
EXERCISE BOOK
DETECTION AND CONTROL OF
EPIDEMIC CHOLERA

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WORKSHOP EXERCISES

EXERCISE 1 -

DETECTING AN EPIDEMIC - CASE DEFINITIONS

1) Clinical Cholera and Case-Definitions:

a) What are the typical signs and symptoms of clinical cholera? (write key words).

b) What is the surveillance case definition for cholera in an area where cholera is not known to be present?

c) What is the surveillance case definition for cholera in an area where cholera is endemic, or where there is an outbreak of cholera?

d) What is the definition of a confirmed case of cholera?

2) Read about these patients in District A and decide whether or not they meet the case definition for cholera. Cholera has not been reported in District A since the 1991 outbreak.

a) You receive a note from Health Center Alpha. The note states that a two-year-old girl with watery diarrhea and severe dehydration (Plan C) was brought to the Health Center but died while receiving treatment. Does she meet the case-definition for cholera?

Yes _____ No _____

b) Later that day, you receive a letter from a Health Center Beta. This note describes an eight-year-old boy who developed severe, watery diarrhea, vomiting, and leg cramps. He had severe dehydration (Plan C). The boy recovered after receiving intravenous fluids and ORS. The boy's parents told the Health Center their son's illness was probably food poisoning caused by eating bad fish.

Does he meet the case-definition for cholera? How would you report this case?

Yes _____ No _____

- c) The next day, three of the boy's adult family members developed watery diarrhea. His father and 16-year-old brother had *some* signs of dehydration (Plan B) and his mother had *no* signs of dehydration (Plan A). All were successfully treated with ORS at the Health Center.

Do the family members meet the case-definition for cholera?

Father Yes _____ No _____

Mother Yes _____ No _____

Brother Yes _____ No _____

- d) Should the District Health Officer visit either of the two health centers to investigate whether a cholera outbreak is occurring? If so, which health center?

- e) One week later, it is clear that there is a cholera epidemic in the area. Cholera has been confirmed by the laboratory. Three patients come to the hospital with acute watery diarrhea.

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- Patient A is 40 years old and has no signs of dehydration,
 - Patient B is 18 years old and has some signs of dehydration, and
 - Patient C is 4 years old and she has severe dehydration.

Which of them meets the case-definition for cholera? (there is an outbreak of cholera in the area).

Patient A *Yes* _____ *No* _____

Patient B *Yes* _____ *No* _____

Patient C *Yes* _____ *No* _____

EXERCISE 2

CALCULATION OF CASE FATALITY RATES

An epidemic of suspected cholera has just begun in three districts of Lin Province. There are five districts in the Province and the total population of the Province is 500,000.

- *Capital District* reported 1600 cases, and 40 deaths. The provincial hospital is located in the main town, which is the largest in the province. The total population of the district is 150,000 inhabitants.
- *Remote District*, where the outbreak was first noted, reported 200 cases and 25 deaths. It is a remote and sparsely populated area, with few health services. Transport and communications are difficult. The total population of Remote District is 50,000 persons.
- *Market District* reported 200 cases and 10 deaths. There is a medium-sized town with a large market and a small hospital. The district population is 100,000.

1. What is the case fatality rate in the Province as a whole?

2. What is the case fatality rate in Capital District?

3. What is the case fatality rate in Remote District?

4. What is the case fatality rate in Market District?

What are possible reasons for the differences in case fatality rate in Remote District and Capital District? (write key words)

EXERCISE 3

CALCULATE ATTACK RATES

Refer to the description of Lin Province in Exercise 2.

1) What is the attack rate for cholera for Lin Province?

2. What is the attack rate in Capital District?

3. What is the attack rate in Remote District?

4. What is the attack rate in Market District?

5. Where is the attack rate the highest?

Where is the case fatality rate the lowest?

What is a possible reason for this?

EXERCISE 4

MAKE A GRAPH

There is a cholera outbreak in Cane District. The Epidemic Committee has asked you to make a graph that shows the number of suspected cholera cases that occurred from May 15th to May 21st. These are the number of cases that were reported that week.

Number of Cases	8	7	9	10	12	17	22
Date	May 15	May 16	May 17	May 18	May 19	May 20	May 21

EXERCISE 5

CASE MANAGEMENT

On July 10, an 8-year-old boy is brought to a health center by his father. The boy has profuse, watery diarrhea and vomiting which began 24 hours earlier. He also has painful leg cramps. The boy is extremely weak and appears sleepy. Although he says he is thirsty, he appears too weak to lift his head to drink. His eyes appear very sunken, and his skin pinch goes back very slowly.

1) What signs of dehydration does the boy have? Write them below and circle any that are "key" signs.

2) Does the boy show signs of no (Plan A), some (Plan B), or severe (Plan C) dehydration?

3) The boy is older than 5 years of age. What other signs of dehydration should you look for?

4) Outline your treatment plan for the first 3 hours (he weighs 25 kg).

After 3 hours of treatment, the boy's hydration status is completely reassessed. Compared with the initial examination, his eyes are less sunken and his skin goes back more quickly after being pinched. The boy is alert and irritable. He requests ORS constantly to quench his thirst. He continues to have profuse, watery diarrhea, but the vomiting and leg cramps have stopped. The boy appears to have some dehydration (Plan B).

- 5) Outline your treatment plan for the next 4 hours.

After 4 hours of ORS therapy alone, the boy's hydration status is reassessed. He shows no signs of dehydration (Plan A). He still has frequent diarrhea.

- 6) Outline your treatment plan at this point.

- 7) Should this patient be given an antibiotic? If so, which one and what dose?

Yes ___ *No* ___

EXERCISE 6

HEALTH EDUCATION

Use this space to write notes on the group discussion of Health Education Messages.

EXERCISE 7

ESTIMATE TREATMENT SUPPLY NEEDS

It is not easy to predict how many people will become ill, but using the attack rates suggested below will help you estimate how much to order. During a prolonged epidemic, you can modify the estimates of attack rates as data becomes available.

If you are:

- 1) ordering supplies to be held in reserve, in order to be ready for a future epidemic, use the attack rate of 0.2%. This attack rate is recommended by WHO¹.
- 2) ordering supplies at the beginning of an epidemic, for a large population, use the attack rate of 0.2%.
- 3) ordering supplies at the beginning of an epidemic, for a rural population of 5,000 or less, use the attack rate of 2%.
- 4) ordering supplies during a prolonged epidemic and you can calculate the attack rates for that epidemic, then use those attack rates.

Use the worksheets on the next two pages to estimate the amount of supplies needed. Record the amounts on the table on page 20.

¹ If there have been cholera outbreaks in the district in the past, an alternative to using the attack rates is to maintain a one month supply of the supplies, based on the experience in previous epidemics.

ESTIMATE CHOLERA TREATMENT SUPPLIES USING THE 0.2% ATTACK RATE

Population _____

Step 1. Multiply the population by 0.002.

The result is an estimate of the number of people who might become ill.

$$\frac{\text{_____}}{\text{(Population)}} \times 0.002 = \frac{\text{_____}}{\text{(Number who might become ill)}}$$

Step 2. Divide the number of people who might become ill by 100.

$$\frac{\text{_____}}{\text{(Number who might become ill)}} \div 100 = \frac{\text{_____}}{\text{(Number of groups of 100 people)}}$$

Step 3. Multiply each item on the list by this number.

The result is the amount of each supply needed.

ESTIMATE CHOLERA TREATMENT SUPPLIES USING THE 2% ATTACK RATE

For rural areas with a population of 5,000 or less

Step 1. Multiply the population by 0.02

The result is an estimate of the number of people who might become ill.

$$\frac{\text{_____}}{\text{(Population)}} \times 0.02 = \frac{\text{_____}}{\text{(Number who might become ill)}}$$

Step 2. Divide the number of people who might become ill by 100.

$$\frac{\text{_____}}{\text{(Number who might become ill)}} \div 100 = \text{_____}$$

Step 3. Multiply each item on the list by the result of Step 2.

The result is the amount of each supply needed.

CHOLERA TREATMENT SUPPLIES

	Amount	
	Population	Population
	0.2% Attack Rate	2% Attack rate
Rehydration Supplies		
ORS packets - 1 liter each		
Bags of Ringer's lactate solution, 1 liter each		
Adult IV giving sets		
Scalp vein sets		
Nasogastric tubes for adults		
Nasogastric tubes for children		
Other Treatment Supplies		
Large water dispensers		
One liter bottles for ORS solution		
Half liter bottles for ORS solution		
Tumblers		
Teaspoons		
Cotton wool, kg		
Rolls of adhesive tape		
Antibiotics for Cholera		
Doxycycline capsules, 100 mg each OR		
Tetracycline capsules, 250 mg each		
Trimethoprim-sulfamethoxazole tablets (for children)		

SELF STUDY PROJECTS

COMPONENT 1

ENSURE THAT THE SURVEILLANCE SYSTEM CAN DETECT CHOLERA

(See Sections 3.1 through 3.4, and Section 4.6 of the *Technical Guidelines on the Detection and Control of Epidemic Cholera*)

Project Objectives: To describe the flow of surveillance information
To list information that should be reported

Project: Answer these questions.

- 1) Turn back to the case-definition exercise on page 1. Read about the patients again. What information should the health facility keep on each of these cases?

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-
- 2) Check a clinic register and see if there is enough space to record the information you listed in your answer to Question #1.

If there is not enough room, write how you will instruct health workers to record the information:

-
-
- 3) Is cholera known to be present in your district? If so, is there an epidemic, or is the disease endemic?

If cholera is endemic in your area, how are you keeping track of the usual level of the disease? What is the usual level of the disease?

- 4) Based on your answer to the previous question, write the case-definition of cholera that health workers in your district should use to detect an epidemic.

-
-
- 5) For your district, what is the best method (rapid and reliable) for health facilities to send notification of suspected cases of cholera?

For your district, what is the best method for the district to send notification to the next level?

- 6) During an epidemic, how often should health facilities send reports to the district level?

During an epidemic, how often should the district send a report to the next highest level?

- 7) What information should be in the reports?
-
-

Follow-up Projects:

- 1) Ensure that health workers in the district can recognize cases of suspected cholera. Review the clinical presentation and the suspect case-definition with clinical health workers in your district.

- 2) Draft the report which you should send to the next highest level, in case of an epidemic.

COMPONENT 2

ENSURE THE CAPABILITY TO COLLECT AND TRANSPORT SPECIMENS TO A LABORATORY

(Section 3.5 of the *Technical Guidelines on the Detection and Control of Epidemic Cholera*)

Project Objective: To review information on laboratory confirmation

Projects:

1) Explain why it is important to obtain laboratory confirmation of cholera.

2) What kinds of specimens are needed?

-
-
- 3) When and from whom should they be obtained?

 - 4) How should specimens be collected? What materials are needed?

 - 5) What precautions should health workers or laboratory workers observe while collecting specimens?

 - 6) Are health facilities supplied with the materials they need?

7) Do health workers know how and when to collect specimens?

8) How should the specimens be packed for transport? What materials are needed?

9) What is the closest laboratory that can evaluate the specimens?

10) What means of transportation is available to bring the specimens to the laboratory? How long will it take for specimens to arrive?

What is the phone number of the laboratory? or how will you communicate with the laboratory to get laboratory results?

Follow-up Project:

Ensure that clinical health workers have the knowledge and skills, and the materials, needed to collect and send in stool specimens (see Component 3).

COMPONENT 3

IDENTIFY AND ADDRESS TRAINING NEEDS

(See section 5.3 of the Cholera Technical Guidelines)

Project Objectives: To draft a training plan

To plan brief training session

For this exercise, consider *what* needs to be done to detect and control an epidemic of cholera, and *who* will be responsible for doing it. Then ask yourself whether those persons have been *trained*.

To make the list of what needs to be done, and who needs to do it, review the *Technical Guidelines on the Detection and Control of Epidemic Cholera* (especially the Responsibilities listed in Annex 6). As you work through these Self-Study Projects you will consider nearly everything that must be done to prepare for and respond to an outbreak of cholera; as you note activities that must be done, return to this Project and add training topics to this worksheet.

Project: **Worksheet for Making a Training Plan**

District: _____ Year: _____ Date completed: _____

TITLE OF PERSONNEL	KNOWLEDGE AND SKILLS NEEDED FOR TASK	NUMBER TO BE TRAINED	PERSON(S) RESPONSIBLE FOR TRAINING	MATERIALS NEEDED	SOURCE OF FUNDS

Project: **Plan Brief Training Sessions**

Re-read Section 5.3 in the *Guidelines* and consult your training plan. Use the *Guidelines* and this *Exercise Book* as sources of information for your lessons.

Each lesson plan should include the following:

√ **Topic** of the lesson

For example, *How to recognize cholera*

√ **Objectives** for the lesson

These are statements that explain exactly what you want the trainees to learn or to be able to do after the lesson. For example, "*Health post nurses will be able to describe the clinical presentation of cholera and state the case-definition for cholera.*"

√ **Methods** you will use to teach the lesson

Usually, in each lesson, trainees will learn some new information or practice a new skill. Think of the best way to teach them.

To give trainees new *information*, you may tell them about it, or give them something to read. To review information that trainees have learned before, or to up-date them on a topic, ask questions or lead a discussion. Then have them apply the information.

To teach or review a *skill*, explain and demonstrate each step in the skill. Then have trainees practice for themselves until they can do it properly. They should practice with the same materials or equipment that they will use in their health facilities.

√ **Materials** that will be used

For example, materials for a lesson on surveillance and reporting might include: "*Immediate reporting forms, clinic register, list of case definitions, descriptions of patients from Exercise 1 of the Exercise Book*".

√ **Preparations** that need to be done before the lesson

√ **Description** of what you will do to teach the lesson

Follow-up Project:

Organize a training session addressing one of the training needs you identified in the worksheet.

Possibilities include training on:

- 1) cholera case definitions and reporting procedures
- 2) specimen collection
- 3) case management of diarrhea
- 4) inventory and stock control of supplies needed for cholera
- 5) health education messages for cholera
- 6) safety of drinking-water, storage of drinking-water

COMPONENT 4

MAINTAIN A RESERVE STOCK OF ESSENTIAL EQUIPMENT AND SUPPLIES

(See Sections 4.5 and 5.4 of the *Technical Guidelines on the Detection and Control of Epidemic Cholera*)

Project Objectives:

- To do an inventory of treatment supplies
- To complete the calculation of amount of supplies needed for the area
- To order reserve supplies

Project: The workshop facilitators explained the Ministry of Health's policy on what supplies should be stocked in advance of a cholera epidemic, and where they are held. During the workshop you began to calculate the supplies needed in your area to respond to an outbreak of cholera.

When an epidemic of cholera is suspected, all health facilities will be asked to submit an inventory of the treatment supplies that they have on hand.

For the project, do an inventory of treatment supplies that are on hand now. Fill in the items and the amounts on hand for the district stores, and the amounts on hand at two health facilities in the district. Would the health facilities be ready if an outbreak of cholera began today?

As you do the inventory, check to be sure that the pre-stocked items are being rotated with regular store of the supplies (to be sure that they will be used before their expiration date).

CHOLERA TREATMENT SUPPLIES

	Amount in District Store		Health Facility 1		Health Facility 2	
	Amount	Rotated?	Amount	Rotated?	Amount	Rotated?
Rehydration Supplies						
ORS packets - 1 liter each						
Bags of Ringer's lactate solution, 1 liter each						
Adult IV giving sets						
Scalp vein sets						
Nasogastric tubes for adults						
Nasogastric tubes for children						
Other Treatment Supplies						
Large water dispensers						
One liter bottles for ORS						
Half liter bottles for ORS						
Tumblers						
Teaspoons						
Cotton wool, kg						
Rolls of adhesive tape						
Antibiotics for Cholera						
Doxycycline capsules, 100 mg each OR						
Tetracycline capsules, 250 mg each						
Trimethoprim-sulfamethoxazole tablets (for children)						

Follow-up Projects:

- 1) If you have not completed estimating the amounts of cholera treatment supplies needed in your area (begun in Exercise 7 in the Workshop), finish the calculation now.
- 2) If your area does not have a reserve stock in place, make a plan for acquiring the items that are needed, and make a plan for rotating them with regular stores to avoid problems with expiry dates.

COMPONENT 5

ORGANIZE AN EPIDEMIC COMMITTEE (DISTRICT LEVEL)

(See Section 4.2 of the Cholera Technical Guidelines)

Project Objective: To identify the responsibilities and make-up of the epidemic committee.

Project: To convene a committee to plan and implement activities in your district.

1) Is there now a committee responsible for preparation and response to cholera?

If not, is there a committee that deals with diarrheal disease, with epidemics or with crises?

2) What will the responsibilities of the Cholera Committee (or sub-committee) be?

-
-
- 3) Who should be the members of this committee? Identify specific individuals and their positions.

Follow-up Projects:

- 4) Contact each individual listed to get his/her agreement to be part of a cholera committee if the need to organize one arises. This can be in the form of a letter, a call, or a visit to each person.
- 5) Convene a meeting, and bring members up to date on cholera surveillance, prevention and control. Review the duties of each member and discuss how they would carry them out. Try to identify any problems and obstacles, and make a plan to overcome them.
- 6) At that meeting, or at another meeting, ask the group to make (or review) the district's Emergency Response Plan, and the Evaluation of the district's state of preparedness (see Components 9 and 10).

COMPONENT 6

PLAN LOGISTICS AND STAFF RESPONSIBILITIES

Project Objectives: To plan response to cholera in several parts of the district
To select possible locations for Cholera Temporary Treatment Centers

Project: To plan response to cholera in several parts of the district

- 1) Pick two real places in your district - one remote village and one town - and imagine that suspected cases of cholera have been reported from both of them. In this exercise, think about exactly how you would respond. As you answer the questions for this exercise, think of the situation in your own district - make very concrete and specific answers. If possible, do this Exercise as a group, working with the members of the Epidemic Control Committee and the members of the Mobile Control Team and the Investigation Team.

Overall Planning for Response Campaign

- a) You need to investigate the reports of cholera. Should you send an Investigation Team to the town and the village at the same time, or one after the other? If one after the other, explain how you would pick the one to do first.

b) How many teams will be needed? How many persons on each team? Will you send a team to simply investigate the suspected epidemic, or will you send a Mobile Control Team? How would you decide?

c) When will the team members be trained?

d) Who will train them?

e) What equipment and supplies will they need?

Planning the Response in the Remote Village:

a) What is the population of the village? _____

Are there any risk factors that would make it likely that villagers would become ill?

b) How many persons may become ill, assuming a 2% attack rate?

c) What sort of health care services are available in the village? Nearby?

d) What supplies should the team take to the village, and how much of each?

e) How long will it take to travel to the village?

f) How many people from your headquarters will travel there?

g) How many vehicles are needed?

h) What is the best way to communicate with the village leaders? _____

i) How can you communicate with health workers who are there, or who are nearby?

j) How will you communicate with the team?

k) Are public education messages and materials available in the language spoken there? List them.

l) What are the best ways to communicate with the people of the village?

m) Describe the village's situation as far as the amount and safety of the water supply. How is water stored in the homes? Are materials to make chlorine solution available in the village?

n) Describe the village's situation as far as hygiene and feces disposal.

o) Select possible site for Temporary Treatment Centers. Justify your selection.

p) How long should the team stay in the village? How should they decide when to leave?

Planning the Response in the Town

a) What is the population of the town? _____

b) List any groups at high risk:

c) How many people might become ill, assuming a 0.2% attack rate?

d) What sort of health care services are available?

How can you communicate with health workers that are there?

- d) Are public education messages and materials available in the language(s) spoken? List them.
- e) What are the best ways to communicate with the people of the town? Are there different groups who should be addressed? If so, what is the best way to reach each group?

f) Describe the town's situation as far as the amount and safety of the water supply. How is water stored in the homes?

g) Describe the town's situation as far as hygiene and feces disposal.

h) Select possible sites for Temporary Treatment Centers. Justify your selection.

COMPONENT 7

ENSURE ADEQUATE FINANCES

Project Objective: To identify possible funding sources and to seek support by writing a letter

Project: Planning and response activities have a cost. You should determine how much these activities will cost, and whether they are covered in the district's budget. If they are not, you should ask for funding, from the district or from another source. You will be more likely to receive funds if you present the request with a plan and written estimate of costs.

If more funding is not available, think of ways to use the resources you already have (e.g., re-assign personnel).

Use the table on the next page to list at least five activities you need to do to improve your preparedness for a possible epidemic of cholera. In the second column, list the supplies and resources (e.g., personnel, technical support, money, equipment, etc.) you need that are not available in your district. In the third column, list possible sources of support.

ACTIVITY	RESOURCES NEEDED	SOURCE OF SUPPORT

2) After completing the table, draft a letter to one source asking for support. The letter should contain the following:

- a) a paragraph introducing yourself and your qualifications to write
- b) the reason for your request
- c) data which support your request
- d) the items and amounts you need
- e) an indication of when you would need them (for reserve against future outbreaks or immediately to respond)

Keep the letter brief (one page of text, and several pages of data)

Follow-up Project:

Bring the letter to the follow-up workshop for discussion. After discussion and revision, send it to the addressee and follow it up after two to three weeks.

COMPONENT 8

IDENTIFY MEMBERS FOR MOBILE CONTROL AND INVESTIGATION TEAMS

Project Objective: To identify possible members of Mobile Control and Investigation Teams

Projects:

- 1) Identify possible members of a Mobile Control Team. The table on the next page lists members recommended to be part of a Mobile Control Team. For each member, identify at least two individuals in your district who could be contacted when you are organizing teams. Select people with experience in cholera control and patient management if possible. Your team may be larger or smaller, depending on the size of your district.



MOBILE CONTROL TEAM		
Team member	Name	Alternate
Clinician 1		
Clinician 2		
Hygienist / Sanitarian		
Health Educator		
Support Staff 1		
Support Staff 2		



2) Identify possible members of the Investigation Team.

The table below lists members recommended to be part of an Investigation Team. For each member, identify at least two individuals in your district who could be contacted when you are organizing teams. Use the blank rows to add other persons you think of.

INVESTIGATION TEAM		
Team Member	Name	Alternate
Clinician and/or Epidemiologist		
Hygienist / Sanitarian		
Health Educator		
Support Staff 1		
Support Staff 2		

Follow-up Projects:

- 1) Arrange for the team members to be briefed and trained (if needed). Arrange for practice.

COMPONENT 9

MAKE AN EMERGENCY RESPONSE PLAN

(See section 5.9 of the Cholera Technical Guidelines)

Project Objective: To review and list activities that need to be done during an emergency response.

Project: **Planning Matrix for Emergency Response**

Imagine that a cholera epidemic is about to begin in your area. Completing the following matrix will help you think through activities that need to be undertaken during an epidemic. For each activity, identify a person responsible, an alternate, the time frame, the materials/resources that would be needed and their possible sources, and monetary costs to the district. Make your answers very specific to your district.

ACTIVITY	PERSON RESPONSIBLE / ALTERNATE	TIME	MATERIALS /RESOURCES NEEDED	SOURCE	COST
1) convene epidemic committee					
2) identify roles and responsibilities of staff					
3) send investigation team					
4) inform health facilities					
5) obtain health facility reports					
7) inform provincial officer					
8) arrange for laboratory confirmation					
9) treat patients					
10) plan control measures					
11) inventory treatment supplies					
12) obtain supplies					
13) monitor and evaluate control measures					

Follow-up Project:

In a follow-up meeting, bring your planning matrix for group discussion.

COMPONENT 10

EVALUATE EPIDEMIC PREPAREDNESS

(see Chapter 5.0 of the Cholera Technical Guidelines)

Project Objective: To assess the district's epidemic preparedness

Project: **Evaluate District Epidemic Preparedness**

Chapter 5.0 of the *Technical Guidelines on the Detection and Control of Epidemic Cholera* discusses eleven components of preparedness. Re-read the information in that chapter, and answer the questions about preparedness which are in the boxes. When you can answer “yes” to all the questions, your district is ready to respond to an epidemic of cholera.

You will find these questions in the table on the next page.

Use the columns at the right of the table to record what the district has accomplished. Write the date of evaluations.

If possible, do this project with a group of co-workers, ideally with members of the Epidemic Control Committee.

DISTRICT PREPAREDNESS CHECKLIST

	Yes	No	Comment
1 Ensure That the Surveillance System Can Detect Cholera			
Routine Reporting and Emergency Notification			
In all areas			
Can health workers recognize cases of cholera?			
Do health workers know the surveillance case-definition for cholera?			
Do health workers know how to report suspected cases by the most rapid and reliable means?			
Do health workers know what to report?			
And in areas where cholera is endemic			
Are routine reports complete, sent regularly, and on time?			
Are reports regularly (weekly) analyzed to see whether there is an increase in cases of acute watery diarrhea in patients aged 5 years and over?			
Investigation			
Have members of an Investigation Team been identified?			
Have members been trained or briefed on their duties?			
Has funding for an investigation been provided?			
Have supplies and resources been provided for?			

DISTRICT PREPAREDNESS CHECKLIST

	Yes	No	Comment
2 Ensure the Capability to Collect and Transport Specimens to a Laboratory			
Have laboratories been identified?			
Have funds for laboratory costs have been allocated?			
Have staff been trained to collect specimens?			
Are supplies needed for collection and transport of specimens available?			
Have Cary-Blair kits been distributed to health facilities?			
3 Training			
What percentage of the district's health workers are up-to-date on cholera?			
Is there a plan to train health workers in advance of an epidemic?			
Is there a plan to quickly train health workers at the time of an epidemic?			
Are health workers being trained according to the plan?			
4 Maintain a reserve stock of equipment and supplies			
Is there a reserve stock of treatment supplies needed for cholera?			
Are the reserve supplies rotated with usual supplies?			
Is there a stock of specimen collection kits?			
Has funding been found for the reserve supplies?			

DISTRICT PREPAREDNESS CHECKLIST

	Yes	No	Comment
5 Organize an Epidemic Committee			
Is there a cholera epidemic committee (or a cholera subcommittee of a CDD or crisis committee)?			
Does the committee meet regularly?			
Are members working to prepare the district for a possible epidemic?			
Have members agreed on an Emergency Response Plan?			
6 Plan logistics and staff responsibilities			
Have the responsibilities for district personnel been decided upon?			
Is there a plan for re-assigning staff during an epidemic?			
Has funding been identified for extra staff costs during an epidemic?			
Is there a plan for setting up Temporary Treatment Centers?			
Have logistics needs during an epidemic been identified?			
Has funding for extra costs related to logistics been identified?			
7 Ensure that financial support is available for preparation and response			
Have costs related to preparation for an epidemic been identified?			

DISTRICT PREPAREDNESS CHECKLIST

	Yes	No	Comment
Have costs related to investigation of a suspected epidemic been identified?			
Have costs related to the response to an epidemic been identified?			
Has a source of funding or support been found for each expense?			
8 Control Measures			
Have potential members of Mobile Control Teams been identified?			
Have team members been trained?			
Has a source of supplies been identified?			
Has transport been identified?			
Have possible Temporary Treatment Centers sites been identified?			
Are there plans for providing safe water areas?			
Are health education messages ready?			
Has funding for control measures been identified?			
9 Make an Action Plan for Responding to an Epidemic of Cholera			
Is there an Action Plan for responding to cholera?			
Are members of the cholera epidemic committee aware of the plan?			
10 Evaluate Epidemic Preparedness			
Has the preparedness of the district been evaluated?			

DISTRICT PREPAREDNESS CHECKLIST			
	Yes	No	Comment
If so, were the recommendations of the evaluation acted on?			
Are regular, periodic evaluations scheduled?			
Plan for Prevention			
Has the district situation with regard to safe water been determined?			
Has the district situation with regard to sanitation and feces disposal been determined?			
Has the district situation with regard to domestic food safety been determined?			
Is there a plan to make any improvements needed?			

Follow-up Project:

1) Make a plan to turn all the “no” answers into “yes” answers. The plan should include:

- √ what should be done
- √ who should do it
- √ when it should be done (starting and ending dates)
- √ resources or materials that are needed to do it
- √ a method of evaluation (how will you know that it was done, and done well?).

2) If you think that some parts of the preparedness components cannot, or should not be done at your level, then explain your reasons to your supervisor. Work together with your supervisor to arrange for someone else to be responsible for that activity.



COMPONENT 11

PLAN FOR PREVENTION

Project Objectives: To learn more about the district situation with regard to practices that can prevent transmission of diarrhoeal diseases and cholera

Project: **Inspect Three Places for Safe Water, Hygiene and Food Practices**

Choose three places or more to visit. Choose from among:

- a) health facilities
- b) some homes
- c) a rural health facility
- d) a market
- e) a school
- f) transport terminus or station

Make arrangements for the visits. Go to the each place and introduce yourself; explain that you are visiting in order to learn more about the situation in the district. Try to have someone who works or lives at the place accompany you.

Explain what you are looking for and why it is important. Explain and demonstrate how to correct any problems you find. Be helpful and realistic in your suggestions.

Inspect each place and check the following:

Drinking-Water:

- √ What is the source of the drinking-water?
- √ If the drinking-water is not from a safe source, has it been treated?
- √ If the drinking-water is stored in a container, does the container have a lid and a narrow mouth? How is water removed from the container?

Sanitation:

- √ Is there a toilet or latrine?
- √ Is it functioning and well maintained?
- √ Are there convenient hand washing facilities nearby? With soap (or ash)?
- √ Do users wash their hands after using the toilet or latrine?

Food Safety:

- √ For domestic food preparation, ask questions and observe to see if food is prepared and stored according to the recommendations in the Health Education messages in Annex 2 of the *Guidelines*.
- √ For food that is prepared for sale, or for large groups, ask questions and observe to see if food is prepared and stored according to the more detailed *Rules for Safe Food Preparation to Prevent Cholera* in Annex 3 of the *Guidelines*.

If possible, return in 3-6 months to look for improvement and to help solve any problems.

For each place you visit, write a brief report of your findings.

Follow-up Project:

Based on the results of your visit, choose several activities that can be done in your district to improve the situation. Record the activities on the table below, and carry them out.

Be very specific in the way that you record the activity, e.g., instead of writing "public education," write "go house-to-house to deliver the following messages" (followed by the messages themselves). Also list resources that you will need to do the activity, as well as possible sources of support.

ACTIVITIES	PERSON(S) INVOLVED / RESPONSIBLE	RESOURCES NEEDED	TIME

ANNEX

SAMPLE IMMEDIATE NOTIFICATION FORM

NOTES

NOTES