



Work Together. Stop Transmission. End Deaths.

Self-Assessment Tool: Are Health Facilities Capable of Managing Cholera Outbreaks?

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Johns Hopkins Bloomberg School of Public Health
615 N. Wolfe Street / E5537, Baltimore, MD 21205, USA

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Why Conduct a Self-Assessment of Health Facilities? The health facility is a cornerstone of preventing deaths due to cholera and controlling the spread of the disease. When patients are managed appropriately, no one should die due to cholera. Therefore, it is essential that health facilities be prepared to respond to the needs of cholera patients. By conducting a self-assessment of health facility preparedness, health officials can identify elements of their health system that can be strengthened to ensure that deaths due to cholera are minimized. This self-assessment can be inexpensive to administer and yield actionable results.

Cholera deaths can occur from one or more of these three “delays” when seeking emergency care:

1. The time it takes the family or individual to understand that the illness is serious and requires specialized treatment in a health facility.
2. The time it takes to travel from home to a treatment facility. It may be difficult to find transportation, cross a river, or get through traffic.
3. The time from arrival at the treatment facility to receiving emergency treatment. Treatment is not difficult, but if the health care provider is not on duty, is not properly trained, or if the facility does not have the needed supplies, proper treatment may not be provided in time.

Time is of the Essence

When cholera occurs in a community, the residents will need emergency treatment if the disease is severe. Without treatment, the risk of dying is about 50%. Severely ill patients need to reach a treatment center quickly since the interval between the onset of symptoms (severe diarrhea and vomiting) and death may be only a matter of hours. A delay in seeking treatment can be fatal; delays can take several forms as shown in the box below. While mild diarrhea can be treated simply at home with oral rehydration solution (ORS), severe cases require intravenous fluids, antibiotics, and careful observation. Individual patients depend on proper treatment, but during an outbreak, many patients may require emergency care simultaneously. In this situation, the facility must have a system – not just for treating the occasional patient – but also for treating the many patients who arrive daily. In extreme situations, hundreds of patients may require urgent care, which can simply overwhelm the facility unless it is well prepared. The individual facility may need backup support from the district or regional health system to ensure proper and sufficient staffing, training, supplies and equipment

How to Use this Self-Assessment Tool

This document is intended as a self-assessment guide to determine if preparations are adequate for the facility and community to manage a cholera outbreak. The tools in this guide are intended for use by health officials at different levels, as specified below. Each tool lists key questions that will help assess the status of preparations for cholera. By reviewing the questions in this self-assessment, it is hoped that deficiencies can be identified and corrected before the outbreak begins or at least at its earliest stages. The guide has five components:

- 1) Section 1: Community knowledge of cholera and access to cholera treatment, to be completed by officials at the area/sub-district health office;
- 2) Section 2: Health facility’s capacity to manage a major cholera outbreak, to be completed by the facility’s administrator;
- 3) Section 3: Ability of health care providers (doctors and nurses) to manage cholera patients, to be completed by administrators or clinicians;
- 4) Section 4: Regional and district resources and capacity, to be completed by regional or district medical officers; and
- 5) Section 5: Rapid assessment for facility capacity to manage a cholera outbreak to be completed by district medical officers or administrators.

Please note: Sections one through four provide a tool for a “comprehensive assessment”. Managers of health programs or health facilities may find this comprehensive assessment useful to improve their services; however, the list may be too long to use as a rapid assessment. If a more rapid assessment of facilities in an area is needed, only a few of the variables should be used as “indicators”.

To carry out such a rapid assessment, a survey might be administered with a sample of the facilities to understand the overall preparedness in the area or district. Results from the survey can provide an overview of the situation and can guide the strategy for improving preparedness.

Section five includes the indicators suggested for such a rapid assessment; however, other variables can be selected if these are felt to be more appropriate. In general, the number of variables selected for such a survey will need to be limited to two or three from each section, for a total of 8-12 for the entire survey.

Section 1: Community knowledge of cholera and access to cholera treatment

Person completing: _____

Note: This section does not include all aspects of cholera control in a community (e.g., water and sanitation improvements), but is intended to inform activities to improve cholera symptom recognition and health seeking behaviors of cholera patients, by, for example, informing social mobilization activities and improving local transportation to health facilities.

Topic		Explanation/rationale	Assessment	What improvements are needed?
1	Have health authorities at the national or sub-national level defined key messages about the symptoms of cholera?	People need to know the symptoms so they can take appropriate action in case a family member develops these symptoms. They need to understand how the symptoms of cholera differ from “ordinary diarrhea.”		
2	Has the community recently received the key messages about cholera symptoms?	Messages about the symptoms of cholera can be communicated through one-on-one or group health education talks, radio/TV spots, and IEC materials (e.g., posters, leaflets).		
3	Have health authorities developed key messages about when and where people should seek treatment if they have severe diarrhea?	Certain facilities are able to treat cholera while others may not be appropriate. In rural areas, all facilities will need to be able to treat the disease, but in urban areas, certain hospitals may be designated as diarrhea/ cholera treatment centers. The community should have this information.		

Topic	Explanation/rationale	Assessment	What improvements are needed?
4. Has the community recently received the key messages on when and where to seek care?	These should be included in all communications about cholera. Some traditions and beliefs may need to be addressed. If patients with severe cholera go to traditional healers, or use other ineffective treatments, this will delay proper treatment.		
5. Have health authorities developed key messages about how to prevent cholera?	Cholera is transmitted through water, but also through food from hands contaminated with bacteria. Messages are needed to reduce risks of transmission.		
6. Has the community recently received the key messages on preventing cholera?	Messages to use safe water and wash hands should be simple, direct, practical, feasible and culturally appropriate.		
7. Is transportation available so that patients can reach the health facility quickly?	Lack of ability to reach a treatment facility rapidly is a leading cause of cholera deaths. What can be done to help plan for emergency transport?		
8. Is oral rehydration solution (packets) available in the community for patients to use at home or while in transit to the health facility?	ORS is the first treatment for dehydration due to diarrhea. This needs to be widely available and should be given to patients while they travel to a health facility.		

Topic	Explanation/rationale	Assessment	What improvements are needed?
9	<p>If a patient dies of severe diarrhea in the community, are there ways that the death can be quickly reported to the district health authorities?</p>	<p>Reporting cases allows for preparation to manage an outbreak. Death of an adult from acute severe diarrhea is most often due to cholera. Thus, any time this happens, it needs to be reported immediately to health authorities. Funerals of these patients have often led to local outbreaks because it was not recognized as being cholera until the second or third wave of patients.</p>	

Priority actions to be taken. A summary including the priority actions to be taken should be written after completing the assessment. Please include the person/agency responsible to complete each action and the deadline for completion.

Section 2: Health facility capacity to manage a major cholera outbreak

Person completing: _____

	Topic	Explanation/rationale	Assessment	What improvements are needed?
Diagnosis, treatment and reporting of cholera:				
1	Does the facility have a clear clinical definition of cholera?	Reporting needs clear definitions so that patients with cholera can be reported consistently.		
2	Does the facility display the WHO diarrhea treatment chart showing plan A, B and C treatments?	This chart should be posted in each ward where diarrhea patients are treated to guide the treatment plan in a standardized manner.		
3	Does the facility have a policy for reporting such cases?	These policies are needed so that health care providers are able to report cases in a consistent manner. Such reliable reports are key to assessing outbreaks and trends in rates.		
4	Does the facility have communication equipment (e.g. mobile phone) to alert district and/or regional officials if they detect a patient with cholera?	Communications are critical during an outbreak to ensure that supplies are available and that reports of cholera cases can be communicated to the district and region.		
5	Does the facility keep records of all cholera patients and their clinical outcome?	Reporting is important to understanding outbreaks.		
Equipment and supplies				
6	Does the facility have supplies for obtaining a stool specimen from a suspected cholera patient in order to confirm the diagnosis?	This can simply consist of vials of saline into which a filter paper soiled with feces is placed. A special transport medium (Cary Blair) can also be used. A manual on the use of dipstick rapid tests is included in this toolkit.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
7	Does the facility have cholera cots for treating patients with severe diarrhea?	Cholera cots are a very efficient way to monitor diarrhea stool losses.		
8	Does the facility have IV sets with large bore needles appropriate for cholera patients?	These are needed in sufficient quantities to treat a large number of patients during an outbreak.		
9	Does the facility have Ringer's Lactate IV fluid in sufficient quantities to manage patients with cholera?	This is needed in sufficient quantities.		
10	How quickly can Ringer's lactate IV fluid and ORS be obtained in case many patients arrive for treatment?	Facilities may not be able to have a sufficient quantity on hand and the district or region will need to supply additional supplies as needed.		
11	Does the facility have oral rehydration solution available in large quantities?	This is needed in sufficient quantities.		
12	Does the facility have a policy for the proper antibiotic treatment for cholera patients (children and adults)?	Proper antibiotics are crucial and these policies need to be communicated clearly to providers.		
13	Is the proper antibiotic available?	This is needed for proper treatment.		
Facility policies, organization and personnel:				
14	Does the facility have enough capacity to treat the expected number of cholera patients with severe diarrhea?	It is important to estimate the expected number of patients in the health facility to avoid overwhelming situations or wasting of unnecessary resources.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
15	Is the clinic open 24 hours a day?	Cholera patients need treatment whenever the disease occurs. If the clinic is not open 24 hours a day, alternative clinics need to be identified.		
16	Does the facility have enough personnel to work 24 hours a day?	Planning must include all types of workers: medical, paramedical, cleaners, supervisors, assistants, logistic staff, watchmen, etc. Duty shifts should be organized and staff hired accordingly (day/night).		
17	Are different areas in the health facility clearly defined by function (triage, observation, in-patient treatment, recovery area and mortuary)?	Ideally, patients should first be screened and diagnosed before admission, if necessary. How the health facility is organized should be clear to all health workers.		
18	Does the facility have a program to educate family members of cholera patients on how to prevent cholera transmission by treating water and improving sanitation for at least the next 10 days?	Families of cholera patients are at high risk and need to be informed on how to avoid transmission within the family. This includes hand washing and chlorine treatment of household water.		
19	Does the facility have clear discharge criteria?	Patients can be discharged when they are fully rehydrated, and can easily maintain hydration using ORS. If discharged while still purging, they may not be able to drink enough ORS and they may become dehydrated again.		
Infection control and sanitation				
20	Does the clinic have a way to properly dispose of contaminated feces?	Cholera vomitus and feces are infectious and need to be disposed of properly.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
21	Does the clinic have a way to decontaminate the bed linens or plastic liners?	These need decontamination before they can be used again.		
22	Are hand washing stations adequate and does the clinic provide hand sanitizer?	Hand washing prevents the transmission of germs.		
23	Are different chlorine solutions available and clearly labeled for different uses in the facility?	Three different levels of chlorine solutions should be available (0.05% for hand washing; 0.2% for disinfecting floors, cots, etc.; and 2% for decontamination of excreta and corpses.		

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Section 3: Ability of health care providers (doctors and nurses) to manage cholera patients

Person completing: _____

	Topic	Explanation/rationale	Assessment	What improvements are needed?
1	Have health care providers been trained to clinically diagnose and treat cholera?	Providers need to know how to suspect cholera. This requires knowledge of the case definition of cholera.		
2	Can providers explain the WHO chart for plan A, B and C treatment of diarrhea?	The ability to judge the severity of dehydration is critical to proper treatment.		
3	Are providers able to determine the extent of dehydration in a patient with severe diarrhea?	Patients who are severely dehydrated (e.g. in shock) are estimated to have lost 10% of their body weight through loss of diarrhea fluid.		
4	Do providers know which intravenous fluid to use for patients with severe dehydration?	Ringer's Lactate is the best solution because it contains the proper concentration of salts including the base (lactate) needed to correct the acidosis.		
5	Do providers know how to calculate the volume of intravenous fluid needed for a patient who is severely dehydrated?	A patient who has lost 10% of their body weight will need an equivalent volume of fluid to make up for this loss. Thus, a patient who weighs 50 Kg has lost about 5 liters of fluid. This volume needs to be replaced quickly to achieve rehydration.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
6	Do providers know the proper size IV needle to use and how quickly to administer IV fluid to a patient with severe dehydration from diarrhea?	A large needle is needed (e.g. 18 gauge). A 23 gauge needle is too small to deliver fluids quickly. Fluids must be given intravenously and not subcutaneously or intraosseus, as these other methods infuse fluids too slowly.		
7	Can providers start an intravenous line in patients who are severely dehydrated?	The ability to start IVs in such patients is critical to successful treatment. In some cases, a femoral line may be needed, so instructions on how to use the femoral vein may be needed.		
8	Do providers know how to monitor the volume of fluid needed to maintain hydration of patients who continue to pass liquid stool after initial rehydration?	In addition to initial rehydration, treatment requires monitoring of the volume of diarrhea losses that continue. This volume also needs to be replaced.		
9	Do providers know how to use ORS to maintain hydration after the initiation of IV rehydration?	Generally, the ongoing “maintenance” hydration can be accomplished using ORS. Sometimes, patients will not be able to drink enough to maintain hydration. These patients will need additional IV fluids.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
10	Do providers use cholera cots to manage patients with severe diarrhea?	Cholera cots are needed to monitor the volume of ongoing stool losses. By estimating the volume of diarrhea losses in the bucket, one knows how much ORS to administer.		
11	Do providers know which antibiotic and dose to administer to patients (both children and adults) suspected of having cholera?	At present, most strains are susceptible to doxycycline and this is generally the preferred antibiotic. Alternatives are needed if the strains are resistant to doxycycline and when the patient is pregnant.		
12	Do providers know how to treat cholera patients who are pregnant?	Pregnant women are at high risk of losing the fetus through miscarriage or stillbirth if dehydration is not corrected quickly and if the hydration is not maintained.		
13	Do providers know how to treat cholera patients who are malnourished?	Assessment and management of dehydration in severely malnourished children might be difficult unless the nurses and doctors are well trained.		
14	Do providers know how to manage the most frequent complications of cholera?	The most frequent complications in cholera patients are hypoglycemia, hypokalemia, renal failure (hypovolemic shock), and acute pulmonary edema (due to over-hydration).		

Priority actions to be taken. A summary including the priority actions to be taken should be written after completing the assessment. Please include the person/agency responsible to complete each action and the deadline for completion.

Section 4: Regional and district resources and capacity

Person completing: _____

	Topic	Explanation/rationale	Assessment	What improvements are needed?
1	Has an assessment of cholera readiness been performed to know if the health facilities in the district are prepared?	The District Medical Officer needs to regularly assess individual facilities to ensure that they are prepared.		
2	Is a stock of Ringer's lactate available in case it is needed for a cholera outbreak?	Proper inventories are essential. While emergency supplies are needed in the facility, additional stocks may need to be kept in a central location where they can be distributed quickly during an outbreak.		
3	Is a stock of ORS available in case of an outbreak?	Emergency stocks may be needed during an outbreak.		
4	Is a stock of IV sets available in case of a cholera outbreak?	Emergency stocks may be needed during an outbreak.		
5	Is there a designated person responsible for receiving emergency calls from health facilities in case cholera cases are diagnosed?	Lines of communication are essential in handling outbreaks.		
6	Is the telephone number for such emergency calls known by each of the facilities in the district?	Backup resources may be needed quickly.		
7	Has there been an updated training of providers in cholera case management during the last year?	Providers must be trained to manage patients with severe diarrhea, regardless of whether it is cholera. Refresher trainings will keep their skills current.		

	Topic	Explanation/rationale	Assessment	What improvements are needed?
8	Does the District and the region have clear policies and mechanisms for reporting cases of cholera to the national MOH?	Reporting will allow for a more rapid response from the central government.		
9	Does the district have a plan for confirming the diagnosis of cholera from a representative sample of patients suspected of having cholera?	Some of the cases need to be confirmed, but after the outbreak is confirmed to be cholera, a representative sample of cases should be monitored to confirm the diagnosis and detect any change in antibiotic sensitivity over time.		
10	Has the MOH at the national, regional or district level considered vaccination among the tools to prevent or control a cholera epidemic?	Oral cholera vaccine (OCV) is a safe and effective tool to prevent cholera infection. WHO encourages the use of OCV both in endemic and epidemic settings.		

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Section 5: Rapid assessment for facility capacity to manage a cholera outbreak

This rapid assessment provides a “snapshot” of the ability to manage a cholera outbreak. Generally, this will be completed by a supervising physician or administrator in the district and the same rapid assessment may be carried out in multiple health centers to understand differences between the different centers.

Person completing: _____

Topic	Explanation/ rationale	Assessment	What improvements are needed?
Section 1: Community knowledge of cholera and access to cholera treatment			
1	Have health authorities developed key messages about how to prevent cholera?	Cholera is transmitted through water, but also through food from hands contaminated with bacteria. Messages are needed to reduce risks of transmission.	
2	Is transportation available so that patients can reach the health facility quickly?	Lack of ability to reach a treatment facility rapidly is a leading cause of cholera deaths. What can be done to help plan for emergency transport?	
Section 2: Health facility's capacity to manage a major cholera outbreak			
3	Does the facility display the WHO diarrhea treatment chart showing plan A, B and C treatments?	This chart should be posted in each ward where diarrhea patients are treated.	
4	Does the facility have Ringer's Lactate IV fluid in sufficient quantities to manage patients with cholera?	This is needed in sufficient quantities.	
Section 3: Ability of health care providers (doctors and nurses) to manage cholera patients			
5	Can providers explain the WHO chart for plan A, B and C treatment of diarrhea?	The ability to judge the severity of dehydration is critical to proper treatment.	

Topic	Explanation/ rationale	Assessment	What improvements are needed?
6 Do providers know how to calculate the volume of intravenous fluid needed for a patient who is severely dehydrated?	A patient who has lost 10% of their body weight will need an equivalent volume of fluid to make up for this loss. Thus, a patient who weighs 50 Kg has lost about 5 liters of fluid. This volume needs to be replaced to achieve rehydration.		
Section 4: Regional and district resources and capacity			
7 Has an assessment of cholera readiness been performed to know if the health facilities in the district are prepared?	The District Medical Officer needs to regularly assess individual facilities to ensure that they are prepared.		
8 Has there been a recent training of providers in cholera case management during the last year?	Providers must be trained to manage patients with severe diarrhea, regardless of whether it is cholera. Refresher trainings will keep their skills current.		

Priority actions to be taken. A summary including the priority actions to be taken should be written after completing the assessment. Please include the person/agency responsible to complete each action and the deadline for completion.

