



COVID-19 Infection Prevention and Control (IPC) and WASH Technical Guidelines for Communities and Camp- like settings

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Acronyms

AGP	Aerosol Generating Procedures
CCCM	Camp Coordination and Camp Management
CDC	Center for Disease Control
COVID	Corona Virus Disease
FRC	Free Residual Chlorine
HH	House Hold
HK	Household Kit
HP	Health Promotion
HWW	Hand Washing with soap
IDP	Internally displaced person
IPC	Infection Prevention and Control
MERS	Middle East respiratory syndrome coronavirus
MoH	Ministry of Health
PPE	Personal Protective Equipment
POC	Protection of Civilian
SARS	Severe Acute Respiratory Syndrome
TWG	Technical Working Group
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations International Children’s Fund
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WUC	Water User Committees

1.1. Introduction

The provision of safe water, sanitation and hygienic conditions is essential for protecting human health during all infectious disease outbreaks, including of coronavirus disease (COVID-19). Ensuring evidence-based and consistently applied WASH and waste management practices in communities, homes, schools, marketplaces, and other public places will help prevent human-to-human transmission of COVID-19 virus.

This Standard Operating procedure manual provides an overall guidance to the water, sanitation, hygiene and infection prevention and control response activities being undertaken in South Sudan to mitigate the spread of the SARS-COV-2 virus within communities and camp-like settings including refugee camps, IDP camps and protection of civilian (POC) camps and the general public. It specifically provides guidance to WASH practitioners and health-care providers working to support COVID-19 response activities among communities within the country. This infection prevention and control advice is considered good practice in response to the COVID-19 pandemic. It is based on the best evidence available from previous pandemics and inter-pandemic periods and focuses on the infection prevention and control aspects of this disease only, recognizing that a preparedness plan will consider other counter measures.

The inclusion of Water, Sanitation and Hygiene guidance to the Infection prevention guidance has been prepared in response to the challenges experienced in the prevention and control of COVID-19 in settings where WASH services are limited and where there is emerging evidence on the presence of viral fragments in excreta and untreated sewage.

It serves to compliment previously approved Standard Operating Procedure documents and guidelines and has been aligned to international guidelines published by the World Health Organization (WHO), the Global and South Sudan WASH Clusters.

N.B. The emerging evidence base on COVID-19 is rapidly evolving. Further updates may be made to this guidance as new detail or evidence emerges

2.1.0 COVID -19 routes of transmission

The transmission of COVID-19 is thought to occur mainly through respiratory droplets generated by coughing and sneezing, and through contact with contaminated surfaces. This is consistent with a recent review of modes of transmission of COVID-19 by the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC).

Infection control advice is based on the reasonable assumption that the transmission characteristics of COVID-19 are similar to those of the 2003 SARS-CoV outbreak. Initial research has identified the presence of COVID-19 virus in the stools and conjunctival secretions of confirmed cases. All secretions (except sweat) and excretions, including diarrheal stools from patients with known or possible COVID-

19, should be regarded as potentially infectious. However, the risk of transmission of the COVID-19 virus from the faeces of an infected person appears to be low.

2.2.0 Survival in the environment

In light of limited data for SARS-CoV-2, evidence was assessed from studies conducted with previous human coronaviruses including MERS-CoV and SARS-CoV. Human coronaviruses can survive on inanimate objects and can remain viable for up to 5 days at temperatures of 22 to 25°C and relative humidity of 40 to 50% (which is typical of air-conditioned indoor environments).

Survival on environmental surfaces is also dependent on the surface type. An experimental study using a SARS-CoV-2 strain reported viability on plastic for up to 72 hours, for 48 hours on stainless steel and up to 8 hours on copper. Viability was quantified by end-point titration on Vero E6 cells. Extensive environmental contamination may occur following an AGP.

The rate of clearance of aerosols in an enclosed space is dependent on the extent of any mechanical or natural ventilation and the size of the droplets created. The greater the number of air changes per hour (ventilation rate), the sooner any aerosol will be cleared.

While the presence of the COVID-19 virus in untreated drinking-water is possible, it has not been detected in drinking-water supplies. Furthermore, other coronaviruses have not been detected in surface or groundwater sources and thus the risk of coronaviruses to water supplies is low. This is further reduced when water is chlorinated.

2.3.0 Infection Prevention and Control and WASH Strategies

According to WHO, limiting human to human transmission of COVID-19 requires a range of infection prevention and control measures which are facilitated by availability of safe water supplies, proper management of sanitation facilities and improved environmental hygiene. The provision of water enables regular hand hygiene and cleaning. Water services should not be cut off because of consumers' inability to pay the bills. WASH partners too should provide access to water services to people who cannot access it through other immediate actions such as protected boreholes, water tankers, installing surface water treatment systems (SWAT), and extending piped supplies etc. Individuals and organizations involved in providing water and sanitation services should be designated as providing essential services and be allowed to continue their work during movement restrictions and have access to Personal Protective Equipment (PPE). The use of PPE should be based on exposure risk (e.g. activity type) and the transmission dynamics of the pathogen (e.g. contact, droplet). Ensure availability of functional hand hygiene facilities with soap to protect staff from contracting the virus.

2.4.0 Hygiene promotion

Hygiene promotion will focus on the following key areas:

- Training and orientations
- Frequent handwashing

- Distribution of hygiene kits
- Social distancing of at least 2 meters and its importance
- Use of face masks in public places
- Risk Communication and Community engagement (RCCE)
- Information, Education and Communication (IEC) materials

2.4.1 Training provisions

- All staff and volunteers carrying out messaging should be trained on COVID-19 key messages, as well as on how to protect themselves.
- Organizations should train their direct staff, in groups of 10s or less, depending on the available training space. It is encouraged to conduct trainings in an open space while still observing physical distancing of 2 meters between participants. Training of partners should be implemented in the same way, then rolled out to community workers/volunteers/hygiene promoters in small group sessions.
- Training contents: Training materials should be based on the TWG approved COVID-19 competencies for non-health workers.
- Training should include practical elements of how to conduct health promotion sessions in the field while maintaining social distancing, for example:
 - Explain at the start the distance to be maintained between participants
 - If people step towards you, take a step back
 - If possible, conduct sessions and HH visits while seated and place the chairs at a safe distance apart to prevent people from getting too close. Appropriate distance should be observed between participants where mats are used
 - Special attention should be given to debunking myths about how to protect one's self from COVID-19
 - It is important to ask them what they have heard about COVID-19 and how to treat or prevent it when presenting the materials. Then address each of their statements to ensure they have the most accurate information
 - During training, discussion time should be dedicated to speaking with communities about context-specific issues, such as:
 - religious practices and how to adapt them to respect social distancing
 - how to protect one's self when going shopping and to marketplaces
 - how to maintain social distance in small spaces/crowded camp environments
 - Ensure all are informed on how to report suspected cases or how to refer those who are ill to seek proper medical attention
 - How to protect vulnerable groups (people with underlying health issue) if there is suspected or confirmed case in a household
 - Training should also discuss how people recover from non-severe COVID-19 (rest and fluids) to not create undue panic

- Emphasis should be placed on visiting health centers only if you have symptoms or following a call to toll-free number 6666 in which seeking treatment at an approved center is advised
- It is also recommended to use the MoH/UNICEF/WHO guidance on RCCE for developing further training materials which are context specific.
- Hygiene promoters should roll out messaging at HH-level, with small group messaging happening only if social distancing can be respected
 - Training/messaging should also target existing committees which have been created by the community or through projects and which may have a large influence on the behavior of populations.
- All hand-outs and training materials should be available in printed version to participants, if possible, in local languages.

2.4.2 During hygiene promotion sessions

- All messaging should be done at household level, while maintaining a distance of at least 2 meters between yourself and the participant(s), ideally outdoor under trees and shades.
- Gathering people together for mass messaging is discouraged. Messaging at common gathering sites, such as water points, is also discouraged as it will be difficult to control social distancing in these contexts
- Organizations should provide face masks, disposable gloves, hand sanitizers and soap to staff and volunteers working in the field
- Messaging will focus on the IPC TWG COVID-19 approved competencies for non-health workers guidance. Key messages for COVID-19 prevention:
 - Wash your hands frequently. Wash your hands with soap and water or use an alcohol-based hand rub if hands are not visibly soiled.
 - Cover your mouth and nose with a flexed elbow or tissue when coughing and sneezing.
 - Keep a 2-metre distance between yourself and someone who is coughing, sneezing or has a fever.
 - Avoid touching your eyes, nose, mouth, spitting in public
 - If you have fever, cough and difficulty breathing, seek medical care. Phone ahead and inform the health center when you will visit.
 - Use face masks when in public places like markets, distribution sites, offices, etc. for people with ages of 6 years and above.
- Messaging will also be required at community and religious leader level to assist in message acceptance and retention rates. Community leaders should be informed of restrictions on large gatherings and asked to lead by example.

2.4.3 Group meetings

- Where possible no groups of more than 10 people should be assembled for activities
- Meeting spaces should allow for proper social distancing (2 meters between each participant) and be well ventilated
- Meeting spaces (mats, chairs) should be cleaned with 0.1% chlorine solution cleaning solution before and after meeting
- Group meetings should be done outdoors not indoors to allow free air circulation to avoid infection
- All participants should wash their hands or use hand sanitizer before entering meeting. If necessary, organizations can travel to meeting sites with portable handwashing stations and soap.
- If infrared thermometers are available, temperature of participants should be taken at entrance to meeting space. Those with a temperature of more than 38°C will not be allowed entrance and should be provided guidance on self-quarantine and how to seek medical attention
- If thermometers are not available, participants should be asked to declare any symptoms (dry cough, fever, and shortness of breath) they might be experiencing. Those with relevant symptoms will not be allowed entrance and should be provided with guidance on self-quarantine and how to seek medical attention. If possible, they can be provided with masks.
- Staff or volunteers conducting the meeting, taking temperatures or cleaning spaces should be provided with disposable gloves and hand sanitizers or other relevant PPE.

2.4.4 The use of face masks

Following emerging evidence that consistent and proper use of face masks can reduce the risk of human to human transmission of SARS-COV-2, all persons over the age of 6 six years are advised to always wear home-made clothe face masks while in public. (Annex 2)

Organizations should ensure they have adequate supplies of disposable gloves, soap, hand sanitizers and other relevant PPE for those who will be working in the field. The use of PPE should be based on exposure risk (e.g. activity type) and the transmission dynamics of the pathogen (e.g. contact, droplet

When giving the mask, clearly explain that they are only effective when used properly, with the following steps:

- Wash hands before removing mask from package
- Only handle edges of mask when putting it on – touching the front of the mask can contaminate the mask
- While wearing the mask, do not touch your face – touching the mask can transfer the virus from your hand to your face, putting you at higher risk of infection
- Remove the mask when it becomes damp

- To remove the mask, first wash your hands, then remove from the elastic, avoiding touching the front of the mask. Immediately dispose it in trash can with lid. Then, wash your hands again
- Disposable masks are for one time use only and must be disposed of properly after use
- Reusable cloths masks can be used with proper washing, soaked in hot water first and after wash with clean water and soap and dry in the sun.
- The mask can create a false sense of security, therefore there is need to emphasize that the most effective ways of preventing COVID-19 infection are regular handwashing, social distancing, avoiding touching face, and practicing respiratory hygiene

2.4.5 Hand hygiene materials.

The ideal hand hygiene materials for communities and homes are recommended in the following order:

Water and Soap

- Soap does not need to be antibacterial and evidence indicates that normal soap is effective in inactivating enveloped viruses, such as coronaviruses
- Where bar soap is not feasible, a soapy water solution can be used by diluting powdered laundry soap or liquid soap.

Alcohol-based hand rub

- Alcohol-based hand rub should contain at least 60% alcohol.

Chlorine solution of 0.05%

- For chlorinated water, it should be a temporary measure, used where soap or Alcohol-based hand rub are not available and where there is a precedent. Also, it is not recommended for use at homes.

2.4.6 Messaging on hand washing:

Increased messaging should be carried out with communities about handwashing beyond the 5 critical times to ensure it takes place before and after touching any communal surface.

Key timings for handwashing include:

- After coughing and sneezing and/or disposing of a tissue,
- On entering the home having come from public places,
- Before preparing food
- Before and after eating and feeding/breastfeeding
- After using the toilet, or changing a child's diaper
- After touching animals.
- When caring for sick

Where possible, organizations should prioritize the distribution of hand washing stations and soap, alongside HP messaging, at community gathering points.

- Latrines

- Bathing spaces
- Water collection points
- Community meeting centers
- Schools
- Churches
- Distribution sites
- Entrances to the camps
- Markets

To prevent theft and encourage proper use of the materials, hand washing stations and soap should be entrusted to community cleaning committees (if they are in place), school directors, water management committees, etc. If committees are already in place, they can also be responsible for daily checks of water levels and soap in the stations. If such a committee does not already exist, one can be created in coordination with the community leaders and CCCM in the area. These committees should receive additional training on COVID-19 and the importance of hand washing.

Where committees cannot be established, e.g. in marketplaces and camp entrances, volunteers can be hired to manage the hand washing facilities with provision of incentives (see guideline on incentives below). Most importantly, the volunteers should be trained on COVID-19 key messages so that they can protect themselves and inform community members on the importance of handwashing. They become monitors of adherence to hand washing.

2.4.7 Handwashing facility options

Several design features should be considered in selecting and/or innovating on existing handwashing facility options. These features include:

- Touch free, that will minimize the likelihood of re-contamination: either a sensor, foot pump, or large handle so the tap can be turned off with the arm or elbow
- Soap dispenser: for liquid soap either sensor controlled or large enough to operate with the lower arm; for a bar of soap, the soap dish should be well-draining, so the soap doesn't get soggy
- Grey water: ensure the grey water is directed to, and collected in, a covered container if not connected to a piped system
- Drying hands: paper towels and a bin provided. If not possible, encourage air drying for several seconds
- Materials: generally, the materials should be easily cleanable and repair/replacement parts can be sourced locally
- Accessible: should be accessible to all users, including children and those with limited mobility. Several handwashing designs have been implemented in households, schools and in public settings.

Figure 1: The principles for COVID-19 HWWS facilities for reducing risk of disease transmission and making the facilities more functional, more desirable, and more used (UNICEF April 2020)



2.4.8 COVID-19 Household kit distributions

Normal hygiene kit distribution will continue to be done depending on need and history of distributions. Blanket distribution of the COVID-19 kits is suggested in camp settings given the proximity of households and difficulties in conducting targeted distributions. Outside of camp settings, vulnerable households should be identified using criteria such as age, pre-existing conditions, and risks of exposure. The recommended COVID-19 kit for 3 months for a family of 6 members is as follows:

DESCRIPTION	Unit	QTY
LIST OF ITEMS OF KITS/HH		
Flyer with COVID messages and cleaning and disinfection instructions	Flyer	1
800 grams washing soap	Bar	6
20L Plastic Bucket with Lid and tap	Pieces	1
20L Plastic Bucket with Lid	Pieces	2
Household size: 6		
Distribution frequency: every three months (could be reviewed with post distribution monitoring)		

This is a minimum kit; partners can provide more soap and other items as informed by post distribution monitoring reports.

To minimize close contacts among the population, large gatherings of people are not recommended for distribution of hygiene kits. IPC TWG instead recommends that the kits be distributed directly to households through door to door distributions. However, if this is not feasible in a specific setting, alternative means of distribution, such as block distributions or distributions through vouchers could potentially be used if approved and implemented in close coordination with CCCM and local authorities. Distributions, both communal and household level, should be accompanied by sufficient handwashing stations and/or hand sanitizer for regular use by recipients and distribution staff

Distribution, if not able to happen at HH level, should be planned in small groups of 10 households (1 individual per hh) by respecting social distancing (at least 2 meters). Distribution plans should be developed based on the size of the distribution site and how many people the site can contain while allowing social distancing. Pre-distribution awareness should be done at HH-level and with community leaders to inform people about social distancing protocols and requirements for entrance to the distribution site. Organize households with the help of the community leadership and CCCM and inform each household to come to the distribution site at their allocated time. If vouchers are available, distribute them ahead of time. Ensure that the hygiene items are kitted before the distribution. To prepare the distribution site, the following can be done:

- Identify and mark with tape/rope and signs the entrance, area for handwashing, the temperature check, covered area for those with fever, waiting area, kit collection point, and exit. A site plan can be developed showing all the areas and the flow of beneficiaries to avoid the spread of coronavirus
- The allocated area should be spacious enough to allow beneficiaries to sit/stand at least one meter apart from each other. Thus, mark the standing/sitting points in everyone meter
- Set up hand washing areas with adequate supply of water and soap
- Optional: Allocate areas for body temperature checks by health personnel. This has to be agreed with CCCMs and health actors operating in the camp
- Optional: Establish sheltered/covered area with chairs for beneficiaries that do not receive clearance at the body temperature check point. The people identified with high fever will then be managed by the health staffs at the distribution site
- Ensure that there are clearly marked entrance and exit points in the distribution area
- Instruct beneficiaries to maintain 2 meters from each other throughout the distribution process
- Using rope or tape, mark off a one-meter area around the desk at the collection point to ensure that the collection point is accessible to only one beneficiary at a time

Minimum number of staff at a distribution site: 1 person directing people at the entrance to the hand washing stand; 1 person taking temperatures; 1 person checking vouchers and getting a

signature/thumb print on the distribution list; 1 person handing out HKs. To manage flow at the distribution site, the following must be done:

- Upon arrival at the distribution site, direct beneficiaries to the hand washing area and then to the temperature check area to have their body temperature assessed using a noninvasive thermometer (Optional as stated above)
- If a beneficiary has a fever (38°C or above), they should be directed to the specified sheltered/covered area for a follow up by health personnel at the distribution site (Optional and should be done in consultation with health partners as stated above)
- Beneficiaries cleared at the temperature check area are to be directed to the verification checkpoint
- Beneficiaries should not pass through the distribution point more than once
- There should be no physical contact between people at the distribution site
- The distributor at the collection point should place the kit on the table at the distribution point and step back, permitting the beneficiary to collect the kit
- Following the collection of the HK, beneficiaries are to be directed to exit the collection site and encouraged to depart the distribution site. Beneficiaries should wash their hands before departing the distribution site

On completion of distribution, the distribution point (room/ area/ tarpaulin) should be swept clean and cleaned with 0.1% chlorine solution. All tapes, ropes and signage must be removed. Hand wash stations must also be removed and stored. It is mandatory that all staff at the distribution site perform hand sanitation and follow general hygiene practices.

Where possible, distribution of hygiene kits and soap should be combined with food and other NFIs distributions to reduce exposure of communities through multiple gatherings. Therefore, organizations intending to distribute hygiene kits and soap are encouraged to liaise with the those conducting distributions so that they coordinate and share schedules to combine the efforts as we are targeting the same community.

2.5.0 Physical distancing in public places

This SOP recommends that individuals maintain a physical distance of at least 2 meters between individuals when in public to avoid transmission of the SARS-COV-2 virus. Further guidance on maintaining physical distance in public places as means of Infection Prevention and control is provided by the South Sudan Physical and Social Distancing guidelines developed by the Risk Communication and Community Engagement Technical Working Group (Annex 3)

2.6.0 Water supply

Priority remains to ensure that water is available for hand washing and safe provision of drinking water free from disease causing pathogens, regular cleaning, and disinfection purposes, to shorten the persistence of the virus on surfaces and bodies. Minimum of 15 L/p/d (drinking, bathing/personal

hygiene, clothes washing, and cooking) according to sphere guidelines should be maintained. Higher quantities of water are recommended with the increased need for hand washing and cleaning.

- Systematic chlorination of water points with water quality monitoring should be considered essential in the COVID -19 WASH response. FRC of 0.5-1mg/l must be maintained
- Work with Water User Committees (WUCs), community leaders and CCCM to regulate influx of people at water points and ensure physical distancing measures or consider using physical markers to direct physical distancing
- Use of water points just for collection and prohibition of other activities on site (e.g. laundry)
- Ensure handwashing with soap before touching the tap. Install hand washing facilities at water points with a dedicated operator to ensure water, soap availability and adherence. This can be discussed with WUCs on how this can be done and monitored
- Adapt water points operation schedule to allow less people at a time (e.g. increase the number of delivery points, longer opening hours of water points) – encourage with WUCs for the involvement of a dedicated operator to reduce handling of the water point
- Consider water collection schedule allowing separate timing for high risk, COVID 19 home-patients and general population
- Disinfect hand pump handle/ water taps with a disinfectant or 0.1% chlorine solution in high risk areas/ camps daily. Those responsible for cleaning using disinfectant should also wear PPE (mask, gloves)
- Build capacity of the WUCs in O&M and increase spare parts contingency stock availability to mitigate potential lockdown and markets disruption

2.7.0 Sanitation facilities and the handling of faeces

Safe and proper sanitation is also key in the prevention of COVID-19. Excreta disposal in the camps and host communities must continue through ventilated improved pit latrines. Anyone handling faeces should follow existing WHO contact and droplet precautions and use PPE to prevent exposure, including long-sleeved gowns, gloves, boots, masks, and goggles or a face shield if there is risk of splashes. If diapers are used, they should be disposed of as infectious waste, as in all non-outbreak situations. After disposing of excreta, bedpans should be cleaned with a neutral detergent and water, disinfected with a 0.1% chlorine solution, and then rinsed with clean water. The rinse water should be disposed of in a drain, toilet, or latrine. Other effective disinfectants include commercially available quaternary ammonium compound

The latrines should be cleaned and disinfected at least twice a daily by trained hygienist and equipped with PPE (gown, gloves, boots, mask, and a face shield or goggles). Workers should be properly trained in how to put on and remove PPE, so that these protective barriers are not breached. If PPE is not available or the supply is limited, the frequency of correct hand hygiene should increase, and workers should keep at least 2m physical distance to avoid the spread of COVID-19. The ratio of people to latrines is 1:50 latrines (sphere)

- Ensure that all latrines are functional, clean and have hand washing stations with soap

- Ensure that the committees have adequate cleaning materials including disinfectants. Increase monitoring of the committees to ensure that cleaning is done regularly
- Avoid sharing facilities (water points, latrines, shower) between households with suspected/ confirmed cases and neighboring families
- Daily cleaning and disinfection latrines/ toilets/ showers, including door handle, lock, and frequent touch points with detergent and then 0.1% chlorine solution
- Where latrines are inadequate, work with community leaders or CCCM to regulate influx of people at latrines
- Inform communities about hand washing also before and after using the latrine. Be sure that grey water is safely drained and disposed
- Identify other multi touch points with communities and come up with prevention measures to curb the further spread of COVID-19

2.8.0 Cleaning and disinfection of environmental surfaces in Non-healthcare settings.

High-touch surfaces in these non-health care settings should be identified for priority disinfection. These include door and window handles, kitchen and food preparation areas, counter tops, bathroom surfaces, toilets and taps, touchscreen personal devices, personal computer keyboards, and work surfaces. The disinfectant and its concentration should be carefully selected to avoid damaging surfaces and to avoid or minimize toxic effects on household members or users of public spaces.

Hypochlorite is rapidly inactivated in the presence of organic material; therefore, regardless of the concentration used, it is important to first clean surfaces thoroughly with soap and water or detergent.

The selection of disinfectants should take account of the microorganisms targeted, as well as the recommended concentration and contact time, the compatibility of the chemical disinfectants and surfaces to be tackled, toxicity, ease of use and stability of the product. The selection of disinfectants should follow the manufacturer's instructions to ensure that disinfectants are prepared and handled safely, wearing the appropriate personal protective equipment (PPE) to avoid chemical exposure meet local authorities' requirements for market approval, including any regulations applicable to specific sectors, for example healthcare and food industries.

After cleaning, the following disinfectants and defined concentrations can be used on environmental surfaces to achieve a >3 log₁₀ reduction of human coronavirus,³³ and they are also effective against other clinically relevant pathogens in the health-care setting.

- Ethanol 70-90%
- Chlorine-based products (e.g., hypochlorite) at 0.1% (1000 ppm) for general environmental disinfection or 0.5% (5000 ppm) for blood and body fluids large spills.

If disinfectants are to be applied, this should be done with a cloth or wipe that has been soaked in disinfectant.

The recommendation of 0.1% (1000 ppm) in the context of COVID-19 is a conservative concentration that will inactivate the vast majority of other pathogens that may be present in the health-care setting. However, for blood and body fluids large spills (i.e. more than about 10mL) a concentration of 0.5% (5000 ppm) is recommended.

Spraying individuals with disinfectants (such as in a tunnel, cabinet, or chamber) is not recommended under any circumstances.

This could be physically and psychologically harmful and would not reduce an infected person's ability to spread the virus through droplets or contact. Moreover, spraying individuals with chlorine and other toxic chemicals could result in eye and skin irritation, bronchospasm due to inhalation, and gastrointestinal effects such as nausea and vomiting.

Personal safety when preparing and using disinfectants

Hygienist, Cleaners, chlorine solution preparators should wear adequate personal protective equipment (PPE) and be trained to use it safely.

When working in places where suspected or confirmed COVID-19 suspected or confirm patients are present, cleaners should wear the following PPE: gown, heavy duty gloves, medical mask, eye protection (if risk of splash from organic material or chemicals), and boots or closed work shoes. Disinfectant solutions should always be prepared in well-ventilated areas. Avoid combining disinfectants, both during preparation and usage, as such mixtures cause respiratory irritation and can release potentially fatal gases, when combined with hypochlorite solutions.

In non-health care settings, resource limitations permitting, where disinfectants are being prepared and used, the minimum recommended PPE is rubber gloves, impermeable aprons and closed shoes. Eye protection and medical masks may also be needed to protect against chemicals in use or if there is a risk of splashing.

Note: High concentrations of chlorine can lead to corrosion of metal and irritation of skin or mucous membrane, in addition to potential side-effects related to chlorine smell for vulnerable people such as people with asthma.

2.9.0 Safe disposal of greywater or water from washing PPE, surfaces, and floors

WHO recommends that utility gloves or heavy-duty, reusable plastic aprons are cleaned with soap and water, and then decontaminated with 0.5% sodium hypochlorite solution each time they are used. Single-use gloves made of nitrile or latex, and gowns should be disposed in protected waste pits and burnt after each use and not reused; hand hygiene should be performed after PPE is removed. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again. However, it is important that such water is disposed of in drains connected to a septic system, a sewer or in a soak-away pit at least 30 meters away from a ground water source (boreholes and protected wells). If greywater is disposed of in a soak away pit, the pit should be fenced off within the health facility grounds to prevent tampering and to avoid possible exposure in the case of overflow.

For those working with untreated sewage for which there are considerable infectious risks, in addition to standard PPE (heavy-duty gloves, boots, masks, and goggles or a face shield, that is, a long-sleeved impermeable gown or if not available, an apron, is needed). It should always be worn when handling or transporting excreta offsite, and great care should be taken to avoid splashing and release of droplets

2.10.0 Waste management at homes

Waste generated at home during quarantine, while caring for a sick family member or during the recovery period should be disposed appropriately. Tissues or other materials used when sneezing or coughing should immediately be thrown in a waste bin. After such disposal, correct hand hygiene should be performed.

Note: It will be of a great help if waste generated by sick family member potentially infectious to be burned immediately to minimize the risk of transmission to the municipal collection for final disposal. Same to be applied to volunteers supplied with one-time use gloves (disposable gloves)

2.11.0 IPC WASH response to community COVID-19 case

When there are suspected or confirmed cases of COVID-19 in the home setting, immediate action must be taken to protect caregivers and other family members from the risk of contact with respiratory secretions and excreta that may contain the COVID-19 virus. A COVID-19 hygiene kit must be given to the household to enable the much-required hygiene practices. If available, minimum PPE according to the rational use must be provided to the affected household for use by care givers in cleaning the frequently touched surfaces throughout the patient's care. The cleaning and disinfection should be done using the disinfectant provided in the kit. Other things to do include:

1. Support to ensure that a separate latrine is set aside for their use by the suspected case to minimize cross contamination. This has to be communicated with other members of the community where there are shared latrines
2. Support to ensure that the household has access to adequate water for hygiene purposes. Ideally, the household should access the water point at a different time from the rest of the community members to avoid the spread of COVID
3. Chlorination of water points around the case if this is not already being done. Bucket chlorination can be implemented in case of hand pumps. FRC >0.5mg/l at the water point
4. Disinfection of the household with a COVID-19 case and all households within 30m radius
5. WASH facilities (latrines, water points, tap stands) should be disinfected as a preventative measure (at least once a day) and as response

2.12.0 Risk Communication and Community Engagement (RCCE)

WASH Partners will disseminate the information within communities for COVID-19 response. Community engagement and involvement will be the key in mitigating the epidemic effects and avoiding stigmas that may relate to the infected person/household. Community reporting, identification and referral will be encouraged as part of WASH Cluster Specific Objective in

coordination with WASH and Health Cluster partners, the Risk Communication and Community Engagement Technical Working Group, and the Refugee Coordination Platform led UNHCR. Partners working in refugee camps will do also coordinate the RCCE Technical Working Group.

Key considerations are to:

- Work with community-based hygiene promoters to promote key messages (e.g. radio, megaphones, loudspeakers).
- Ensure that handwashing stations with soap and water are available in all households and public places
- Distribute WASH NFIs via non-contact methods.
- Suspend household surveys and mass gatherings
- Adapt communal WASH facilities with social distancing measures so that services can be accessed safely:
- Increasing operation times to reduce queuing (e.g. increasing water pumping hours to ensure water availability).
- Installing additional temporary facilities to reduce queuing (e.g. water points, communal toilets).
- Regular disinfection of common contact surfaces (e.g. door handles and taps), including disinfection of distribution sites.
- Marking social distance intervals on/near infrastructure (communal water points and toilets) and distribution sites.
- Communicating importance of social distancing when using communal services
- Emphasis on hand washing and respiratory hygiene measures and early symptom identification.
- Ensure adequate access to clean water and waste disposal in the community, soap, narrow necked water containers, and covered buckets for households.
- Share adequate and correct information in applicable (local) languages with refugees and other PoCs will be very important during this period to reduce panic and minimize stigmatizing responses. This includes clearing of myths and misconceptions in the communities.
- Engage and consider vulnerable groups e.g. children, persons with disabilities, women and girls, pregnant women, people living with HIV, gender-based violence survivors and elderly
- Avoid too much focus on one-way messages without listening to the perspective of different groups.

2.13.0 Coordination and collaboration

The implementation of this document will be led by the Ministry of Health in coordination with the WASH/IPC TWG, National Steering Committee (NSC , the cluster partners (WASH, Health, CCCM, Education, Protection), Refugee Programme (UNHCR and its partners), and all stakeholders supporting the implementation of the National COVID-19 Epidemic Response Framework.

2.14.0 Annexes:

Annex 1: Demonstration of proper handwashing/Hand Rubbing

Annex 2: Community Use of face masks in South Sudan_MoH_V01

Annex 3: Physical and social distancing guidelines for South Sudan

Annex 4: Chlorine Preparation and Decontamination in public places

Annex 5: Generic TOR for IPC TWG