

Discussion Session: Waterborne Diseases

Objective

- To introduce students to waterborne diseases
- To discuss factors that contribute to the spread of waterborne diseases
- To consider ways to prevent waterborne diseases from occurring

Materials / Preparation

- Visual and audio material
- Water (clean, almost clean, dirty)

Procedure [45 min approx.]

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| | <p>Preparation</p> <ul style="list-style-type: none"> - Set up visual and audio material |
| 5 Minutes | <p>Introduction: Video on Water</p> <p>Today we are going to talk to you about seven different waterborne diseases</p> <ul style="list-style-type: none"> • We will tell you why they happen • How many people they affect • How many people die from them • How they can be prevented • How they can be treated |
| 5 minutes | <p>Talk about Feces</p> <ul style="list-style-type: none"> -Go over the five reasons that talking feces affects global health -Ask students why they think “poop” is taboo |
| 15 minutes | <p>Describe each of the Seven Waterborne Diseases</p> <p>1. Diarrhea</p> <ol style="list-style-type: none"> 1. virus and bacterial infection 2. anyone ever had diarrhea? <ol style="list-style-type: none"> 1. not a lot of fun is it? 3. Africa and South Asia account for more than half of all of the cases of diarrhea worldwide 4. second most common cause of childhood death 5. kills 1.5 million kids under the age of five every year 6. What is it? <ol style="list-style-type: none"> 1. does anyone know exactly what diarrhea is? 2. its a gastrointestinal infection caused by bacteria and viruses transmitted through contaminated water 7. How can we treat it? <ol style="list-style-type: none"> 1. Rehydration <ol style="list-style-type: none"> 1. getting clean, fresh water into the body 2. Zinc 3. Continued feeding 8. How can we prevent it? <ol style="list-style-type: none"> 1. Having access to fresh, clean water 2. Hand-washing 3. Vaccine 4. Education |

2. Dysentery

1. Bacterial infection
2. Who knows this one?
 1. Diarrhea containing blood
 1. Abdominal cramps, fever, pain
 2. Spread by contaminated water
 1. Person-to-person contact
3. Kills 700,000 people every year
4. How can we treat it?
 1. Antibiotics
 2. Rehydration
 1. Getting clean, fresh water into the body
5. How can we prevent it?
 1. Having access to fresh, clean water
 2. Hand-washing
 3. Education

3. Cholera

1. Bacterial infection
2. What is it?
 1. Bacterial infection of the small intestine
 1. Vomiting
 2. Diarrhea
 1. Remember what diarrhea is like?
3. 100,000-130,000 deaths per year
4. How can we treat it?
 1. Rehydration
 2. Antibiotics
 3. Electrolytes
5. How can we prevent it?
 1. Water purification
 2. Education
 3. Vaccination

4. Typhoid Fever

1. Bacterial
2. What is it?
 1. Bacterial infection transmitted by contaminated water
 2. Symptoms
 1. Fever, headache, cough, delirium, internal bleeding, dehydration
3. Affects around 20 million people each year
 1. 20% of that dies each year if untreated
 2. 1% dies if treated
 1. May seem small, still 200,000 people a year
4. How can we treat it?
 1. Rehydration
 2. Antibiotics
 3. Surgery
5. How can we prevent it?
 1. Water sanitation and hygiene
 2. Vaccination

5. Dengue Fever

1. Viral Infection
2. Anybody know it?
 1. Virus transmitted by mosquitos

1. Fever
2. Headache
3. Skin rash
4. Muscle pains
5. Lethal in extreme cases
3. Kills 25,000 people each year
4. How can we treat it?
 1. No medicine to treat it
 2. Rehydration
 1. Getting clean, fresh water into the body
 3. Blood-transfusion if necessary
5. How can we prevent it?
 1. No vaccine for it
 2. Mosquito nets
 1. Do you know what mosquito nets are?
 3. Clean, fresh water

6. **Malaria**

1. Parasitic infection
2. What is it?
 1. Parasitic protozoan
 2. Transmitted by mosquitos
 3. Symptoms
 1. Fever, fatigue, vomiting, headache, seizures, coma, death
 4. How long do you think it takes for all of this to happen?
 1. 15 days after being bitten
3. 207 million cases in 2012
 1. 20% of these people died
 2. Means 41.7 million people every year die
4. How can we treat it?
 1. Anti-malarial medication
 2. Issues with this?
 1. Diseases has high drug-resistance
5. How can we prevent it?
 1. Clean water supply
 2. Education
 3. Mosquito Control
 1. Nets
 2. Extermination
 4. Medication

7. **Schistosomiasis**

1. Parasitic infection
2. What is it?
 1. Blood fluke (worm disease)
 2. Transmitted by snails
 3. Symptoms
 1. Abdominal pain, diarrhea, blood in the stool,
 1. Sometimes enlarged livers
 2. Kidney damage, blood cancer
3. 249 million cases in 2012
 1. Only 42 million received treatment
4. Treatment?
 1. Medicine

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| <p>8 minutes</p> <p>5 minutes</p> | <p>1. Draws out parasitic worms</p> <p>5. Prevent</p> <ol style="list-style-type: none"> 1. Improved sanitation 2. Hygiene education 3. Snail control 4. Treatment of large, at-risk populations <p>Does anybody have any questions?</p> <p>Quick Summary</p> <ul style="list-style-type: none"> - Education - Access to clean water --> Rehydration - Medication <p>Show maps of sanitation vs. malaria cases</p> <ul style="list-style-type: none"> -Ask students to interpret the maps -Describe Eastern vs. Western ideology of illness - What are biomedical and alternative healing methods? - Acupuncture, Faith healing, bloodletting, rituals, sacrifices, fasting, etc. <p>Quiz</p> |
| <p>5 minutes</p> | <p>Africa Killers</p> <ul style="list-style-type: none"> - Show Ebola in comparison to Malaria - Ask why we hear more about Ebola - Let students come to solutions for what should be done <p>Look at the graph in the PP. Describe the numbers it represents (Ebola v Malaria). Ask students to interpret why we hear more about Ebola in the news now than malaria? Is this an issue? Should we be talking about malaria instead? What can be done to increase malaria and other WBD prevention?</p> |
| <p>2 minutes</p> | <p>What Can You Do? (PP)</p> |
| <p>Bonus Time</p> | <p>Additional Questions or Final Video</p> |