

Lesson Plan 4: Diarrheal Disease Response

 **60 min total**

Lesson Description



The focus of this lesson is to explore different diarrheal diseases present within communities and to identify ways of responding to them. Participants will discuss effective measures for responding to the presence of diarrheal disease and demonstrate how to effectively prepare oral rehydration solution in an emergency response context.

Learning Outcomes



At the end of this session participants will be able to:

1. Identify common diarrheal diseases
2. Describe how to differentiate between cholera and other diarrheal diseases
3. Demonstrate how to prepare emergency oral rehydration solution

Materials



- Flip chart paper
- Markers
- Masking tape
- Commercial ORS package
- Clean utensils and glass to prepare ORS
- An empty 1-liter bottle
- Basin or bucket

Preparation



1. Read and prepare lesson plan
2. Write lesson description or learning outcomes on flip chart paper
3. A 1-liter bottle filled with water (tap water is okay)
4. Prepare utensils for preparing ORS package

Introduction

5 minutes


1. Ask the participants if any participants or anyone in their family has experienced diarrhea recently (if participants answer no, ask them if they have experienced it at some point previously).
2. Ask the participants to describe what they needed in order to feel better or recover.
3. Present the lesson description or learning outcomes.

Exploring Diarrheal Diseases

15 minutes



1. Ask the participants if they know any different diarrheal diseases.
2. As participants volunteer ideas write them on a piece of flip chart. *Responses might include things such as: rotavirus, dysentery, cholera, Giardia, Cryptosporidium, etc.*
3. Ask the participants: How are these diarrheal diseases transmitted from person to person and through a community?
4. Summarize participant responses and highlight that diarrheal diseases are usually transmitted through the fecal – oral route. They are often spread through contaminated water, food, or poor hygiene practices. Connect this to the previous lesson on disease transmission.
5. Explain that diarrheal disease can be divided into three types: Acute, watery diarrhea; Persistent diarrhea; and Bloody diarrhea. Write these three types on the flip chart. *Acute, watery diarrhea leads to rapid dehydration; persistent diarrhea can be mild but last over long periods of time resulting in nutrient malabsorption; and bloody diarrhea is the result of intestine inflammation and damage.*
6. Post a flip chart and divide it into two sections. Title one section “What to ask.”
7. Explain to participants that because diarrheal disease may be an uncomfortable topic to discuss openly and some people may hesitate to share details. We can easily identify the symptoms if we see them, however we may not always see physical evidence.
8. Referring to the three types of diarrhea identified, ask the participants: “Considering the nature of the topic, what can we ask community people to gauge if they are experiencing diarrheal disease?”
9. As volunteers offer suggestions, record them on the flip chart. *Possible responses include: How often have you defecated in one day? Have you experienced loose or watery stool? Are you experiencing nausea or cramping pains? Do you have blood in your stool?”*
10. Label the second half of the flip chart: “What to Recommend.”
11. Tell participants that identifying the presence of diarrhea will often not be especially difficult, and that their primary focus is making appropriate recommendations to the community people.
12. Ask the participants: “Once we have uncovered the presence of diarrhea in a household or community, what can we recommend to individuals?” *General recommendations are to stay hydrated, to continue feeding, to promote consumption of safe water and practice improved sanitation and hygiene practices, to seek immediate clinical medical assistance, etc.*
13. As participants volunteer suggestions, write them on the flip chart under the second category. Clarify any misconceptions and discuss as a large group.

Acute, Watery Diarrhoea**20 minutes**

1. Tell participants that one of the most dangerous types of diarrhea is acute, watery diarrhea.
2. Ask participants: "Why is acute, water diarrhea so dangerous?" *Rapid dehydration.*
3. Ask participants to each hold out one of their hands.
4. Tell them to use their other hand to briefly pinch the skin on the back of their hand and then release it.
5. Ask participants: "What happened to your skin after you released it?"
6. Provide opportunity for 2-3 volunteers to offer their experiences. In most cases, the skin should rebound and return to its original state immediately after being released.
7. Explain to participants that as diarrhea patients become dehydrated their skin loses its elasticity. When a person first becomes dehydrated they may not notice it. As it progresses they will first become thirsty. After this, their skin will lose turgor and their eyes will become sunken.
8. Explain to participants that a quick and reliable hydration test that can be done on those suspected of moderate to serious diarrheal infection is to check a person's skin elasticity by pinching it. If it does not quickly return to normal (more than 3 seconds) then the person is likely experiencing significant dehydration and requires immediate treatment.
9. Explain to participants that you are going to demonstrate what can happen to a person experiencing acute, watery diarrhea such as cholera infection.
10. Display the 1-liter container filled with water and the bowl or bucket in the front of the room.
11. Explain to participants that symptoms for people infected with cholera can range from mild to incredibly severe. Severe cholera develops in approximately 10% of cases. Explain this usually takes the form of severe diarrhea, but also vomiting.
12. Begin to pour the first 1 liter bottle of water into the bowl or bucket. Explain that in severe cases cholera infection can cause a person to lose a liter or more of their body's water through diarrhea every hour. Explain that, like the water, one of the identifying characteristics of cholera is that vomit and diarrhea will likely (but not always) be mostly clear liquid. The diarrhea is also often painless.
13. Once the bottle is empty, state that one hour has passed. Tell participants that as a person continues to vomit or have diarrhea, they may develop muscle cramps, sunken eyes, and have cold, clammy skin.
14. Ask participants: "Without proper treatment, how long do you think a person will survive with a severe cholera infection like this?"
15. Ask for 1-2 participants to share their ideas.
16. Explain that untreated severe cholera infections can lead to death within hours of the onset of symptoms. Tell participants that according to the WHO treated cholera infections only result in death approximately 5% of the time, but untreated infections during outbreaks and among vulnerable people can result in death by as much as 50% of the time. This is a huge difference, and highlights the need for community

education and interventions, especially after emergencies or among vulnerable groups.

Rehydration**15 minutes**

1. Explain that in most cases of diarrheal disease infection, including cholera, oral rehydration is the most successful treatment. Emphasize that if possible, people experiencing severe diarrhea should always be recommended to a health clinic or facility as soon as possible.
2. Explain that meanwhile, ORS is safe and simple to administer to most people. It works by replacing the fluids which have been lost, and by maintaining hydration as people continue to lose fluids. In some cases when a person has serious vomiting and cannot keep liquid down, it is recommended to continue to attempt oral rehydration while immediately seeking out medical care in a clinic for intravenous (IV) hydration.
3. Display a package of locally available ORS powder. Explain the acronym as “oral rehydration salts/solution” and discuss its use as the recommended solution to keep people suffering from diarrheal disease hydrated.
4. Using the package, demonstrate the correct preparation according to its specific instructions. Be sure to follow and highlight the following steps to prevent contamination of the solution by writing them on the flip chart and titling it “Preparing ORS Solution.”
 - a. Wash hands with soap and safe water
 - b. Wash the water container and spoon/stick with soap and safe water
 - c. Add ORS package to 1 liter of **SAFE** water and stir until dissolved
5. Explain to participants that ORS should ideally be consumed in continuous small sips or doses with either a cleaned spoon or straw. For cholera, adults are recommended to consume as much as they can, with general guidelines being to drink one teaspoon of ORS every minute.
6. Explain to participants that after ORS has been prepared it should ideally be consumed immediately as it can quickly become contaminated.
7. Ask the participants: “Thinking about how much fluid a person with cholera can lose, how would you communicate or demonstrate to community people how much someone with cholera needs to drink to stay hydrated?”
8. Ask participants to discuss ideas as a large group.
9. Explain to participants that, as WASH volunteers it is important to be able to recognize diarrheal disease in the community, and to be able to recommend solutions to community people. In the cases of vulnerable groups (young children, elderly, HIV positive, etc.) or when cholera is present, immediate action is required to keep people hydrated and prevent transmission to others.
10. Explain that all of the recommendations in this workshop around improved water, sanitation, and hygiene contribute to preventing the spread of diarrheal diseases in communities recovering from emergency effects.

Review**5 minutes**

1. Post a flip chart with the following:
 - a. What can we ask community people to check if they are experiencing diarrheal disease?
 - b. How can we informally check a person for serious dehydration?
 - c. How can we distinguish cholera infection from other diarrheal diseases?
 - d. What are important things to remember when preparing ORS?
1. Ask the participants to form groups of 3-4.
2. In their groups ask participants to discuss the above points. Allow approximately five minutes for the groups to discuss their responses.
3. Clarify any problems or misconceptions with the large group.

Reflections on Lesson