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DIPLOMA IN WATER AND SANITATION HEALTH

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Question 1: Why is hand washing an essential aspect in WASH interventions?

In all WASH activities the main thrust is the extension of a healthy life style. To achieve this, it’s through a number of interventions but one of them is most effective and cheap way is to wash hands at all times, especially with soap.

There are a number of water-washed diseases that need to be prevented and by saying water washed disease we mean the prevention of excreta to enter the body. If people do not have adequate amount of clean water for basic household hygiene there can be an outbreak of a number of diseases like they will have skin and eye diseases (such as scabies and trachoma – trachoma is the leading cause of preventable blindness[12]), and diarrhoea, dysentery – in fact any of the diseases that can be waterborne. ( (Duncan Mara, 2011)

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| Faeco-oral diseases occur when a sufficient number of a pathogen in the faeces of one person enters the mouth of another person. Likely transmission routes are: |
| 1. Faeces of person A. fingers of person A. mouth of person B (imagine two very small children playing: |
| they commonly put their fingers into each other’s mouths), |
| 2. Faeces of person A. fingers of person A. fingers of person B. mouth of person B (two people shaking |
| hands), |
| 1. Faeces of person A. fingers of person A. food. mouths of persons B, C, D, etc. (a mother preparing food for her family), |
| Routes #1-3 are examples of the very direct person-to-person water-washed transmission route, |

Adapted from (Duncan Mara, 2011)

But to achieve this you need to have clean water from a secure source or clean source that means its clean to drink and wash in. Washing hands is for certain times like before cooking or preparing food, before eating or feeding children, and after defecating or changing and cleaning babies. The Diagram below better explains the positive impact of hand washing when it comes to faecal matter.

Part 1 Part 2



Adapted from (WASH DIPLOMA MODULE 1, 2018)

In part one nothing stops the flow of infection to the different aspects but in Part 2 hand washing stops the contamination and carrying of feaces to food and new host.

In summary the washing of hands is essential and cost effective to stop the infection of diseases in the body. There is need to stop the transmission of faecal matter from one person to another’s mouth through washing hands with soap and proper sanitation activities.

Question 2: What are the main standards in WASH interventions in emergencies?

Answer:

In an emergency, there are different standards or steps that should be taken in WASH interventions. Looking at the recent Cyclone Idai that hit us, the first protocol is to secure safe drinking and washing water. Unlike some parts of Zimbabwe where boreholes are mainly used, Chimanimani/ Chipinge area rely mainly on underground springs. These were still working after the cyclone but they were not protected thus they were a hub of disease. In the same breath some underground springs are used for cultural and religious rituals so there is need for consultation with religious and cultural leaders through the local government to find out and persuade the construction of safe water sources. In areas that are not able to have water through underground wells there is need to drill and supply the masses with water from water transporters. The construction of water points and training of water management committees will provide sustainability of the program. But also, the rehabilitation of the water works if affected. Secondly the establishment of a waste management system that will be in effect from the day the cyclone leaves the area. The system will be operational in survival camps, homes and the present local areas. The aim would be to prevent the spread of diseases through vectors and water borne diseases. Also, the establishment of toilets and bathing areas will help to manage the waste. Then the next is to provide health care services that is the provision of medical care. Mobile clinics should aim to provide the same WASH standards as for outpatients, including access to a safe water source and toilets. Ensure at least a 48-hour supply (and storage) per facility (Sphere, 2018)



(Sphere, 2018)

The above diagram illustrates the standards that should be taken in an outbreak.

In summary WASH interventions standards help us to assess and evaluate what to do in an emergency thus being effective. In tern the establishment of water is always first for washing and drinking, then the provision of sanitation facilities then making sure Health services are provided. All can work hand in hand as we cannot have sanitation without clean water. Community involvement is also critical so that we can have sustainability of the programme.

Question 3. Waste Management is becoming one problem in the emergencies. Why?

Answer.

Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. (WASH DIPLOMA MODULE 1, 2018). This defination helps to give us a picture of what is waste management but as it’s a broad subject to answer in the question l’m assuming that the emergency is Cyclone Idai that currently affected my area. In an emergency waste management is not given as much of a priority as other forms of WASH interventions. It becomes a problem when it affects the lives of the survivors. In Chimanimani / Chipinge basic infrastructure was destroyed and there were the displacements of a lot of people into Hotels, schools, and camps for food and safety. In these crowded places the amount of human waste increased. People are not concerned because of different reasons like it’s just temporary and they expect to be leaving soon or psychologically they are traumatised. But in those area the waste builds up then invites vectors like rats, flies to then feed on them and spread diseases. (WASH DIPLOMA MODULE 1, 2018) The tools and equipment for refuge collection will not be available that is why it is important to train the community in the proper way of disposing of waste. Because of lack of toilets and at times inadequate education facilitates open defecation to occur. This becomes a problem as there will be contamination of the soil. Uncertified builders are building pit toilets that are not properly lined thus the faecal matter is affecting the underground water.

If the area that the community is living in doesn’t have proper waste management capacity it becomes a refuge of an outbreak. The other area that causes problems is when there are few latrines as there would have been destroyed by the cyclone, this then causes either blockage of the surviving ones.

There are no collection points and as roads have been washed away thus there is no access to remove the waste by the refuge trucks. Another problem that currently noticed is when the septic tanks and latrine where damaged they affected the water systems for drinking water that mean people are drinking contaminated water. In our area the water sources are not protected even the wells are contaminated. The allocation of an area to dump waste should then be priority as the technology to process it is not available but this aspect is not a priority. The lack of fast action capacity in this area will cause the diseases and malnutrition in especially young children. Thus, causing the deaths of many lives. Currently after months since the cyclone hit the eastern tip of Zimbabwe there has been little transportation and disposal of waste as this is not an area that is most liked and follows a sense of taboo. Monitoring falls on the NGO community as there is little or no resources available be the local government to fund the excesize. That becomes a problem as most are into aid and other programs and not yet in the waste management section. In the Menstruation promotion that the NGO’s are conducting when dignity kits or/and pads are being distributed there is no way of disposing of them thus adding in the accumulation of waste in the emergency area. Girl friendly latrines will need to be built thus being able to safely disposal of the pads.

In summary waste management is becoming a problem in emergencies because of the fact that not many people like focusing it as it deals with dirty substances and the cultural TABOO of some aspects of it deter the proper implementation of the programs. Another factor is that when roads and infrastructure has been destroyed it is had or near impossible to transport that waste to designated land fills thus the waste accumulates and then there will have a disease outbreak.

Question 4: Discuss how environmental health and sanitation affect the nutritional status of the vulnerable groups.

Answer:

Environmental health and sanitation refer to the surrounding elements of the vulnerable groups. This greatly affects the nutritional status in a way most local people do not know. Firstly, open defecation is a problem in term’s that according that 3million in children die because of malnutrition (capacity4dev.eu) and this is caused mainly by poor sanitation methods. How does this happen?

* When there is open defecation the fecal matter has pathogens that are transferred to the soil and when young children are playing, they can touch the effected soil and inject food when they have not washed their hands. (Nutrition)
* Another route is when there is open defecation it can be able sink to the water table thus affecting the underground drinking water intern if not boiled it will be ingested in the body.
* Another way is through irrigation when contaminated water is used to irrigate thus affecting crops like lettuce and many more that are eaten raw.
* When there are poor sanitation methods like the pit latrines are built wrongly thus the matter affecting the underground water.
* The poor disposal of waste like dumping it in waste dumps thus a number of vectors like rat’s, flies, and many more will inhabit.
* Containment of children’s faeces: Infants’ and children’s faeces are commonly

more dangerous than those of adults.

Excreta-related infection among children is frequently higher, and children may not have developed antibodies to infections. (Sphere, 2018)

The above factors affect the body especially in young children were the pathogens like protozoa, warm larva and bacteria enter the human body, this affects the small intestines. The body then defends itself by releasing water. There is a common change of the structure of the gut reduces the surface area for absorption and more permeable. (USAID)Thus, the walls of the gut from having a rough surface to absorb nutrients it then has smooth surface that will not be able to absorb nutrients, this causes the child to be malnourished and left unchecked the person will die. Also, when the body is fighting pathogens it deprioritises other functions and stunting occurs. (USAID)

In areas with poor sanitation. Children experience vicious cycles of environmental enteropathy. Emerging evidence links early childhood diarrhoea and/or growth failure with an increased occurrence of risk factors for cardiovascular disease in the later life (DeBoar, 2012).

So, in a nutshell if a person is malnourished that person’s immune system is reduced thus be able to be attacked by diseases, at the same time they are going to be affected by host of problems like stunting and poor growth rate. (Nutrition) We need to cut this by implement simple systems like building toilets and providing clean water for washing with soap. The other way is to teach people to have good hygiene practices and change their behaviour. This is critical, but if people need to pay due regard so that it will not negatively affects the environmental health of the society.

We also have to break the TABOO of talking about it and get more organisations and governments involved as it’s put aside because of the composition of dealing with faecal waste. Cultural practices also play a role in either reducing or al This if left unchecked the walls of the intestines will not be able retain the nutrients that the person eats thus the person will suffer from malnutrition. The is need to be able the teach the community the different forms of hygiene promotion aspects.

Question 5: Assuming you have been appointed to head an organization dealing with health development in your area, describe the critical factors that you will consider in planning for health service in that area.

Answer:

In tackling this question lm assuming that my area is here in Chipinge where it was recently hit by the recent Cyclone Idai. Especially my home area of Kopa. This is where two rivers converged and swept more than 300 houses. This area is approximately 40 km from Chipinge town and was the epicentre of the cyclone. Health service would have been a priority in this area.

If l was appointed head of an organization dealing with health development in my area the critical factors will be affected by what has happened and we will want to know what is needed.

* Accessibility

This is critical in assessing the extent of the damage. We cannot help if we don’t know how to help. This can be handled by dispatching Helicopters, 4x4 vehicles and boats to remote areas that have little access to the outside world.

* Establish the need and affected victims.

Then when that personal are on the ground there is need to establish the need and roll out that health service. There are cases that there are critical needs that cannot be handled on site thus being transported to the nearest capable hospital and for us that was Chipinge Hospital.

* Facilities and personal available

This is to assatain if the local authority has enough capable personal and equipment to carry out the health services. If not, it might require that our organization buy equipment or bring in personal from other areas to help out the local health care services.

* Evaluation and monitoring

In what ever programs that are rolled out there is need to take stock and see if the affected victims are getting what they need considering their various ethnic and cultural backgrounds.

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