Diploma in WASH

Final Exam

Brian Tedley Otieno O.

Reg. G.E., Civil Engineering (Water and Sanitation)

11 December 2019

**Final examination**

**QUESTIONS**

**1) What is Sanitation and Hygiene?**

Sanitation is the provision of facilities and services for the safe management of human excreta, animal waste, disease carrying vectors, solid and medical waste and storm water to create an environment that does not predispose the public to infectious diseases.

Hygiene refers to practices focused at ensuring water sources/ supplies free of contamination as well as fostering personal hygiene through hand washing and bathing, domestic hygiene in ensuring food does not get contaminated and environmental hygiene ensuring that households are free of excreta and solid waste.

**2) Why are water, sanitation, and hygiene important?**

Adequate water, sanitation and hygiene services are critical in ensuring public health in any given community as they are preventive in nature. They are therefore a basic component of public health services. WASH services provide for water availability and quality, adequate sanitation facilities as well sufficient hygiene and health promotion targeting behavior change which is as vital as the infrastructure set up for WASH.

The short and long term effects of WASH are far reaching ranging from reduced infections and spread of diseases in the community; upholding the dignity of all in the community due to improved access to WASH facilities; improved protection of the vulnerable in the community who are usually most adversely affected by lack of access to WASH services including women and girls, the disabled and those of religious/ political/ethnic minorities; improved quality of life due to reduced cost of healthcare burden on poor families, as well as availability of more time to pursue revenue generating activities and to attend schools especially for girls.

**3) What is open defecation?**

This is the uncontrolled practice of defecating in the open environment instead of in toilets or designated areas. This may be due to lack of access to toilet facilities or due to cultural norms. Open defecation is a major cause of spread of diseases due to poor sanitation.

**4) What is Sanitation Marketing?**

Sanitation marketing is the application of social and commercial marketing approaches in increasing the demand and supply for improved sanitation facilities in a given community. It involves research to establish what products are desirable for the target population as well as determining how much they would be willing to pay for the improved facilities. Sanitation and hygiene promotion activities are also core to the success of sanitation marketing initiatives. As resources to fully implement WASH initiatives to the required scale are limited, sanitation marketing is emerging as a useful alternative funding tool for sanitation improvement as it makes it possible for local industries to meet the demands of non-poor and some poor local households.

**5) What are some of the biggest challenges you face in teaching hygiene and sanitation?**

* Apathy- Some of the most vulnerable and most affected by lack of adequate sanitation facilities do not care about these matters mostly because they have problems they consider as more pressing. They are more concerned about making ends meet than improving their hygiene standards
* Cultural norms- Some cultural practices conflict with what would be considered as standard sanitation and hygiene practices. Some cultures root for open defecation for example.
* Lack of resources/ sanitation facilities- Where some parts of the community are receptive to improving their sanitation and hygiene standards, lack of financing to establish adequate sanitation facilities becomes a major challenge. In the long run, many become desolate and continue with their unhygienic way of life as they cannot afford improved sanitation systems.
* Lack of local leader’s support/ interest- Some political leaders frustrate efforts to train their communities on improved sanitation and hygiene practices purely for their own political expediency.

**6) What is sustainable sanitation?**

Sustainable sanitation is a system that is designed to meet a given set of criteria and performance level over the entire design life of the system. This means that the system must be economically and socially acceptable as well as both institutionally and technically appropriate to protect the environment from contamination and thus protect human health in the long run. A sustainable sanitation system therefore takes in to account all the processes involved in collecting, containing, transporting, treating and finally safely disposing or reusing waste.

**7) What are the steps for planning and implementing a successful WASH behavior change campaign?**

WASH behavior change campaigns largely depend on the actual situation on the ground and what is generally acceptable or feasible in terms of customs, culture and resources. The scale and intensity of the campaign depends on the level of public health risk. Early stages of the campaign will be characterized by the need to procure adequate information on the scale and nature of need of the community and a rapid release of tailored information to them through interactive means. The steps are as follows;

* First, an assessment of the WASH situation of the target community to identify the key risks to their health and safety is necessary. This allows one to establish what the community knows, does and understands about WASH.
* Consultation- Women, men and children should be consulted to establish their unique hygiene needs. For instance, women and girls could require sanitary towels.
* Planning- This involves selection of practices and facilities necessary for an effective intervention.
* Clear definition of target audiences- This could be all affected community members especially caregivers to young children. This is useful in picking out the exact section of the community that is involved in risky unhygienic behavior.
* Clear definition of initial modes of intervention- Involves clear determination of key messages and channels of communication as well as advocacy and training needs for stakeholders.
* Recruitment and training of fieldworkers and development of outreach system. The capacity that already exists in governmental and community based organizations should also be assessed.
* Implementation- Distribution of hygiene kits, emphasis on provision of information and use of mass media and other campaigns.
* Continuous assessment- Continuous collection of qualitative data using participatory methods to understand the effectiveness of WASH messages and interventions from the campaign to establish what motivates those who currently adopt safe hygienic practices.
* Monitoring- Assessing use and level of satisfaction of the users for the WASH facilities.
* Implementation- Refining of communication plan to rapidly adapt intervention measures according to outcome of monitoring. Continuation of training and monitoring through interactive methods.

**8) What are the challenges faced by WASH Projects in Africa**

* Africa has limited resources to fund the infrastructure and hygiene projects required to achieve equitable access to improved WASH services for its entire people.
* The scale of needs in Africa for WASH services is enormous and daunting.
* In many regions, the challenge of culture and customs that work against safe hygienic practices are still a challenge.
* Extreme poverty is another challenge that causes apathy amongst those with limited access to WASH services. Most of the poor have other problems they consider more significant and therefore do not care much for changing risky unhygienic behaviors.
* Conflict and unrest causing displacement of people is also a big challenge. Migrating people are harder to train towards improved behavior change concerning hygiene and sanitation. The instability also constantly puts at risk the entire WASH infrastructure set up in such regions.
* Lack of capacity in government institutions to manage water resources is another huge challenge.
* The challenge of climate change resulting in prolonged droughts and uncharacteristically heavy rains causing flooding is also an impedance to WASH projects as the needs keep changing.
* A poor culture of operating and maintenance impedes the sustainability of WASH projects in Africa.
* Lack of sufficient governmental commitment to the implementation of WASH projects is a major challenge as well.

**9) You have visited one of the schools in your locality. What part of its surroundings can you see that satisfy the criteria for disease prevention? List the parts of the building and its surroundings, and state why they are important.**

* The surrounding is well kept and while the structures are old and simple, they are well maintained and clean. There is no accumulation of dust and debris or even garbage. This reduces breeding grounds for disease carrying vectors.
* Surrounding hedges are well trimmed and the grass is trimmed to prevent breeding of mosquitoes.
* Several old and new toilet blocks with distinct boys and girls sides are available. They are provided with rainwater harvesting tanks and tanks connected directly to municipal water therefore adequate water is available for cleaning, anal cleansing, flushing and hand washing.
* On the walls and on signboards are messages encouraging children to wash hands with soap before eating, handling food and after visiting the toilet. The messages are simplified and supplemented with drawings to appeal to the children more. This is a continuous campaign to encourage hand washing.

**10) You have asked the local county government to provide a license for your new hotel in town. The *inspector* asks you to assist him to describe the basic hygiene for your business before licensing. Kindly describe.**

* Personal hygiene for staff and customers- Easily accessible wash hand basins with soaps are provided. Clean and drying towels are also available.
* Food storage and handling- Refrigeration is available for foods that require cold storage while foods that require dry storage are stored in shelves in a clean storeroom. Cross contamination is prevent, as all staff must properly wash their hands before handling any food.
* Appropriate working clothe for staff- The employees are given uniforms, which must be washed frequently.
* Kitchen sanitation- Staff clean and sanitize the kitchen and equipment as they prepare meals continuously.
* Garbage disposal- Garbage bins are provided for organic and inorganic waste.
* Rest rooms- A clean rest room is available for staff and customers Water is available for flushing, anal cleansing and hand washing.

**11) You have to make a plan of action for the promotion of WASH in your town. Briefly describe the activities that need to be included in your plan.**

Any activity chosen should be entrenched in the participatory approach of engagement. Activities include the following:

* Exploratory Walks- The study team along with community representatives should walk around the area to familiarize themselves with the context and risky behaviors prevalent in the area.
* Structured and unstructured observations- An activity in which a list of preselected items are to observed to find out the expansiveness of existing WASH services and hygiene practices within the community.
* Interviewing key informants- Interviewing of anyone who can offer specific information such as health workers and village leaders.
* Community mapping- Ask participants to develop a map of their community identifying key places such as schools and markets.
* Three pile sorting- A range of drawings relating to defecation habits, water sources and hygiene to be discussed by participants in small groups. The cards are sorted I to different groups depending on whether the group thinks they are good, in-between or bad practices. A discussion should follow afterwards to understand their rationale and implications of their choices.
* Focus group discussions- People with related experiences such as mothers meet and discuss a specific topic of interest. This helps improve openness in discussions as women could fear speaking of certain topics in the presence of men for instance.