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**COURSE-WATER, HYGIENE AND SANITATION**

**WASH ASSIGNMENT-MODULE TWO**

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

* Hand washing (or hand washing), also known as hand hygiene, is the act of cleaning hands for the purpose of removing soil, dirt, and [microorganisms](https://en.wikipedia.org/wiki/Microorganism).
* Hand washing is an essential aspect in WASH interventions because hand washing is the first line of defense against the spread of many illnesses — from the [common cold](https://kidshealth.org/en/parents/cold.html) to more serious infections, such as [meningitis](https://kidshealth.org/en/parents/meningitis.html), [bronchiolitis](https://kidshealth.org/en/parents/bronchiolitis.html), [the flu](https://kidshealth.org/en/parents/flu.html), [hepatitis A](https://kidshealth.org/en/parents/hepatitis.html), and many types of [diarrhea](https://kidshealth.org/en/parents/diarrhea.html).
* Hand washing with soap is an important way to prevent transmission of diarrhoeal diseases. is an important way to prevent transmission of diarrhoeal diseases. Handwashing facilities need a regular supply of water, soap and safe drainage.
* Hand washing facilities need a regular supply of water, soap and safe drainage. Position facilities so that hand washing happens before touching food (eating, preparing food or feeding a child) and after contact with excreta (after using the toilet or cleaning a child’s bottom) .
* Hand washing promotion that supports behaviors, community engagement, and actions to reduce the risk of disease is fundamental to a successful WASH response.
* Hand washing should build on people’s own knowledge of risk and disease prevention to promote positive health seeking behaviour
* Germs can spread many ways, including:
* touching dirty hands
* changing dirty diapers
* through contaminated water and food
* through droplets in the air released during a cough or sneeze
* Contaminated surfaces through contact with a sick person's body fluids.

To stop the spread of germs in your family, make regular hand washing a rule for everyone. It's especially important:

* before eating and cooking
* after using the bathroom
* after cleaning around the house
* after touching animals, including family pets
* before and after visiting or taking care of any sick friends or relatives
* after blowing one's nose, coughing, or sneezing
* after being outside (playing, gardening, walking the dog, etc.)
* WASH interventions through Hand washing has the following health benefits:
* Minimizes the spread of [influenza](https://en.wikipedia.org/wiki/Influenza)
* Prevents infectious causes of [diarrhea](https://en.wikipedia.org/wiki/Diarrhea).
* Decrease respiratory infections.
* Decrease [infant mortality](https://en.wikipedia.org/wiki/Infant_mortality) rate at [home birth](https://en.wikipedia.org/wiki/Home_birth) deliveries
* Promoting good personal hygiene often requires that community members are mobilized towards this goal and awareness is raised about how to achieve it.
* WASH hygiene education programmes do more than simply tell people that if they do not wash their hands they will become sick because of pathogens they cannot see.
* To encourage hand washing to become part of the daily routine, suitable facilities must be located near to places such as latrines and kitchens, where they will be needed. If running water is available, the facilities should include a tap and a sink as well as soap.

1. **What are the main standards in WASH interventions in emergencies?**

* People are more susceptible to illness and death from disease, particularly affected by emergencies diarrhoeal and infectious diseases. Such diseases are strongly related to inadequate sanitation and water supplies and poor hygiene. WASH programmes/interventions aim to reduce public health risks.
* The main pathways for pathogens to infect humans are faeces, fluids, fingers, flies and food. The main objective of WASH programmes in humanitarian response is to reduce public health risks by creating barriers along those pathways.
* WASH intervention in emergiences help:
* promoting good hygiene practices;
* providing safe drinking water;
* providing appropriate sanitation facilities;
* reducing environmental health risks; and
* ensuring conditions that allow people to live with good health, dignity, comfort and safety.

WASH main standards reduce the risk of disease transmission in energiences.Below are some of WASH main interventions:

* Water supply standard access and water quantity

All people have safe and equitable access to a sufficient quantity of water for drinking, cooking and personal and domestic hygiene. Public water points are sufficiently close to households to enable use of the minimum water requirement. WASH intervention in emergencies take to consideration the following criteria

* Needs:

the quantities of water needed for domestic use may vary according to the climate, the sanitation facilities available, people‘s normal habits, their religious and cultural practices, the food they cook, the clothes they wear, and so on. Water consumption generally increases the nearer the water source is to the dwelling.

* Water source selection:

the factors that need to be taken into account are the availability and sustainability of a sufficient quantity of water; whether water treatment is required and, if so:

* the feasibility of this;
* the availability of the time
* , technology or funding required to develop a source;
* the proximity of the source to the affected population;
* and the existence of any social, political or legal factors concerning the source.. Disasters often require a combination of approaches and sources in the initial phase. All sources need to be regularly monitored to avoid over-exploitation.

* Measurement:

measuring solely the volume of water pumped into the reticulation system or the time a hand pump is in operation will not give an accurate indication of individual

consumption. Household surveys, observation and community discussion groups are a more effective method of collecting data on water use and consumption.

* Quality and quantity:

In many emergency situations, water-related disease transmission is

due as much too insufficient water for personal and domestic hygiene as to contaminated water supplies.

* Coverage:

In the initial phase of a response the first priority is to meet the urgent survival

needs of all the affected population. People affected by an emergency have a significantly

increased vulnerability to disease and therefore the indicators should be reached even if they are higher than the norms of the affected or host population. In such situations it is recommended that agencies plan programmes to raise the levels of water and sanitation facilities of the host population also, to avoid provoking animosity.

* Maximum numbers of people per water source:

the number of people per source depends on the yield and availability of water at each source. For example, taps often function only at certain times of day and hand pumps and wells may not give constant water if there is a low recharge rate.

* Water supply standard water use facilities and goods

People have adequate facilities and supplies to collect, store and use sufficient quantities of water

for drinking, cooking and personal hygiene, and to ensure that drinking water remains safe until it is consumed.

* Excreta Disposal

Safe disposal of human excreta creates the first barrier to excreta-related disease, helping to reduce transmission through direct and indirect routes. Safe excreta disposal is therefore a major priority, and in most disaster situations should be addressed with as much speed and effort as the provision of safe water supply. The provision of appropriate facilities for defecation is one of a number of emergency responses essential for people‘s dignity, safety, health and well-being. access to, and numbers of, toilets

In WASH lnterventions, it is important to:

* manage the entire water chain:
* water sourcing,
* treatment,
* distribution,
* collection,
* household storage and consumption;
* manage the entire sanitation chain in an integrated manner;
* enable positive healthy behaviours; and
* ensure access to hygiene items..

* Excreta disposal standard : design, construction and use of toilets Toilets are sited, designed, constructed and maintained in such a way as to be comfortable,

hygienic and safe to use.

1. **Waste Management is becoming one problem in the emergencies. Why?**

* Waste can be generated at the household, institutional or community level and includes medical waste. It may be hazardous or non­hazardous. For example
* Inadequate solid waste management poses a public health risk as it can create favourable habitats for insects, rodents and other disease vectors.(malaria)
* Poor incontinence hygiene management can be a major source of disease transmission in emergencies
* Untreated waste can pollute surface water and groundwater. Children may play in poorly managed solid waste, risking injury or sickness.(cholera)
* Excreta management:An environment free of human excreta is essential for people’s dignity, safety, health and well­being. This includes the natural environment as well as the living, learning and working environments. Safe excreta management is a WASH priority.
* A vector is a disease carrying agent. Vectors create a pathway from the source of a disease to people. Vector borne diseases are a major cause of sickness and death in many humanitarian settings due to poor management of waste. Most vectors are insects such as mosquitoes, flies and lice, but rodents can also be vectors. Some vectors can also cause painful bites.
* Vectors can be symptomatic of solid waste, drainage or excreta management problems, inappropriate site selection, or broader safety and security problems
* Uncontrolled human defaecation constitutes a high risk to health, particularly where population density is high, where people are displaced, and in wet or humid environment.
* Waste pickers, who earn money from collecting reusable materials from waste dumps, may be at risk of injury or infectious disease
* Solid waste can block drainage systems, generating stagnant and polluted surface water, which may be a habitat for vectors and create other public health risks.
* Management of the dead: Promote safe, dignified and culturally appropriate burial of dead persons, including identification of all persons. Let people identify their family members and conduct funerals. Do not dispose of bodies unceremoniously in mass graves. Mass burial may be a barrier to obtaining the death certificates necessary for making legal claims.

1. **Discuss how environmental health and sanitation affect the nutritional status of the vulnerable groups**

* Vulnerable groups may include .
* older people;

• Persons with disabilities and those facing mobility barriers;

• Women who have given birth–including girls, who are at increased risk of fistula;

• People with chronic illnesses such as asthma, diabetes, stroke or cancer; • girls and women who have experienced gender­based violence or have undergone female genital mutilation;

• People who have had surgery such as removal of the prostate; • women going through the menopause; and

* Young children and children psychologically affected by conflict or disaster. .
* Vulnerable populations has a broad and flexible definition in the context of environmental health and includes sub-populations that are potentially more vulnerable to the adverse health effects of environmental exposure compared to the general population. Intrinsic vulnerability factors include age, life stage (such as pregnancy), gender, ethnicity, and genetic polymorphisms.
* Extrinsic vulnerability factors include socioeconomic status (SES), health status, nutrition status, geographic proximity to sources of exposure, and various lifestyle choices.
* There is growing evidence that vulnerable populations bear a disproportionate burden of disease that is associated with environmental exposures.
* Inadequate water quantity and quality is the underlying cause of most public health problems in crisis situations. There may not be sufficient water available to meet basic needs,
* A number of environmental, social, demographic, cultural, and economic factors contribute to poor nutritional status among venerable group.
* At the same time, foods are unhygienically prepared, stored, and consumed in open environments that can be contaminated by various flies. Kitchen wares and clothes are unhygienically handled, and handwashing contribute to poor nutritional status among venerable group.
* In addition to using unsafe water, hygiene-sensitive household facilities such as kitchen and latrine surfaces are not easily and frequently washed, increasing susceptibility to harbor pathogens contribute to poor nutritional status among venerable group.
* Lack of sanitation, in particular, is strongly correlated with acute malnutrition and stunting.
* Malnutrition is a major health problem, especially in developing countries. Water supply, sanitation and hygiene, given their direct impact on infectious disease, especially diarrhoea, are important for preventing malnutrition especially among venerable group.
* Malnutrition affects all age groups, but it is especially common among the poor and those with inadequate access to health education and to clean water and good sanitation. More than 70% of children with protein-energy malnutrition live in Asia, 26% live in Africa, and 4% in Latin America and the Caribbean (WHO 2000).
* Use of safe water, sanitation facilities, and good hygiene can improve nutritional outcomes by addressing both immediate and underlying causes of malnutrition.
* Undernourished children become vulnerable to infections due to deteriorated immune system, leading to a vicious cycle of infections and undernutrition. Other infections, including intestinal worms, may interfere with digestion process by competing with the host for nutrients.
* Open defecation is still practiced in most communities and the few with sanitation facilities own traditional pit latrines, which can pose a risk of fecal contamination especially among venerable group.
* A number of environmental, social, demographic, cultural, and economic factors contribute to poor nutritional status among venerable group.
* The overall disease burden and treatment costs of diarrhea-associated infections and its consequences may affect the households’ food budget, which may limit the amount of food available, resulting in risk of insufficient nutrient intake and undernutrition among vulnerable groups.
* Water, sanitation and hygiene practices are fundamental human rights and contribute significantly to the nutritional status of venerable group.
* A fecal-contaminated environment is linked to chronic undernutrition, which reduces utilization of essential nutrients.
* Unsafe water and sanitation services, coupled with poor hygiene practices, kill and incapacitate millions of children leading to deprivation and minimized opportunities for many more.
* Malnutrition is both a medical and a social disorder, often rooted in poverty. Combined with poverty, malnutrition contributes to a downward spiral that is fuelled by an increased burden of disease, stunted development and reduced ability to work.
* Nutritional status is compromised where people are exposed to high levels of infection due to unsafe and insufficient water supply and inadequate sanitation.

1. **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.**

* Step One – Surveying the Environment: This often involves extensive information gathering to determine the health or illness profiles and experiences of the population of interest. It is meant to identify the current state of the issue under consideration.
* Step Two – Setting Directions: This involves setting goals and objectives, and it also involves establishing the standards against which current health/illness profiles, or current organisational or system performance, will be compared. This step is meant to identify the desirable future state (expressed as outcomes if possible) for the issue under consideration.
* Step Three – Problems and Challenges: This involves identifying and quantifying the shortfalls (if any) between what is and what ought to be.
* Step Four – Range of Solutions: This involves identifying the range of solutions to each identified problem or challenge. This step should also include assessing each possible solution in terms of its feasibility, cost and effectiveness so alternate solutions can be compared with each other.

This step often requires significant creativity, since no off-the-shelf solutions may be available for some problems and challenges.

* Step Five – Best Solution(s): This step involves a choice of the solution, or set of solutions, that should be implemented to address the problems or challenges identified in step three. The choice may need to take into account fiscal, political and other limitations.
* Step Six – Implementation: This step involves implementation of the chosen solutions, and often begins with development of an implementation plan.
* Step Seven – Evaluation: This step involves evaluation of the results of implementation to determine whether the implemented solutions are effective in achieving their goals.

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