehydration and the maintenance of an adequate state of hydration for the duration of the illness.

Apart from reducing stool volume and duration of disease, antibiotics can also serve to:

1. Reduce the number of cholera bacteria being shed via the patient’s feces, thereby restricting transmission, especially after the patient is discharged from clinical care;
2. Make the patient feel more comfortable more quickly, a desirable state that also makes it easier to ensure rapid and adequate rehydration.

While rehydration is crucial to clinical treatment of cholera, antibiotics are an excellent complement to fluids and, at the same time, they are an important addition to the available public health tools, making a vital contribution to cholera control in the population.

Note that if severe dehydration is accompanied by frequent vomiting, antibiotic therapy should be postponed until after the patient has been rehydrated and vomiting has stopped. For those patients with moderate dehydration, antibiotics can be given together with oral rehydration therapy.

Studies have shown that a number of antibiotics are effective with a single dose, assuming that the circulating bacteria are susceptible to them. There are reports of increasing resistance to antibiotics that have traditionally been used for the treatment of cholera cases presenting with severe dehydration, and the choice of antibiotic to be used in a cholera control program should be guided carefully by laboratory analysis of antibiotic susceptibility patterns. Faecal samples do not have to be taken from every patient either to establish the diagnosis or to guide the treatment, but establishing the antibiotic susceptibility pattern of the circulating vibrio at the onset of an outbreak and periodically thereafter is important.

In any given outbreak, issues of cost, availability, reliable access to patients and their level of expected compliance should be taken into account when developing policy for antibiotic use. For information regarding effective antibiotics for use in cholera treatment, see **Annex 8B**: Summary of treatment guidelines.

### 8.3.8. Prophylactic antibiotics

The question of prophylactic, or preventive, antibiotic treatment of close contacts of cholera patients has long been debated, and was recently reviewed. **In general, the health impact is negligible, while the opportunity costs are significant.**

In principle, antibiotic prophylaxis can be considered only for very close contacts of index patients (the first recognised case in a household), and, even then, should not be necessary if adequate precautions are taken by those contacts to not ingest contaminated water or food. In reality, identifying true close contacts (those likely to

<sup>22</sup> Zinc supplementation in children with cholera in Bangladesh: randomised controlled trial, SK Roy et al, BMJ [http://www.bmj.com/highwire/filestream/345900/field\\_highwire\\_article\\_pdf/0/266.full.pdf](http://www.bmj.com/highwire/filestream/345900/field_highwire_article_pdf/0/266.full.pdf)

<sup>23</sup> (New England Journal of Medicine, 2011, Jan 6; 364 (1):5-7.

contract cholera via secondary transmission from the index case) and delivering antibiotics to them in a timely manner is extremely challenging and resource intensive. Efforts often lead to mass prophylaxis of persons not at immediate risk of cholera, or to mass treatment of those already exposed and possibly infected but without displaying symptoms. Furthermore, arbitrary use of prophylaxis has been associated with resistance in circulating cholera strains to the antibiotics used, hampering treatment efforts. In general, therefore, antibiotic prophylaxis, even of close contacts, is usually not a worthwhile intervention.

However, in special situations when antibiotics can be delivered quickly to persons potentially exposed to cholera but not yet ill and when those patients can be taken under direct observation, prophylaxis may prevent cases from occurring. The most likely scenario for early mass treatment to occur is immediately after a cholera case, or when a small cholera outbreak is suspected among prisoners. Because most prisoners are exposed to the same sources of water and food, and because crowding and sanitary conditions in prisons may be favorable for cholera transmission, a single case or small outbreak may herald the emergence of many more cases within a very short time frame. Antibiotics can be delivered to prisoners quickly and under direct observation to assure compliance, yielding a situation in which there is a high likelihood of benefit. Similar conditions in other institutional settings, e.g., boarding schools, also favour the strategic use of mass antibiotic prophylaxis in special circumstances.

#### Key resources:

- ▣ **MSF Cholera Guidelines: Chapter 5.** <http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf>
- ▣ **COTS: Chapter 4-6.** <http://www.ideact.nl/cots/entirecots.pdf>
- ▣ **MSPP/CDC Haiti Cholera Training Manual:** a full course for health providers (2011, [http://www.cdc.gov/haiticholera/training/hcp\\_materials.htm](http://www.cdc.gov/haiticholera/training/hcp_materials.htm)) including **fact/wall sheets for clinical presentation and management** (<http://1.usa.gov/RhQnpQ>) (**in French:** <http://1.usa.gov/RIZ8Qb>).

### 8.3.9. Nutrition

Cholera often occurs in areas with high levels of childhood malnutrition, which can pose a particular problem to case management. However, even in areas where prevalence of malnutrition is not of concern, children are still considered at risk due to the infection/malnutrition cycle. The following need to be considered with respect to child nutrition and cholera outbreak preparation, prevention and response.

#### Breastfeeding

**Breastfeeding should be encouraged and continued whenever and wherever possible.** Children who are being exclusively breastfed rarely contract cholera, for reasons mentioned in Section 2.4. If breastfeeding is temporarily interrupted, as is often necessary during an outbreak if a mother is infected, it should be resumed as soon as possible. Keep in mind that if a mother is alert and able to breastfeed without compromising her condition, it should be encouraged. See **Annex 8D** for guidance on breastfeeding and infant feeding during cholera outbreaks.

#### Children with malnutrition

Severe acute malnutrition (SAM) can seriously compromise cholera diagnosis and management; similarly cholera can compromise the diagnosis and management of SAM. For assessment and treatment protocols for management of cholera in malnourished children, see the **CDC training manual, pages 17-20, and the Algorithm in Appendix I** (Assessment and treatment of a severely malnourished child 6-59 months with AWD) at <http://1.usa.gov/W0tWLU>.

A child with SAM requires additional precautions while being treated for cholera. If a child is referred to a treatment facility for SAM and is suspected to have cholera, the child should be transported to a cholera treatment facility (CTC/CTU) or isolated from other malnourished children immediately. Treatment should take place in a CTC or CTU and not in a unit specialized in SAM treatment because of the danger of contamination and potential

transmission of infection to other severely malnourished children, who require specialized treatment. If a significant number of malnourished children are affected by cholera, special facilities should be developed and staffed by experienced health personnel.

Children with SAM and severe dehydration who are brought to a health facility are likely to be in a state of shock. They are often unresponsive, their pulses very weak or absent, and they may be vomiting. **These children need to be rehydrated immediately, and the infants can be breastfed; cholera treatment is urgent and outweighs all other patient needs.** Cholera-infected children are in a seriously compromised condition and should be prioritized above other patients. See the CDC training manual at <http://1.usa.gov/W0tWLU> for treatment doses of IV fluids and ORS for malnourished children.

Severely malnourished children need to be monitored extremely closely (every 10 minutes or so) because of the risk of over-hydration causing heart failure and death. Note that the rate of rehydration should be slower than for adults to alleviate this risk, and additional risks of hypoglycemia and sodium-overload that could result from the administration of Lactated Ringer's solution to dehydrated children with SAM. Therefore, different solution blends are used for intravenous rehydration of children with SAM, such as LRS with 5 per cent dextrose solution or half-normal saline with 5 per cent dextrose).

During cholera treatment, a severely malnourished child will either receive IV hydration as described, or ORS as it is normally prepared. Following successful treatment for severe dehydration, a child with severe malnutrition should be transferred to a SAM treatment centre as quickly as possible. A discharge path should be pre-established for SAM patients to return to the SAM treatment centres in order to avoid a break in SAM treatment. It is important that children are assessed for malnutrition on discharge to ensure adequate recovery with the appropriate treatment regime.

Usually, severely malnourished children with moderate dehydration (not from cholera) are treated with a special variant of ORS called ReSoMal (Oral Rehydration Solution for Severe Malnutrition) that contains about two-thirds of the sodium content of ORS, but ReSoMal should only be used after cholera is resolved and the child is referred to a SAM treatment facility. **ReSoMal should NOT be used to treat dehydration from cholera.**

The assessment of children with mild or moderate malnutrition may be difficult because the signs of dehydration, such as low skin turgidity, sunken eyes, lethargy, and so forth, can also be signs of malnutrition. Children who are moderately malnourished may be more susceptible to contracting cholera, so that in any supplementary feeding programs, prophylaxis antibiotics, zinc and ORS should be provided with clear instructions for use.

Patients seen in cholera treatment centres, particularly those that are vulnerable to malnutrition (pregnant women, children and those with chronic diseases such as AIDS) should be provided safe food at the cholera treatment facility and encouraged to eat nutritious meals on a regular basis. Adequate nutrition should not be overlooked and should be provided by the facility or families.

### **8.3.10. Cholera management with co-conditions**

#### **Pregnancy**

Cholera patients who are pregnant have additional risk factors for more severe outcomes that can affect both the mother and newborn.<sup>24</sup> Women who are pregnant typically have increased severity of diarrhoeal disease with greater dehydration in the third trimester. However, there is no increased risk of mortality with appropriate treatment. The greatest potential impact of maternal infection affects the outcome of the newborn because cholera infection in the third trimester poses a greater risk of spontaneous abortion and premature delivery, fetal death / stillbirth, and increased mortality both in mature and pre-term neonates.

Frequently, poor neonatal outcomes are due to physiological causes rather than to the cholera toxin because the fetus does not contract cholera infection from its mother. The management of cholera in pregnant women, based on MSF work in Haiti, includes:

<sup>24</sup> Hirschhorn N, Chowdhury A.K, and Lindenbaum J., "Cholera in pregnant women", *The Lancet*. 1969; 1: 1230-1232.

- Rehydration: use WHO protocol with more aggressive fluid replacement and close monitoring of hydration status
  - Systematic rehydration with IV and ORS
- Systematic prevention of hypoglycemia with glucose 50%
- Systematic antibiotic use: Erythromycin
  - NO systematic antibiotics for newborns
- Strict hygiene precautions
- Additional services:
  - pregnancy, delivery and post-partum care (within the CTU by trained staff (midwives, OBGYN and pediatrician)
  - Special cholera units for pregnant women in big outbreaks or urban settings:
    - allows to cater for obstetric and neonatal care
    - for adapted follow-up of both cholera and pregnancy status
  - Complications transferred to the maternity and to intensive neonatal care

For details, see the [MSF presentation on cholera and pregnancy from Haiti](http://bit.ly/WcVqN1) at <http://bit.ly/WcVqN1>.

## HIV/AIDS

In general, people with HIV/AIDS are more susceptible to infection from various pathogens and have more severe clinical outcomes. There are currently no additional treatment strategies attributed to patients who also have HIV/AIDS. They should be assessed and treated according to national cholera treatment protocols.

## 8.4. Health facilities and treatment sites

### 8.4.1. Description of health facilities and treatment sites

Different levels of health facilities and associated structures may be required during a cholera response. However, organisations may use different terminologies for the levels of health facilities, or similar terminologies with different meanings. It is important in any prevention, preparedness and response action that the terminology used for different health facility levels are discussed and agreed upon to simplify communication across sectors and among organisations, to save time, and to help prevent life-threatening misunderstandings.

For more information on site selection, set up of treatment centres and infection control measures (WASH), refer to **Annex 8E**, and **Annex 8H** for a CTC/CTU evaluation checklist for monitoring.

### Levels of cholera-related health care with common terminologies

The following categories of facilities have been grouped by levels of care:

**Level 1 - Within the community – Oral Rehydration Point (ORP) or Oral Rehydration Corner (ORC) (no beds).** An ORP or ORC is a location at community level (urban, rural or IDP/refugee camps) where people with mild/moderate dehydration can be managed through the provision of ORS (and zinc), screened for severe dehydration and referred to a health facility as needed. Lacking beds, ORPs and ORCs are not equipped to handle longer-term treatments such as intravenous rehydration, which require a well-equipped health facility. By helping to reduce the severity of dehydration of patients who require health facility services, ORPs reduce stress and overcrowding at health facilities. However, they require trained personnel to ensure that ORS is appropriately provided to those who need it. For more information about treatment at an ORP/ORC, see **Annex 8F** and **Section 9.11 for community case management (CCM) of cholera**.

**Level 2 – Small health facility/dispensary (1-5 beds).** A small health facility/dispensary receiving small numbers of patients may contain an ORC and, where necessary, a room with a small number of dedicated beds for occasional severe patients. The health facility may have the capacity to administer IV fluids for treatment of severe dehydration if staffed by a qualified health professional.

**Level 3 - Medium size in-patient facility – Cholera Treatment Unit (CTU) (10-20 beds) Annex 8E.** A cholera treatment unit (CTU) often serves cholera patients in places where there are long distances between communities, requiring a larger number of decentralised facilities of smaller size. Smaller in size than a cholera treatment centre (CTC) and usually located either inside a health facility or close to it, and sometimes separately, a CTU has an in-patient facility allowing for separation of cholera patients from others. They offer an ORC as well as a full range of treatment, including regimens for severe dehydration.

**Level 4 – Hospital-based facility or distinct site – Cholera Treatment Centre (CTC) (25-200 beds) Annex 8E.** A dedicated treatment facility for cholera patients, a CTC is ideally constructed in a hospital compound but clearly separated and isolated from other departments, sometimes in other locations. A CTC contains an ORC and offers a full range of treatment including treatment for severe dehydration. A CTC is often used in urban areas where there are a large number of cases.

#### 8.4.2. Treatment centre locations

**Urban settings** - Ideally a hospital-level facility like a CTC should be provided within a hospital compound but separated from the other departments to prevent cross-contamination of non-cholera patients. Alternatively, the CTC can suitably location for easy access. Where possible, it is preferable to have one well-managed CTC with a number of ORPs to hydrate patients before they reach the centre. However, during large epidemics or in urban areas spread over large distances or placed where traffic is heavy and congested, more CTCs or a combination of CTUs and CTCs may be needed.

**Rural settings** - The priority in rural settings to increase coverage and access may mean establishing a central hospital-level facility (CTC) and a series of facilities at medium-sized health facilities (CTUs) with a range of ORPs at village level. In some instances it may be better to establish a CTU at village level. The CTU should ideally be located inside the health facility/post or close to it because they are familiar places and because staff and resources are likely to be accessible. Otherwise, it can be set up elsewhere. Note that care must be taken to ensure sufficient staff to serve during an outbreak or CTUs could paralyse routine health services because case management is labour intensive.

**In both urban and rural settings** - ORPs can be located at the home of a community health worker or community leader or established at another location such as a community centre or religious building. Location information should be distributed to community members for reference. Refer to **Annex 8E** for further information on site selection.

#### 8.4.3. Infection control through water, sanitation and hygiene actions

**What does infection control seek to achieve** - Infection control in a cholera-treatment facility is a critical component of patient care. It focuses on reducing the risk of transmission of the cholera bacteria and other diarrhoeal pathogens. Infection control is mainly based on the water, sanitation and hygiene (WASH) actions that need to be undertaken in a facility.

**Adherence to infection control procedures, training, equipment and supportive supervision** – Despite the intention of facilities' health and management staff to take responsibility for making sure that infection control procedures are established and enforced, sometimes the facilities themselves become sources of infection, usually because:

- Staff lack knowledge of the different the various infection control procedures required for general diarrhoeal diseases and cholera
- Staff do not possess adequate protective equipment and disinfectants
- Staff are over stressed and exhausted from working around the clock with limited or no time off because strict rules limiting work hours are neither adhered to nor enforced
- Staff focus too much attention on curative aspects of case management rather than on prevention.

Therefore, professionals from the WASH sector should provide support to health professionals to make sure that correct procedures are established and adhered to. Medical NGOs with significant cholera experience, such as Médecins sans Frontières (MSF), always include logisticians, WASH and health professionals to establish and manage CTC/CTUs.

### **Tip: Key principles for cholera infection in health facilities**

- Handwashing with disinfectant water (0.05% chlorine/per MSF) must be undertaken routinely by staff, caregivers and patients at key locations around the facility or site – on entry/exit from the site, in-between wards/areas of the centre, after patient contact, after using the toilet, and before eating.
- Limit contact between the most severe patients and others through isolation within the health facility and assignment to a single caregiver.
- The entrance to a cholera treatment centre should be guarded to restrict entry and exit only to individuals who have permission to enter (staff, patients, designated caregivers or supervisors)
- Health facility wards, latrines and bathing units should all be accessible and easy to sanitize.
- Vomit and diarrhoeal fluids must be safely disposed of in a pit latrine after adding chlorine
- Food movement into/out of the cholera treatment facility should be limited; ideally food should be prepared and provided on site
- Soiled bedding and clothes should be disinfected before they are allowed out of the centre
- Bodies of deceased cholera victims should undergo specific procedures for storage, cleansing, preparation and burial. Care must also be taken that family members have the opportunity to grieve with the body in a designated mourning area. See **Annex 9D** for more information on safe care of the dead.

**Caregivers and infants** – Only one caregiver should be allowed to tend to each patient in the cholera treatment facility. This restriction reduces the potential for cross-infection and helps ensure that staff has the necessary space to carry out procedures efficiently. Exception should only be made for infants who are being exclusively breastfed to be allowed into the centre. Other children should be denied entrance unless they are sick and need to be admitted for care. Finally, names and contact details of relatives caring for a patient's children should be noted as a protective measure at the time the parent is admitted to the centre.

**Water, sanitation and hygiene facilities** – Ensuring cholera and other health-related treatment centres have appropriate WASH facilities/services is essential to proper infection control. All CTCs must ascertain that water is available in appropriate quantity and quality for the various required purposes; that sanitation facilities are properly maintained (including final disposal of sludges) and separated for severe and mild patients, caregivers and staff (by gender); and that handwashing stations are available at key points. See **Annex 8E** for specific design parameters for the WASH facilities, for maintenance considerations, and for specific procedures and measures for infection control.

### **Tip: Making infection control work**

- Simplified training sessions and reminders on infection control and WASH can be useful tools that outline the rules for infection control on arrival, during admission and on departure; they can also be posted on the walls of the facility for ease of reference.
- The provision of basic equipment and supplies (see Section 8.4.5) can assist in enabling and motivating hard-working but understaffed health and support staff to be able to implement infection control.
- Mobile back-up WASH support can be helpful to support staff in smaller facilities where it is not feasible to have dedicated WASH and logistics staff

### Key resources:

- ❏ Médecins Sans Frontières (MSF), **Cholera Guidelines, 2004; Chapter 4 and Annexes 7 – 11 for criteria for CTC/CTU.** <http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf>
- ❏ MSF, **What is a Cholera Treatment Centre (CTC)?** (website). <http://ctc.msf.org/home/>
- ❏ Ministry of Health and Population in Haiti/U.S. Centers for Disease Control and Prevention, Haiti **Cholera Training Manual: A Full Course for Healthcare Providers, 2011.** [http://www.cdc.gov/haiticholera/pdf/haiticholera\\_trainingmanual\\_en.pdf](http://www.cdc.gov/haiticholera/pdf/haiticholera_trainingmanual_en.pdf)
- ❏ Ethiopia (Oct 2006, draft) *Protocol No 7 – Hygiene, sanitation and isolation aspects of CTCs, Federal Democratic Republic of Ethiopia* (**LINK**); and associated photos (**LINK**);
- ❏ Fewester, E. **Video of the WASH and infection control aspects of an upgraded CTC in Haiti**, 2009, Medair. (**LINK**)
- ❏ WASH Cluster Somalia, *Guidelines for water, sanitation and hygiene in cholera treatment centres*, 2009. (**LINK**)

#### 8.4.4. Human resources for health facilities and treatment sites

Staff required for health facilities and treatment sites include medical staff, such as nurses, doctors, pharmacists, community health workers (at some sites) and management and support staff, such as site managers, logisticians, WASH specialists, cleaners (for floors, toilets, clothes and bedding), cooks, guards, water carriers, and disinfectant makers.

The number of staff required for each facility depends upon:

- Size of the facility
- Absolute minimum number of staff necessary to make sure it runs effectively and allows adequate time off so that staff can function safely
- Available human resources are balanced against need in all locations.

The most serious human resources challenges are likely to be presented by explosive, large-scale, fast-moving epidemics requiring multiple facilities, creating a high level of competition for staffing, particularly local health professionals. Such challenges are particularly acute in resource-poor contexts where an epidemic has not been declared or lacks the high profile to receive adequate levels of support. It can also be challenging for health staff in small health facilities to rest or update training.

#### **Tip:** Training of staff working in cholera related health facilities

- Training should be an integral part of preparedness efforts because it is difficult to undertake once a cholera outbreak is underway and staff are often overworked, exhausted and unable to leave their posts to attend training sessions.
- Trainee or student nurses and doctors can be directed to support qualified health staff during large-scale cholera outbreaks
- New staff can be mentored by experienced staff or those already running cholera-related health facilities, before the moving on to their own facilities
- Simple job aides with job tasks can help as training tools and references in the health facility once the response is underway. See the Key Resources that follow for links to examples
- A dedicated training team in large outbreaks will help improve confidence and standards
- Mobile teams providing supportive supervision can also provide on-the-job refresher training as a core part of their responsibilities and can help identify resource gaps. Mobile teams are particularly valued by staff in small, dispersed health facilities and can help boost morale.

Refer to **Annex 8G: Human resources for cholera-related health facilities and treatment sites** for further details and numbers of staff needed for different levels and sizes of facilities, and to Section 6.4 for further information on human resources and staff training.

**Note on incentives:** Staff often work overtime in challenging conditions, and the issue of incentives comes up frequently, which can lead to strikes cholera response workers to demand compensation for their work or to request equal salaries to other staff doing the same job (when agencies all have different pay scales). It is important to keep staff well compensated for their work and to ensure that cholera services are maintained on a regular basis. If possible, staff compensation should be agreed upon by the government and all supporting agencies when outbreak preparations are being made. Typically, during a cholera outbreak, health care services should be provided for free, however, these may be imposed on when staff are not compensated for their work.

**Note on registration of external practitioners:** During large cholera outbreaks, cholera response staff from other countries may offer to volunteer response services, but they may not be qualified to provide such services. Pre-registration of Foreign Service providers by the Government during the preparedness phase could greatly ease the deployment of support staff during an outbreak.

#### Key resources:

- ❏ **COTs program: Staff pocket cards for diarrhoeal diseases.** <http://www.ideact.nl/cots/allpockets.pdf>
- ❏ Médecins Sans Frontières (MSF), **Cholera Guidelines, 2004, Chapter 4 section 3 and Annex 11 for Human Resources.** <http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf>

#### 8.4.5. Equipment and supplies for cholera treatment centres

To set up cholera treatment centres, the following equipment and supplies are likely to be needed:

- To establish and maintain a site and implement infection control procedures – Equipment includes: tents, fences, jerry cans, plastic cups, cholera cots, buckets, bowls, mops and other cleaning implements, latrine slabs, plastic sheeting, poles, plastic drums (for mixing and storing chlorine and ORS), body bags, equipment for electricity supply, cooking and eating utensils, incinerator and protective clothing (gum boots, gloves, overalls, aprons) for medical staff, guards and support staff. Consumable supplies include: disinfectants, toilet paper, plastic aprons and gloves and food.
- To provide medical care – Equipment includes: needles, cannulae, surgical gloves, surgical gowns, aprons, scissors, forceps, basins, trays, sphygmomanometers, and thermometers. Consumable supplies include: ORS sachets, IV drips, syringes, nasogastric tubes, antibiotics, and body bags.
- To accommodate health staff – Where staff have to be brought in from outside areas, additional equipment may be required, particularly at rural health facilities. Equipment may include tents, camp beds, blankets, eating utensils and food supplies (where food is not provided onsite).

Refer to **Annex to be developed**, for a standard listing of key equipment and supplies for health facilities and treatment sites, with notes on how to determine quantities and prioritise items, and an associated Supply Calculator (see **Annex 3J**). See Section 6.5 for kits of drugs.

#### Key resources:

- ❏ Médecins Sans Frontières (MSF), **Cholera Guidelines, Chapter 4 section 4.** <http://www.bvsde.paho.org/texcom/cd045364/choleraguide.pdf>
- ❏ **MSF cholera kit lists** (medical and non-medical supplies for CTCs/CTUs) (**LINK**)



#### 8.4.6. Program monitoring: case management practices and treatment facility quality

On-going program monitoring is needed to make adjustments in programming according to identified needs (staffing and training, supplies, etc.). Service delivery at treatment centres can be monitored by:

- Following case management quality at the health facility by observing trends in the case fatality ratio (CFR) which should remain below 1 per cent. Observations should be made on a daily and weekly basis. See Section 3 and **Annex 3F** for more information.
- Following treatment facility processes, including case management protocols, infection control at the facility, staff competency and supplies on a daily basis through direct supervision and on a weekly basis using a CTC – CTU monitoring form. For details, see **Annex 8H**).

**Note:** It is crucially important not only to fill out the forms, but also to adjust programs accordingly.

#### Key resources:

- ▣ World Health Organization, *Cholera outbreak, Assessing the outbreak response and improving preparedness, 2004*. [http://whqlibdoc.who.int/hq/2004/WHO\\_CDS\\_CPE\\_ZFk\\_2004.4\\_eng.pdf](http://whqlibdoc.who.int/hq/2004/WHO_CDS_CPE_ZFk_2004.4_eng.pdf)

### 8.5. Information for patients and their caregivers, psychosocial support and protection.

#### 8.5.1. Involving patients and their caregivers

In many countries where cholera is endemic, the care of patients relies heavily on the involvement of family members who often prepare food and carry out simple nursing tasks. It is therefore important to give family members adequate information to protect themselves from illness and to care safely for their sick relatives. In particular, information should be given to a family member who is allowed to enter the cholera treatment facility to care for the patient.

#### 8.5.2. Informing and conversing with patients and their caregivers

A range of information should be provided to patients and their caregivers on arrival at the health facility, during their stay and before discharge. On each occasion, they should be offered opportunities to ask questions and raise concerns. Information provided should cover a description of cholera, procedures for looking after themselves during their stay, breastfeeding, rules for infection control (including food preparation and consumption) and reassurance to assuage feelings of shame about their sickness. Before discharge, instructions should be provided on preparing ORS, recurring illness and preventing the spread of cholera to other family and friends. They should also be informed of additional support resources for use in the event of discrimination or conflict with neighbours or the wider community. Recommended activities include:

- Regular meetings with families, especially before discharge, family briefing and education sessions, notice boards and suggestion/complaint boxes can all help to facilitate communication.
- Drawing and psychosocial therapy are useful for helping children during their recovery.

See **Annex 8I: Information for patients and their caregivers** for useful additional information.

#### 8.5.3. Psychosocial impacts

Populations may possess strong feelings insecurity during an outbreak and fear of being stigmatised if they seek treatment or suffer from severe diarrhoea. Patients and their families may feel ashamed of being treated for cholera – especially if the disease is new to the country.

Supportive attitudes by medical and nursing staff help reduce stigma associated with cholera. Staff sensitivity when a patient dies and the need to recognise the impact on families are also meaningful. Whenever possible,

families should be given the opportunity to mourn with the body of their loved one and to say their goodbyes with respect and dignity.

Families grieving the loss of loved ones may feel unable to undertake usual funeral and mourning practices, causing additional pain and suffering and a reduction in the effectiveness of the response. Addressing stigma early can encourage care-seeking behaviours.

The recent cholera outbreak in Haiti serves as a powerful example of how the response addressed the population's fear of the sick and the dead as well as the construction of cholera treatment centres.

For further information on the Haiti example and on other attitudes toward cholera, refer to **Annex 7F: Community beliefs and perceptions in relation to cholera**. For more details specifically on the Haiti study, review the presentation, “5 Psychosocial Responses to the Cholera Outbreak” (English) (**LINK**) and The Haiti Red Cross Paper at <http://bit.ly/QEEj2t>. The following box provides tips on responding to the issues highlighted in this section. For additional details, refer to Section 2.3 and **Annex 7F: Community beliefs and perceptions in relation to cholera**, and Section 9.7 and **Annex 9D: Safe care of the dead**.

#### 8.5.4. Protection considerations

Programme responses to cholera outbreaks should alleviate rather than exacerbate vulnerabilities for affected populations. See **Annex 8J** for information on protection during a cholera response.

Examples of protection challenges that may be faced include:

- Children, who lose their primary caregiver through sickness or death may suffer a loss of family income and risk abuse, exploitation or other forms of harm.
- People who are living in extreme poverty are least likely to have access to safe water and sanitation services, and they may live far from health posts.
- People, particularly women, from marginalised groups are less likely to be literate, to speak the national language and to have access to information on cholera and how to protect themselves.
- Refugees, asylum seekers and prisoners may be refused access to health care.

#### **Tip: Addressing protection, gender and psychosocial needs**

##### Case management

- Collect and analyse disaggregated gender and age data from cholera cases.
- Divide the hospitalisation of cholera patients by gender and provide needed supplies, e.g., menstruation toiletries from adolescent girls and women, during hospitalisation.
- Ensure that children possess identification and contact details at all times and keep relatives or temporary caregivers informed of their location and status so that children and their parents are not accidentally separated when one is admitted to a health facility.

##### Psychosocial support

- Provide opportunities for non-judgemental discussion of cholera as part of awareness-raising campaigns. Build on what people know, rather than trying to convince them to dismiss their strongly held beliefs.
- Provide opportunities for grieving family members to spend time with the body of their loved ones before burial.
- Provide psychological first aid to the patients and family members of hospitalised patients as well as information on cholera to prevent or reduce fear and stigma. Community health workers and other service providers may be trained on Psychological First Aid (PFA).
- Work with influential community members, using existing community organizations such as children's and youth networks, on cholera education to help reduce the stigma faced by community members who are affected.
- Facilitate referrals to specialized psychological, social and protection services.

## **Tip: Addressing protection, gender and psychosocial needs (cont.)**

### **Community outreach**

- Build dialogue with patients in treatment centres and establish conflict resolution mechanisms with the wider community.
- Engage girls, boys, women and men in dialogue, using age appropriate language and communication channels and making sure that they all gain equal access to information about:
  - The existing gender division of roles in cholera prevention and response, and how men and women can share the workload and ensure women and girls are not overloaded with extra work.
  - The importance of good hygiene and of seeking treatment early.
  - The establishment of cholera treatment centres, safe water points and community committees to engage with the response management and create opportunities to provide feedback to the service providers.
- Use a variety of communication channels to share outbreak information with vulnerable and hard to reach people on how to prevent cholera and what to do when sick, bearing in mind differences in preferred or trusted channels among groups; monitor the effectiveness of reaching the target groups and make adaptations as required.
- Use peer education, an effective method to engage children and young people.
- Provide training for people working with children, the elderly, and people with disabilities in care or protection centres or homes, in the prevention of cholera and what to do if someone becomes sick.

### **Key resources:**

- ✚ Save the Children, ***Rapid Assessment of Protection Issues within Zimbabwe's Cholera Epidemic and Response***, 2009. [http://www.kubatana.net/docs/chiyou/stc\\_rapid\\_assess\\_protection\\_cholera\\_0904.pdf](http://www.kubatana.net/docs/chiyou/stc_rapid_assess_protection_cholera_0904.pdf)
- ✚ OXFAM, ***Excreta disposal for physically vulnerable people in emergencies***, 2009. <http://bit.ly/RLAZTq>
- ✚ World Health Organization, ***Psychological First Aid: Guide for Field Workers***, 2011. [http://whqlibdoc.who.int/publications/2011/9789241548205\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241548205_eng.pdf)
- ✚ Inter-Agency Standing Committee (IASC), ***IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings, 2007***. <http://bit.ly/Rx2Vxe>
- ✚ Grimaud, J. and Legagneur, F. '**Community beliefs and fears during a cholera outbreak in Haiti**', *Intervention*, 2011, 9(1) pp. 026-034. <http://bit.ly/R0S5ih>
- ✚ UNICEF Haiti Child Protection Section/GBV Program (2010) **Briefing Note: Strategy for integrating a gendered response in Haiti's cholera epidemic.** **(LINK)**



## 9. Community focussed interventions

### 9.1. Overview of community-focussed response interventions

#### Summary of Annexes

Annex 9A	Water supplies and treatment
Annex 9B	PoU Water
Annex 9C	Safe excreta
Annex 9D	Safe care of the dead
Annex 9E	Cholera response actions in institutional or public settings
Annex 9F	Community-based surveillance form (weekly)

This chapter should be read in conjunction with Chapter 7 on communication, behaviour change and social mobilisation, with specific reference to Section 7.4 on mobilising for community action and to the associated Chapter 7 Annexes, which identify methodologies for behaviour change communication and motivational messaging.

A comprehensive community-based strategy integrating WASH and health promotion components is critical to early prevention, detection of illness and case management.

Key actions needed for cholera control at community level include those:

- That will break the chain of transmission and reduce the number of people who will be infected with cholera;
- That will prevent people from dying of cholera.

#### The importance of early prevention, detection and treatment

Early prevention, detection and treatment of cholera at the household and community levels will prevent and reduce the spread of cholera and limit illness and death

Community-based strategies have the following main objectives:

- Prevention of new cases in the community through provision of safe water, safe food, hygiene promotion messages and sanitation activities
- Detection, treatment and referral for treatment of cases in the household and the community
- Community-based surveillance for early detection and monitoring of reporting of cases and deaths.

A community-based strategy must be linked to higher level health and WASH services including surveillance systems in order to record cases and deaths, ensure appropriate supervision, supply chain and referral systems.

Community-based health workers, including trained community health workers (CHWs), hygiene promoters, volunteers, etc., play a major role in delivering services to the community. CHWs need to be identified, trained and equipped to manage their role as a key actor in cholera preparedness and response plans. They also require close supervision and support, including oversight of supplies, in order to provide adequate and continuous service to their communities.

The following table provides an overview of the actions and strategies for cholera response, including activities to prevent the spread of the disease (see Chapter 4 for additional reference) and indicates which actors are likely to be responsible for their implementation as well as the role of the community in each.

Table 11 - Community-focussed actions for cholera response

Target outcome	Household, community and institutional practices – Actions required (may involve sustained behaviour change)	Practitioners – Actions required
People have access to and use safe water supply for drinking	Refer to Section 4 (Table 2) for details	
Households, communities, institutions and food outlets practice safe food hygiene	Refer to Section 4 (Table 2) for details	
Infants are exclusively breastfed and if needed, given safe fluids and food	Refer to Section 4 (Table 2) for details	
The environment is free from excreta because people dispose of it safely	Refer to Section 8 for details on case management at community level	
People wash their hands with soap and water at critical times	Refer to Section 4 (Table 2) for details	
Environmental hygiene is adhered to in markets and other public places	Refer to Section 4 (Table 2) for details	
<p>(a) Children and adults who have diarrhoea with or without vomiting are effectively rehydrated</p> <p>(b) Households know where to get ORS and know how to prepare and use it</p>	<ul style="list-style-type: none"> <li>Children and adults who have diarrhoea with or without vomiting are given ORS made with safe water and zinc.</li> <li>Children and adults who have diarrhoea with or without vomiting and who do not have access to ORS may be given another solution (such as sugar-salt solution, or rice-based ORS) or water to slow down the process of dehydration until proper care with ORS and zinc is available. See Section 8.3.3 for details.</li> <li>Children and adults who are sick during a cholera outbreak immediately go to a health facility</li> </ul>	<ul style="list-style-type: none"> <li>ORPs at community level are established.</li> <li>Community case management by trained CHWs</li> <li>Advocacy, education and mobilisation on the use of ORS (and zinc) for the treatment of dehydration and for health care-seeking behaviours during a cholera outbreak</li> <li>Support for the establishment of a supply chain for ORS and zinc for easy access in all urban and rural areas</li> </ul> <p>See <b>Section 9.11</b> on community case management of cholera.</p>

Target outcome	Household, community and institutional practices – Actions required (may involve sustained behaviour change)	Practitioners – Actions required
Items contaminated with infected vomit and faeces are safely disinfected	<ul style="list-style-type: none"> <li>Floors, furniture, bed linen, clothes or other items soiled with vomit or diarrhoea are effectively disinfected with water and chlorine</li> <li>Disinfectant spraying is not cost-effective and not recommended. See explanation in Section 9.6</li> </ul>	<ul style="list-style-type: none"> <li>Education through family visits and mobilisation on the appropriate procedures for disinfecting areas and materials soiled with faeces or vomit. Disinfectant need to be provided</li> <li>Education and mobilisation on the critical importance of not washing clothes and bed linen in or near open or safe water sources</li> </ul>
Households are not ashamed of getting cholera and seek help promptly	<ul style="list-style-type: none"> <li>Peer-to-peer information sharing and encouragement to explain that contracting cholera is not shameful to emphasized the importance of seeking help promptly</li> </ul>	<ul style="list-style-type: none"> <li>Awareness raising is undertaken through the media and with religious and community leaders to alleviate the stigma associated with cholera</li> </ul>
Precautions to prevent cholera transmission are taken at funerals and when handling dead bodies	<ul style="list-style-type: none"> <li>Handwashing facilities with soap are installed and their use is promoted: <ul style="list-style-type: none"> <li>After going to the latrine</li> <li>After touching a corpse, its clothing or bedding</li> <li>Before food preparation</li> <li>Before eating food or drinking</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Education and mobilisation on safe handling of the dead and cholera safety at funerals is provided, especially for religious and community leaders and health extension workers</li> </ul>
Households and institutions practice safe hygiene and use ORS effectively	<ul style="list-style-type: none"> <li>Supplies are received and used as instructed</li> </ul>	<ul style="list-style-type: none"> <li>Supplies available, and those critical for taking action on WASH safety and ORS use, are identified</li> <li>Most vulnerable people for the distribution of supplies are identified</li> <li>Supplies, with training and support for use, are distributed</li> </ul>

#### Key resources:

- ❏ US Centers for Disease Control & Prevention (CDC), **Community Health Worker Training Materials for Cholera Prevention and Control**, 2012. <http://www.cdc.gov/cholera/pdf/Haiti-Eng-MASTER-Worldwide.pdf> (French version)
- ❏ CDC, Slideshow: **'Cholera Prevention & Control: Introduction and Community Engagement'**, 2010. [http://www.cdc.gov/haiticholera/pdf/cholera\\_prevention\\_control.pdf](http://www.cdc.gov/haiticholera/pdf/cholera_prevention_control.pdf) (French version - LINK)
- ❏ **Joint Statement: Scaling up the community-based health workforce for emergencies**, October 2011. <http://bit.ly/sKs1Rm>

## 9.2. Improving access to adequate quantity and quality of safe water supplies

Access to safe and adequate water supplies is critical to effective cholera response, but interventions to enhance and secure supplies are often of an emergency and temporary nature. Therefore, clear and well communicated exit strategies are required from the outset. Whenever possible, investment in water supplies should seek to achieve sustainability of the supplies and complementarity with existing infrastructure and service providers.

**Urban water supplies** – Priority interventions relating to urban water services include repairing existing systems, boosting bulk storage option, increasing and monitoring residual chlorine levels and supply through water tankering and bucket chlorination where there are no alternative options. Construction of new and additional (permanent) water supplies should be prioritised as necessary in cholera-affected areas. Pre- or post-emergency risk mapping should identify critical supplies and define steps to address shortfalls and promote sustainability of supplies.

Efforts to improve urban water services during a cholera response should consider involving communities / user groups and the value of their contribution to cholera control efforts. They can play an important role in monitoring the provision of services and their effectiveness, reporting leaks or broken systems to the authorities, and supporting the operation and maintenance of point sources.

**Rural water supplies** – Access to improved water supplies is usually more limited in rural areas than in urban areas. Sustainability presents a significant challenge, although some communities can make their systems sustainable using a range of management models, such as small scale private operators, community committees, privately owned sources. Weaknesses in the sustainability of rural systems need to be considered as part of the cholera response, to prioritise required repairs and agree on temporary management arrangements for the period of the response if existing management systems are not working effectively.

**Point of use water treatment and safe storage (PoUWT&SS)** – PoUWT&SS puts households in control of the safety of their water supply and can ensure safe drinking water to a significant proportion of households and help to protect them from cholera during an outbreak. Household water treatment options include: boiling, filtration (ceramic candle, ceramic bucket, activated carbon); chlorination (liquid or tablet); coagulant / disinfectant combinations; and solar disinfection. At community level, the variety of methods and products can lead to confusion, so it is important to select the most appropriate to the context and communicate clear messages on the procedures and use. It is essential to ensure supplies to individual families, particularly in the most at risk populations, thereby avoiding breaks that can jeopardize their health and safety. Furthermore, safe storage is an essential requirement if water is to be kept safe until use and should be a focus of community training and communication.

Factors that need to be considered in the promotion of PoUWT&SS include:

- The necessity of providing information in the local language, with training of people to undertake household water treatment, provision of follow-up support and monitoring and assurance that adequate equipment and consumables are available.
- The uptake of PoUWT&SS is higher in countries with existing PoUWT&SS programs, where educational and promotional materials in local languages are already in use and the products are familiar to local populations and can be scaled-up in production to meet additional demand during a cholera outbreak. (For more information on existing programs, see [www.cdc.gov/safewater](http://www.cdc.gov/safewater).)
- The need for consistency on messaging and agreement on residual chlorine levels, especially when high turbidity water is encountered.

Refer to **Annexes 9A and 9B**: *Point of use water treatment and safe storage* for further information on chlorination levels to use during a cholera outbreak; further discussion on the controversies; strengths and weaknesses of PoUWT&SS options; and tips on urban and rural water supplies and PoUWT&SS.

Community Health Workers play a key role in disseminating messages and teaching the community about the provision of safe water and safe water storage. For additional information, see **CDC Modules 6,7,8,9 CHW training on cholera prevention and control** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf).



The strategy for delivery on the water related outcome is the **primary responsibility of: Water Authorities - Local Administration / Municipal Authorities (Water Dept / Health Dept) - Private Sector (small scale water providers) – Communities - Institutions – Householders with support from: Ministry of Water - Ministry of Health – WHO – Local Non-Governmental Organizations (LNGOs) – International Non-Governmental Organizations (INGOs) – other International Organizations (IOs).**

#### Key resources:

- ❏ **Evaluating household water treatment**  
[http://www.who.int/water\\_sanitation\\_health/publications/2011/household\\_water/en/index.html](http://www.who.int/water_sanitation_health/publications/2011/household_water/en/index.html)
- ❏ **WHO Water Safety Planning for Small Community Water Supplies**  
[http://whqlibdoc.who.int/publications/2012/9789241548427\\_eng.pdf](http://whqlibdoc.who.int/publications/2012/9789241548427_eng.pdf)
- ❏ MSF Ethiopia questionnaire (LINK)
- ❏ DRC WASH cholera rapid assessment tool (LINK – folder) (LINK)
- ❏ Somalia WASH Cluster (no date) **Guidelines for using a pool tester/residual chlorine comparator** (LINK)
- ❏ Somalia WASH Cluster (no date) **Sanitary survey for hand-dug wells and boreholes in Somalia** (LINK)
- ❏ WHO (2011) **Measuring chlorine levels in water supplies, Technical Notes for Emergencies, No 11.**  
<http://bit.ly/V2brYj>
- ❏ WHO (2005) **How to measure chlorine residual in water, Technical Notes for Emergencies, No 11.**  
<http://bit.ly/TshM1P>

### 9.3. Improving food safety and hygiene

**Food safety and hygiene in food outlets and markets** – Food can be a major source of transmission of cholera bacteria. Not washing hands before food preparation, insufficiently cooked food, improperly re-heated, leftover food, dishes washed in contaminated water, and the presence of flies in large numbers can all contribute to the risk of a person ingesting cholera bacteria and becoming infected. Hygienic preparation, cooking, storage and serving of food are paramount. The training of food handlers working in food outlets and markets and the monitoring of food quality for adherence to minimum standard of hygiene are critical elements of cholera response. Raising general public awareness of basic food safety standards is a valuable way to encourage food handlers to improve their practices.

**Environmental Health Officers** – Health Officers usually represent the Health Department, but they prioritise curative rather than preventive interventions and they may struggle with limited resources to do their job properly. As important actors in cholera prevention, preparedness and response particularly in urban areas, they should be targeted to receive additional funding as well as training, support and collaborative action.

**Food safety and hygiene in the household, in institutions and at social gatherings** – The promotion of food safety and hygiene in the household, in institutional settings and at social gatherings (funerals, weddings and other events) is a high-priority response and should be an integral part of communication efforts using a range of channels. Food prepared and consumed in institutional settings and at gatherings poses a particular risk because if it becomes contaminated, there is a greater potential for more people to ingest the bacteria. People exposed to cholera at mass gatherings may carry cholera back to their homes and transmit the disease to people in other parts of the country. For more information, see **CDC CHW training module 10** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf).

Refer to Chapter 2 and **Annex 2A** for information on the survival of cholera in foods and at different temperatures, and **Annex 9E** for summaries of cholera preparedness and response activities in institutional and public settings.

The strategy and actions to deliver this outcome are the **primary responsibility of: MoH - Local Administration / Municipal Authorities (Health Dept / Env. Health Dept) - Restaurant owners/management - market traders - Religious and community leaders – Households, supported by: WHO – LNGOs – INGOs – IOs.**

#### Key resources:

- United Nations Office for the Co-ordination of Humanitarian Affairs, '**KITCHEN and COOKING Recommendations for Schools and Children Centres for Cholera Response**', Somalia 2011. <http://ochaonline.un.org/OchaLinkClick.aspx?link=ocha&docId=1272780>
- See example of **IEC materials for food vendors for using with training from Tanzania in Kiswahili** (LINK) and the associated translation (LINK).

### 9.4. Improving access to and use of safe excreta disposal

**Excreta disposal in urban areas** – In urban areas, excreta disposal has proven to be challenging. The provision of temporary communal latrines in public places or institutions during the response phase may be the only option that funding allows, but this option requires time and effort to establish and sustain effective operation, maintenance and cleaning. Sharing latrines can also be promoted. Alternatively, where plastic bags are commonly used or introduced as a temporary measure for excreta disposal during a cholera outbreak, the effective collection, transport and final disposal will need particular attention to ensure that cholera-contaminated faeces do not get back into the environment.

**Excreta disposal in rural areas** – During a cholera outbreak, efforts should focus on minimising open defecation and other dangerous sanitation practices, primarily through communications for behaviour change and community mobilisation. Messages should focus on what actions people can take immediately; for example, in rural and even in peri-urban areas the burying of faeces (sometimes called the 'cat method' of disposal) is usually possible. Some specific contexts may demand additional actions, for example the construction of latrines if there was an outbreak in an IDP camp. Timing constraints often prevent adequate provision and use of new latrines during a cholera outbreak, so alternative means of faeces disposal is frequently required. Much can be achieved through community groups, schools and religious institutions to encourage community-level and community-led action to eliminate open defecation and promote safe excreta disposal.

**Maintenance, cleanliness and hand-washing facilities** – Where latrines exist, efforts should focus on ensuring they are used, kept clean and provided with handwashing facilities. In the absence of latrines, other forms of safe excreta disposal should be promoted and households should be encouraged to establish handwashing stations and individuals should be encouraged to always wash their hands with soap after defecation and/or disposing of faeces.

**Accessibility of excreta disposal facilities** – Efforts must be made to make sure that public and institutional latrines are gender specific and accessible in terms of both travel distance and physical design for people with limited mobility, such as people with disabilities, the elderly and pregnant women.

**Understanding barriers to latrine use and motivators for behaviour change** – Telling people unaccustomed to using latrines that they should use them is an uncertain proposition at best. Cultural practices relating to defecation, excreta and its disposal must be understood to discover the barriers to latrine construction and use. The training for community level staff (extension workers, community health workers, health brigades, Red Cross or Red Crescent volunteers, etc.) should encourage the identification of such barriers to practicing healthy behaviours. Although investigating such community-specific issues may not always be possible during outbreaks, relevant information can be gathered and lessons drawn from prior research and from assessment and monitoring

processes during the outbreak in order to gain insight and consider actions to address the challenge. See **CDC CHW training Module 11** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf).

The ability to identify specific motivators for action holds critical importance in successfully changing attitudes behaviours regarding latrine use. In community-led total sanitation (CLTS) programmes, disgust and shame have been employed to motivate people by exerting peer pressure to effect behaviour change, but these motivators need to be handled sensitively. While the CLTS method may be a powerful motivator, individuals and their families may resist if they already feel stigmatised because they have contracted cholera and need care. It is therefore important to ensure that communication methods do not put off anyone from seeking treatment and support.

Refer to **Annex 9C: Safe excreta disposal** and Chapter 7 for information on communication, behaviour change and mobilization along the associated Chapter 7 series of Annex handouts.

The strategy for delivering the excreta free environment outcome is **primarily the responsibility of: MoH - Local Administration / Municipal Authorities (Health Dept. / Env. Health Dept. / Water and Sewage Depts. / Education Dept / Civil Works Dept.) - Schools (staff and PTAs) - Religious institutions – Community (leaders and members) supported by: WHO – LNGOs – INGOs – IOs**

#### Key resources:

- ❏ OXFAM, **Excreta disposal for people with disabilities in emergencies**, Technical Brief, 2009. <http://bit.ly/RLAZTq>
- ❏ Access for all – Accessibility features for latrines, adapted from CCBRT, Tanzania (LINK)
- ❏ **WHO Technical Notes 10, 13 and 14 on excreta disposal in emergencies**
- ❏ Harvey, P., **Excreta disposal in emergencies, A field manual, Inter-agency publication**, WEDC. <http://www.unhcr.org/4a3391c46.html>

### 9.5. Improving handwashing practices

Making handwashing with soap easier at key times through the use of facilities positioned next to the latrine, kitchen or canteen is a practical action that communities can support together (such as the construction of low cost handwashing stations, so called ‘tippy taps’). Ash can also be used as an alternative where soap is not available, but again, discussions will be needed with community members to ensure that this is acceptable. For information on communication for behaviour change and the promotion of hand-washing, refer to Chapter 7. See also **CDC CHW training module 4** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf).

#### **Tip: Critical times for handwashing with soap**

- After using the toilet / latrines
- After cleaning a soiled baby
- Before eating
- Before feeding a child

**Responsibility** for promoting and facilitating handwashing lies with: *MoH - Local Administration / Municipal Authorities (Health Dept / Env.Health Dept) - Community Extension Workers - Community Members – Restaurant Staff - Market vendors - Water Vendors – Schools, supported by: WHO – LNGOs – INGOs – IOs.*

### Key resources:

- ▣ USAID HIP, [How to build a tippy tap \(LINK\)](#)

## 9.6. Disinfection of vomit and faeces in households and transport vehicles

During cholera outbreaks, bedding, clothing and other surfaces, as in vehicles used to transport cholera patients to a health facility, become soiled with faeces and vomit and disinfection to maintain sanitary conditions is an ongoing challenge.

Previous recommendations called for spraying of homes or vehicles with a pressurised chlorine sprayer, but **this process is no longer recommended** because:

- There is no evidence of the effectiveness of a one-off spraying process
- Typically the spraying team would not reach a contaminated home until several days after the onset of cholera, during which time other family members may have already been infected
- Asymptomatic or convalescing household members may be responsible for repeated household contaminations
- The spraying process can stigmatise a family and damage household possessions. Both of these issues can discourage households from seeking prompt treatment family members.
- The household spraying process requires considerable resources and staff time that could be better used for more effective actions.

### **Tip:** Disinfecting bedding, clothes and transport vehicles used by cholera patients

- Households affected by cholera or diarrhoea should carefully cleanse the premises with dilute bleach, other available disinfectants or with water and soap and allow washed items to dry in direct sunlight, if possible.
- Bedding, clothing, and other materials used by cholera patients must not be washed in or near a clean source of running or stored water.
- Vehicles used to transport a cholera patient should also be washed inside with a dilute bleach solution after the patient has left the vehicle.
- Households should be provided with information and, when and where possible, with the materials for disinfecting their home. Such materials could also be left with community leaders for distribution to affected families as needed.
- Information on good home disinfection practices can be incorporated with other information on PoUWT&SS, hand-washing and proper food hygiene.

Refer to **Annex 9B:** *Point of use water treatment and safe storage* for disinfectant concentrations.

**Responsibility** lies with: *MoH - Local Administration / Municipal Authorities (Health Dept / Environmental Health Dept) - Community Extension Workers - Community leaders – Households*

### Key resources:

- ▣ **Position paper prepared during the Haiti earthquake against spraying the households of cholera patients (LINK)**

## 9.7. Promotion of safe handling of the dead

Funeral rites are meaningful cultural and religious events that help bereaved families come to terms with their loss. During cholera outbreaks, traditional and local practices may need to be suspended or adapted to minimise the risks of transmission during such ceremonies:

- The bodies of people who have died of cholera pose a risk of transmission because they may leak fluids that contain high concentrations of cholera bacteria.
- Family members who prepare the body for viewing and for burial may also be involved in preparing food for the gathering.
- Communal gatherings often provide food for large numbers of people, and safe food hygiene measures may not be taken.
- Food prepared in advance may provide a breeding medium for cholera bacteria.
- Funeral gatherings may involve practices, such as touching or kissing the deceased that facilitate transmission.
- People traveling to funerals from long distances may become infected and spread cholera to other areas of the country upon their return home.

A participatory social approach is required to allow safe grieving, and the banning of funerals gatherings would add to the stigma that can be associated with cholera. Community and religious leaders should be consulted to identify risks and mitigate them through the promotion of safe practices.

Refer to Section 2.4 on misunderstandings and beliefs about cholera for a discussion on the relative risks at funerals as documented in different areas of the world, and **Annex 9D: Safe care of the dead** for further details on safe practices for funerals of people who have died of cholera. For additional reference, see **CDC CHW training module 12** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf).

**Responsibility lies with: MoH - Local Administration / Municipal Authorities (Health Dept) - Social Workers – Religious and Community Leaders – Households**

### Key resources:

- ▣ **Guidance provided for people at funerals, Somalia (LINK)**
- ▣ **Guidance provided for people at funerals, Zimbabwe (LINK)**

## 9.8. Provision of supplies / Non-food items

Supplies such as soap, disinfectants, narrow-necked water storage containers or other non-food items (NFIs) can be useful to provide to households during a cholera outbreak to enable them to practice safe hygiene. However, consideration must be made of programme resources available such as funding, transport and distribution mechanisms, the size of the population in need, and how long supplies will last.

It can be very difficult to distribute large quantities of supplies and NFIs without adequate logistical support. Large NGOs may have the resources to enable them to do manage the process in an effective and timely manner for smaller communities. National and local governments, however, which bear responsibility for large populations, are likely to be hampered by the lack of funding to procure sufficient NFIs and to coordinate transport, fuel and personnel for their distribution.

Therefore, effective targeting of NFIs may be an appropriate strategy for reaching:

- Families living in particularly high-risk areas
- Communities where an outbreak has already started or a neighbouring area
- Particularly vulnerable families or sub-groups within communities

- Schools and other public institutions, e.g., child protection centres, feeding centres, prisons, etc.
- Specific facilities established for supporting the cholera response, such as community ORPs.

Refer to **Annex (in development): Provision of supplies/NFIs** for tips on the selection and distribution.

**Responsibility** lies with: *MoH - Local Administration / Municipal Authorities (Health Dept) - Social Workers – Private Sector - Religious and Community Leaders – Households.*

#### Key resources:

- ▣ **WASH Cluster Hygiene Project paper on NFIs** ([LINK](#))

### 9.9. Good environmental hygiene in markets and other public places

Solid waste can pose a significant health risk near markets and shop outlets by attracting flies and vermin and blocking drainage systems. If unable to ensure functioning, year-round drainage systems, municipal authorities should prioritise high cholera-risk periods for ensuring waste disposal and keeping drainage systems clean. Community clean-up campaigns focussed on market areas and drainage near food outlets can also be initiated with the help of strong community leadership. The provision of tools and protective equipment may spur communities to take action.

Particular care must be taken when disposing of solid waste that might include faeces in bags (so-called ‘flying toilets’). Where possible, arrange for separate, dedicated collection, treatment and disposal systems for these plastic bags.

**Responsibility** lies with: *MoH - Local Administration / Municipal Authorities (Dept Health / Dept Env.Health / Dept Sanitation) - Market traders – Community Leaders and Action Groups.*

### 9.10. Cholera response in institutions and other public settings

Places where people gather require special attention during a cholera response because they can generate increased risks for cholera transmission if care is not taken. At the same time, they can also provide opportunities for more easily spreading information on good practice and for motivating community members to take action.

Specific response activities are needed in institutions and other public settings. A table in **Annex 9G: Cholera response actions in institutional or public settings** summarises the actions by the following institutions or settings:

- Schools, colleges and other educational settings (Guidance sheet: Preparedness for schools, day care centres and child friendly spaces, Somalia 2011 ([LINK](#)))
- Feeding centres: Guidance sheet: Cholera preparedness and response for health facilities and feeding centres, Somalia 2011 ([LINK](#))
- Refugee or IDP camps
- Care homes or child protection centres: Guidance sheet: Preparedness for schools, day care centres and child friendly spaces, Somalia 2011 ([LINK](#))
- Prisons

The information in **Annex 9E** can be adapted for use in other public institutions or settings, such as religious institutions, police or military barracks, public exhibition grounds, workplaces, etc. Market places and food vendors have been covered in the Sections 9.3, 9.4 and 9.9.

### Key resources:

- ▣ **Guidance sheet: Cholera preparedness and response for health facilities and feeding centres**, Somalia 2011 ([LINK](#))
- ▣ **Food and cooking recommendations for schools and children centres**, Somalia 2011 ([LINK](#))
- ▣ **WHO Guidelines on Drinking-water quality, 4<sup>th</sup> Edition** (2011)  
[http://www.who.int/water\\_sanitation\\_health/publications/2011/dwq\\_guidelines/en/](http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/)

## 9.11. Community Case Management

The role of the community-based health worker can be to:

- Provide input into preparedness and response planning including liaising with the community
- Provide messages for prevention and control (see Chapter 7)
- Mobilize the community (see Chapter 7)
- Provide services and commodities for safe water (i.e distribution of aquatabs), hygiene (soap), and sanitation (see Chapter 9)
- Detect, assess, treat and refer cholera patients in the community and the home including infection control (see Chapter 9)
- Support the establishment and running of ORP services (See Chapter 8)
- Monitor and report cholera activities (See Chapters 3 & 9).

See CDC CHW Training materials for cholera prevention and control in [English](#) and training slides in [French](#) for an overview of key messages for cholera prevention and control, training modules on community mobilization, WASH, use of ORS, preventing stigma, including community education cards and PowerPoint training slides and **Annex 8F: How to set up an ORP**.

### 9.11.1. Treatment of cases in the community

Community health workers can play a significant role in detecting, assessing and treating cholera in the community and individual households. As CHWs often live in the community where they work, they are the front line health workers. They are the first to notice any trends in AWD and to influence early case management of patients, saving lives as time is critical. CHWs should be identified, trained, equipped and supervised before a cholera outbreak, during preparedness and for ongoing prevention activities. When an outbreak strikes, they can be mobilized to support cholera control activities.

CHWs can either see patients through their routine services including integrated community case management (iCCM), through house-to-house visits or at established ORPs during an outbreak. As the first point of contact or in areas where treatment facilities don't exist CHWs can:

- Identify AWD and signs of dehydration (see Chapter 8)
- Treat mild forms of cholera by rehydrating the patient with ORS and providing zinc. For reference, see **Annex 8C: Preparation of ORS, Chapter 8** for rehydration guidance and **module 5 in the CDC CHW training guide** at [http://www.cdc.gov/haiticholera/pdf/Haiti\\_Eng\\_MASTER\\_Haiti.pdf](http://www.cdc.gov/haiticholera/pdf/Haiti_Eng_MASTER_Haiti.pdf)
- Save lives by starting rehydration early while transferring to a treatment facility for more severe cases
- reduce the burden on other cholera treatment facilities such as CTC/CTU's.

By way of example, CHWs employ a process much like to one depicted in the following chart, which can be used for the assessment and treatment of AWD with ORS and also with the inclusion of zinc.

#### *Taking care of the sick at home*

Early rehydration for the sick person and good hygiene to avoid spread of the disease is critical. The CHW will provide guidance to families on how to use ORS, conduct proper feeding of infants and children, recognize

danger signs and refer cases to treatment centres, and keep the household clean and safe to reduce the spread of cholera in the home and community through effective WASH measures.

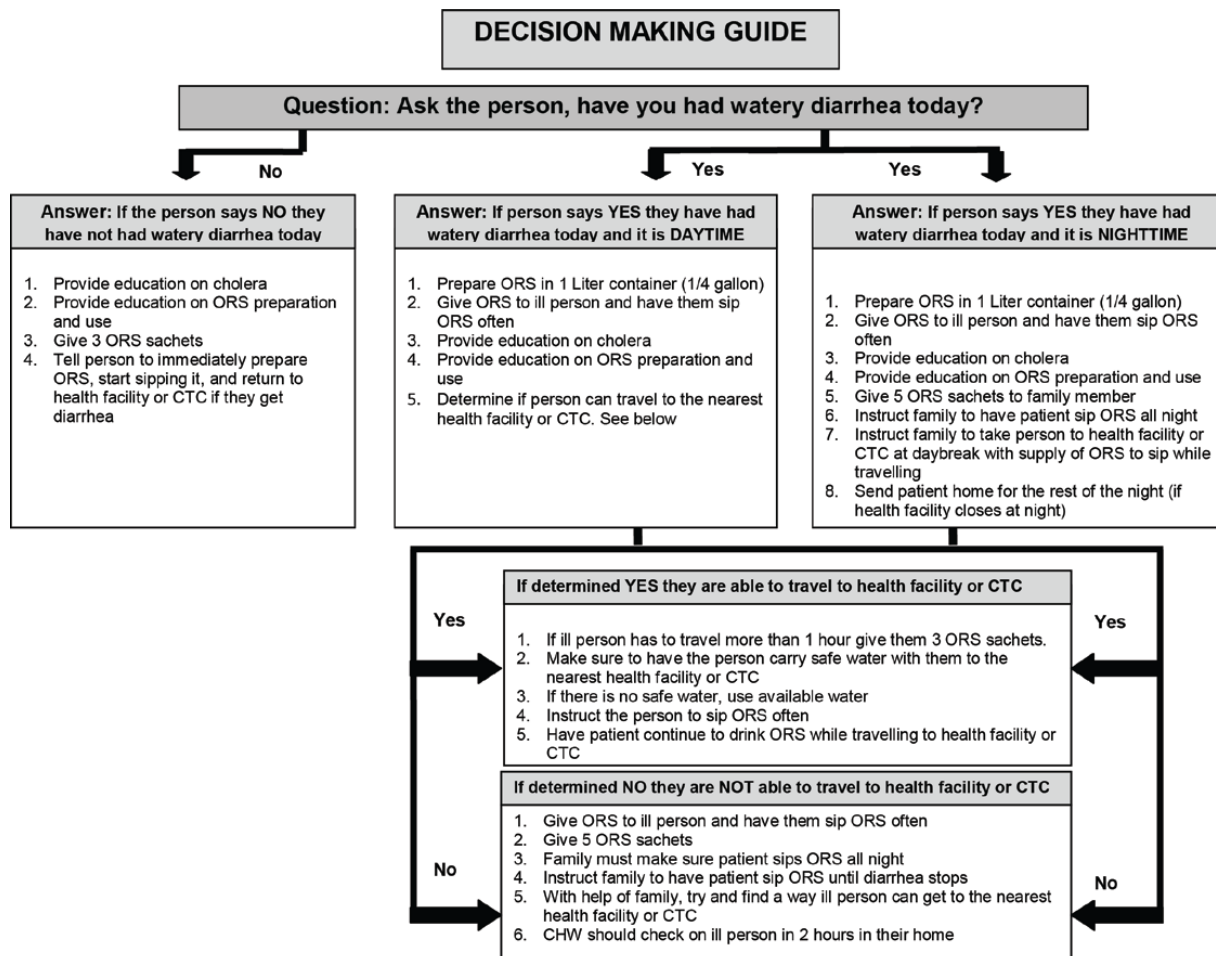


Fig XXX – Decision making guide for treatment of cholera cases at community level (source: CDC, Module 3, Community Health Worker training material for cholera prevention and control)

### 9.11.2. Monitoring and reporting of cholera activities

CHWs can provide significant support in the detection and reporting of rumours to signal an Alert (see Chapter 3) and for ongoing monitoring of cholera activities. There is a significant amount of data on cases and deaths that go unreported as people may not seek or have access to health care. Through the use of cell phones, CHWs can quickly signal an Alert for immediate verification. They can also be provided with a simple reporting form for community or household visits. See **Annex 9F** for a community-based surveillance form to count cases and deaths. Additional information can be added such as treatment provided, age and gender. These data need to be provided to the health facility for inclusion in the district and national level surveillance system.

### 9.11.3. Mobile teams

Community teams composed of health and hygiene promoters resemble community-based health workers as described. They can provide messages, ensure they are understood appropriately and reinforce them; ensure measures for prevention are put in place at household level; play a role in identifying and reporting new cases, treating them early and referring them as appropriate; and contribute to the surveillance system.



## 9.12. Accountability to communities

It is important to develop a system of regular communication with communities to help them gain awareness and understanding of situations and identify successes and problems with the response, such as groups that are not being reached, misconceptions and misunderstandings, and poor-quality interventions from partners including increased involvement in providing community-based solutions.

Regular discussions (weekly then monthly) with different target groups are useful, and these could be supplemented by the use of suggestion boxes, phone-ins or complaint-collection mechanisms.

Actions to improve accountability to affected populations should be included in all partner agreements.



## 10. UNICEF procedures for emergency preparedness and response

### 10.1. Overview of this chapter

This chapter presents UNICEF-specific procedures for emergency preparedness and response to complement and operationalize the activities and interventions proposed in the previous chapters of this Toolkit. Although some elements and their rationale may apply to other organizations, most of the considerations, links and resources are intended as guidance for UNICEF staff and relate to internal UNICEF processes.

Exceptional circumstances – as during cholera outbreaks – call for exceptional responses, which may fall outside of UNICEF Country Office (CO) standard operating procedures and processes. The implementation of global guidelines and administrative instructions at country level is flexible and usually dependent on local interpretation and individual decisions. However, the fact that a UNICEF CO is not familiar with a specified procedure should not preclude its relevance or use. Collaboration among the Human Resources, Operations/Supply and other divisions and functions to investigate options should be instrumental to preparedness activities. In addition, advocacy and lobbying with management is recommended, to allow systems and procedures to be adapted in the best possible way to improve UNICEF's ability to respond quickly to the emergency.

### Summary of Annexes

Annex 10A

Terms of Reference Health/WASH staff

#### **Tip: Addressing Level 3 Emergencies**

**Simplified Standard Operation Procedures (SSOPs)** were issued by the UNICEF Executive Director on 6 March 2012 for use during Level 3 Emergencies, with the objective to simplify, streamline and clarify UNICEF procedures related to emergencies and to enable an effective response to major emergencies. The SSOPs are available at <http://intranet.unicef.org/emops/emopssite.nsf/root/Pagexssops>

### 10.2. Human resources

Emergencies such as cholera outbreaks always require significant additional resources of all kinds, so staffing should be planned accordingly to cope with additional demand. Following are a variety of options for increasing human resources during any emergency response, including cholera outbreaks.

#### 10.2.1. Human resources required in an outbreak

Section 6.4 of this Toolkit outlines the range of key personnel likely to be required during a cholera outbreak. Some particular areas in which UNICEF's involvement may be required include:

- Supporting the government and partners to identify human resource needs
- Funding personnel through partnership agreements to work at various levels
- Contracting personnel directly to work as part of the UNICEF team or to support the government or other partners

A suggested list of key professional staff that UNICEF and partners might consider for emergency cholera response is presented below:

#### Co-ordination, communication, information:

- Emergency coordinator for cholera response (inter-sectoral)
- Communications for development (C4D) specialist
- Information manager (LINK)

#### WASH:

- WASH coordinator (sector focus) (LINK)
- WASH specialist (hygiene) (LINK)
- WASH specialist (sanitation) (LINK)
- WASH specialist (water supply) (LINK)
- WASH specialist (water quality) (LINK)
- WASH co-coordinator (agency focus) (LINK)
- Hygiene promotion/communication co-coordinator (agency focus) (LINK)
- WASH trainer (LINK)
- Field hygiene promoters (LINK)
- Water and sanitation / public health engineer (LINK)

#### Health:

- Health coordinators (sector focus) (LINK)
- Health specialist (epidemiology) (LINK)
- Health specialist (case management) (LINK)

#### Operations:

- Dedicated administrator ( General ToR)
- Dedicated financial officer ( General ToR)
- Logistician ( General ToR)
- Administrator/finance ( General ToR)

Terms of reference for the roles are presented in **Annex #**; they can be adapted as needed based on the local needs and conditions. Depending on the scale and urgency of the outbreak, other roles might be necessary to cover sub-national co-ordination and media relations and other functions, or they may be included in existing job descriptions. Keep in mind that for each five to eight additional Professional Staff, additional Programme Assistant will be required, so it must be included as part of human resources needs. Other needs related to increased staff such as office equipment and furniture as well as accommodation will be needed to deal with by UNICEF CO.

### 10.2.2. UNICEF's modalities for increasing human resources for emergency response

To increase human resources capacity for responding to cholera outbreak, the following options can make available additional staff for support:

#### Internal Redeployment

- In-country re-deployment – This is the quickest option in situations where there are sub-offices and personnel who can be called for support. In this case, the decision making process is internal to the CO, and there are no delays on external issues such as visa requests.
- Surge deployment from other UNICEF offices – This option can be fast and can tap experienced UNICEF staff, generally at minimal cost. Surge staff can come from Country Offices (requires special permission from the CO Representative of the supporting office), Regional Offices and Headquarters (deployment for in-country support, particularly for establishing the response).

**Note:** Some regions have established Regional Response Mechanisms (RRM) in which UNICEF staff from CO and RO have been 'pre-certified and cleared' for emergency deployment to allow quick mobilization.

For Level 3 Emergencies, an Immediate Response Team (IRT) will become available at global level to provide in-country support on a non-regret basis for a period of up to 3 months.

### Standby partners

Secondment of technical staff can be requested from global stand-by partners (through EMOPS) or from national partners for collaborative action through Project Cooperation Agreements (PCAs). Secondments serve as a relatively quick source of additional human resources for emergency response; that said, secondments from national stand-by partners should be arranged in advance as part of preparedness activities. Additional information on the global standby partnership mechanism and how to access it at country level can be found at: <http://www.intranet.unicef.org/Emops/EMOPSSite.nsf/root/Page091103>

With respect to co-ordination functions, and especially if the Cluster Approach has been/is activated in the country, the Global WASH Cluster has a Rapid Response Team that can provide additional support for Cluster Co-ordination and Information Management under the above-mentioned global stand-by partnership mechanism. Additional information can be found at: <http://www.washcluster.info/?q=download/file/fid/471>

### External Recruitment

UNICEF also has the ability to recruit supplemental human resources through Special Service Agreement (SSA), Temporary Assignment (TA) or Fixed Term (FT) positions.

The SSA offers the easiest and quickest of these hiring options, although professionals on SSA do not have authority to manage internal UNICEF administrative systems. Although the organization is moving towards reducing the length of contracting process, a TA might require up to 4 to 6 weeks from the time of request to fulfillment. And, an FT post can take 6 months or longer to fill, so its use for emergency response is limited.

Although the Country Office leads the process, Division of Human Resources (DHR) at Headquarters can provide assistance, including identification of candidates, notably through its **Global Web Roster (GWR)** of pre-screened professionals. From the GWR, names of 'technically cleared' individuals can be recommended and their interest in applying for identified roles solicited. As with any other type of contracts, DHR rules and regulations apply.

Finally, the SSA, TA and FT hiring options require clear Terms of Reference (ToR) and/or a detailed Job Descriptions (JD). With respect to emergency cholera response, it is highly recommended that a UNICEF office in a country at high risk for cholera outbreaks make advance efforts to identify the most likely profiles to be required and prepare ToRs in advance.

Keep in mind also that when preparing the ToR or JD and requesting the deployment, the duration of the assignment (with estimated dates), managerial level and reporting lines for the requested staff must be included in the initial communication so as to avoid processing delays.

### 10.2.3. Building UNICEF's capacities to address cholera outbreaks

In order to effectively support a country government, UNICEF staff must already possess cholera preparedness and response capacity. The following table identifies UNICEF staff who require such capacity, the key skills required and training subjects needed.

**Table 12 - Capacity required of UNICEF staff on cholera preparedness and response**

Personnel Role	Key skills required	Training required	Resources available
Country management team and logistics staff	<ul style="list-style-type: none"> <li>• Leadership to guide collaboration among Health, WASH and other actors</li> <li>• Possession of decision-making rationale for priority actions</li> <li>• Ability to expedite response by UNICEF systems</li> <li>• Grasp of specifications for key procurement items</li> </ul>	<ul style="list-style-type: none"> <li>• Basics of cholera preparedness and response</li> <li>• UNICEF policy on cholera</li> <li>• Latest knowledge of relevant vaccines</li> <li>• Linkages between emergency programming and development</li> </ul>	<ul style="list-style-type: none"> <li>• This UNICEF Cholera Toolkit, including the additional resources</li> <li>• UNICEF webinar on cholera (To be developed after completion of the Toolkit)</li> <li>• Existing cholera guidelines (WHO, MSF, COTS) (available within the additional resources)</li> <li>• Sector training materials (see a non-comprehensive list in <b>Annex 6G</b>)</li> <li>• Emergency simulations</li> <li>• Established institutional cholera-related training, such as ICDDR,B.</li> </ul>
Section Chiefs and Programme Officers (WASH, Health, Nutrition, Protection, Education, C4D)	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Facilitation and co-ordination</li> <li>• Development of communication strategies and plans</li> <li>• Mentoring and capacity-building skills</li> <li>• Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Basics of cholera preparedness and response</li> <li>• WASH and health related cholera preparedness and response actions</li> <li>• Context-specific responses</li> </ul>	

Section 6.4.3 identifies the steps necessary to establish capacities within the country, identify capacity-building needs and develop a capacity-building plan. **Annex 6F** identifies the training requirements for key staff and **Annex 6G** outlines capacity-building methods and examples of training and materials.

**Key resources:**

- ❏ **ICDDR-b COTS training (LINK)**
- ❏ **Recruitment and staffing in emergency situations (Executive Directive CF/EXD/2010-005)**  
<http://uni.cf/TkNQz6>.
- ❏ **UNICEF's Corporate Emergency Activation Procedure (Executive Directive CF/EXD/2011-011)**  
<http://uni.cf/PVcLda>.
- ❏ **What are Stand-by Resources? (UNICEF intranet)**  
<http://www.intranet.unicef.org/Emops/EMOPSSite.nsf/root/Page091103>.
- ❏ **Human Resources in Emergencies (UNICEF intranet)**  
<http://intranet.unicef.org/dhr/dhrsitesite.nsf/Site%20Pages/Page10>.
- ❏ ToRs templates (additional resources package)

**10.3. UNICEF implementation arrangements for general emergency response**

Understanding the response implementation arrangements within UNICEF, as detailed in Figure 5, is critical to generating the greatest positive impact for women and children and to fulfilling the Core Commitments to Children in Humanitarian Action.

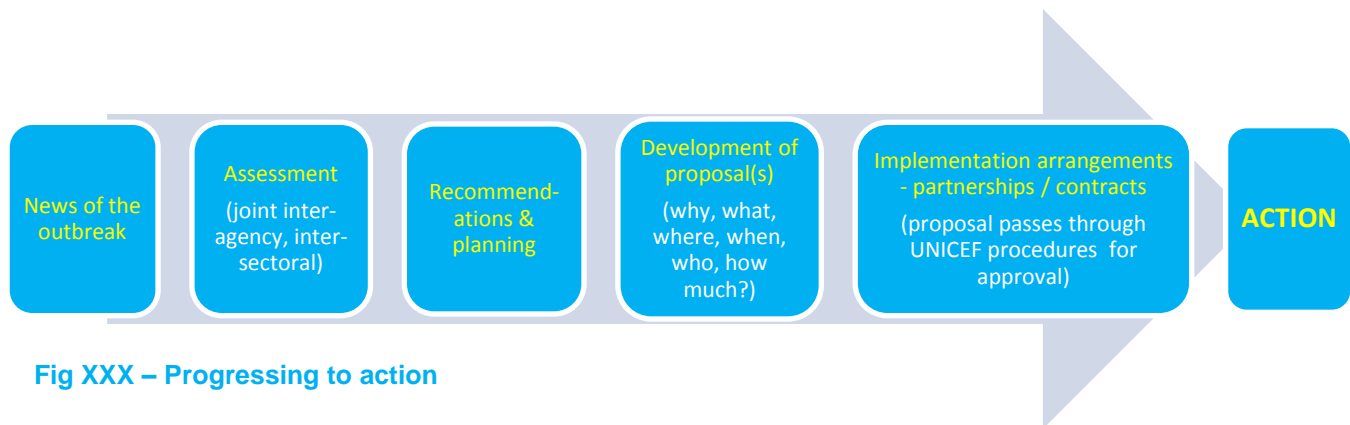


Fig XXX – Progressing to action

The delivery of UNICEF’s programmatic response (for emergencies as well as development) is heavily dependent upon the capacity of national and international implementing partners, including government, non-governmental organizations (NGOs), civil society organizations (CSOs) and contractors. UNICEF’s preparedness plan should therefore identify the most suitable partners prior to an emergency as well as activities to improve their capacity to respond.

All implementation arrangements are ruled by the **Basic Cooperation Agreement (BCA)** signed between UNICEF and the host government. The BCA constitutes the legal basis for UNICEF’s presence in a country, its programme cooperation, the programme procedures and its right to observe all phases of the programme, including emergency response situations.

With respect to the transfer of resources for implementation, UNICEF has only a limited number of options, whose selection depends on both the type of organization with which UNICEF is liaising as well as the nature of results expected from the relationship.

Transferring resources to a governmental partner is done within the scope of the Annual Workplan signed with UNICEF. It is a relatively quick option for transferring funds, and implementation depends on the government’s capacity.

Engagement with NGOs is possible through three different options: a **Project Cooperation Agreement (PCA)** and its “junior” version, the Small Scale Funding Agreement (SSFA); a **Special Service Agreement (SSA)**; or, through a **Long Term Arrangement (LTA)**.

Each of these options has its own positive and negative aspects that need to be considered when choosing which is most appropriate for a given situation. Note that **during a response**, the use of an LTA will be possible **only** if this has been developed **in advance**, otherwise the partnership (PCA) or contract (SSA) options are the only options to use (for details on LTAs, see below). Ultimately, the decision should be based on the level of results expected from the arrangement. **Annex 10A** presents key considerations to make when choosing between SSAs or PCAs for emergency response, and a brief summary of the implementation arrangements described follows:

**Project Co-operation Agreement (PCA)** – The PCA is the main type of agreement used for development- and emergency-related partnerships. It focuses on the collaborative implementation of a jointly developed intervention within the framework of the UNICEF Programme of Cooperation or set of supported humanitarian responses. Although specific processes can be established for the approval of PCAs during emergencies, their creation and administrative processes take time (25 days<sup>25</sup> on average); hence, they should be developed as a preparedness measure to be useful in the early stages of cholera outbreak.

<sup>25</sup> Based on the practical feedback from UNICEF WASH staff from COs through the WASH in Emergencies Training. It only includes the time consumed during UNICEF’s internal administrative process, after agreement with partners has been reached and before they have the resources to start implementation on the ground.

While stand-alone PCAs can be developed for emergency responses, Country Offices are increasingly using them as contingency mechanisms prepared in advance of an emergency either as stand-by mechanisms activated when an emergency is declared or by introducing specific 'emergency clauses' into regular programme's PCAs. See **Annex 10E** for a summary of the uses of PCAs as contingency mechanisms.

**Small-Scale Funding Agreement (SSFA)** – An SSFA is similar in scope to a PCA, but smaller in scope and both simpler and quicker to develop and deploy because it does not require a committee/review panel approval process. Note that **the cumulative value of SSFAs cannot exceed US\$ 20,000 in total**, including funding in cash and supplies, for an individual NGO/CSO in a calendar year; hence its use is limited, especially where large-scale action is required.

### **Direct Cash Transfers (DCTs)**

A DCT is the means by which cash is made available to a partner (government or NGO/CSO) against a PCA, SSFA [for NGO/CSOs] or a request for emergency support [from government partners] to implement agreed activities. DCTs are usually paid on a quarterly schedule in one lump sum to each partner. **DCTs have to be spent and liquidated – and any unspent money returned – within six months, otherwise the UNICEF financial system blocks further payment to the partner until the DCT has been cleared. Such a block has widespread negative impact because** the financial system covers all UNICEF Programmes and Sections in a CO; therefore, a blocked payment to a partner stops payment to all offices and sectors working with the same implementing partner in the country until the DCT is cleared.

**Special Service Agreement (SSA)** – An SSA is a legally-binding agreement between UNICEF and an external party, most frequently an individual (managed by HR) or an institution (managed by Operations/Supply section) including NGO or CSO, but also private sector, academic institutions, among others, to perform services at a specified fee. For example, it can be used for the recruitment of temporary staff as consultants or for the delivery of services, procurement of supplies or arrangement of logistics. Each country establishes its own threshold requirements for SSAs to pass through the Contract Review Committee (CRC) either at sub-national or national level. However, the CO Representative can modify the composition and operation of the local CRC in order to expedite the review process during emergencies, which otherwise take up to 19 days, on average.<sup>26,27</sup>

Institutional contracts under SSA are not exempt from UNICEF policies and procedures. Instead, they are administered in accordance with UNICEF processes for competitive tendering and procurement, including a request for quotation, public advertisement or invitation to bid; following by a competitive selection and justification for the recommendation based on technical quality and price.

**Long Term Agreement (LTA)** – An LTA can expedite the operational processes associated with the procurement of services and supplies because bidding and clearance are completed during the establishment of the LTA. Establishing an LTA takes several months and should be prepared as part of the CO preparedness, and once established it can last for a period of one to two years. In cholera endemic countries, LTAs should be set up as preparatory measures undertaken.

Refer to **Annex 10E (to be developed)** for further details about partnership arrangements.

#### **Key resources:**

- ❏ **Introductory presentation on UNICEF implementation arrangements** [\(LINK\)](#)
- ❏ **Basic Cooperation Agreement (BCA)** <http://uni.cf/Y7AxTp>.
- ❏ **PCAs and SSFAs associated guidelines for Country Offices** <http://bit.ly/hg5o5f>.

<sup>26</sup> [Financial and Administrative Management for Emergencies. A Guide for UNICEF staff](#) (p. 33)

<sup>27</sup> Based on the practical feedback from UNICEF WASH Staff from COs through the WASH in Emergencies Training.



- ❏ **Contract Review Committee (Financial Circular 19, rev. 3)** <http://uni.cf/SKNCi0>.
- ❏ **UNICEF Programme Policy and Procedure Manual (Intranet e-Manual)** <http://uni.cf/URvlnR>.
- ❏ **Financial and Administrative Management for Emergencies. A Guide for UNICEF staff** <http://uni.cf/TKldxg>.

#### 10.4. UNICEF supply procurement

This section focuses on UNICEF options for the procurement, storage and use of preparedness stocks. Challenges presented by supply procurement processes can create an emergency response bottleneck; therefore, preparedness activities can ensure the readiness and availability of necessary supplies for emergency response, including the identification of key supplies and agreement on the assignment of responsibility for procurement, insurance, storage and logistics. In addition to the regular in-country procurement process, UNICEF CO can access supplies from:

- **[International procurement through Supply Division, Emergency Supply List and Supply Calculator:](#)** An Emergency Supply List (ESL) has been developed, comprising relief items essential for responding to the needs of 250,000 people. The ESL consists of 161 items allocated to staff support (35 items) and programme support (126 items). UNICEF regional warehouses maintain supplies of ESL items at all times. The list is available at [http://www.unicef.org/supply/files/EmergencySupply\\_List.pdf](http://www.unicef.org/supply/files/EmergencySupply_List.pdf)

A Supply Calculator is also available to estimate order quantities and costs of key supplies needed, including those from the ESL. It has built-in calculations that generate order recommendations, based on the size of affected population, as well as a freight cost estimator for shipments for international orders issued through UNICEF Supply Division (SD). The Supply Calculator is available at

<http://extquickrc01.unicef.org/denmark/do/danemergency.nsf/WebCalculation?ReadForm>

Note that international procurement through UNICEF SD is available for all Country Offices upon request. Supply Division has the ability to deliver ESL-listed items within 72 hours to the affected UNICEF CO's port of entry. However, this option is usually the most expensive and should be used as the option of last resort. Detailed information on how to initiate and place orders is available [here](#) or at <http://bit.ly/PbNYQP>.

To log into the Supply Calculator and to place orders through SD, an UNICEF intranet user ID and password is required.

- **[Long-Term Arrangements \(LTAs\)](#)** – Section 10.3 provided a brief overview of LTAs. After LTAs are in place, monitoring of the product quality and readiness of suppliers for all LTAs involving delivery of supplies should be scheduled as part of the preparedness activities.
- **[In-kind assistance \(IKA\) / donations in kind \(DIK\) / in-kind contributions \(IKC\)](#)** – In general, these arrangements are not encouraged because of the challenges they pose with respect to implementation (especially when items are not considered as part of the intervention from the beginning), liability (duty free, safety), quality control (IKA/DIK bypasses regular pre-delivery inspection), warehousing, logistics and distribution costs, and further monitoring and reporting.

IKA/DIK/IKC arrangements should be considered **only** for items which would otherwise require a purchase order and the need for which is defined using the same specification. Any [DIK/IKA/IKC options should be referred to PARMO](#) (manages relations with government donors) [or to PFP](#) (manages private contributor relations) [and Supply Division BEFORE entering any discussions or commitments](#).

- **[Procurement through PCAs with partners](#)** – It is possible to establish PCAs with partners that include shared access to emergency stocks (of both organisations) or supply transfers by UNICEF to partners to be stocked and managed by them. Partners can also be cleared for direct procurement, reducing the burden on UNICEF as a procurement agency and speeding up the acquisition process in emergencies (especially for

items which can be locally procured and which the implementing partner has the capacity to handle internally). Ideally the pre-clearance process should be undertaken as a preparedness measure. The Country Office-based Operations/Supply function holds authority for clearance of implementing partners for in-country procurement, which usually includes a review/audit of their procurement and logistical processes and capacity. Alternatively, Supply Division in Copenhagen must approve offshore procurement arrangements.

Note for consideration that the USAID Office of U.S. Foreign Disaster Assistance (OFDA), the European Commission's Humanitarian Aid Department (ECHO) and other donors have similar clearance process which can serve as an indication of partner's capacity to handle the procurement of supplies.

- **UNICEF contingency stocks-** UNICEF Offices may hold contingency stocks of key items, especially those procured offshore and not readily available on the market. Nevertheless, due to the liabilities on International Public Sector Accounting Standards (IPSAS), funds used for procurement of supplies are not considered spent – and therefore cannot be reported as used – until these supplies are delivered to beneficiaries/final users, reducing UNICEF's ability to maintain contingency supplies. One option is to consign these supplies to government or implementing partners, which implies that UNICEF cede ownership and management of these goods in order to be released from the accounting requirements. To make proper use of this feature, UNICEF should carefully evaluate a partner's capacity to store and manage stocks and build the necessary confidence to ensure these goods will be used as originally planned. **All transfer of goods to government and partners must be properly accounted for and reported via internal UNICEF systems.** In the case of implementing partners, the goods must be transferred under the scope of a PCA and reported accordingly.

Refer to **Annex 10B** for further details about supply procurement. General considerations with respect to the supplies required for cholera response and preparedness measures for their availability (identification, mapping, procurement and storage) are discussed in Section 6.5 of this Toolkit. In addition, **Annex (to be developed)** outlines lists of key supplies and considerations for identifying priority supplies.

#### Key resources:

- ❏ **Supply Catalogue – Emergency. Intranet Webpage** (includes Emergency Supply List and Calculator) <http://bit.ly/hg5o5f>
- ❏ **PowerPoint on the UNICEF supply and logistics systems (LINK).**
- ❏ **Long Term Arrangements (Supply Manual, Chapter 6, Section 8)** <http://uni.cf/VvyC86>.
- ❏ **Additional considerations for IKA approval** <http://uni.cf/TMPpBQ>.
- ❏ **Financial and Administrative Management for Emergencies. A Guide for UNICEF staff** <http://uni.cf/TKldxg>.

## 10.5. Resource mobilization

UNICEF is officially a 'fund' and hence does not receive any core resources from the United Nations. It therefore has to raise funds from external sources for both development and humanitarian contexts aid, as well as its ability to respond to the Core Commitments to Children (CCCs) in humanitarian action, including cholera outbreaks. All UNICEF funds originate from: i) government donors, ii) National Committees (NATCOMs) or iii) private donations.

The various possible funding options open to UNICEF for humanitarian action, including response to cholera outbreaks, are:

**Table 13 – Funding options for UNICEF’s humanitarian action**

<p><b>Re-programming of existing Country Office Resources (RR/OR/ORE)</b></p>	<p>Regular Resources (RR) can be diverted immediately by a CO Representative, according to the approved thresholds.<sup>28</sup> Diversion of Other Resources (OR) can only be done with approval from the donor.</p>
<p><b>UNICEF Emergency Programme Fund (EPF)</b></p>	<p>The Emergency Programme Fund (EPF) is intended to support a CO’s ability to meet the CCCs, pending donor contributions. It is approved within 24-48 hours and is <u>considered a UNICEF loan</u> (from an account managed by EMOPS); the funds must be repaid after contributions from donors become available.</p>
<p><b>Central Emergency Response Funds (CERF)</b></p>	<p>The CERF is a stand-by fund established and managed by UN (as CERF Secretariat established at OCHA). Only UN and the International Organization for Migration (IOM) are eligible to submit proposals, which should be based on sectoral priorities and projects.</p>
<p><b>Fund raising appeals</b></p>	<p>These funding requests comprise any other appeal options to support humanitarian action, including:</p> <ul style="list-style-type: none"> <li>- Immediate Needs Document (IND)</li> <li>- Stand-alone Crisis Appeal</li> <li>- Flash Appeal</li> <li>- Consolidated Appeal Processes</li> <li>- Other transitional and early recovery appeals.</li> </ul>

Other funds may become available through transfers of resources from another UN Agency. See **Annex 10C** for specific information on these and other resource mobilization mechanisms.

**Key resources:**

- ❏ **Overview PowerPoint on UNICEF funding types and sources**, Sando Training, 2011 (LINK)
- ❏ **Resource Mobilization in Humanitarian Action (Intranet Webpage)**  
<http://intranet.unicef.org/Emops/EMOPSSite.nsf/root/Page0602>.
- ❏ **CAP / CHAP** - [www.unocha.org/cap/](http://www.unocha.org/cap/)
- ❏ **CERF** - [www.unocha.org/cerf/](http://www.unocha.org/cerf/)
- ❏ **Pooled funds (CHF, ERF/HRF)** - [www.unocha.org/what-we-do/humanitarian-financing/pooledfunds](http://www.unocha.org/what-we-do/humanitarian-financing/pooledfunds)
- ❏ **Resources from one UN agency to another – guidance note:**  
<http://toolkit.undg.org/uploads/contents/1333997515.pdf>
- ❏ **UNICEF Policy and Procedure Manual, Programme Operations**, January 2009, pp110-117 (LINK)

<sup>28</sup> According to the [CF/EXD/2004-15](#), Representatives can authorize up to US\$ 200,000 if CO RR budget >\$2 million (for RR <\$2 million the maximum is US\$ 150,000). Anything beyond these thresholds requires RO / HQ approval.