

Acute diarrhoeal diseases in complex emergencies: CRITICAL STEPS

Decision-making for
preparedness and response

THE PURPOSE

This leaflet is designed to help:

- Identify key issues relevant to diarrhoeal disease control in complex emergencies
- Prepare and guide the response to an outbreak



THE PROBLEM

A complex emergency is a situation affecting large civilian populations facing war or civil strife, food shortages, and population displacement resulting in excess mortality and morbidity.

In endemic areas, all disasters, natural and man-made, that adversely affect water supply and sanitation can result in outbreaks of acute diarrhoeal disease. The disease is usually transmitted by faecally contaminated water or food. Outbreaks may be of two kinds:

- acute watery diarrhoea: **cholera**
- acute bloody diarrhoea: **Shigella dysentery**.

KEY MESSAGES

GENERAL

- Follow the development of the situation closely so that the plan of action can be adapted regularly.
- Use data to guide prevention, preparedness, and response.
- Early warning and preparedness for outbreaks results in better and faster containment of cholera and Shigella dysentery.
- In complex emergencies, good coordination among the various operational partners is paramount.
- A good communications network is a valuable tool for surveillance.

CASE MANAGEMENT

- Proper case management saves lives.
- Oral rehydration salts must be available at village level.
- Early rehydration using ORS is critical.

PREVENTION

- Find and treat the source of transmission as soon as possible.
- Reinforce the use of safe drinking-water during outbreaks.
- To maintain health and reduce the risk of diarrhoeal disease outbreaks in refugee camps, water supply will be the first objective.
- A proper sanitary environment prevents the spread of diarrhoeal diseases.
- Personal hygiene behaviour will change only with strong community involvement.
- Cook it, peel it, or leave it.
- Disinfection and hygiene measures are essential during funerals.

1. Critical steps relating to diarrhoeal disease risk factors

1.1 Lack of water

- Use health education to reinforce use of safe drinking-water during outbreaks.
- To maintain health and reduce the risk of diarrhoeal disease outbreaks in refugee camps, water supply will be the first objective.
- Find and treat the source of transmission as soon as possible.

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
Quantity and quality of water	Concerned population, aid agencies	At least 20 litres per person per day of drinkable water	• In collaboration with water authority, increase access to safe water, at least in areas of high risk.	• In refugee camps, ensure: — at least 20 litres per person per day — good water storage conditions in households (narrow-mouthed plastic containers). In the initial phases, and when conditions are very difficult, organize chlorination at water sources, treating water directly in the individual (non-metallic) containers.
Source of water — piped system — well — other	Water authority, aid agencies, site visits	One protected well for every 200 people	• General distribution in towns: — implement new safe water system and sanitation facilities — monitor and improve drinking-water quality. • In villages: — increase the number of protected wells — introduce chlorine disinfection of wells.	• In open situations and during an outbreak: — strengthen the control of chlorination in general water system from catchment to consumer — ensure chlorination of drinking-water in the home (or at least, the use of boiled water) — increase control of quality of water storage.
Contamination of water At source — locally, by human excreta — by floods — other During transport During home storage	Site visit, aid agencies, household visits	Latrines built ≥ 30 m from water source No defecation in the open near water sources Clean, closed, non-metallic containers	• Develop knowledge of chlorine use at household level. • Provide chlorinated water during important outbreaks. • Inform the population about the importance of cleaning water containers properly.	• Water could be supplied by tanker until new wells can be dug.
Sudden rise in population	Local authorities, aid agencies		• Look for additional water sources to cope with new influx.	

1.2 Inappropriate sanitation

- A proper sanitary environment prevents the spread of diarrhoeal diseases.

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
Latrines not used (for cultural reasons)	Local population, local authorities		• Increase the number of culturally appropriate facilities for human waste disposal.	• During the very early stages of a serious emergency, physically isolated defecation fields can be

Lack of latrines:	Site visit, population interviews, aid agencies
— no space	At least one latrine for every 20 people in refugee camps and crowded situations
— soil type	
— cost	

designated, but pit latrines should be dug as soon as possible.

1.3 Inadequate hygiene

■ Personal hygiene behaviour will change only with strong community involvement.

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
Lack of water	Site visit; check all possible sources of water	20 litres per person per day (for drinking and hygiene purposes)	- Improve awareness of the population about cholera and other diarrhoeal diseases and their prevention: - improve personal hygiene behaviour - advocate use of soap or ash for hand-washing , particularly after having passed stool. - create specific messages for cholera and diarrhoeal disease prevention, include correct care or a patient at home. - Train health personnel and other staff responsible for public information to disseminate messages on specific cholera prevention methods.	- During the outbreak, strengthen use of sanitary facilities. - Use all available media (radio, television, newspapers) to diffuse outbreak information and key prevention messages. - Use all available channels (local civic schools, community health workers) to spread hygiene messages. - Distribute soap where it is not available.
Poor hygiene behaviour	Population interviews	Regular hand-washing with soap before eating and preparing food		
Inadequate knowledge of risk in caring for cholera and diarrhoeal disease patients	Interviews with population and staff responsible for public information	Isolation of patient at home Careful hand-washing with soap after care of patients or handling their belongings		

1.4 Inadequate food safety

■ Cook it, peel it, or leave it.

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
At home Cultural influences on food preparation and storage Traditional dishes containing raw foods Poor food safety during preparation and storage	Local authorities, population interviews, aid agencies	During outbreak, eat only freshly cooked food or food thoroughly reheated before serving Eat fruits that can be peeled	- Strengthen health education on: - eating only cooked food during outbreaks - always washing vegetables with safe water - eating only fruits that can be peeled. - Ensure adequate control of food stalls in public places.	- Health education activities should stress the importance of specific messages concerning food preparation, storage, and consumption. - National programme on food safety should be strengthened. - Environmental health workers should be vigilant in inspecting food handling practices.
Entire food chain Lack of food safety in markets and restaurants and by street vendors	Sites visits, food safety authority			

1.5 Funeral practices for cholera victims

■ Disinfection and hygiene measures are essential during funerals.

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
Keeping corpse at home — for how long? — under what conditions?	Population interviews, aid agencies	Funeral should be held within hours of death if possible. Corpse should be enclosed in plastic bag to prevent spread of <i>Vibrio cholerae</i>	• Inform people of the high risk of contamination through handling the corpse and keeping it at home. • Explain necessary precautions: — disinfect corpse with 2% chlorine solution — fill mouth and anus of corpse with cotton soaked in chlorine solution — carefully wash hands after handling the corpse — disinfected the dead person's bedding by stirring it in boiling water for 5 minutes. • Try to keep the funeral ceremony to an acceptable minimum of attendance and duration. • Reinforce all hygiene measures during preparation for the funeral and the ceremony itself. • Identify and train a burial team to ensure implementation of safe burial practices.	• Ensure that all precautions are well understood and fully observed. • If possible, a trained village health worker should check that preventive measures are properly applied during funeral ceremony and associated activities.
Funeral ceremony — attendance? — special ritual? — funeral meal?	Population interviews	Application of hygiene rules as described under preparedness.		

2. Critical steps relating to other risk factors

2.1 Inadequacy of health services

ASSESSMENT	SOURCE OF INFORMATION	REQUIRED MINIMUM	PREPAREDNESS PHASE	RESPONSE
Communicable diseases surveillance system — data collection — laboratory confirmation — data analysis — feedback — early warning system	Public health department at different levels (national, provincial, district), aid agencies	Number of cases and deaths on weekly basis Laboratory confirmation available	• Strengthen the surveillance system: — use clear and standardized case definitions — develop standardized methods for data collection and analysis at all levels (localisation, seasonality) — ensure weekly reporting and regular data analysis — introduce standardized "rumour form" for non-medical personnel — train public health staff and village health workers on early warning system and surveillance	• Activate the early warning system: — distribute "rumour form" (alert form, warning form) — activate case detection through home visiting in refugee camps — move to daily reporting if possible — send investigation teams for confirmation of outbreak and to find source of transmission (water, food) • Open cholera treatment centres and ORS corners
Health care	Ministry of	Creation of ORS		



ers
tion of cholera
ment centres
ability of
ment guidelines

- ensure regular water supply to cholera treatment centres and ORS corners
 - ensure availability of drug supplies and renewal of emergency stocks
 - refresh staff in proper cholera case management
 - increase hygiene and disinfection talks using all medical activities (outreach, immunization programmes, consultations, etc.)
 - distribute national guidelines if available, or WHO guidelines.
 - Ensure regular supplies during the outbreak and renewal of emergency stocks.
 - Ensure good coordination among the various operational partners.
 - Hold regular meetings to share information on the epidemic, inventory of stocks, planning of interventions.
- identify laboratories for confirmation.
 - **Case management:**
 - identify appropriate sites for cholera treatment centres and ORS corners, and check and improve, if necessary, their water and sanitation facilities
 - identify health staff in charge of cholera treatment centres or ORS corners and train them in case management and disinfection measures (including corpse disinfection).
 - Provide emergency stocks (ORS, IV fluids, chlorine, transport medium, laboratory reagents).
 - Adapt surveillance and case management guidelines to the local situation.
 - **Coordination:**
 - create an epidemic diseases task force, including all relevant sectors (health, water and sanitation, information, education) political decision-makers, NGOs, United Nations agencies
 - agree on a standardized surveillance system and case management and ensure monitoring
 - encourage a coordinated multisectoral approach to disease prevention and control, and linkages with existing programmes
 - assign tasks and responsibilities.

3 trained health staff per cholera treatment centre
1 trained health worker per ORS corner

Emergency stock available
Interagency diarrhoeal disease kits

Regular meetings during an outbreak

Health facilities

REQUIRED MINIMUM

Emergency stocks in at-risk areas

PREPAREDNESS PHASE

- In anticipation of areas being isolated by war, floods, etc. it is essential to:
 - train village health workers and health staff
 - provide emergency stocks
 - install a good communications network for surveillance.

RESPONSE

- Activate communication networks for support and feedback.
- Monitor the outbreak through this communication network.