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Cholera Toolkit

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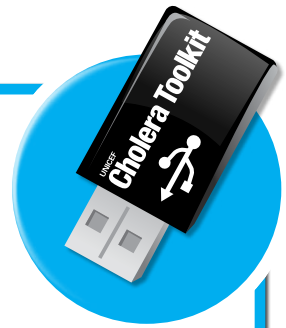
Cholera Toolkit 2013

This document is accompanied by a USB device containing the three components of the UNICEF Cholera Toolkit: the Main Document, the Annexes and Additional resources. These components are meant to work together to make the best use of the Toolkit.



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Contents

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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 choleratoolkit@unicef.org

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Acronyms

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

EMOPS	Office of Emergency Programmes (UNICEF)
EPF	Emergency Programme Funds (UNICEF)
ERC	Emergency Relief Co-ordinator (OCHA)
ERF	Emergency Response Fund (UN) – also known as a HRF or by other names
ESARO	Eastern and Southern Africa Regional Office (UNICEF)
EWARN	Early warning alert and response network
FA	Flash Appeal
FBO	Faith Based Organisation
GIS	Geographical Information System
GM	Gender Marker (CAP)
GPS	Global Positioning System
HACT	Harmonised Approach to Cash Transfer (UN)
HC	Humanitarian Co-ordinator (UN)
HCT	Humanitarian Country Team (UN)
HIV	Human Immunodeficiency Virus
HP	Hygiene Promotion
HQ	Headquarters (used in this instance for UNICEF HQ)
HR	Human Resources
HRBA	Human Rights Based Approach
HRF	Humanitarian Response Fund (UN) – also known as a ERF or other names
HWTS	Household water treatment and safe storage
HWWS	Handwashing with soap
IEC	Information, Education and Communication
IKA/IKC	In Kind Assistance / In Kind Contribution
IM	Information Management
IND	Immediate Needs Document (UNICEF)
INGO	International Non-Governmental Organisation
IO	International Organisation
IOM	International Office for Migration
KRA	Key Results Areas (UNICEF)
LFA	Logical Framework Analysis
LNGO	Local Non-Governmental Organisation
LoU	Letter of Understanding
LTA	Long Term Agreement (UNICEF)
MENARO	Middle East and North Africa Regional Office (UNICEF)
MoU	Memorandum of Understanding
MTSP	Mid-Term Strategic Plan (UNICEF)
NatCom	National Committees for UNICEF (established for the sole purpose of fundraising for UNICEF)
NFI	Non-Food Item
NGO	Non-Governmental Organisation
OCHA	Office for the Co-ordination of Humanitarian Affairs
OHCR	Office of the UN High Commissioner for Human Rights
OR	Other Resources (UNICEF)
ORC	Oral Rehydration Corner - also sometimes called an Oral Rehydration Therapy Corner (ORTC/ORC) or an Oral Rehydration Point (ORP)
ORE	Other Resources – Emergencies (UNICEF)
ORP	Oral Rehydration Point (also sometimes called ORTC/ORC)
ORS	Oral Rehydration Solution
PAHO	Pan-American Health Organisation, Regional Office of WHO for Latin America and the Caribbean
PCA	Project Co-operation Agreement (UNICEF)
PFP	Private Fundraising and Partnership Division (UNICEF)
PHAST	Participatory Hygiene and Sanitation Transformation
PLA	Participatory Learning and Action
PLWHA	People Living with HIV/AIDS
PoUWT	Point of Use Water Treatment
PoUWT&SS	Point of Use Water Treatment & Safe Storage
RC	Resident Co-ordinator (UN)
RDT	Rapid Diagnostic Test
RO	Regional Office (UNICEF)
ROSA	South Asia Regional Office (UNICEF)
RR	Regular Resources (UNICEF)
SSA	Special Service Agreement (UNICEF)
SSFA	Small Scale Funding Agreement (UNICEF)
TACRO	The Americas and the Caribbean Regional Office (UNICEF)
ToTs	Training of Trainers
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation & Hygiene
WCARO	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.[1] 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.

1 **WHO.** Cholera – Fact Sheet N° 107. Geneva, Switzerland, World Health Organization. (2011d).

UNICEF currently provides strategic technical support and guidance, surge capacity, training, supplies and logistical support for cholera and diarrhoeal disease 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 diarrhoeal disease 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 and 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, Child Protection) as well as key supporting services such as Emergency Programmes (EMOPS) and Supply Division (SD).

For all cholera-related activities, UNICEF Health and WASH Sections at all levels should work closely together with other key sections, 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, Child Protection and supporting services, such as Supply Division (SD) and Office of Emergency Programmes (EMOPS). UNICEF's Core Commitments 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 Action 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 provides 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, Child 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 available only in electronic copy) 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, available in the companion USB). Links to web-based resources are included throughout the electronic version of the Main Document.

Key resources mentioned across the 'Main Document' and 'Annexes' are linked to the website where this additional information is available and/or to the companion USB. For accessing the documents in the companion USB, click on the icon next to the document.

KEY RESOURCES

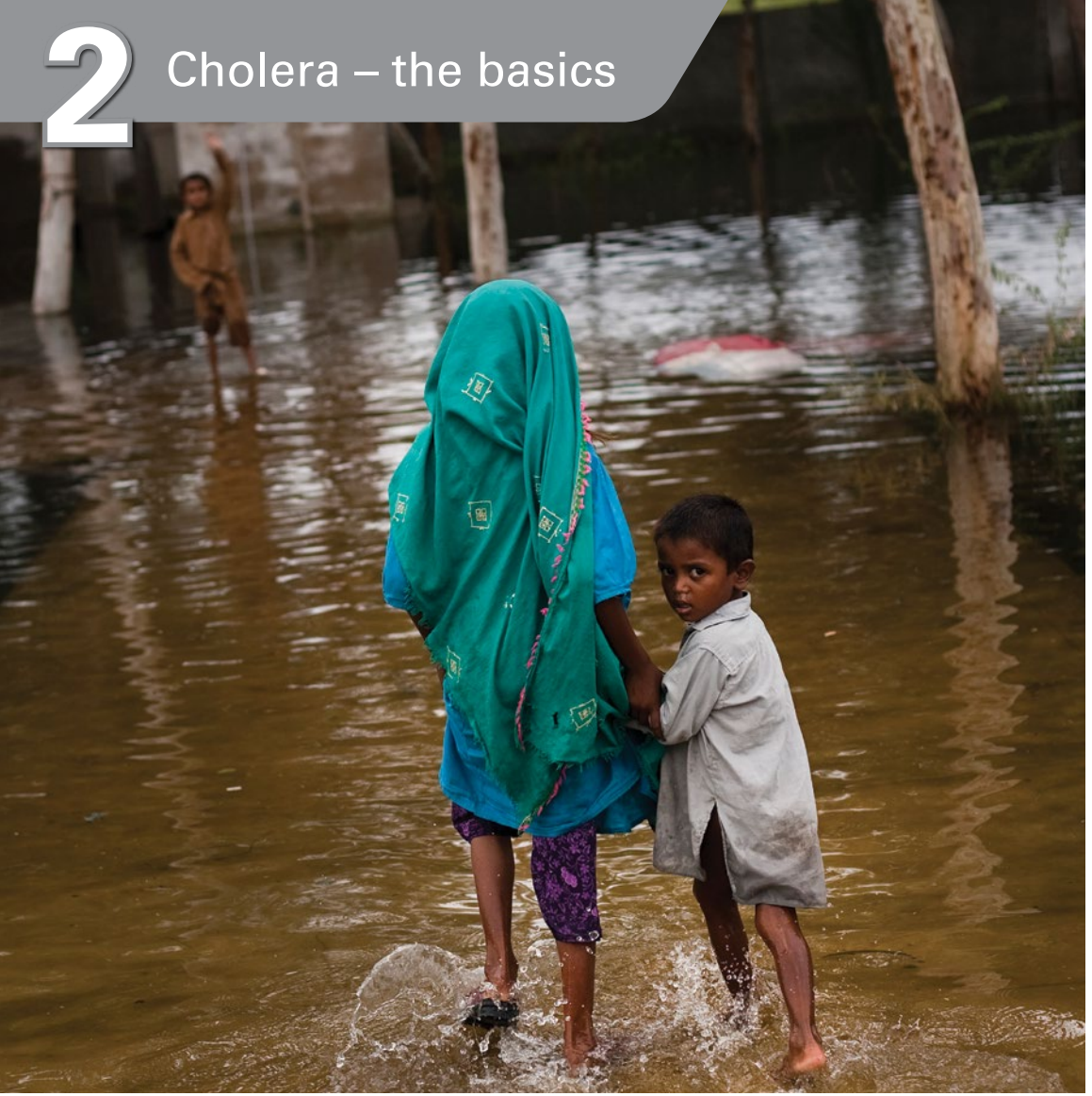
UNICEF, Delivering better results for children: A handy guide on UN coherence (2010).

UNICEF, UNICEF water, sanitation and hygiene strategies for 2006-2015 (2005).

UNICEF, UNICEF joint health and nutrition strategies for 2006-2015 (2005).

UNICEF, Core Commitments for Children in Humanitarian Action (2010).

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

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.[2] 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, prevention interventions, including oral cholera vaccine, 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.

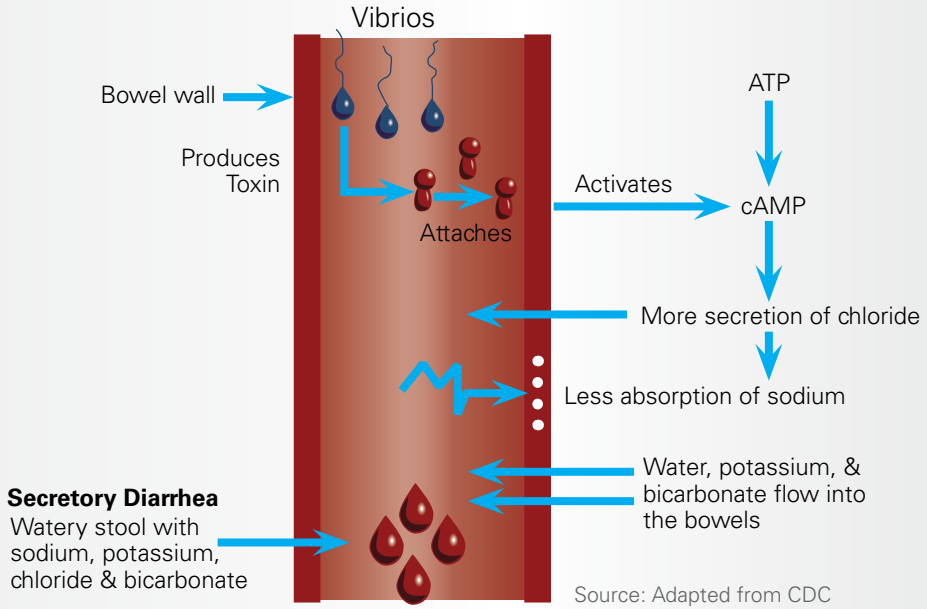
2 The letter 'O' refers to the serogroup-specific lipopolysaccharide cell wall (O) antigen.

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).

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.

FIGURE 1 Mechanism of cholera action



Source: Adapted from CDC

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.

Additional detail on the mechanism of cholera can be found in an animated online presentation produced by the Department of Microbiology and Immunology at the University of Rochester. See 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.[3]

3 WHO. (2011d). Cholera – Fact Sheet N° 107. Geneva, Switzerland, World Health Organization.