



**MALAWI GOVERNMENT**

**MINISTRY OF HEALTH**

**GUIDELINES FOR DISINFECTION OF PREMISES  
AND SURFACES**

**APRIL 2020**

**Environmental Health Services Section  
Department of Preventive Health Services  
Ministry of Health  
Capital Hill  
Lilongwe, MALAWI**



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## **FOREWORD**

The emergency of the new corona virus disease, COVID-19, which started in Wuhan City in the Hubei province in the Republic of China, has affected many countries in the world including Malawi. The World Health Organisation (WHO) On 20th January 2020, declared COVID-19 as a disease of Public Health Emergency of International Concern (PHEIC). Meanwhile individual countries including Malawi started prepositioning themselves into preparedness mode to prevent the disease getting into their respective countries because it was known its spread was associated with travel.

Malawi was declared as a state of disaster by the State President, Professor Arthur Peter Mutharika on 20th March 2020, and Malawi confirmed its first case on 2nd April 2020.

Realizing that hand washing and disinfection of potentially contaminated surfaces is one key intervention in the prevention of further spread and control of COVID-19, the Ministry of Health, through the Directorate of Preventive Health Services- Environmental Health, developed these guidelines in order to facilitate quality and effective disinfection and spraying services.

It is, therefore, the responsibility of each and every one, in Malawi, to comply with and use these guidelines in order to facilitate prevention and control of the COVID-19 problem in the country. Further to this, all stakeholders are implored to mobilise necessary resources for the effective implementation of the guidelines, and consequently make a contribution to the prevention and control of the COVID-19 pandemic in the country.

Finally, I recognize these guidelines, have been developed in response to the COVID-19 pandemic, a new disease, as a tool for prevention and control of other infectious diseases especially those related to sanitation and hygiene. The Ministry is grateful for the support given in the production of these guidelines and requests partners to continued support especially during the implementation of the guidelines.



Dr. Dan Namarika

**SECRETARY FOR HEALTH**

23<sup>rd</sup> April, 2020

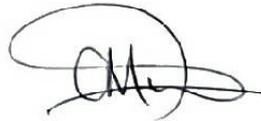
## **ACKNOWLEDGEMENT**

Development of these guidelines was done in response to the declared state of COVID-19 disaster by the head of state, His Excellency Professor Arthur Peter Mutharika. The Ministry of Health (MOH) greatly appreciates the wonderful work produced by the Directorate of Preventive Health Services-Environmental Health which will go a long way in the prevention and control efforts against COVID-19 and related other infectious diseases.

Special thanks are extended to Dr Storn Kabuluzi, Director of Preventive Health Services; Mr. Allone Ganizani, Deputy Director of Preventive Health Services responsible for Environmental Health Services; Mr. Holystone Kafanikhale, Principal Environmental Health Officer (PEHO) and National WASH Programme Desk Officer; Mr. Caseby Banda, PEHO and National Desk Officer for Health and Safety; Mrs Flora Dimba, PEHO and National Desk Officer for Food Safety and Hygiene also Focal Point for Port Health Services; Mr. Sydney Paul, PEHO and National Desk Officer for Vector, Vermin and Disease Control and Mr. Hendricks Mgodie, Environmental Health Officer (EHO) and National Desk Officer for Climate Change, Human Health and Emergencies for their dedication and team work demonstrated in coming up with these guidelines.

Many thanks should go to Mrs Vangelista Mtseka for the secretarial services including formatting of this document.

Finally we are grateful to the Ministry's Senior Management for both technical and administrative support given, also all stakeholders for their support.



Dr Charles Mwansambo  
**CHIEF OF HEALTH SERVICES**

23<sup>rd</sup> April, 2020

## **INTRODUCTION**

The World Health Organisation (WHO) did, on December 31<sup>st</sup>, 2019, alert countries, on the globe, of the new corona virus disease, COVID-19, which started in Wuhan City in the Hubei province in the Republic of China. On 20th January 2020, the organization alerted the countries again that COVID-19 was a disease of Public Health Emergency of International Concern (PHEIC).

Meanwhile individual countries including Malawi started repositioning themselves into preparedness mode to prevent the disease getting into their respective countries because it was known its spread was associated with travel.

World Health Organization later declared the disease a pandemic having already affected many countries socially and economically.

Malawi was declared as a state of disaster by the State President, Professor Arthur Peter Mutharika on 20th March 2020, and Malawi confirmed its first case on 2nd April 2020.

Realizing that handwashing and disinfection of potentially contaminated surfaces was one key intervention in the prevention of further spread and control of COVID-19, the Ministry of Health, through the Directorate of Preventive Health Services- Environmental Health, developed these guidelines in order to facilitate quality and effective disinfection and spraying services.

## **PURPOSE OF THE GUIDELINES**

These guidelines are aimed at ensuring correct chemicals/bleaches, steps and procedures herein provided are followed when spraying and disinfecting institutions, structures, offices and surfaces potentially deemed contaminated with the corona virus that causes COVID-19 and related other infectious disease germs.

It is strongly felt this will make a huge contribution towards the control of COVID-19 pandemic and also reduction of nosocomial infections in general.

## **WHO WILL USE THE GUIDELINES**

These guidelines will be used by various institutions and individuals ranging from healthcare workers in health facilities (both private and public), ports of entry staff, public business premises such as hotels, shops, markets, offices, prisons and police cells, spraying firms, individual households at community level among others.

## **ROUTINE ENVIRONMENTAL CLEANING REQUIREMENTS**

Cleaning is an essential part of disinfection. Organic matter can inactivate many disinfectants. Cleaning reduces the soil load allowing the disinfectant to work well. Removal of germs such as the virus that causes COVID-19 requires thorough cleaning followed by disinfection. The length of time that SARS-COV-2 that causes COVID-19 survives on inanimate surfaces varies depending on factors such as amount of contaminated body fluid e.g. respiratory droplets or soiling present and environmental temperature and humidity.

Corona virus can survive on surfaces for many hours but is readily inactivated by cleaning and disinfection. It is good practice to routinely clean surfaces as follows.

- Clean frequently touched surfaces with detergents solutions (see diagram below)
- Clean general surfaces and fittings when visibly soiled and immediately after any spillage

### **Frequently touched surfaces (door handles, bed rails, table tops and light switches)**

- Should be frequently and routinely cleaned.
- Detergents and disinfectants can be used
- Follow manufacturer's instructions

### **Minimally touched surfaces (floors, ceilings, walls, blinding)**

- Damp mopping is preferred to dry mopping
- Walls and blinds should be cleaned when visibly dusty and soiled
- Window curtains should be regularly washed/changed
- Sinks and basins should be cleaned on regular basis

## **HAND HYGIENE**

- Soap and water can be used for hand hygiene.
- Alcohol based hand rub (sanitisers) can be used if soap and water are not readily available except when hands are visibly soiled.
- Cleaning hands regularly also helps to reduce environmental contamination.

## **INFORMATION FOR CLEANING STAFF**

The risk when cleaning premises is not the same as the risk you may have when face to face with sick persons who may be coughing and sneezing. The following must be followed:

- Cleaners should use alcohol based hand rub before putting on and after removing surgical masks and eye protection
- Cleaning staff should wear impermeable disposable gloves and surgical masks plus eye protection or face shield while cleaning
- Cleaning staff should be informed to avoid touching their face especially the mouth, nose and eyes when cleaning
- Remember to use alcohol based and rub after removing surgical masks

The surgical masks and eye protection act as barrier to people inadvertently touching their face with contaminated hands and fingers whether gloved or not during cleaning. If there is visible contamination with respiratory secretions or other body fluids, the cleaners should wear full length disposable gown in addition to surgical masks, eye protection and gloves.

Advice must be sought from your Environmental Health Worker or Health and safety Officer on correct procedures of wearing personal protective equipment (PPEs)

## **USE OF DISINFECTANTS ON PREMISES**

- Disinfectants used should be the one for which the manufacturer claims antiviral activity meaning it can kill virus (such as Chlorine based disinfectants which are commonly used)
- Ready-made disinfection products approved in Malawi can be used if available.

- If using freshly made bleach solution, follow manufacturer's instructions for appropriate dilution and use. Note that prediluted bleach solutions lose potency over time and on exposure to sunlight.
- Wipe areas with bleach solution using disposable paper towel or disposable cloth
- Dispose of gloves and masks in leak proof plastic bag
- Wash hands well using soap and water and air dry. If water is unavailable, clean hands with alcohol based hand rub (sanitiser)

### **PREPARATION OF CHLORINE BASED DISINFECTANTS**

- Chlorine (Bleach) can effectively kill the virus but handling it can be hazardous for humans
- Use safer alternatives, where possible and always follow manufacturer's instructions.
- Know when and how to dilute it correctly (e.g always pour concentrate into water, never the other way round)
- Work in well ventilated area and wear PPEs
- Do not use with any other products such as toilet bowl cleaner, acids, vinegar and anything containing Ammonia
- When preparing the bleach solution, observe the following.
  - Gloves should be worn when handling and preparing the bleach solutions
  - Appropriate protective eye wear should be worn in case of any splashing
  - Bleach solution should be:
    - Made up every day
    - Used mainly on hard, non-porous surfaces (it can damage textiles and metals)
  - Bleach solution require sufficient time to kill the viruses.

### **HOW TO MAKE 0.1% DISINFECTANT FOR SPRAYING**

- 5.5 table spoons of HTH of 70% strength to 10 litres of water to make 0.5% chlorine solution
- Then dilute 1 part of 0.5% chlorine solution to 9 parts of water to make 0.1% chlorine solution.

**Alternatively,**

Put 7 grams (1 tea spoon) to 1 Litre of water to make 0.1% chlorine solution.

Both can be used for spraying and washing of linen.

## **DISINFECTION PROCEDURES ON PREMISES**

Environmental Health Worker/Health and Safety Officer must enter and assess the premises accompanied by one of the residents. Both should be dressed in full protective clothing.

### **FOR LATRINES USED BY SICK PERSONS**

For latrines used by sick persons, blood stains, urine, vomitus and stool on floor

- Pour carefully 0.5% chlorine solution on the latrine and floor using a cup or bottle and let it sit for 15 minutes. If the floor is visibly soiled with body fluids such as blood, urine, vomitus or stool, then use towel to cover the soiled area and pour 1% chlorine solution on top of the towel to avoid splashes. Let the towel with chlorine solution on the surface 15 minutes
- Remove the dirty towel after 15 minutes and dispose of in a plastic bag
- Clean and remove the remaining chlorine solution using a towel absorbent fabric soaked in 0.5% chlorine solution
- Do not touch any spills of body fluids. Use wooden sticks to clean the floor using a towel or absorbent soaked with 0.5% chlorine solution
- Rinse floor and latrine with water and soap to reduce chlorine solution
- Dispose of all dirty towels and fabrics in a plastic bag containing other dirty towels and fabrics

### **FOR CLOTHES, LINENS, TOWELS AND MATTRESSES USED BY SICK PERSONS**

- Throw linens towels, clothes that are visibly soiled with blood, vomitus, urine or stool away to plastic bag to be burned
- Put linens, towels, or clothes NOT visibly soiled in a bucket with 0.1% chlorine solution. Let it stay for 30 minutes and then wash normally
- If mattresses covered with plastic sheeting, then pour 0.5% chlorine solution on the plastic sheeting, let the solution sit for 15 minutes then remove solution with towel and then wash plastic sheeting normally

### **FOR PLATES, UTENSILS AND CUPS USED BY SICK PERSON**

- Remove all plates, cups and utensils used by sick persons

- Throw away left over food in a plastic bag
- Wash plates and utensils with clean water and soap
- Rinse plates, cups and utensils in 0.1% chlorine solution

For general cleaning of surfaces not contaminated with blood, body fluids, use wipe downs

Allow surfaces to air dry before allowing residents to come onto premises

Dry sweeping with brooms should never be done. Rags holding dust should not be taken out and surfaces should not be cleaned with dry rags.

- Cleaning should always be carried out from clean areas to dirty areas to avoid contamination transfer
- Do not spray ( i.e. fog) occupied and non occupied areas with disinfectants. This is potentially dangerous practice that has no proven disease control benefit.

#### **HOW TO REMOVE PPEs BY CLEANERS**

Take off the PPEs in the following manner

- Shoe covering if worn
- Outer gloves
- Gown
- Goggles or face shield
- Face masks
- Inner gloves

#### **GENERAL RULES ON USAGE OF PPEs**

- Wash hand with soap and water immediately after removing the PPEs or use alcohol based hand rub if soap and water are unavailable
- After removal of PPEs collect and keep contaminated items in plastic bag until they are disposed of properly. Attach a BIOHAZARD warning label to the outside of the bag. If contaminated items are not dry, they should be placed in a leak proof bag and double bag.

## GUIDELINES ON DISINFECTION OF COMMON AREAS OF BUILDINGS

The disinfection procedures must be carried out in accordance with the following orders and methods

Public area requiring special attention include

- (a) Entrance lobbies
- (b) Door knobs, handles, intercom system, security locks and buttons
- (c) Corridors and staircases
- (d) Escalators, hand rails/handles and call buttons
- (e) Security guard booths / enquiry counters
- (f) Refuse collection chambers / areas if any
- (g) Public toilets

### DISINFECTION PROCEDURES

- Cleanse the floor and remove all accumulation of refuse before carrying out disinfection
- Spray the juncture between the wall surface and floor with 0.1% chlorine solution. **Avoid spraying in switch boxes or electric boxes, electric sockets and other electric appliances**
- Wipe all door knobs, handles, handrails, security locks, buttons, intercom system, escalators, and switch boxes with 0.1% chlorine solution. Leave for 15 to 30 minutes then rinse with water and wipe dry. Use 70% alcohol for metallic or electric or electronic items instead of diluted bleach
- Damp mop with 0.1% diluted household bleach. Leave it for 15 to 30 minutes then rinse with water and mop dry
- Pour half litre water into drain outlets and spray the outlets with insecticide if pesticide disinfection is necessary
- Disinfect the communal toilets

## **DISINFECTING THE COMMON TOILET (WC PAN HAND WASHING BASIN AND FLOOR)**

### **DISINFECTING WC PAN**

- (a) Flush the pan
- (b) Brush to clean the WC pan by using lavatory brush and 0.1% chlorine solution
- (c) After cleansing, soak the lavatory brush into the bucket containing 0.1% chlorine solution
- (d) Put down the toilet seat cover
- (e) Flush the pan
- (f) Wipe the toilet seat cover with 0.1% chlorine solution and leave for 15 to 30 minutes, rinse with water and wipe dry
- (g) Spray the juncture between the wall surface of the toilet and the WC pan with 0.1% chlorine solution

### **DISINFECTING THE HAND WASHING BASIN**

- (a) Cleanse and brush by using the ordinary brush soaked in 0.1% of chlorine solution. Leave for 15 to 30 minutes and rinse with water
- (b) Spray the junctures between wall surface of the toilet and hand washing basin with 0.1% chlorine solution

### **DISINFECTING THE FLOOR SURFACES**

Damp mop with 0.1% chlorine solution and leave for 15 to 30 minutes then rinse with water and mop dry the floors.

### **DISINFECTION TOOLS**

- Brush
  - An ordinary brush for bath tubs, wash up sinks and hand washing basins
  - Lavatory brush for WC pans
- Mop
- Sprayers
- Plastic buckets
  - 1 exclusively used for soaking lavatory brushes
  - 2 for general purposes

- Towels
- Bleach
- Table spoons
- Other articles include plastic bags, garbage bags, wires, strings.

## **PERSONAL PROTECTIVE EQUIPMENT**

- Gown
  - Coverall- for disinfection of toilets where massive environmental contamination is anticipated or when splashing is required
- Goggles and face shield
- Cap
- Face masks
  - N95 respirator- for procedures using high pressure water jet or sprayer
- Heavy duty rubber gloves
- Rubber boots

## **POINTS TO NOTE WHEN USING BLEACH- PRECAUTIONS**

- Wear personal protective equipment including face masks, goggles, rubber gloves when using bleach
- Open window or exhaust fan to ensure good ventilation when using bleach. Diluted bleach should be prepared daily.
- Do not apply bleach to wool, nylon, silk, dyed fabrics and lacquered surfaces. Bleach can be corrosive to damage painted surfaces.
- Avoid contact with eyes. If bleach goes into eyes, rinse with running water and consult the doctor promptly
- Do not simultaneously use other cleaning agents with bleach or in combination as it reduces its effectiveness and cause chemical reaction. Toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. If necessary, use detergent first and rinse thoroughly with water before using bleach for disinfection.

## **PURCHASE OF CHEMICALS AND MATERIALS**

- It is the responsibility of the institutions to procure chemicals and materials required for spraying.

- It is also the responsibility of the institutions to maintain and replenish the materials.
- It shall be the responsibility of the institutions to meet the cost of spraying teams hired or otherwise engaged.
- It shall be a **MUST for the Ministry of Health** to provide technical guidance and supervision of the services being provided.