

# CHOLERA KITS – INFORMATION NOTE

## 1. Background

For several years, agencies supporting preparedness and response to cholera outbreaks have supplied medicines and medical devices through “cholera kits”. The content of the Interagency Diarrhoeal Disease Kits (IDDK) was initially elaborated by WHO together with partners (UNICEF, IFRC, ICRC) and revised in 2005. However, several partners have noted during recent cholera outbreaks that the kits don’t adequately meet field needs.

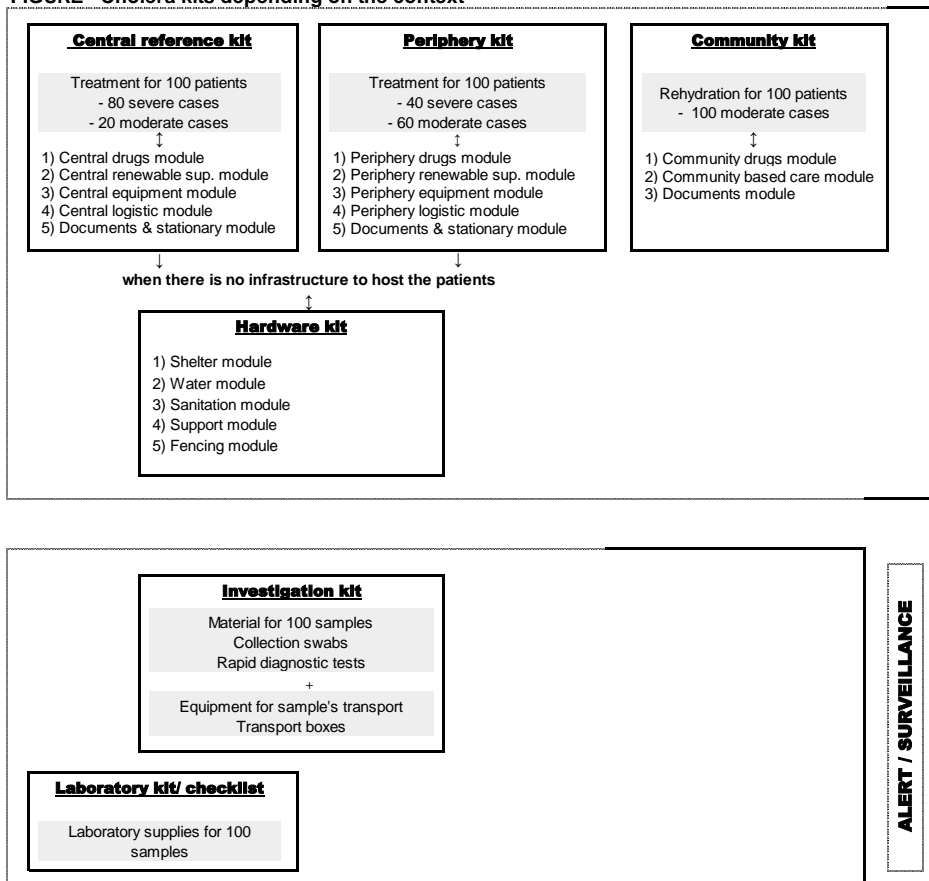
In an effort to better align the presentation and content of the kits to field needs, the composition of the cholera kits has been reviewed. The content of all modules have been updated and reorganised to be better adapted for field use in different settings. This document serves as an introductory presentation of the revised cholera kits 2015.

## 2. Presentation

The revised cholera kits are designed to help prepare for a potential cholera outbreak and to support the *first month* of the initial response to an outbreak. After this period supplies should be ordered based on needs. The overall package consists of six different kits (Figure 1). Each kit is divided in several modules. The kits and modules can each be ordered separately. While examples are given in this document, each context will be different and the number and type of kits required must be adapted to the context.

- 3 kits are designed for the treatment of cholera patients within existing structures at the central, peripheral and community levels.
- 1 kit, called “Hardware kit”, provides the necessary material to set-up a provisional structure for patient care when no existing structure is in place
- 2 kits include the equipment needed for the investigation of cholera outbreaks / alerts and for the laboratory confirmation of suspected cholera cases

FIGURE - Cholera kits depending on the context



### 3. Description and content

#### *Central Reference and periphery kits*

The central and periphery kits differ in the proportion of severe cases (i.e. cases with severe dehydration) they are able to treat. The central kit also contains glucose 50% and potassium chloride which should only be administered under medical supervision. Both kits are divided into 5 modules which can be ordered separately.

- The central kit contains the necessary equipment for the initial response to a cholera outbreak, at central level within an existing health structure such as a referral hospital or an already established Cholera Treatment Center (CTC). It is adapted to any structure where patients can be hospitalized and where health care professionals and equipment are present.  
It is designed for the treatment of 100 patients : 80 severe cases, requiring IV rehydration, and 20 mild/moderate cases, who should be given oral rehydration solutions only.  
It is recommended that each central reference cholera kit is associated with 3 community kits to be dispatched in the surroundings of the hospital which will allow for the majority of moderate patients to be treated at the community level.
- The periphery kit contains the necessary equipment for the initial response to a cholera outbreak at periphery level within an existing health structure with in patients facility such as a cholera treatment unit (CTU) or a health center (HC). It is designed for the treatment of 100 patients: 40 severe cases and 60 mild/moderate cases.  
It is recommended that each periphery kit is associated with at least 1 community kit.

#### *Composition*

**The drugs module** contains only drugs for the treatment of patients (injectable drugs, antibiotics, ORS, IV fluids, paracetamol, zinc, etc.). Quantities differ between the central and periphery kits. Glucose 50% solution and potassium chloride ampoules are only found in the central kit as these items should only be given by qualified medical staff.

**The renewable supplies module** contains renewable items used for the administration of drugs to patients (IV infusion giving set, needles, examination gloves, etc.) It also contains Cary-Blair transport medium.

**The medical equipment module** contains medical equipment for the care of patients (glucometer, stethoscopes, basins, trays, sphygmomanometers, scissors, etc.)

**The logistic module** contains logistical items to run cholera treatment structures (cholera beds, solar lamps, disinfectant, buckets, sprayers, boots, pool tester, etc.)

**The document and stationary module** contains reference documents, IEC material and stationary.

#### *Community kit*

The community kit contains the necessary equipment for the initial response to a cholera outbreak at community level. Its small volume allows for rapid deployment to improve access to ORS closest to the affected population. It is adapted to all settings and should be set-up nearby an existing structure with access to latrines and clear water. It can be monitored by trained community members

The community kit is designed to support a small place set up for an average of 40 patients maximum per day. It is subdivided into 3 modules which include medical and logistic material for the oral rehydration of 100 mild/moderate cases which can be ordered separately.

### Composition

**The community drugs module** contains drugs for the treatment of 100 mild/ moderate patients (ORS and zinc)

**The community based care module** contains containers and ceramic filters that provide clean water using gravity filtration. It also contains renewable supplies such as examination gloves, soaps, cups, spoons, etc.

**The community document and stationary module** contains reference documents, IEC material and stationary.

### Hardware kit

This kit contains equipment to set up a new cholera treatment structure when there is none existing in an area where a cholera outbreak occurs. It can be used in refugee camps, as well as rural and urban areas.

It is divided in 5 modules and each module can be ordered separately.

### Composition

**The shelter module** contains 5 waterproof tents (with shade net and plastic for flooring) for 15 beds each. The tents are used for hospitalization ward, storage space, for observation, and recovery wards. There is one extra tent for extension.

**The water module** contains 4 water tank kits, 2 water distribution modules, pool testers and chlorine test tablets.

**The sanitation module** contains squatting plates for latrines and plastic sheeting to set up latrines and showers.

**The support module** contains cholera beds and solar lamps.

**The fencing module** contains plastic sheeting for fences around the cholera treatment structure

### Investigation kit

This kit contains equipment for stool collection and shipment and is designed to provide materials for the investigation of a cholera outbreak / alert. It also includes rapid diagnostic tests (RDTs) which can facilitate the rapid detection of early cases.

It contains Cary-Blair transport medium, containers, gloves, filter paper, micro tubes, applicators, transport boxes and rapid diagnostic tests

### Laboratory kit/checklist

This kit/checklist lists the items needed to culture samples in order to confirm the presence of *Vibrio cholerae*, strain information as well as resistance to antibiotics.

The list of contents should be used a checklist. If a laboratory is equipped with all the items, no order is necessary. If items are lacking to perform diagnostic confirmation, the missing items should be ordered.

The kit/checklist includes peptone water, iron agar tests, *Vibrio cholerae* antisera and antibiotic disks.

The antisera and antibiotic disks have a shelf life of 18 months and require cold chain. (2-8°C)

## 4. Logistic summary

WHO Cholera kits	Module	Approx Weight (kg)	Approx Volume (m3)	Price
<b>1- Cholera Central Reference kit</b>	1.1 CENTRAL DRUGS MODULE	<b>820</b>	<b>1.9</b>	Please refer to WHO online catalogue <a href="http://intranet.who.int/tools/wcat/QuickSearch.aspx">http://intranet.who.int/tools/wcat/QuickSearch.aspx</a>
	1.2 .CENTRAL RENEWABLE SUPPLIES MODULE	<b>110</b>	<b>0.5</b>	
	1.3 CENTRAL EQUIPMENT MODULE	<b>20</b>	<b>0.1</b>	
	1.4 CENTRAL LOGISTICS MODULE	<b>635</b>	<b>3.8</b>	
	1.5 DOCUMENTS & STATIONARY MODULE	<b>5</b>	<b>0.1</b>	
	<b>COMPLETE CENTRAL</b>	<b>1,590 kg</b>	<b>6.4 m3</b>	
<b>2- Cholera Periphery kit</b>	2.1 PERIPHERY DRUGS MODULE	<b>430</b>	<b>1</b>	
	2.2 PERIPHERY RENEWABLE SUPPLIES MODULE	<b>82</b>	<b>0.4</b>	
	2.3 PERIPHERY EQUIPMENT MODULE	<b>18</b>	<b>0.1</b>	
	2.4 PERIPHERY LOGISTICS MODULE	<b>420</b>	<b>2.6</b>	
	2.5 DOCUMENTS & STATIONARY MODULE	<b>5</b>	<b>0.1</b>	
	<b>COMPLETE PERIPHERY</b>	<b>955kg</b>	<b>5m3</b>	
<b>3- Cholera Community kit</b>	3-1 COMMUNITY DRUGS MODULE	<b>25</b>	<b>0.1</b>	
	3.2 COMMUNITY ORP BASED CARE MODULE	<b>31</b>	<b>0.2</b>	
	3.3 COMMUNITY DOCUMENTS MODULE	<b>5</b>	<b>0.1</b>	
	<b>COMPLETE Community</b>	<b>61kg</b>	<b>0.4m3</b>	
<b>4-Cholera laboratory kit/checklist (100 samples)</b>		<b>17kg</b>	<b>0.1m3</b>	
<b>5- Cholera investigation kit</b>		<b>13kg</b>	<b>0.1m3</b>	
<b>6- Cholera hardware kit</b>	6.1 Shelter module	<b>1,110</b>	<b>5</b>	
	6.2 Water module	<b>830</b>	<b>3</b>	
	6.3 Sanitation module	<b>166</b>	<b>0.85</b>	
	6.4 Support module	<b>325</b>	<b>2.3</b>	
	6.5 Fencing module	<b>210</b>	<b>0.6</b>	
	<b>COMPLETE Hardware</b>	<b>2,650 kg</b>	<b>12m3</b>	

## 5. Scenarios in different settings

Example	Setting	Type	Population at risk	Attack rate	Estimated cases		
					Total	Severe cases (20%)	Mild/moderate cases (80%)
1	open setting	rural/province	150,000	0.5%	750	150	600
2	urban setting	City	300,000	1.0%	3000	600	2400
3	closed setting	slum/refugee camp	50,000	2.0%	1000	200	800

### *Example 1: province*

A province with a population of 300,000 contains 6 health zones and each zone has a Health Center. The capital of the province has a referral hospital.

An increase of cholera cases is expected in this area during rainy season. The 6 health zones may be affected at the same time. We estimate half of the population (150,000) being at risk and the attack rate to be 0.5% based on data from previous years. The total number of cases expected would be 750 among which 150 (20%) are severe cases and 600 (80%) are moderate cases. In the worst case scenario, 20% of cases may occur during the first month (150).

It is recommended that you order:

- 1 central kit for the capital
- 1 periphery kit and at least 1 community kit for each health zone.

Each community kit can be further subdivided into 2 or 3 lots to be used in villages affected by cholera.

### *Example 2: city*

A city with a population of 900,000 has a central hospital or a CTC.

There is a declared cholera outbreak and it is estimated that a third of the population (300,000) is at risk and the attack rate to be 1%. The total number of cases expected would be 3 000 among which 600 (20%) are severe cases and 2400 (80%) are moderate cases. In the worst case scenario, 30% of cases may occur during the first month.

Ideally the severe cases would be treated in the existing hospital in separate wards or in the CTC if existing.

To cover the initial needs, we recommend that you order:

- 3 central kits (periphery kits may also be required, depending on the conditions of access to the referral structure)
- 9 community kits.

If there is no place to isolate patients in the hospital or if there are no cholera beds and there is inadequate water supply, it may be necessary to order a complete Cholera Hardware kit. If some of these elements are available, only the necessary modules should be ordered.

### *Example 3: urban slum or refugee camp*

A slum area or a refugee camp with a population of 50,000 where all the population is at risk and an attack rate of 2% is anticipated. The area has one large referral health centre and 2 health centres. There is no space to isolate patients at the referral health centre, but another area, in a football ground has been identified to build a new cholera treatment structure. An ambulance system will be set up to transfer patients from the health centres to the CTC.

The total number of cases expected would be 1000 among which 20% would be severe cases and

80% would be mild or moderate cases. To cover the initial needs, we recommend that you order :

- 1 hardware kit
- 1 central kit (for the CTC)
- 2 periphery kits (for the health centres so that patients can be stabilized immediately)
- 2 community kits (for oral rehydration points).

**Annex:**

Items' list for each kit

Colour coding will be added on labels