Diploma in water, hygiene and sanitation

Diploma in WASH assignment 2

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Question1. Why is hand washing an essential aspect in WASH interventions?

Hand washing, especially with soap is a key element of the prevention of diseases, spreading of diseases and vector barrier for personal health, blocking bacteria and viruses that cause diseases mainly related to the respiratory track and diarrheal related. WASH is water, sanitation and hygiene, hand washing been a key element of hygiene. Hands are the main path way for germ and virus infections as they come into contact with many surfaces and contaminates, hand washing with soap removes these germs thus becoming a prevention method for ingestion of these germs and viruses.”Adequate water, sanitation and hygiene are essential components of providing basic health services” (https://www.who.int/water\_sanitation\_health/publications/qa-wash-hcf.pdf) Hygiene is one of the key components of WASH. Hygiene is the practice of keeping oneself and one's environment clean and free of infection risk. “Though many hygiene practices can assist in preventing disease, the one with the strongest evidence for effectiveness and cost-effectiveness in developing countries is hand washing with soap”( https://www.lboro.ac.uk/orgs/well/resources/fact-sheets/fact-sheets-htm/Handwashing.htm). Washing hands with soap helps prevent gastrointestinal diseases like diarrhoea, respiratory diseases like influenza. UNICEF estimates that diarrhoea is responsible for 25% to 40% of child deaths in emergencies. Hand washing as a prevention method is critical in health care setting; adherence to proper hand hygiene can prevent most health care associated infections (nosocomial infections). Many studies have shown that washing hands with soap can prevent or slow down outbreaks for example one of the key components of cholera treatment and prevention is hand washing. So since WASH encourages protective health behaviours among populations and all the areas of WASH support and strength one another, it goes to say if one is lacking others cannot progress. That is why hand washing is essential aspect of a WASH intervention; it is a key element of diseases prevention.

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

WASH in emergency interventions is meant to save lives by providing immediate access to basic WASH services that is water, hygiene and sanitation. WASH is also meant to reduce the transmission of diseases and reduce the curve of disease outbreak. WASH services must meet the basic needs of people in an emergency situation by providing them sufficient quantity and quality of services for people to survive, stay in good health and maintain dignity. WASH is a critical determinate for the health and well been of a population in the initial stage of an emergency, natural disaster, war, displacement, famine or outbreak of a diseases. Population affected by these emergencies are usually more susceptible to illness and death from dieses which usually are related to a large extent to inadequate and unsafe water, inadequate sanitation and poor hygiene. The most significant causes of death are water borne diseases and vectors related diseases for example malaria and diarrhoea. The main objective of WASH is to reduce and prevent transmission of these diseases through provision of portable water, sufficient sanitation and promotion of good hygiene practices. Below are some of main standards of WASH that help in archiving these goals.

The main standards according to the SHPERE hand book include:

* Water supply 7,5 to 15 litres per person per day
* Excreta management of 1: 50 per communal latrine
* One hand washing point per latrine block
* Bathing , 1 shower to 50 people per communal shower
* Hygiene promotion 1: 500 people per HP
* Solid waste management
* Vector control

According to UNHCR WASH standards in acute emergencies include

1. Water supply

* Walking distance should be less than 30 minutes and a maximum of 500m
* Queuing time should be less than 15 minutes
* It should not take more than 3 minutes to fill a 20 litre container
* 500 people per water point ( 250 people per tap)
* 70% of households collecting protected treated water.
* Water sources should be separated from latrines by 30 meters

1. Sanitation

* 60% of households using latrines
* Separate facilities for men and women
* Sufficient privacy and security, particularly for women

1. Hygiene

* Hand washing with rubbing agents before and after eating, after use of latrines and before feeding children
* 70% of households should have access to soap
* Women should have access to menstrual hygiene materials

1. Schools

* 3 litres portable water per student per day
* 400 students per hand pump or per well
* 200 students per tap
* 50 students per latrine

1. Health centres

* 10litres portable water per outpatient per day
* 50 litres portable water per inpatient per day
* 1 water point per health centre
* 20 outpatients per latrine
* 10 inpatients per latrine.

In emergency interventions it’s important for WASH programmes to manage the entire water chain. That is to manage the water source making sure it’s safe and free of contaminates. Mange the treatment ensuring it has sufficient residual chlorine. Mange the collection that is making sure that the containers are safe and clean, the water point is functional, clean and safe. Mange the house holds storage and consumption that is that they are using safe utensils. WASH interventions have to mange as well the whole sanitation chain as well, enable positive health behaviours and ensure access to hygiene items.

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

The sphere standards state that people should be able to live in an environment that is not contaminated by solid waste and should have a means of disposal of waste conveniently and effectively. During emergencies the disposal of waste has become a critical problem as existing disposal and collection methods usually stop functioning or are disturbed. The emergency situation as well causes extra waste. The main issue related to waste during emergencies are the type of waste, waste disposal methods, quantity of waste, how hazarders waste is treated, what is been done about waste produced by the disaster and have suitable , sustainable waste disposal faculties. Natural disasters such as earthquakes, cyclones, floods etc produce a large amount of waste and rubble. Disasters or emergencies do not as well stop the production of domestic waste but the content of this waste may change. There been a lot medical activities in emergencies there is production of a lot of medical hazards waste and packages for NFI distribution that is organizations helping also produce waste. Some emergencies result in displaced populations resulting in IDP camps or refugee camps, these camps are usually located in areas with no working waste disposal mechanism. Thus waste management is becoming a problem in emergencies because of the risks it poses to the population. The challenges of waste during emergencies are numerous, first to public health. Where there is poor waste management it can expose the population to health risks and accidents. Second are environmental risks, waste can have a negative impact on the environment? It contributes to air pollution, soil contamination and land degradation. Third it affects the living conditions for the population. Poor waste management can create a unsightly and unpleasant environment attracting vectors contributing to health risks. Fourth is the financial impact, usually waste requires a large budget to manage and causes a burden on the population, governments and NGO’s. Fifth waste contributes to water source pollution. Poor waste disposal will pollute by leaching of runoff, leading to health issues for the population.

There are many health risks related to inadequate management of waste for instance when water sources are contaminated with foreign substances from waste like pathogens, toxic chemicals it creates a cause for dieses out breaks for example cholera and dysentery. Hazarder’s chemicals as a result of in proper waste management are a cause of death, when consumed directly, by contaminating consumption sources. It can be absorbed by plant leading to poisoning when these plants are consumed.

Vectors are attracted to waste; vectors like rats are known carries of disease. This vector’s in turn spread disease. Waste is a main breed area for vector mosquitoes are a typical example, water collects waste and becomes a breeding area leading to malaria outbreak. respiratory infections can also be caused by improper waste management this is cause by fungi grows on the waste or from air pollution from burning waste. Biohazard waste is one type of waste that has grown in volume in emergencies. Management of this waste is not executed well can lead to many problems. Medical waste not properly disposed of can be picked up by children or people scavenging for items, as this waste is contaminated it may lead to the spread of diseases. Waste management also has an impact on the nutritional status of the population in emergencies because improper waste management has an impact on food security through the destruction and contamination of arable land and pollution of surface water sources leading to choking of fisheries.

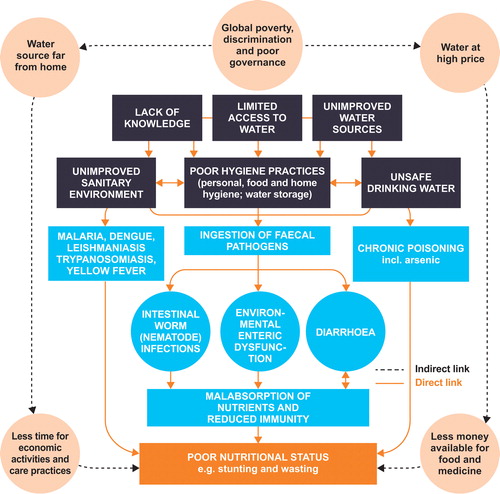
Chemical waste is difficult to get rid of since chemicals are usually indistingaiable in the natural environment and these pose a greater threat. Chemical waste affects water, air, soil and food. The costs related to chemical waste are astronomical and have long lasting affect thus affecting the population beyond the emergency. There also many physical risks that make waste management a problem during emergencies for example un-cleared or collect waste from natural disaster impede access to aid. It also impedes rehabilitation and reconstruction activities leave population venerable for long periods of time. There also dangers posed like injuries, it compromises health care and there are dangers of fire and explosions due to methane generated by decomposing waste. Waste is also unsightly, has a nasty smell and does not give dignity to peoples affected and living in the area.

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

The direct and indirect link between WASH (environmental health and sanitation) and the nutritional status of vulnerable groups refer primarily to a broader socio-economical environment such as access to water, sanitation and hygiene services. Under- nutrition is one of the world’s most serious problems, having a great impact on vulnerable populations. The three underlying causes of under nutrition are unsuitable or insufficient nutritional intake, poor care practices and diseases mainly related to directly or indirectly to poor WASH services. “According to the World Health Organization, roughly 50% of all malnutrition is associated with repeated diarrhoea or intestinal worm infections as a direct result of inadequate water, sanitation and hygiene”. (https://www.wvi.org/nutrition/nutrition-and-wash). House hold food insecurity, inadequate care and feeding practises and unhealthy environment (inadequate and poor WASH services) lead to inadequate dietary intake and diseases including diarrhoea, helminthiasis infections and conditions such as environmental enteropathy. “Diarrhoea and under-nutrition form part of a vicious cycle. Diarrhoea can impair nutritional status through loss of appetite, malabsorption of nutrients and increased metabolism” (Caulfield et al., 2004; Petri et al., 2008; Dewey & Mayers, 2011). Soil transmitted helminthiasis infection which is hookworm, round worm, whipworm etc is directly due to poor sanitation conditions mainly open defecation and poor management of faecal matter. “Soil-transmitted helminthiasis infections can affect nutritional status by causing malabsorption of nutrients, loss of appetite and increased blood loss. Heavy infections with whipworm and roundworm can impair growth” (O’Lorcain & Holland, 2000)

Children in poor sanitation conditions are exposed to high concentration of pathogens and chronic indigestion of these pathogens from oral consumption of faecal matter due to lack of hand washing and improper disposal of faecal matter due to poor sanitation conditions. This high indigestion leads to chronic diarrheal cases which in turn affects their absorption of nutrients.

Below is a diagram that shows and appreciates the wash environment and nutritional status of a vanurable population.



(Figure 1 Relationship between poor WASH environment and poor nutritional status Source: Dangour et al. (2013), adapted by Dr J. Lapègue, Action Contre la Faim (2014c) )

Several WASH interventions for vanurable groups can improve the nutritional status of a population these include hygiene behaviours such as hand washing with soap, food hygiene. As well as improved water supply that is safe portable water, improved sanitation services. In a nut shell improved environmental health. “According to the most recent global burden of disease estimates, access to improved WASH could prevent 361 000 diarrhoeal deaths per year among children under 5 years of age, representing 58% of the total diarrhoea deaths in this age group. This analysis also suggests that the greatest reductions in diarrhoea mortality (up to 73%) can be achieved through services that provide safe and continuous piped water supply and through sewerage connections that remove excreta from both households and community environments” (Pruss-Ustun et al., 2014).

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.

Planning health services for a population one has to take several factors into consideration. I will try and show some of these factors and expand on the factors to give a clear picture. Health services delivery should consider the whole spectrum of care from public health and curative health. All levels of care should be catered for that is self-care, home care, community care, primary and secondary health care.

The main factors that influence health services to be considered are the socio-economical status of the population. Here we look at education levels, the more a population has knowledge the more they will use health services and know the importance of a healthy community. Poor education or illiteracy affects the health of the individual and the community as a whole. When people do not have the knowledge of how to prevent and the importance curative treatment from diseases there is a tendency of out breaks for example cholera or malaria. Economical status of a population has be considered, people with low income or people that are affected by poverty have less to spend on their individual health well been, less to spend on improving the environment they live in and less to spend on health care. Poverty and diseases outbreak is linked thus the economical status of a population has to be considered when planning health services. Demographic data and characteristics have also to be considered in planning health services. Here we take into consideration the population size, population of different age groups and population per sex. For example if we have a high population of children under 5 years old we will need to consider vaccination services. We also have to look at the population density, an over populated community easily sacrum to diseases out breaks. The nutritional well been of a population should be taken into account as yet another socio-economical factor to consider when planning health services. If the nutritional status of a community low one can expect high cases of malnutrition and related diseases.

The second main umbrella factor is the environment. One has to consider physical factor of the environment and the geographical location of a population. The location a community is located can affect their health status for example people living in swamp areas are more prone to diseases like malaria and many waterborne diseases. A clean environment is vital to a proper health of a community. The environment determines the occurrence and transmission of diseases. When considering health services one must look as well at the water source of a community as a poor water source a big negative impact on the health of a community. The sanitation infrastructure of a community has to be taken into account; how a population dispose their waste has a impact on their health status. The shelter people use has also an imprint on the health of a community and should be considered in health service planning. The development of a community should be considered as well that is infrastructure development, how the community organizes and manages its resources should be considered as well.

The third major factor to consider is the government. Since the government is involved in planning, implementing and provision of health service one should always take them into account. The government is also responsible of policy and protocols for health delivery thus making them a major factor to consider. When considering critical factors for health service one should be knowledgeable of the policy and protocols that govern both public health and curative health services.

Social factors should be taken in to account; the culture and behaviour of a community should always give outmost priority. One should be knowledgeable and understand the context in which the health service will be provided. Social context determines how a population in particular the individual behaviour and has a great influence on the health of a community. The habits and culture of a people should always be taken in to account. A population with risky behaviours will need more health services. Also social norm of how people react when they are ill, what services do they seek, which gender use health services more. The influence of community healers has to be taken into account. When considering health services one must always take into account beliefs, culture, community setup and status.

Resources should also be considered when planning health services. Finance consideration, human resources, availability of skills, medication and access to a population. The social-political context should be considered in the area the health services will be provided. Finical resources can make or break any programme thus should be consider in implementation of health services. This determines the scope and the scale of the health services thus the impact on the population.

References

WHO (2019) https://www.who.int/en/news-room/fact-sheets/detail/diarrhoeal-disease

WHO (2015) Water, sanitation and hygiene in health care facilities: status in low and middle income countries and way forward: https://www.who.int/water\_sanitation\_health/publications/qa-wash-hcf.pdf

Jeroen Ensink: Health impact of hand washing with soap: https://www.lboro.ac.uk/orgs/well/resources/fact-sheets/fact-sheets-htm/Handwashing.htm

The sphere handbook P.135 Key indicators (fourth edition 2014)

L.F. Diaz and G.M. Savage (2003): Risks and costs associated with the management of infectious wastes risks http://www.wpro.who.int/environmental\_health/documents/docs/LFDRiskassessmentDec03Final.pdf

Jovana Dodos: (2017) Relationship between water, sanitation, hygiene, and nutrition: what do Link NCA nutrition causal analyses say?https://www.developmentbookshelf.com/doi/full/10.3362/1756-3488.17-00005

Dangour et al. (2013), Figure 1 Relationship between poor WASH environment and poor nutritional status adapted by Dr J. Lapègue, Action Contre la Faim (2014)

(Caulfield et al., 2004; Petri et al., 2008; Dewey & Mayers, 2011)

https://www.wvi.org/nutrition/nutrition-and-wash)

Caulfield et al., 2004; Petri et al., 2008; Dewey & Mayers, 2011: Improving Nutrition outcomes with better water, sanitation and hygiene

O’Lorcain & Holland (2000) The public health importance of Acaris lumbricoides