

COMMUNICABLE DISEASE TOOLKIT

IRAQ CRISIS

6. GUIDELINES FOR OUTBREAK CONTROL

March 2003



WORLD HEALTH ORGANIZATION

TABLE 1. STEPS IN MANAGEMENT OF AN OUTBREAK

1. PREPARATION

- Health coordination meetings
 - Surveillance system: weekly health reports to Ministry of Health and WHO
 - Stockpiles: sampling kits, appropriate antibiotics, intravenous fluids
 - Contingency plans for isolation wards in hospitals
 - Laboratory support
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2. DETECTION

- Diseases of outbreak potential are marked with an asterix * on the weekly morbidity form. They must be reported as soon as possible to your health co-ordinator using the *outbreak alert form* if the weekly alert thresholds provided in “guidelines for use of surveillance forms” are passed. The health coordinator should inform the Ministry of Health and WHO.
 - Take clinical specimen (e.g. stool, serum, cerebrospinal fluid) for laboratory confirmation. Include the case in the weekly health report.
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3. RESPONSE**Confirmation**

- The lead health agency will investigate reported cases to confirm the outbreak situation. Clinical specimens will be sent for testing.
- The lead health agency will set up an Outbreak Control Team with membership from relevant organizations: Ministry of Health, WHO and other United Nations organizations, nongovernmental organizations in the fields of health and water and sanitation, veterinary experts.

Investigation

- Collect/analyze descriptive data to date (e.g. age, date of onset, location of cases).
- Develop hypothesis for pathogen/source/transmission.
- Develop outbreak case definition.
- Follow up cases and contacts.
- Conduct further investigation/epidemiological studies.

Control

- Implement control measures specific for the disease.
 - Treat cases with recommended treatment as in WHO guidelines.
 - Prevent exposure (e.g. isolation of cases in cholera outbreak).
 - Prevent infection (e.g. immunization in measles outbreak).
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4. EVALUATION

- Assess timeliness of outbreak detection and response.
 - Change public health policy if indicated (e.g. preparedness).
 - Write and disseminate outbreak report.
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TABLE 2. RESOURCES NEEDED FOR OUTBREAK RESPONSE

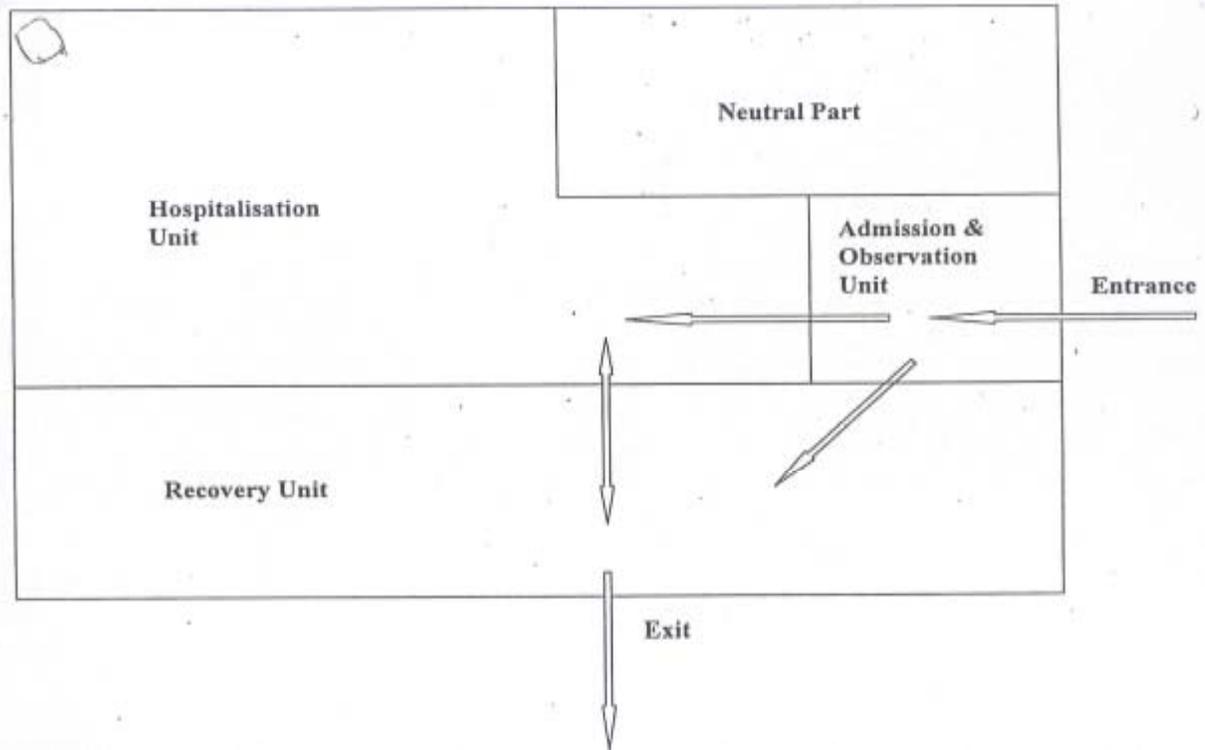
- Personnel (trained staff)
 - Supplies (e.g. oral rehydration salts, intravenous fluids, water containers, water purifying tablets, drinking cups, vaccines, vitamin A, monitoring forms, vaccination cards, tally sheets)
 - Treatment facilities (location, beds available, stocks of basic medical supplies)
 - Laboratory facilities (location, capacity, stocks of reagents, etc.)
 - Transport (sources of emergency transport and fuel, cold chain)
 - Communication links (between health centres; between Ministry of Health, nongovernmental organizations and United Nations agencies)
 - Computers (not essential)
 - In an outbreak requiring an immunization campaign:
 - safe injection equipment (e.g. auto-destruct syringes and safety boxes (puncture-resistant boxes)
 - immunization facilities (location, capacity)
 - cold chain equipment (number and condition of refrigerators, cold boxes, vaccine carriers, ice-packs)
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TABLE 3. RISK FACTORS FOR OUTBREAKS IN EMERGENCY SITUATIONS

Acute respiratory infections	Inadequate shelter with poor ventilation Indoor cooking, poor health care services Malnutrition, overcrowding Age group under one year old Large numbers of elderly Cold weather
Diarrhoeal diseases	Overcrowding Inadequate quantity and/or quality of water Poor personal hygiene Poor washing facilities Poor sanitation Insufficient soap Inadequate cooking facilities
Malaria	Movement of people from endemic into malaria-free zones or from areas of low endemicity to a hyperendemic areas. Increased population density promoting mosquito bites. Interruption of vector control measures Inadequate health care services Stagnant water Flooding, Changes in weather patterns
Measles	Measles immunization coverage rates below 80% in country of origin Population movement Overcrowding
Meningococcal meningitis	Meningitis belt. Dry season Dust storms Overcrowding High rates of acute respiratory infections
Viral haemorrhagic fever	Tick-infested areas (Crimean-Congo haemorrhagic fever)

FIGURE 1:

Organization of an Emergency Treatment Centre and Patient-Flow



Four **separate** spaces:

- Admission and observation unit
- Neutral Part: Staff office and staff rest room, hospital Kitchen, store rooms
- Hospitalisation unit : reserved for severe patients with IV fluids
- Recovery unit : Oral Rehydration space

In **each** space :ensure exclusive latrines , washing areas , large quantity of water and safe disposal of waste

Cholera bed in wood and rope

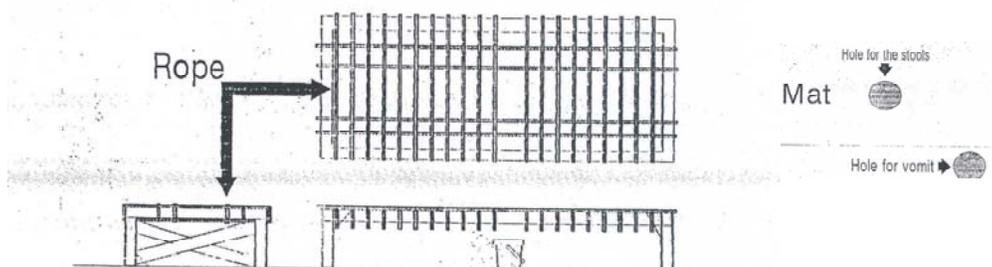


TABLE 4. ESSENTIAL HYGIENE RULES IN CHOLERA TREATMENT CENTRE

Mode of transmission	Essential Rules in the Unit	Additional recommended rules
People	<ul style="list-style-type: none"> ▪ Access limited to patient + one family member + staff ▪ One way flow of people 	<ul style="list-style-type: none"> ▪ Ideally one carer per patient only ▪ 3 separate spaces within Unit (see figure 1)
Water	<ul style="list-style-type: none"> ▪ Safe water (chlorination concentration according to specific use; see table 5) ▪ Large quantity needed (minimum 10 liters/person/day) 	<ul style="list-style-type: none"> ▪ Ideally 50 liters per patient and per day
Hands	<ul style="list-style-type: none"> ▪ Hand washing stations with safe water and soap in sufficient quantities ▪ Wash hands with water and soap <ul style="list-style-type: none"> - before and after taking care of patients - after going to the latrines - before cooking or eating - after leaving the admission ward 	Cut and clean nails
Food	<ul style="list-style-type: none"> ▪ Cooked food ▪ Health care workers should not handle food or water 	<p>Food provided by the Unit (preferably not by families)</p> <p>Large stocks of food may be "tempting "and may lead to security problems</p>
Clothes	Wash clothes and linen with the appropriate chlorine solution	If no chlorine available, wash clothes with soap and dry them in the sun
Environmental contamination (faeces and waste)	<ul style="list-style-type: none"> ▪ Ensure exclusive latrines for the Unit ▪ Disinfect buckets, soiled surfaces and latrines regularly with the appropriate chlorine solution (see table 5) ▪ Incinerator for medical waste 	<ul style="list-style-type: none"> ▪ Latrines at least 100 metres away from wells or surface sources ▪ Special cholera beds
Corpses	<ul style="list-style-type: none"> ▪ Separate morgue ▪ Disinfect corpses (see table 5) 	<ul style="list-style-type: none"> ▪ Find ways to have safe funeral practices ▪ Bury corpses as soon as possible

Developed by WHO Global Task Force on Cholera Control

TABLE 5. PREPARATION AND USE OF DISINFECTANTS

Starting with:	2% SOLUTION	0.2% SOLUTION	0.05% SOLUTION
<u>Calcium hypochlorite</u> at 70% active chlorine (“high-test hypo- chlorite”, “HTH”)	30g / litre or 2 tablespoons / litre	30g / 10 litres or 2 tablespoons / 10 l	7g / 10 litres or ½ tablespoon / 10 l
<u>Chlorinated lime</u> at 30% active chlorine (“bleaching powder”)	66g / litre or 4 tablespoons / litre	66g / 10litres or 4 tablespoons/ 10 litres	16g / 10litres or 1 tablespoon / 10 litres
<u>Sodium hypochlorite</u> solution at 6% active chlorine (“household bleach”)	333ml / litre or 22 tablespoons /litre	333ml / 10 litres or 22 tablespoons / 10L	83ml / 10 L or 5 tablespoons / 10l
USE FOR DISINFECTION OF:	Excreta Corpses Shoes	Floor Utensils Beds	Hands Skin Clothes

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Measurements used: 1 teaspoon=5 ml 1 tablespoon = 15 ml 1 cup = 200ml
Do not use metallic bucket for preparation and storage of chlorinated solutions

TABLE 6. CHOLERA TREATMENT SUPPLIES PER POPULATION

0.2% of the population expected to fall ill initially

How to estimate the initial amount of supplies needed for a cholera outbreak (0.2% ill initially).

The table below gives you an estimate of the amount of supplies you will need according to the number of people in your area. To find the amounts needed for each item, look in the column under the approximate population of your catchment area to the nearest 5000. You may add several columns (e.g. if your health facility serves 35 000 people, add the amounts in the 10 000 and 5000 columns to those in the 20 000 column). Write the amount needed at your health facility in the empty column on the right.

ITEM	Population (+ numbers expected to fall ill)						Your area
	5000	10000	15000	20000	50000	100 000	
	(10)	(20)	(30)	(40)	(100)	(200)	
Rehydration supplies							
ORS packets (for 1 litre each)	65	130	195	260	650	1 300	
Nasogastric tubes (adults) 5.3/3.5 mm (16 Flack) 50 cm	1	1	1	2	3	6	
Nasogastric tubes (children)	1	1	1	2	3	6	
Ringer's lactate bags, 1 litre, with giving sets	12	24	36	48	120	240	
Scalp vein sets	2	3	4	5	10	20	
Antibiotics							
Doxycycline, 100 mg (adults)	6	12	18	24	60	120	
Erythromycin 250 mg (children)	24	48	72	96	240	480	
Other treatment supplies							
Large water dispensers with tap (marked at 5-10 litres)	1	1	1	2	2	4	
1 litre bottles for ORS solution	2	4	6	12	20	40	
0.5 litre bottles for ORS solution	2	4	6	12	20	20	
Tumblers, 200 ml	4	8	12	16	40	80	
Teaspoons	2	4	6	8	20	40	
Cotton wool, kg	1/2	1	1 1/2	2	5	10	
Adhesive tape, reels	1	1	1	2	3	6	

Developed by WHO Global Task Force on Cholera Control

TABLE 7. DYSENTERY TREATMENT SUPPLIES PER POPULATION

(0.2% of the population expected to fall ill initially)

How to estimate the amount of supplies needed for a Dysentery outbreak (0.2% ill initially).

The table below gives you an estimate of the amount of supplies you will need according to the number of people in your area. To find the amounts needed for each item, look in the column under the approximate population of your catchment area to the nearest 5000. You may add several columns (e.g. if your health facility serves 35 000 people, add the amounts in the 10 000 and 5000 columns to those in the 20 000 column). Write the amount needed at your health facility in the empty column on the right. On the basis of drug resistance in your area, choose only one of the antibiotics.

ITEM	Population (+ numbers expected to fall ill)						Your area
	5000	10000	15000	20000	50000	100000	
	(10)	(20)	(30)	(40)	(100)	(200)	
Rehydration supplies							
ORS packets (for 1 litre each)	10	20	30	40	100	200	
Ringer's lactate bags, 1 litre, with giving sets	2	4	6	8	20	40	
Scalp vein sets	1	1	2	2	5	10	
Antibiotics							
Nalixidic acid, 500mg (adults)	320	480	960	1280	3200	6400	
Nalixidic acid, 250mg (children)	80	160	240	320	800	1600	
Ciprofloxacin, 500mg	100	200	300	400	1000	2000	
Other treatment supplies							
Large water dispensers with tap (marked at 5-10 litres)	1	1	1	1	1	2	
1 litre bottles for ORS solution	1	1	2	2	5	10	
0.5 litre bottles for ORS solution	1	1	2	2	5	10	
Tumblers, 200 ml	1	2	3	4	10	20	
Teaspoons	1	1	2	2	5	10	
Cotton wool, kg	1/2	1	1 1/2	2	5	10	
Adhesive tape, reels	1	1	1	2	3	6	
Hand soap, kg	2	4	6	8	20	40	
Boxes of soap for washing clothes	3	6	9	12	30	60	
1-litre bottle of cleaning solution (2% chlorine or 1-2% phenol)	1	1	1	1	2	4	

Developed by WHO Global Task Force on Cholera Control

TABLE 8. TYPHOID FEVER TREATMENT SUPPLIES PER POPULATION

(0.2% of the population expected to fall ill initially)

How to estimate the amount of supplies needed for a Dysentery outbreak (0.2% ill initially).

The table below gives you an estimate of the amount of supplies you will need according to the number of people in your area. To find the amounts needed for each item, look in the column under the approximate population of your catchment area to the nearest 5000. You may add several columns (e.g. if your health facility serves 35 000 people, add the amounts in the 10 000 and 5000 columns to those in the 20 000 column). Write the amount needed at your health facility in the empty column on the right.

On the basis of drug resistance in your area, choose only one of the antibiotics.

ITEM	Population (+ numbers expected to fall ill)						Your area
	5 000	10 000	15 000	20 000	50 000	100 000	
	(10)	(20)	(30)	(40)	(100)	(200)	
Rehydration supplies							
ORS packets (for 1 litre each)	10	20	30	40	100	200	
Ringer's lactate bags* 1 litre, with giving sets	1	2	3	4	10	20	
Scalp vein sets	1	1	2	2	5	10	
Antibiotics							
Chloramphenicol , 250mg	2500	5000	7500	10000	25000	50000	
Amoxycillin, 500mg	1680	3360	5040	6720	16800	33600	
Cotrimoxazole, (SMX 400mg+TMP80mg)	840	1680	2520	3360	8400	16800	
Cefixime,200mg **	840	1680	2520	3360	8400	16800	
Other treatment supplies							
Large water dispensers with tap (marked at 5-10 litres)	1	1	1	1	1	2	
1 litre bottles for ORS solution	1	1	2	2	5	10	
0.5 litre bottles for ORS solution	1	1	2	2	5	10	
Tumblers, 200 ml	1	2	3	4	10	20	
Teaspoons	1	1	2	2	5	10	
Cotton wool, kg	1/2	1	1 1/2	2	5	10	
Adhesive tape, reels	1	1	1	2	3	6	
Hand soap, kg	2	4	6	8	20	40	
Box of soap for washing clothes	3	6	9	12	30	60	
1-litre bottle of cleaning solution (2% chlorine or 1-2% phenol)	1	1	1	1	2	4	

*Considering that less than 50% of the patients need IV rehydration ** In case of multidrug resistance to above antibiotics , choose Cefixime.