Water, Sanitation and Hygiene Manual

WASH Training for Hygiene Promotion Staff

NRC NORWEGIAN REFUGEE COUNCIL

PCD The Partnership for Child Development | Imperial College London

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Introduction

This manual has been designed to train NRC hygiene promotion incentive staff on health and hygiene. It can also be used as a hand book and reference for the staff when conducting hygiene promotion activities in the communities. It is set out into separate topics, covering the concept and importance of hygiene, diseases that are present or a risk in Kakuma Refugee Camp and how to prevent them; monitoring WASH activities and communication skills.

The Hygiene Promotion staff have a great role to play in promoting hygiene in the community through disseminating messages to the community on how and why to adopt good hygiene behaviours and practices that can protect people from diseases.

Background

Why hygiene?

Diarrhoea is one of the top three killer diseases in developing countries, claiming the lives of more than three million children a year (WHO, 2014).

Improvements in water supply and sanitation in the last 20 years have helped to cut the incidence of diarrhoea. However if these technologies have had an impact on health, it is because they make better hygiene possible. Whether modern facilities are available or not, the best way to protect people from diarrhoeal diseases is to keep the people's living space free from germs that cause diseases.

Objective of the training:

- To enable the Hygiene Promoters to understand their roles and responsibilities in promotion of hygiene and sanitation practices.
- To equip the Hygiene Promoters with knowledge and skills to effectively disseminate key hygiene messages in the community including what people can do to prevent and control the spread of diseases and the proper use and maintenance of WASH facilities.
- To enable the Hygiene Promoters to transform and be agents of change in promoting appropriate and desirable hygiene and sanitation practices.
- To equip participants to understand the concepts/ elements and methodologies necessary for hygiene promotion.
- To enable the participants to understand causes, transmission routes, prevention, management & control of diarrheal and vector-borne diseases.
- To familiarize the participants with the tools for data collection, monitoring and presentation

Training topics:

1. Roles and responsibilities of Hygiene Promoters
2. Hygiene and sanitation promotion and the domains
3. Classification of hygiene and sanitation related diseases
4. Specific diseases: causation, transmission, signs & symptoms, prevention, control and management
5. Household visits and participatory methods for hygiene promotion
6. Role of gender in WASH
7. Communication skills

1. Roles and Responsibilities of HPs

The roles and responsibilities as clearly indicated in the HPs job description (JDs) define the duties and tasks of the hygiene promoters in their day to day activities.

1. Conduct house to house visits, disseminate hygiene messages and encourage Household members and the general community members to fully participate in hygiene promotion campaigns.
2. Monitor siting of latrines in collaboration with the beneficiaries, block leaders, beneficiaries, and artisans and monitor their quality.
3. Ensure latrine construction and slab production activities are constructed according to the NRC standards.
4. Work closely with the artisans to ensure repair and maintenance of latrines.
5. Provide daily and weekly reports on routine sanitation and hygiene promotion activities to the Hygiene promotion supervisor.
6. Monitor latrine cleanliness, usage and maintenance within your assigned blocks.
7. Participate in needs assessment, baseline surveys and any other study relevant to sanitation and hygiene promotion and overall NRC work.
8. Ensure all hand washing facilities provided are properly used.
9. Participate in NFIs distribution and other promotional materials to the beneficiaries from the assigned blocks.
10. Fill the monitoring checklists for latrines and hygiene promotion activities as well as collect user satisfaction views on safety and privacy of the latrines as well as appropriateness of the sanitation options.
11. Establish good working relationship and collaboration with other implementing agencies and work hand in hand with the existing WASH committees.
12. Assist in selecting the beneficiaries according to NRC vulnerability criteria, if requested.

2. Introduction to Hygiene and Sanitation

This session is designed to ensure that participants have an overview of, Hygiene, health and Hygiene Promotion.

What is Hygiene?

Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases.

What is Health Promotion?

Health Promotion entails empowering community members to take charge of their own health by raising awareness of the most prevalent diseases and building the necessary practical skills for prevention. Health promotion is all about prevention of diseases.

What is Hygiene promotion?

Hygiene promotion is a planned, systematic approach to enable people to take action to prevent and/or mitigate water, sanitation and hygiene-related diseases. It can also provide a practical way to facilitate community participation, accountability and monitoring Water, Sanitation and Hygiene Promotion (WASH) programmes.

Hygiene promotion involves ensuring that people make the best use of the water, sanitation and hygiene-enabling facilities and services provided and includes the effective operation and maintenance of the facilities.

The three key factors are:

1. **mutual sharing of information and knowledge**
2. **the mobilisation of affected communities**
3. **the provision of essential materials and facilities.**

Promotional activities should include, where possible, interactive methods, rather than focusing exclusively on the mass dissemination of messages. Hygiene promotion is vital to a successful intervention to prevent water, sanitation and hygiene behaviours.

Hygiene and sanitation serve an important role in disease prevention. Poor sanitation and hygiene aid in the spread of diseases mainly through the faeco-oral route and bites by vectors. Hygiene is defined as the conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness. It relies on sufficient quantities of water for cooking, bathing washing and handwashing. The simple act of washing hands at the critical times can significantly reduce the incidence of diarrhoeal diseases.

Sanitation involves improving access to, and use of latrines in order to separate faeces and infectious material away from people, and to prevent flies from breeding.

Improvement in WASH services must also be accompanied by improved hygiene behaviour, which is why health education is important. Hygiene and sanitation practices are greatly influenced by attitudes and behaviour of individual, family or community. Health education and hygiene promotion are therefore designed to empower individuals, groups and communities to participate fully and to critically think and make appropriate decisions to change behaviours and practice good desirable habits conducive to health.

Domains of Hygiene

Teaching:

By the end of the session, participants will understand the domains of hygiene as described below:

Personal hygiene: involves caring for oneself and keeping clean the hands, eyes, mouth, skin, armpits, nose, clothes and beddings as well as private parts to avoid bad odor and reduce the risk of disease. Handwashing with soap or ash is among the most effective and cheapest way to prevent diarrhoeal diseases which together are responsible for the majority of child deaths. Handwashing with soap helps reduce the incidence of diarrhoeal disease by more than 40%.

Hands readily become contaminated with faecal material after anal cleansing or after cleaning children's bottoms and stool. Rinsing fingers with water is not enough to remove sticky particles which contain germs.

Steps of hand washing

Step 1. **Wet hands with running water**

Step 2. **Apply soap**

Step 3. **Rub your hands vigorously to produce foam. Do not forget to rub the backs of hands, between fingers, under fingernails and wrists.**

Step 4. **Do not forget to clean nails**

Step 5. **Rinse away all soap**

Step 6. **Dry hands completely**

Critical handwashing times:

- After visiting the toilet
- After cleaning the bottom of a baby or child
- After disposing a child's faeces
- Before handling food
- Before cooking food or boiling water
- Before eating and before feeding the baby

1. Food hygiene: This involves keeping food clean and free from contamination and spoilage. It is important to protect food against contamination and spoilage at all stages: collection, storage, preparation, cooking and serving. In particular, it is important to wash or cook food before eating to kill or wash away any harmful germs. Foodborne illness also known as foodborne disease or food poisoning is any illness resulting from the consumption of contaminated food, pathogenic bacteria, viruses, or parasites that contaminate food, as well as chemical or natural toxins such as poisonous mushrooms.

Example of food borne illness include:

a) Bacteria – Vibro, salmonella, *E. coli*, shigellosis

b) Viruses – Hepatitis, poliomyelitis

c) Parasites – Taeniasis, cysticercosis

2. Environmental hygiene: Involves keeping home environment clean and free from vectors. Environmental hygiene encompasses solid waste management, liquid waste management and vector control. Vectors of public health importance include housefly, mosquito, tsetse fly, blackfly and lice. Many of these vectors are associated with, or breed nearby solid waste.

Solid waste is defined as any unwanted residue, remains, leftovers, discarded materials or by-products that are no longer required/needed by the initial user or producer.

Objectives of proper solid waste disposal

- To prevent diseases
- To maintain a clean environment
- To encourage resource recovery through salvaging
- To prevent contamination of water, land and air
- To reduce rate of fly breeding and other vermin like rats and mice

Solid waste is classified under domestic waste, street waste, commercial waste,

industrial waste, agricultural waste and medical/hospital waste. Disposal methods include burning, composting, incineration and burying.

3. Water hygiene: Water that is contaminated with faeces (or stool) can pose a severe risk to health, and is responsible for the spread of diseases such as Acute Water Diarrhoea (AWD), Cholera, Typhoid, Bacillary and Amoebic Dysentery, Poliomyelitis among others. Water must therefore be from a safe and reliable source and should be treated kill micro-organisms before consumption. Hygiene should be observed during collection, transportation and storage of water to prevent contamination.

Water gets contaminated through:

- Leakages in pipes
- Openings in the water tanks
- Cracks and openings on slabs around the hand pumps
- Spillage of engine oils and grease from gen-sets
- Run-off from rain water
- Animal droppings
- Bathing and washing clothes around the water source

Ask the community members what measures can be taken, by themselves, hygiene promoters, and water committees to maintain a clean water supply and clean environment. If not all the points below are raised, bring them in and explain what they mean and how they are done.

- **Regular checks** and inspection of pipes for breaks and leaks.
- **Regular cleaning** of water reservoirs/ tanks.
- **Regular cleaning** of water storage and handling containers at household level.
- **Treatment** of water with chlorine
- **Cleaning** of water slabs around the tap stands and draining off waste water.
- **Building latrines** away from water sources.
- Providing **lids/covers** on water storage tanks.
- **Fencing** of open water sources to prevent animals from entering.

Water that is obtained from unsafe water source, such as a stream, or an open well will require treatment at the household level prior to drinking to make it safe from germs. Examples of this include:

- **Boiling water:** water should be at a rolling boil for **at least 3 minutes.**
- **Chemical treatment:** Chlorine powder, Aquatab, PUR. Water should sit for at least 30 minutes before consumption.
- **Solar disinfection:** Sunlight contains Ultraviolet Rays which can destroy or kill germs: Let water sit in direct sunlight in **clear bottles** for **at least 5 hours.**

3. Classification of diseases related to hygiene and sanitation

There are many diseases that are associated with poor hygiene and sanitation practices and poor management of liquid and solid waste. The most common diseases are diarrheal diseases transmitted by human excreta (also known as faeces or stool) containing harmful organisms that come into contact with people through touching of faeces, eating food contaminated with faeces and drinking of contaminated water. In addition, some diseases are prevalent due to poor management of water. The sections below will discuss the risk factors associated with poor practices around water, sanitation and hygiene, and how to prevent them.

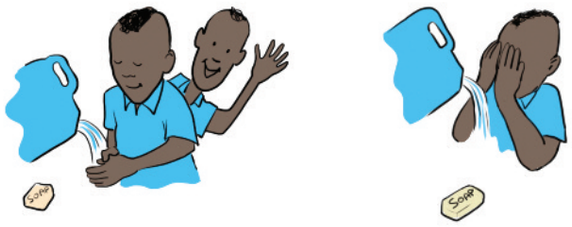
1. Water borne diseases: Diarrheal diseases contribute largely to child mortality and morbidity globally. They pose a particular risk especially in refugee camps where infrastructure is poor, and many people may be suffering from malnutrition. This diseases result when water, food or fluids is contaminated with pathogens, commonly from faecal matter. Diseases that are contracted as a consequence of consumption of unsafe water may lead to diarrhea and loss of fluid in the body causing dehydration and malnutrition. Water borne diseases include diarrhoea, cholera, amoebiasis, Typhoid & bacillary dysentery and Hepatitis A.

Prevention and control is through treating water prior to drinking it and proper food, water and environmental hygiene.

2. Vector-borne diseases: Vector-borne diseases are spread by biting insects, such as mosquitoes, sand fly or tsetse fly that rely on water for breeding. Diseases spread from these bites include **malaria, yellow fever, river blindness** and **filariasis** among others. **Filariasis** and **malaria** are spread by mosquito vectors. **Onchocerciasis** is spread by the black fly that breeds in fast flowing water and leads to river blindness. **Schistosomiasis** or **Bilharzia**, which is transmitted by infected snails that live in reeds along rivers and lakes, is caused by a parasitic worm infection. It causes swollen stomach, tiredness, poor growth and development in children, and later in life more severe complications caused by fibrosis of the affected organs. Snails are infected from people who have an infection defecating or urinating near to a water source where snails live.

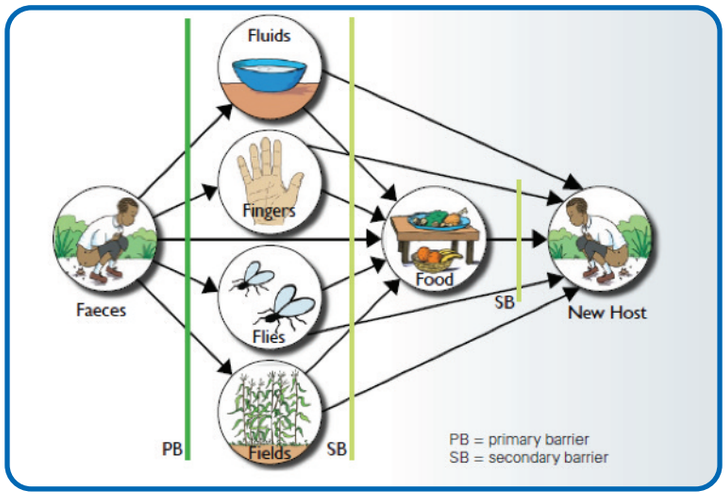
Prevention and control of these vector borne diseases is through draining stagnant water, indoor residual spraying (IRS), larviciding and sleeping under Long Lasting Insectside Treated Nets (LLITNs) In the case of onchocerciasis, active removal of fly breeding sites is required.

3. Water-related diseases: These diseases are due to lack of sufficient safe water. Diseases that fall under this category include: trachoma, scabies and skin infections. Trachoma is a bacterial infection of the eye and can lead to blindness if not treated. It is due to not washing the face and not keeping the household environment clean and free from flies. Prevention is by ensuring enough water is available for proper washing and ensuring good personal hygiene.



The F-diagram concept-Disease transmission route

There are multiple routes through which faeces can be consumed and cause disease. The diagram below which is known as the 'F-diagram' illustrates the relationship between faeces, flies, food, fluids, feet? and fingers as routes of transmission of diseases. It shows how faecal matter gets to our mouth through the different routes and the ways of breaking the transmission cycle. The green lines indicate places where onward transmission can be prevented through hygienic behaviours.



Using the diagram, we can see that the most important way of preventing spread of diarrheal diseases is:

- Proper disposal of faeces through use of pit latrine *(Flies, fluids, fields)*
- Proper hand washing with soap or ash at the critical times *(Fingers, food)*
- Drinking safe and clean water *(fluids)*
- Treating water by boiling or use of chlorine tablets *(fluids)*
- Covering food and water *(Flies, Fluids)*
- Proper cooking of food *(Food)*
- Providing general health education on water, sanitation and hygiene promotion with emphasis on food hygiene, personal hygiene, environmental hygiene
- Protecting water sources and storage tanks by fencing, providing lids, repair of leakages and broken pipes *(fluids)*
- Cleanliness around water collection points and draining of waste/dirty water *(fluids)*

4. Diseases: Causation, transmission, prevention, control and treatment

1. Cholera

Causation: Cholera is caused by bacteria known as *Vibrio cholerea*. It is spread through the faeco-oral route mainly via contaminated food and water. The material that is excreted or vomited contains large amounts of infectious material and without good hygiene practices it can make it back into people's food or drinking water, either by direct contamination, or not washing hands after caring for a sick individual. Many cases are usually asymptomatic, so if there is an outbreak, all faecal matter must be treated as infectious, and good hygiene and sanitation should be observed.

Symptoms: Cholera is characterized by sudden onset of profuse painless watery stool which is rice water-like and sometimes accompanied by vomiting and abdominal cramps. Infection with cholera leads to loss of body fluids leading to severe dehydration and thirst. Death can occur in severe cases and is particularly a risk for young children who are untreated. Seeking treatment gives a good prognosis.

Transmission/Risk factors:

- Person to person, mainly through direct contact with the infected individual or their faeces or vomit
- Ingestion of contaminated food or water (most common)
- Contact with the corpse/dead from cholera

Various risk factors that increase contamination include:

- Insufficient water supply
- Poor sanitation
- Overcrowding
- Underlying diseases or poor nutrition leading to lowered immunity

Prevention:

- Drink and use safe water: Boil or treat with chlorine, always store water in covered container
- Wash hands often and with soap (ash or sand) and safe water:
  - Before eating or preparing food
  - Before feeding small children
  - After using the latrine
  - After changing the baby
  - After caring for a sick individual
- Use latrines or bury faeces; clean latrines often
- Cook food well: make sure it is cooked or peeled
- Do not wash clothes or bathe yourself, children or sick individuals near to drinking water sources

Treatment: Line one management of cholera is by administration of oral dehydration salt (ORS) or preparation and administration of salt sugar solution at house hold level before transferring the patient to the nearest hospital. This prevents dehydration. Antibiotic treatment reduces fluid requirements and duration of illness. Make sure the sick individual is fed; nutrition and energy are required to fight the infection

A single case of confirmed cholera is considered an outbreak and therefore if one is suspected, the HPs have to quickly report to the WA/WO for appropriate action.

2. Trachoma

Causation: Trachoma is a blinding bacterial eye infection which is caused by *Chlamydia trachomatis*. It is spread by contaminated hands, cloths and flies. Infection can lead to swollen and inflamed red eyes, which over time turn inwards and the eyelashes scratch the eyeball, eventually leading to blindness if not treated.

Symptoms: There are various stages of trachoma infection and disease depending on the length of infection. It causes mild irritation in the eyes, and sometimes a discharge of pus/mucus. Repeated infection leads to eye pain and inflammation of the eye.

As the condition progresses, the eyelids turn inwards causing eyelashes to scratch the eyeball, leading to scarring. This can be very painful, and sometimes leads the infected person to pick out their eyelashes themselves. Repeated scarring of the cornea can lead to a complete loss of vision.

The bacteria leads to a red, inflamed eye with large white spots under the eyelid.

Transmission/Risk factors: Discharge from infected persons' eyes or nose can contain the *Chlamydia trachomatis* bacterium. Infection is transmitted through contact with eye and nose discharge of infected people, particularly children. It can be spread via **fingers, dirty towels, cloths** and **flies.** One particular housefly, Musca sorbens, has been implicated with transmission of the infection from person to person after feeding on the eye and nose secretions of an infected individual. This fly likes to breed in human faeces in particular.

Not using a latrine encourages flies that spread trachoma from person to person

Trachoma spreads when your face, hands and towels are dirty and have not been washed

Prevention: The global strategy for prevention of trachoma is known as **SAFE.**

S is for Surgery: People who have had trachoma for a very long time may need surgery to correct the damage done to their eyes. This repairs the damage done by the inflammation and inward turning of the eyelids, but corrective surgery, performed by a trained professional, must come before the eye is too badly damaged.

A is for Antibiotics: People with eyes infected with the germs should take medicine to kill the germs and clear the infection.

F is for Facial cleanliness: Keeping the face clean of eye and nose secretions keeps flies away, and stops flies transmitting the infection from infected eyes to uninfected eyes.

E is for Environmental improvement: By keeping the environment, schools and homes clean, and free from open faeces by using latrines, the flies do not breed and the risk of trachoma are decreased.

Surgery and medicine are needed in the more extreme cases, but prevention of infection through clean faces and use of latrines can help reduce the chance of catching trachoma.

3. Malaria

Causation: Malaria is a parasitic which affects millions of children especially in Africa and poses risk especially to children and pregnant mothers. It is caused by a parasite known as *Plasmodium*, transmitted when infected mosquitoes take a blood meal on an adult, child or baby. After infection, parasites infect the red blood cells, reducing the number of red blood cells, and leading to the signs and symptoms of the disease. Mosquitoes are infected when they take a blood meal from someone who is suffering from malaria.

Symptoms: include fever, headache and vomiting from between 10 and 15 days after a bite by an infected mosquito. The symptoms are often quite general, but it is important to seek treatment as soon as a case of malaria is suspected, particularly for the more severe cerebral malaria caused by *Plasmodium falciparum*, which can cause respiratory problems and anaemia.

Transmission/Risk factors: The mosquito of the species *Anopheles* is responsible for spreading the parasite. They bite at night, and therefore being outside at night is a risk factor. *Anopheles* breed in fresh water, often in small puddles of stagnant water, therefore there may be an increase in malaria during and just after the rainy season when there are more mosquitoes present. Populations at particular risk include young children, pregnant women, people with HIV/AIDS and immigrants from non-malarial areas.

Prevention: sleeping under a bed-net can prevent mosquitoes biting, as malaria mosquitoes tend to bite at night. This is particularly important for small children and pregnant women. Insecticide treated bed-nets and indoor residual spraying (IRS) can also help control the mosquitoes. Depending on the insecticide used, insecticide should be reapplied to indoor walls or bed-nets once every 6 months – 1 year to maintain the efficacy of the insecticide. Avoiding the collection of standing water can also reduce vector breeding sites.

Treatment: Suspected malaria should be confirmed using microscopy or a rapid-diagnostic test before administering treatment in order to prevent emergence of anti-malaria drug resistance. A course of artemisinin-based combination therapy (ACT) is the best available treatment for malaria. The malarial parasite is becoming more frequently resistant to anti-malarials, it is therefore very important to ensure infected individuals are taking good quality medication and that they complete the course of anti-malarials rather than stopping just when the symptoms go away.

5. Household visits and Participatory Methods for Hygiene Promotion

Hygiene promotion messages should be developed and designed in a simple manner which can easily be understood by the community. The messages should also be culturally acceptable. Messages can be disseminated using several methods including House to house visits, mass campaigns, group discussions, mass media, use of Information, Education and Communication (IEC) e.g. billboards, T-shirts, wall murals, leaflets among others.

For effective house hold visit interactive session, the following should be observed:

- Hygiene promoters to walk in pairs to address gender sensitive concerns and security
- Avoid visits at inappropriate times eg meals time, prayer times
- Seek acceptance and HH head consent before initiating the discussion
- Use polite and simple language to disseminate the intended message to reduce confusion and increase understanding

Steps for organizing a community mass campaign

- Assess the health risk needs of the population. This can be achieved through baseline surveys, assessment reports, KAP surveys
- Identify the problem
- Develop appropriate key messages for dissemination
- Identify the target group, population, locations
- Mobilize the necessary resources (logistics, PA systems, tools and human resource)
- Action taking/actual implementation
- Impact evaluation through M & E

6. Gender and WASH

Gender plays a huge role in WASH. It is important to ensure that all individuals, regardless of their age and gender benefit from improved WASH facilities. From improving health, to allowing dignity in day to day lives, the provision of WASH services is very important. Poor access of water and sanitation facilities can increase vulnerability of women and girls when trying to access these services. There are various reasons why women should be involved and participate in the planning, design and implementation of WASH interventions and the promotion of hygiene both at household and community levels. This includes:

- Women are the principal users of water at household level, and thus have considerable knowledge on the amount of water required to be used for different tasks at household level
- Women are frequently the primary care givers in a household, and responsible for teaching their children good habits from a young age, as well as being responsible for keeping the family health
- Women are charged with responsibility of collecting water for household consumption and maintaining hygiene ie bathing babies, sweeping, cooking etc
- Women are frequently the ones preparing food, so it important they are aware of the risks of poor hygiene
- Women participation in development projects is strong and it ensures sustainability, ownership, status and opportunities for income generation

7. Communication Skills

Communication is a process of passing information from one person (sender) to another (intended receiver) with an aim of getting the intended feedback or response. The process of communication includes transmission of information, ideas, emotions, skills, knowledge by using symbols, words, pictures, figures, graphs or illustrations. The act of communication is referred to as 'Transmission'.

In order to correctly identify the best way of conveying health messages to the audience, it is important to identify the:

- Purpose of the message
- Targeted audience
- Channel for dissemination
- Elements of communication

To ensure effective communication is achieved, one should;

- Listen actively
- Concentrate carefully
- Choose an appropriate channel & reduce the chain of transmissions (ie messages are distorted by various barriers if passed through too many people)
- Use understandable language for the intended audience
- Choose a quiet venue
- Have a supportive document and note incidents as explained by the beneficiary

Elements of communication

- **Sender:** Is the transmitter, which operates on the message in some way to produce a signal suitable for transmission over the channel.
- **Channel:** Is the medium used to transmit the signal from transmitter to receiver.
- **Receiver:** Performs the inverse operation of that done by the transmitter, reconstructing the message from the signal.
- **Destination:** Is the person (or thing) for which the message is intended.
- **Message:** A concept, information, communication or statement that is sent in a verbal, written, recorded or visual form to the recipient.
- **Feedback**

Notes

Notes

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