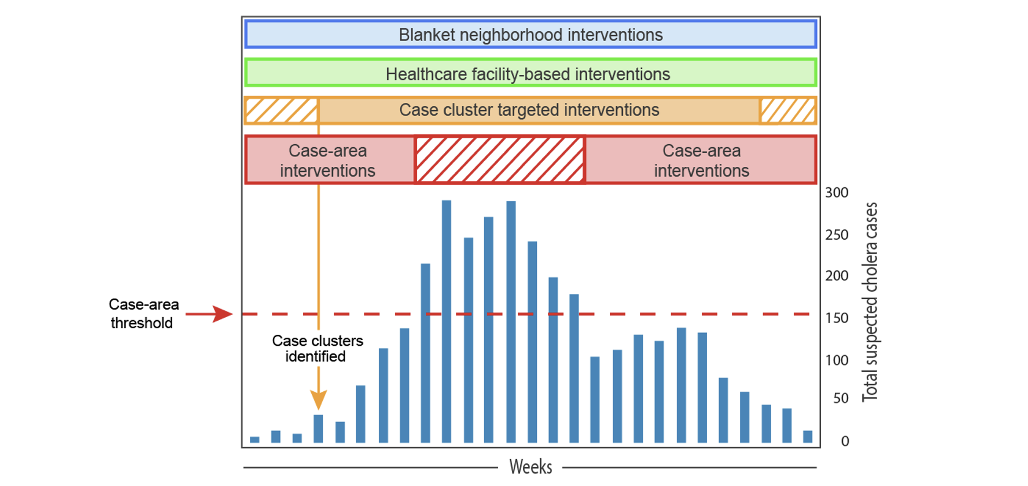
**Practical guidance on Case-Area Targeted Interventions**

Case-area targeted interventions (CATI) are specific tailored WASH and IPC activities carried out by multi-disciplinary rapid response teams at case residences and neighboring households in a defined perimeter (50- to 150-meter radius) around localized AWD cases (Rebaudet, S. et al, 2019; UNICEF, 2019). Once cases are identified, a team (rapid response teams – RRT) carries out a rapid case investigation, active case finding and referral, and WASH interventions at the case residence and surrounding perimeter to limit transmission. These WASH interventions include home and environmental disinfection, hygiene promotion, household water treatment, water quality monitoring and delivery of a household AWD kit.

As illustrated in the graph below, CATI has a window to be an effective delivery mechanism. It is important to note that CATI addresses only one of six potential transmission contexts, namely, case households and nearby neighbors. Other transmission context such as public institutions and places; AWD/hospital treatment facilities, burials and funerals of AWD cases, population gatherings, and environmental contamination. During periods of increased suspected cases, it would be challenging for teams to reach all households within 48 hours, placing a significant strain on human resources and supplies/logistics. In such scenarios, the CLUSTI approach, which involves targeted interventions at the community level within clusters or aggregations of cases, may be a more suitable option.



*\*To implement the CATI approach, access to detailed and timely information on cases is compulsory. If that is not an option, Health-care facility base interventions or blanket intervention could be a better alternative.*

This graphic is indicatives and it should not be taken as definitive for the Myanmar context. Depending on partner’s capacity (human capacity, logistics, access, funds…) that threshold should be stablished.

**COMPOSITION OF THE RAPID RESPONSE TEAMS**

The composition of the teams will vary depending on multiple factors such as security context, funding availability, personnel, multisectoral nature of the team, or transport available. The minimum for a RRT is to have a hygiene promoter, a WASH, a Team Leader, and a driver. Example from an organization in Myanmar: 2 hygiene promoters for Household visit and 2 for bucket chlorination.

A vehicle or another way of transport, is critical for the team to go around to the case households and transport their required supplies. This is a WASH example of team composition, it should be promoted multisectoral teams that could include: health personnel, SBC personnel, nutrition personnel.

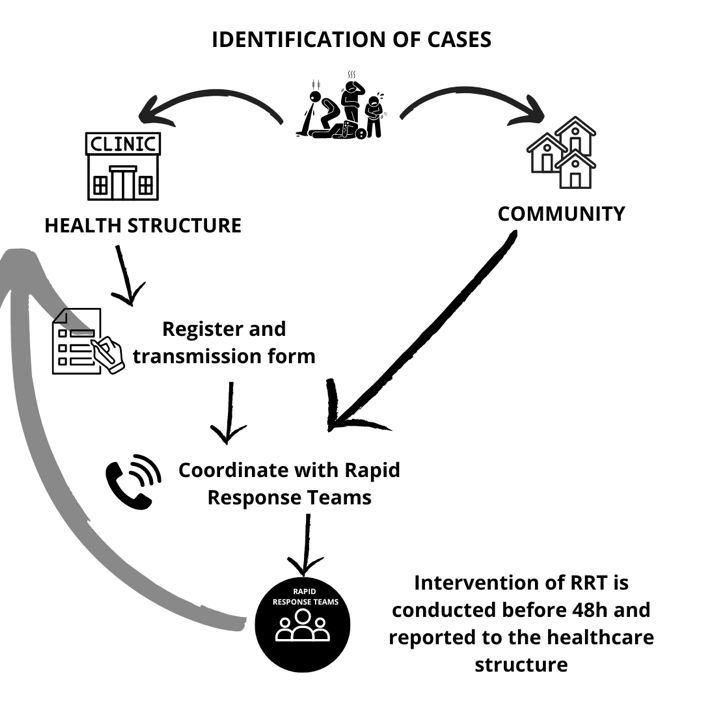
An alert-response system to activate the teams is also essential for timely response and need the following in place before alerts of cases appear:

1. Agreements with the State Health Department: TA, data sharing, focal point.
2. Agreement with the different WASH and Health partners on tools to use, monitoring framework, supplies monitoring and provision, data sharing and coordination with other sectors.
3. Training of the teams, simulation exercise
4. Launch of the rapid response teams with monitoring exercise

**RESPONSE PROTOCOL**

**STEP 1: Identification of cases**

**At the healthcare facility/clinic/CTC/ORP**

* Each morning, the Team leader (TL) of the RRT takes note of the new cases the day before and during the night.
* Collect names and addresses. The TL should prioritize the severe cases over the mild cases and have a document to follow up the cases that have been responded to during the day.
* If during the day severe cases are admitted, the TL can flag them to the RRT for prioritization over mild cases of the day.
* When patients arrive, the transmission form should be filled and shared with the RRT to be continued in the household. If there is not option for the teams to go to the field, the transmission form can be done on the phone.
* Organize stocks and distribute AWD kits with the teams, provide each team with extra kits in case more cases are detected in the “buffer/risk area.”
* Two jerrycans with 0.2% and 2% chlorine solution are filled to complete the portable sprayer in the field, take two sprayers per team, check the sprayers are functioning, ensure personal protective equipment is provided to the team members.
* Take one pool tester (with DPD1 and Phenol Red tablets) and ensure each team can take GPS coordinates of the cases’ houses (with smartphone, tablets, or GPS). Please avoid taking GPS coordinates if that can compromise the security of the household.

**At the community**

* While conducting routine WASH activities, the teams may identify AWD cases that have not been seen in the clinics. The teams should report and refer these suspect cases to the healthcare center or to the Team Leader of the RRT depending on the structure.
* If the identified case is a severe one and the teams have the required equipment including protective gear and the training to conduct the RRT interventions, they can execute the transmission form and conduct the activities at the household level. The WASH team needs to relay this information back to the RRT team leader and healthcare facility.
* Soon as they are available, the Rapid Response Teams should return to the household and conduct the remaining buffer ring interventions.
* If required supplies are not on hand for the case-household, the new case must be followed up the next day, as per protocol.

**STEP 2: At patient’s house**

* Before starting the intervention at the case-household, the team should take a few minutes to look at the surrounding environment, the density of houses, how they are separated, and define the houses to be targeted and the method; door to door or small quick gathering for awareness sessions, analyzing the risk of attracting large crowds of people which is better to be avoided.
* The team should put on their personal protective equipment before entering the house.
* The team leader explains the purpose of the visit to the household members, asks permission to perform the investigation (transmission form), and to carry out the full set of activities.
* Note the position of the house/tent. This is important for determining the geographical coverage of the buffer ring.
* While at the case-household, confirm the information initially collected at the healthcare facility and complete the transmission form.
* Ask the household members if they are aware of any other cases of acute diarrhea in the family or neighborhood.
* Deliver key hygiene messages in an interactive way by asking questions: what cholera is, how it enters in the body, its symptoms, how we can prevent it, what we must do in presence of symptoms, engage people actively in this discussion; the IEC materials can be used to guide the session.
* At the end of the session, give the AWD kit to the household and explain how and when to use the materials.
* While a team member fills the transmission form, another disinfects the toilets with 2% solution, then bathroom, kitchen, and bed with 0.2% solution; inform family members not to touch the disinfected surface until it is dry.
* Ask if the sick person vomited or defecated inside the house and if the place was cleaned, and if not, then clean first and disinfect with 2% solution.
* Ask if the family has washed/disinfected the patient’s clothes and beddings, if not, ensure they can do it as soon as possible or recommend burning them; remind that clothes and beddings soiled by the patient must not be washed near water points. Burning should be the last solution and prioritize disinfection.
* Remind the family to clean soiled areas of the floor with a mop soaked in a detergent or chlorine solution in the event of future new cases of diarrhea.
* If the household is using treated water, check the free residual chlorine of stored water or tap water in the household. If the residual chlorine is less than 0.2-0.5 mg/l ask about the steps the household takes when chlorinating the water, correct misconceptions as necessary or propose alternative actions to make water safe.
* Explain the household how to create a disinfectant solution with bleach. Normally unless advised by the producer, we will dissolve 1 part of bleach in 9 parts of water. That dilution is safe for the house to use as disinfectant.

**STEP 3: At the patient’s surroundings (150m) – buffer ring or risk ring, also called cordon sanitaire.**

* Elevated risk area (ring radius) is likely to vary between urban and rural areas. The rule of thumb is 50-150 meters around the case-household. However, the ring should be defined according to the local context and operational constraints.
* The ring radius (50-150m) is a guide that should include somewhere around 20-30 households, the team in the field needs to decide which household should be in the ring or not based on local features, especially with the absence of a GPS location:
  + e.g., up to a given road/river/path.
  + based on the team leader's assessment which households are still at risk.
  + based on the local context, and the spread of the cases, the whole village can be the part of CATI rollout.
* While the first team member is at the case-household, the other team members can start the activities in the ring radius, visiting other families.
* All households within the ring radius will receive a complete package of response activities regardless of if they have a case of AWD or not. These include active search of cases, hygiene education, hygiene kits delivery, and environmental disinfection (focus on toilet and kitchen).
* When a household representative is not present at the residence, the kit should not be simply left with no instructions, and the team must plan to return.
* Administer the transmission form if other AWD cases are detected in neighboring households by the RRT during the visit.
* Inspection of toilets in each household, especially if the toilets are shared; if these are not clean, with visible traces of excreta or effluent on the ground, then ask the sprayers to come and disinfect (the family can help to clean before disinfection).
* The names or codes of each family visited/met are noted on the monitoring form indicating the activities performed for each one.
* Households not responded to will be prioritized the next day to respect the 48 hours limit.
* In addition to the household visit, verify whether food vendors are present in the vicinity, especially fruits and vegetables vendors; plan to sensitize them and encourage them to have a bucket with tap and soap at their food stall; if they do not have one, provide them with a bucket with tap with a portion of soap bars or 3 strips of Aquatabs; provide them with IEC material if available, so they can stick on the side of their structure.
* Observe and ask if there are leaking toilets, pits, septic tanks, or sewer bursts in the vicinity.
* If a school is closed due to cases, you might need to meet the director or teachers, carry out active searching for cases, reminding the preventive measures that teachers may repeat in classroom, leave some IEC materials, provide your contact details to the school focal point in case he/she observes suspected cases. If the school is not already supported by an NGO or Government, you might also ask a partner to send local volunteers to undertake hygiene education sessions in the school.

**STEP 4: Reporting**

* At the end of the day, each team returns the transmission forms to the TL.
* Unload and store the balance of supplies.
* A quick review of the cases responded against the cases planned is done by team leaders to reprogram the remaining cases for the next day.
* Before sending the case investigation to the health cluster/partner, the teams should have a quick look at them to identify potential correlations and common risk factors between cases, as well as past or ongoing gatherings and food vendors (incl. restaurants) at stake.
* Remember to wash your hands with soap before going home.

**Step 5: Post-distribution monitoring**

* Between 7 days and 14 days after visiting the households surrounding a case, the households should be revisited for a brief survey (PDM), normally is recommended to interview 15-30% of the HH that received products.
* The goal of this survey is to determine whether RRT interventions are being used by the household members.
* An independent team will be primarily responsible to conduct the PDM surveys, but in the event of cases reduction, response teams can perform PDM using the same existing template.

**ANNEX 1: PREPARATION OF CHLORINE SOLUTIONS**

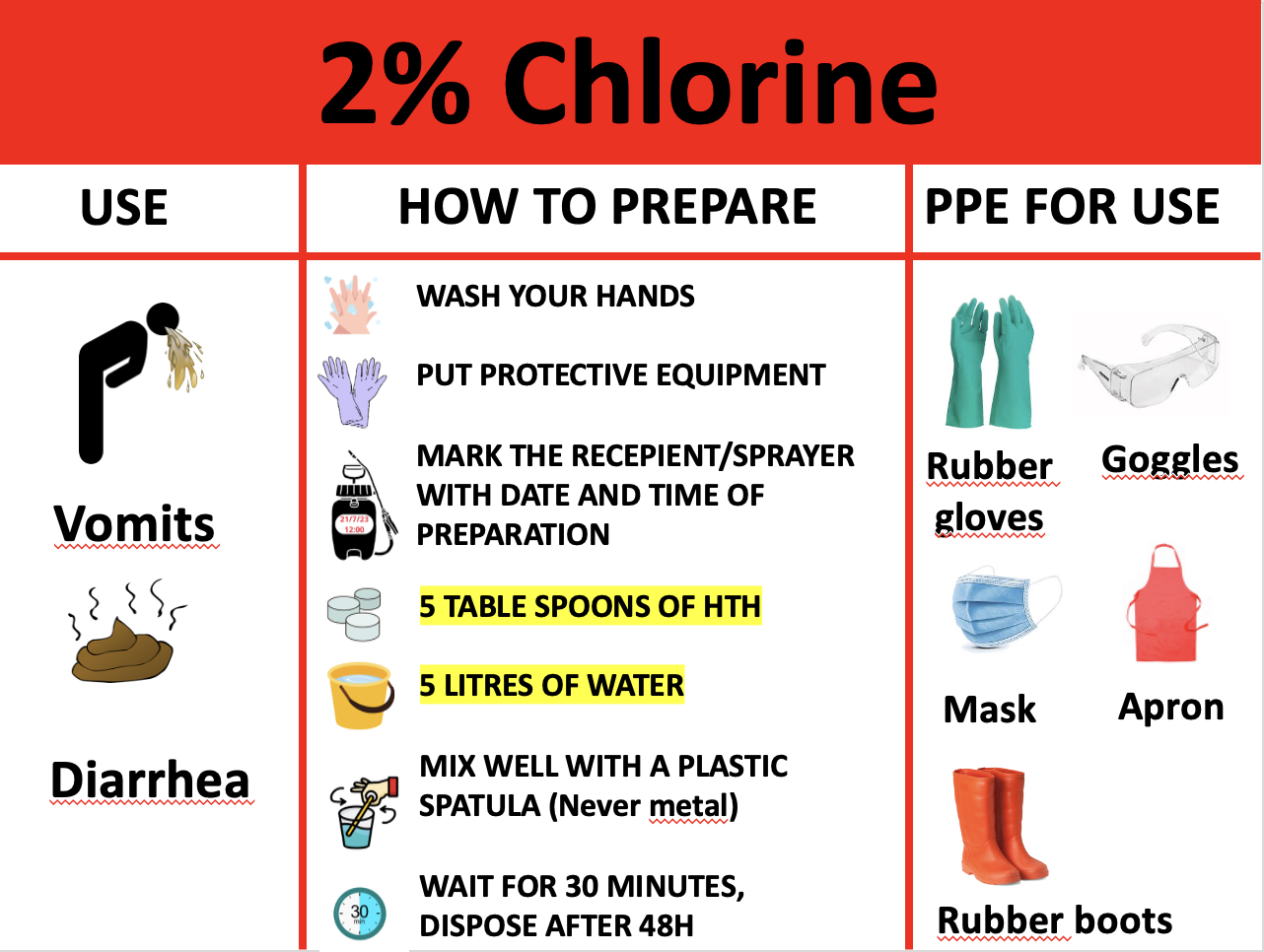
**To prepare chlorine solutions follow the steps:**

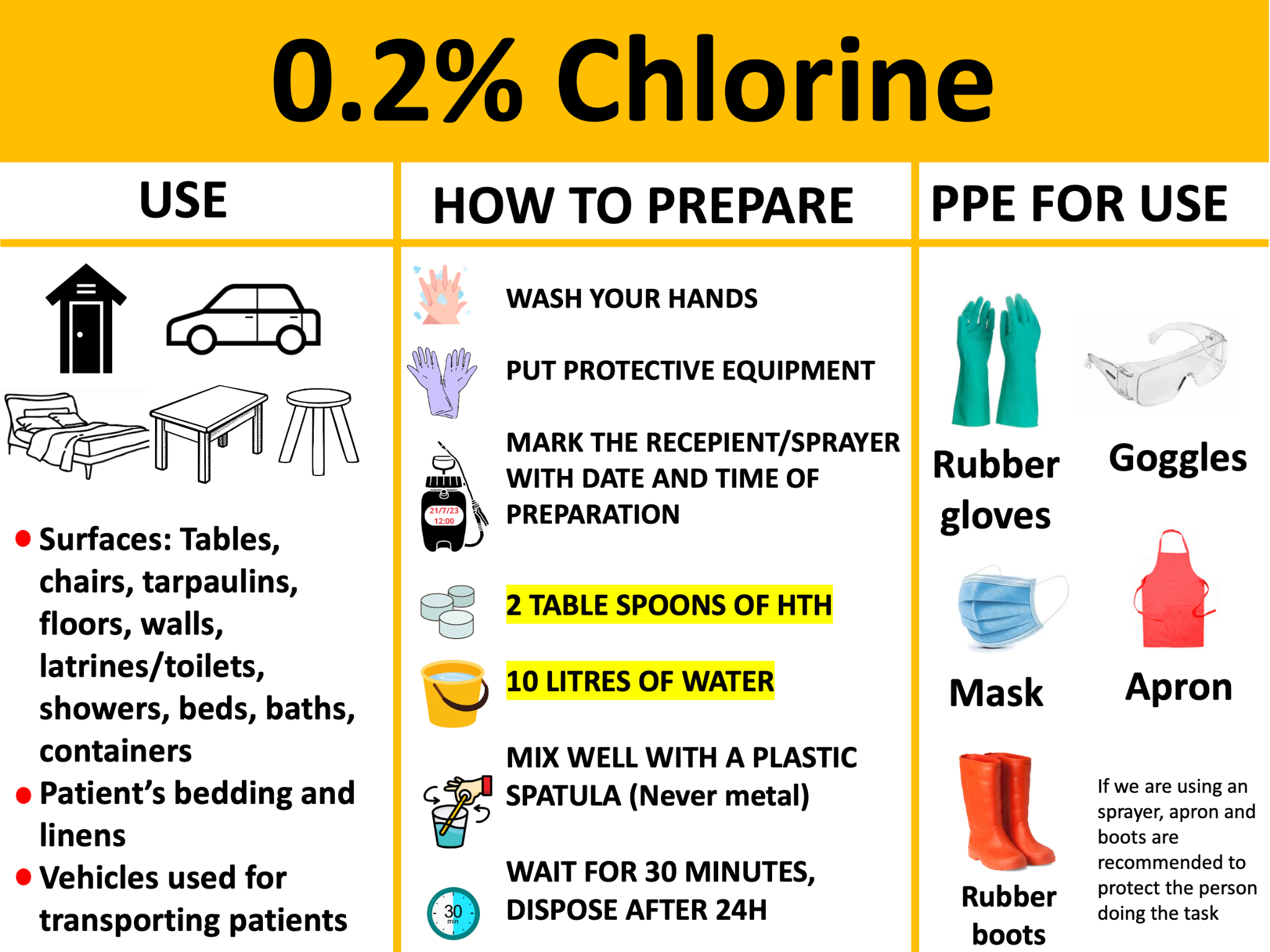
1. Go to a ventilated area or outside
2. Wash your hands
3. Put on your protective equipment to prepare the solutions (not for cleaning procedures)
4. Select a clean and dry container made of plastic, never metal
5. Mark the recipient/sprayer with date and time of preparation
6. Use a clean utensil made of plastic or glass to measure the quantity of chlorine
7. Introduce the chlorine\**(Some might add the water first to avoid splashes, but adding first the chlorine will allow us to remove it if a mistake has been made or we don’t remember the concentration of the solution)*
8. Introduce the water carefully and without splashing
9. Mix well with a clean plastic spatula or another plastic utensil (never metal)
10. Wait for 30 minutes
11. Dispose every 24h for 0.05% and 0.2% solutions, keep up to 48h for the 2% solution. 2% solution should be diluted with water before disposing into a toilet or latrine, sometimes this might not be ethical or appropriate, evaluate.
12. If you are monitoring the preparations, remember to mark it in the monitoring form.

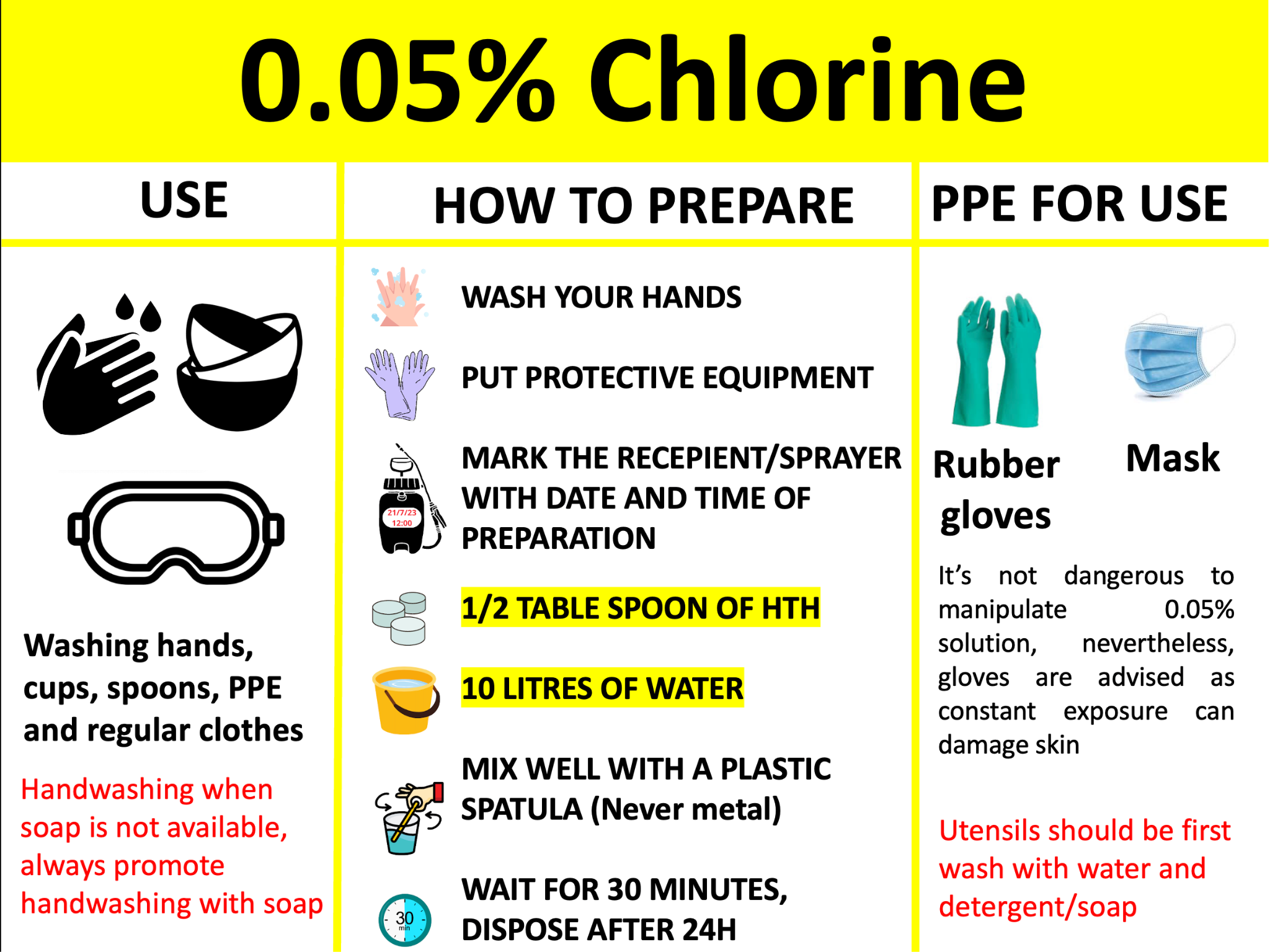
**DIFFERENT CHLORINE SOLUTIONS: USE, HOW TO PREPARE AND PROTECTIVE EQUIPMENT**

Below the images you will find a comparative table with the different chlorine products and equivalences.

\*A mask (respirator) should be worn to protect against chlorine fumes, but this is usually not possible and can be counterproductive in creating an exaggerated image of the disease and how it is transmitted. Surgical masks will not protect against chlorine fumes, nor are they necessary to prevent cholera contamination, however, wearing a mask can provide psychological comfort and a sense of protection for those involved in cleaning and disinfection activities.







**DIFFERENT CHLORINE PRODUCTS AND PREPARATIONS (for 20 litres of water)**

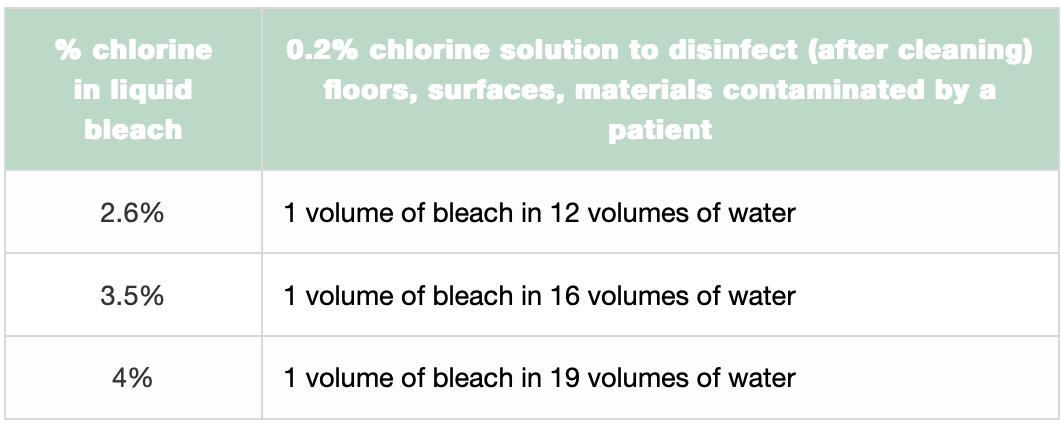
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | PRODUCTS | 0.05% | 0.2% | 2% |
| PREPARATION | **Sodium**  **dichloroisocyanurate**  **(NaDCC) granules,**  **55% active chlorine** | **18 g/20 litres**  or  1 level 20 ml  measuring spoon  per 20 litres of water  (110 g in 120 litres of water) | **72 g/20 litres**  or  4 level 20 ml  measuring spoons  per 20 litres of water  (430 g in 120 litres of water) | **720 g/20 litres**  or  40 level 20 ml  measuring spoons  per 20 litres of water |
|  | **Sodium**  **dichloroisocyanurate**  **(NaDCC) tablet,**  **1 g of active chlorine/tablet** | 10 tablets  per 20 litres of water | 40 tablets  per 20 litres of water  (2 tablets per litre) | 400 tablets  per 20 litres of water  (20 tablets per litre) |
|  | **Calcium hypochlorite**  **(HTH®) granules,**  **65-70% active chlorine** | **15 g/20 litres**  or  1 level 20 ml measuring spoon per 20 litres of water (90 g in 120 litres of water | **60 g/20 litres**  or  4 level 20 ml measuring spoons per 20 litres of water (360 g in 120 litres of water) | **600 g/20 litres**  or  40 level 20 ml measuring spoons per 20 litres of water |
|  | **Sodium hypochlorite (bleach) at 5% active chlorine** | 10 ml of bleach in 1 litre  Or  1 tablespoon in 1 litre of water | 40 ml of bleach in 1 litre  Or  4 tablespoon in 1 litre of water | 400 ml of bleach in 1 litre  Or  2 cups (200ml) in 1 litre of water |

*Extracted from GTFCC and MSF*

Bleach can be presented in other concentrations, as a reference to prepare a 0.2% solution, from MSF Managing a cholera epidemic:

The following formula is used to calculate the amount of water per quantity of bleach:

% of chlorine in liquid bleach ÷ % chlorine desired – 1.



*The volume can be a litre, a gallon, a glass or any other recipient used to measure a dose.*

**ANNEX 2: CLEANING PROCEDURES**

**CLEANING LATRINES**

1. Wash your hands
2. Put on your protective equipment
3. Make sure the solution you are going to use is the correct one and that is not expired
4. Spray 0.2% solution on the latrine slab and let it set for 15 minutes
5. During waiting period, clean the walls with a mop and soapy water, do the same for the foor
6. Rinse with clean water
7. Spray the walls up to 1m in height, slowly from the top to the bottom with 0.2% solution, then the slab and the floor.

**Things to consider:**

* Make sure latrines have a floor you can clean, if it’s soil, add tarpaulin or similar.
* Use the same system for bathing units
* Clean latrines minimum 2 times a day
* Don’t mix soap and chlorine

**CLEANING DIARRHEA AND VOMITS**

1. Wash your hands
2. Put on your protective equipment



1. Make sure the solution you are going to use is the correct one and that is not expired
2. Spray lightly 2% solution to inactivate the bacteria
3. Remove the vomit or feces from the floor. If the floor is soil, just take a shovel and remove a big part of soil and dispose into the latrine or toilet. If it’s a cleanable floor, you can use the mop to remove the vomit or feces into the squeezing bucket
4. Dispose the content into the latrine or toilet
5. Clean the mop and bucket with detergent/soap and water
6. Clean the floor with detergent/soap
7. Rinse with water
8. Lightly spray or use the mop and disinfect with the 0.2% solution
9. Leave to dry

**Things to consider:**

* Sometimes sprayers are discouraged because they mobilize droplets, even that is true, by experience we have seen there is better engagement in cleaning and disinfection activities among men when sprayers are present. When not used, women normally would be in charge of cleaning. Evaluate depending on the context.

**ANNEX 3: KEY AWD PREVENTION MESSAGES**

*\*Extracted from the AWD Volunteer Guide from the Social Behaviour Change sector in UNICEF Myanmar*

**KEY MESSAGES**

AWD/Cholera is transmitted through drinking of unsafe water or contaminated water, and eating food cooked with contaminated water and not cooked well, or food exposed to flies.

* AWD/Cholera bacteria are present in the faeces from the people infected with AWD/cholera.
* AWD/Cholera can cause rapid depletion of water and electrolytes in the body, leading to dehydration.
* In severe cases, it can lead to death if left untreated in a timely manner.

**Modes of transmission:**

* Drinking unsafe water;
* No adequate fly-proof latrines and no proper use of them;
* Eating unsafe food such as food exposed to flies;
* Lack of or inadequate proper environmental sanitation;
* Not washing hands with soap after using toilet;
* Not washing hands with soap before eating;
* Lack of or inadequate proper personal hygiene;

**Symptoms**

* Loose watery diarrhea
* Nausea and vomiting
* Quick loss and depletion of water and electrolytes in the body, leading to fatigue
* muscle cramps, fainting and even death

**Prevention of AWD/cholera**

* Drink safe water disinfected by boiling or treating water with chlorination.
* Do not leave foods uncovered and make sure that all the foods you eat are served hot.
* Avoid eating moldy food, food exposed to flies and overripe fruit.
* Use clean fly-proof latrines.
* Wash hands properly with soap before eating and after using toilet.
* Avoid washing clothes of cholera patients near drinking water sources (wash clothes of hospital patients separately only at the hospital)
* Ensure safe disposal of child stools to avoid exposure to flies.
* Wash hands properly with soap before handling, preparing, eating food and after using toilet.
* Drink oral rehydration solution if you get severe AWD and go to the nearest health center to seek care if you do not get better.

If you have the following danger signs, go to the nearest health center immediately;

* Diarrhea lasting more than 2 days;
* Excessive thirst;
* Dry mouth and skin;
* Little or no urination or dark-coloured urine;
* Severe dizziness;
* Severe abdominal pain;

The following persons should go to the nearest health center to seek health care when they have diarrhea:

* malnourished children, pregnant women and breastfeeding mothers;
* people with pre-existing chronic diseases (including those living with HIV, Diabetes or other chronic diseases)

**How to treat acute watery diarrhea (AWD) at home**

If you suffer from AWD or vomiting, it is crucial to rehydrate your body very quickly. To rehydrate, you can drink oral rehydration solution (ORS).

**How to make ORS solution**

* Wash your hands with soap and water properly first.
* Check the expiry date on the packet. If it is expired, do not use it.
* Prepare ORS by putting one packet of ORS powder and one liter of boiled water or purified drinking water in a clean bottle or container and stirring the mixture.
* Once prepared, ORS should be used up within 24 hours and discard any unused solution after 24 hours.
* Do not add any extra sugar, salt or other liquid in preparing ORS.

**How to make home-made rehydration drinks**

If ORS is not available, you can make rehydration drinks at home by using sugar and salt as below:

* Before preparing it, wash your hands with soap and water properly first.
* Put 8 teaspoons of sugar and 1 teaspoon of salt into one liter of boiled water or purified drinking water and stir the mixture well.

**Steps to be taken for clean foods**

* Cook foods properly.
* Cleanse fruits and vegetables thoroughly with water.
* Keep foods covered not to be exposed to flies.
* Eat properly cooked/warm food.

**Critical times to wash hands**

1. Before and after eating food,
2. Before handling and preparing food,
3. After using toilets,
4. After contact with child faeces/ waste and garbage, hands need to be washed properly with soap and water.

**Steps to be taken for clean water**

Water can be disinfected by boiling or using chlorinating tablets. This water can be used for drinking and cooking. Disinfected water needs to be stored in safe cleaned bottles and containers with lids.

**Construction of fly-proof latrines**

The latrines should be able to prevent spread of infection from faeces.

* be fly-proof with cover
* be smell-proof.
* be privacy-providing.
* have sufficient water for cleaning.
* be clean.

**Key messages to parents and caregivers to prevent and control transmission of AWD/cholera**

* AWD/Cholera can spread through ingestion of unsafe water, contaminated water and food and food which have been exposed to flies.
* Preventive measures include:
  + Wash hands properly with soap and water (especially before eating, before handling food, after using toilet, after handling child faeces and waste).
  + Teach children proper handwashing.
  + Clean meat, fish and vegetables thoroughly with clean water, cook food properly, and use cooking utensils only after washing them carefully with soap and water.
  + Keep food covered to avoid exposure with flies.
  + Drink water only after boiling or disinfecting it.
* All family members should use fly-proof latrines; particularly, child faeces should be disposed of safely and properly.
* **Managing diarrhea at home**
  + If you pass large volume of watery diarrhea, drink oral dehydration solution every time you pass a loose stool, not less than the amount you pass in order to replace water and electrolytes lost.
  + If you pass ‘rice-water stool’, go immediately to the nearest heatlh centers/ hospitals and clinics to seek health care.

**Key messages to markets/ food stalls to prevent and control the spread of AWD/cholera**

Cholera can spread through ingestion of unsafe water, contaminated water and food and food which have been exposed to flies. People selling foods should follow the practices below:

1. **Safe food and water**

* Use clean water: Ensure water used for cooking, washing, and drinking is safe and clean. Boil or treat water before use.
* Cook food thoroughly: All food, especially seafood and meat, should be cooked thoroughly to kill any harmful bacteria.
* Keep Food Covered all the times: Always cover food to protect it from flies and dust, which can carry cholera bacteria.

2. **Personal hygiene practices**

* Wash Hands Regularly: Wash your hands with soap and clean water before preparing food, after using the toilet, and after handling money.
* Use Gloves or Utensils: When handling food, use gloves or clean utensils to avoid direct contact with food items.

3. **Sanitation in the market**

* Clean work surfaces: clean and disinfect your work surfaces, cutting boards, and utensils with a bleach solution.
* Proper waste disposal: dispose of waste, including food scraps and wastewater, in designated areas away from food preparation areas to prevent contamination.

4**. Health monitoring**

* Stay home if sick: If you or anyone in your household is experiencing symptoms of diarrhea or vomiting, stay home and avoid handling food.
* Report symptoms early: If you notice any signs of illness in yourself or your customers, seek medical attention immediately and encourage others to do the same.

5**. Community care and protection**

* Work Together: collaborate with other vendors to ensure everyone in the market follows these safety practices to protect the entire community.
* Disseminate to your customers the importance of hygiene and safe food practices during the outbreak.

6**. Safe Storage of food**

* Keep food safe: Store perishable food items at the right temperature to prevent bacterial growth. Use ice or refrigeration if possible.
* Separate raw and cooked Foods: Avoid cross-contamination by keeping raw and cooked foods separate.

7. **Washing and cleaning**

* Wash produce: Wash fruits and vegetables with safe, clean water before selling or using them.
* Clean Containers: Ensure containers, buckets, and other storage items should be cleaned regularly.

8. **Customer Interaction**

* Promote Cleanliness: Encourage customers to wash their hands before eating and to use clean, safe water.
* Provide clean utensils: If you provide eating utensils, ensure they are cleaned properly after each use.