

# COVID-19

## ENVIRONMENTAL HEALTH GUIDELINES

### 1. Background

The National Department of Health has been actively involved in monitoring international travellers entering South Africa with the aim of detecting any carriers of the virus at early stages. This activity has been carried out for all international conveyances. Plans have been prepared and guidelines were developed to guide the whole health sector in the country. The Country has put all necessary processes in place to ensure that the introduction of cases is detected early at Points of Entry and managed to prevent further spread. If it happens that suspected cases develop symptoms and meet the case definition criteria; this will probably happen at community level or out of the point of entry environment, which may happen after the incubation period has lapsed, Municipal Health Services (MHS) would have to kick in.

This document aims to guide Environmental Health Services (EHS) on key roles related to the management of the outbreak. This guide should be read in conjunction with the guideline for case finding, diagnosis, management and public health response in South Africa and the standard operating procedures on Novel Corona Virus -19 (COVID-19).

### 2. Role of Environmental Health Practitioners in the management of COVID-19

- Participation in Outbreak Response Teams (ORT) activated at provincial and district level;
- Investigation of suspected cases and contact tracing;
- Monitoring of the management of the human remains and disposal of the dead;
- Ensure decontamination and disinfection of affected homes;
- Monitoring of the management of health care waste;
- Conduct health education, awareness raising and health promotion;
- A multi stakeholder approach should be observed throughout activities involving COVID-19.

### 3. GUIDELINES

#### 3.1 GUIDELINES ON MANAGEMENT OF DECEASED AND DISPOSAL OF BODIES INFECTED WITH COVID-19

This interim guideline is based on what is currently known about COVID-19.

This virus was first identified in Wuhan, Hubei Province, China and it continues to spread.

Much is unknown about COVID-19. Current knowledge is largely based on what is known about similar coronaviruses. Coronaviruses are a large family of viruses that are common in many different species of animals, including camels, cattle, cats, and bats. Most often, spread from a living person happens with close contact (i.e., within about 6 feet or 1 metre) via respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza and other respiratory pathogens spread.

This route of transmission is not a concern when handling human remains or performing postmortem procedures. Postmortem activities should be conducted with a focus on avoiding aerosol generating procedures, and ensuring that if aerosol generation is likely (e.g. when using an oscillating saw) that appropriate engineering controls and personal protective equipment (PPE) are used. These precautions should ensure that appropriate work practices are used to prevent direct contact with infectious material.



### 3.1.1 Handling of dead bodies

- 1) The act of moving a recently deceased patient onto a hospital trolley for transportation to the mortuary might be sufficient to expel small amounts of air from the lungs and thereby present a minor risk;
- 2) A body bag should be used for transferring the body to the mortuary and those handling the body at this point should use full personal protective equipment;
- 3) The outer surface of the body bag should be decontaminated immediately before the body bag leaves the ward or anteroom area. This may require at least 2 individuals wearing such protective clothing, in order to manage this process;
- 4) The trolley carrying the body must be disinfected prior to leaving the ward or anteroom;
- 5) Prior to leaving the ward or anteroom, the staff members must remove their PPE;
- 6) Once in the hospital or private mortuary, it would be acceptable to open the body bag for family viewing only (mortuary attendant to wear full PPE). Family to be provided with mask and gloves for the viewing and should not kiss the body;
- 7) Washing or preparing the body is acceptable if those carrying out the task wear PPE. Mortuary staff and funeral directors must be advised by the Environmental Health Practitioner of the biohazard risk;
- 8) If a post mortem is required safe working techniques (for example manual rather than power tools) should be used and full PPE worn;
- 9) The embalming of human remains does not pose a risk, however, the embalmer should wear full PPE;
- 10) After use, empty body bags should be treated or disposed of as health care risk waste;

### 3.1.2 Conveyance of infectious human remains

- 1) The human remains of a person who, at the time of his or her death suffered from a disease or condition which is capable of transmitting an illness even after death and in the opinion of the health authority concerned, may pose a health hazard or endanger public health in one way or another, may not be conveyed in public in any way unless-
  - a) such human remains are placed in a polythene bag, sealed in an airtight container, placed in a sturdy non-transparent sealed coffin, embalmed and/or the total surface of the body covered with a 5 cm layer of wood sawdust or other absorbent material which is treated with a disinfectant;
  - b) a medical practitioner declares in writing that in his or her opinion the conveyance of such human remains will not constitute a health hazard;
- 2) No person other than an attending medical practitioner or attending forensic pathologist or a medical practitioner who can prove that they have treated the deceased during illness may certify that the person did not die of an infectious disease;
  - a) such declaration must accompany the human remains at all times during the conveyance and up to the burial; and
  - b) The declaration referred to in sub-section 1 above shall be shown to an EHP on demand by the person responsible for the conveyance of the human remains;
- 3) No person shall damage a container referred to in sub-section (1)(a), or open such container or remove the human remains from the container or come into direct contact with the human remains after it has been sealed without prior approval from an EHP.

### 3.1.3 Disposal of Human Remains



- 1) The burial and/or cremation of the human remains shall be carried out as per the by-laws of the District or Metropolitan Municipality where the remains will be disposed of.
- 2) These guidelines must be read in conjunction with the Regulations Relating to the Management of Human Remains, Regulation No. R. 363 of 22 May 2013 as framed in terms of the National Health Act, 2003 (act No. 61 of 2003).

### **3.2 TRACING OF FAMILY, HOUSEHOLD, WORKPLACE AND COMMUNITY CONTACTS**

The relevant provincial Communicable Disease Coordinator (CDC) with assistance of Environmental health will be responsible for collating a list of family, household, workplace and community contacts that were exposed a COVID-19 patient.

- A contact line list should be completed for each suspected case at time of sample collection and completion of the Case Investigation Form (CIF) by the facility infection control focal point, attending clinician or designated port health officer.
- Trace and place case contacts under observation e.g. family or cohorts in collaboration with local authorities (district and metropolitan municipalities).
- Collate information and share reports with key stakeholders.
- The CDC will communicate with and assess each contact, and ensure completion of follow-up for the 14-day period for each contact.
- Contacts who do not have symptoms at time of the call, are to be monitored telephonically for 14 days by CDC or NICD call centre personnel post last exposure to the confirmed case.
- Monitoring of contacts may switch from telephonic monitoring to self-monitoring dependant on the number of contacts to be followed up.
- The CDC and EH should prioritise family and household contacts.
- The CDC should report daily to the NICD on their findings.
- The NICD, CDC and EH should together assess the need for:
  - Additional measures to identify contacts including the use of public service announcements or media releases, and/or the use of social media to invite persons who were at particular events and who are symptomatic to make contact with the NICD using the NICD hotline number **0800 029 999**.
- Contacts under monitoring should be advised to:
  - Avoid unnecessary social contact;
  - Avoid travel;
  - Remain reachable for monitoring; and
  - Practice good hygiene always.

### **3.3 CLEANING, DECONTAMINATION / DISINFECTION IN WORKPLACE, HOUSEHOLD OF PATIENTS AND CONTACTS AND OTHER ENVIRONMENTS**

#### **3.3.1 Patient's homes**

**EH and CDC to ensure decontamination and disinfection of patient homes are carried out as follows;**

- Clean and disinfect bathrooms and toilet surfaces at least once daily. Regular household soap or detergent should be used first for cleaning, and then, after rinsing, regular household disinfectant containing 0.5% sodium hypochlorite should be applied;
- Clean the patient's clothes, bed linen, and bath and hand towels using regular laundry soap and water or machine wash at 60–90 °C with common household detergent, and dry thoroughly. Place contaminated linen into a laundry bag. Do not shake soiled laundry and avoid contaminated materials coming into contact with skin and clothes.
- Gloves and protective clothing (e.g., plastic aprons) should be used when cleaning surfaces or handling clothing or linen soiled with body fluids. Depending on the context, either utility or single-use gloves can be used. After use, utility gloves should be cleaned with soap and water and decontaminated with 0.5% sodium hypochlorite solution. Single-use gloves (e.g., nitrile or latex) should be discarded after each use.
- Perform hand hygiene before and after removing gloves.



- Gloves, masks and other waste generated during at-home patient care should be placed into a waste bin with a lid or suitable HCRW receptacle in the patient's room before being disposed of as infectious waste.
- Avoid other types of exposure to contaminated items from the patient's immediate environment (e.g., do not share toothbrushes, cigarettes, eating utensils, dishes, drinks, towels, washcloths or bed linen).

### 3.3.2 Workplace disinfection

Workplaces must be kept clean and hygienic at all times.

- Surfaces (e.g. desks and tables) and objects (e.g. telephones, keyboards) must be wiped with disinfectant.
- Gloves and protective clothing (e.g., plastic aprons) should be used when cleaning working surfaces. Either utility or single-use gloves can be used. After use, utility gloves should be cleaned with soap and water and decontaminated with 0.5% sodium hypochlorite solution. Single-use gloves (e.g., nitrile or latex) should be discarded after each use.
- Perform hand hygiene before and after removing gloves.
- Avoid other types of exposure to contaminated items from the patient's work environment (pens, computers, eating utensils, dishes).
- Promote regular and thorough hand-washing by employees, contractors and customers.
- Brief your employees, contractors and customers that if COVID-19 starts spreading in your community anyone with even a mild cough or low-grade fever (37.3 C or more) needs to stay at home. They should also stay home (or work from home) if they have had to take simple medications, such as paracetamol/acetaminophen, ibuprofen or aspirin, which may mask symptoms of infection.

## 3.4 GUIDELINES FOR HEALTH EDUCATION, AWARENESS AND HEALTH PROMOTION

Community Awareness, Education and Communication is critical in the management and prevention of the spread of COVID-19. Brief your employees, contractors and customers that of COVID-19. Awareness activities should be carried out at all major risky areas, such as where people come together in numbers, e.g. schools, churches, funerals and events etc.

Information, Education and Communication about hand hygiene should be communicated as one of the key preventative measures against COVID-19:

Key messages should be widely distributed to the general public, through various means i.e. Food handling premises (formal and informal; traditional gatherings; bus and taxi ranks; public gathering places (Churches, mosques, shopping malls); shopping centers; retail supermarkets and the fast food chain retailers; points of entry; fuel service stations; universities of higher learning; stadia; and other places where the public may gather.

### 3.4.1 HAND HYGIENE PROMOTION

#### **Encourage washing hands with soap and running water and the use of alcohol based hand sanitizers;**

Hand hygiene promotion messages should be designed to be targeted, clear and easily understandable by the communities.

Hand hygiene messages and information should be focused on promoting washing hands with soap often, and during at the following times:

- After visiting the toilet; after changing baby nappies; before handling food or eating; and before feeding a child or others.
- Always wash your hands with soap after coughing, blowing nose and sneezing into them and every once and again.

Handwashing promotion messages should include the proper handwashing technique. It is critical that people are not told but shown how to properly wash their hands, to ensure maximum removal of germs on the hands.



This will promote the understanding that when hands are washed properly with soap, how the risk of infection is minimised.

The handwashing technique and steps;

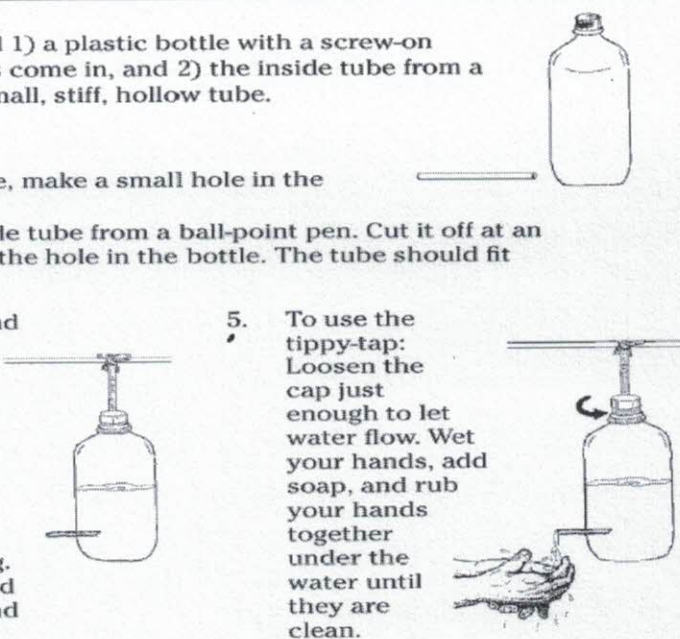
- *Step 1:* Wet hands with water and apply soap;
- *Step 2:* Rub palms of hands together;
- *Step 3:* Rub in between fingers, similarly at the back of the both hands;
- *Step 4:* Clean the thumbs and the hand wrist;
- *Step 5:* Clean underneath your nails;
- *Step 6:* Rinse hands thoroughly with running clean water; and dry with clean cloth or by shaking in the air.

Education should include building local skills to enable construction of self-made handwash technologies using locally available material, i.e. Tippy Tapps can create hygienic enablers for handwashing with running water, especially in areas where there is no running water and required facilities.

### How to make a plastic tippy-tap

To make this tippy-tap you need 1) a plastic bottle with a screw-on cap, of the sort that soda drinks come in, and 2) the inside tube from a ball-point pen, or some other small, stiff, hollow tube.

1. Clean the bottle.
2. Using a heated piece of wire, make a small hole in the lower part of the bottle.
3. Remove and clean the inside tube from a ball-point pen. Cut it off at an angle, and push it through the hole in the bottle. The tube should fit tightly.
4. Fill the bottle with water and replace the cap. When the cap is tight, no water should flow through the tube. When the cap is loose, water should flow out in a steady stream. When you are sure that it works, hang it or place it on a shelf where people can use it for hand-washing. Keep soap nearby, or thread a bar of soap with string and tie it to the bottle.
5. To use the tippy-tap: Loosen the cap just enough to let water flow. Wet your hands, add soap, and rub your hands together under the water until they are clean.



### Use of alcohol based hand sanitizers

**Hand sanitizers** can be used to decrease infectious agents on the **hands**, where one is not close to a handwash basin.

Sanitizers however should not be encouraged after using a toilet, washing hands with soap is critical at those times.

### 3.4.2 PROPER COUGH AND SNEEZE ETIQUETTE

Education and awareness to include proper cough and sneeze etiquette.

Messages to include:

Covering mouth and nose every time one **coughs** or **sneezes**. Use a disposable tissue to cover your mouth or nose if possible.

- If a **cough** or **sneeze** sneaks up on and no tissue is available, **cough** or **sneeze** into your upper sleeve.

### 3.4.3 WORKPLACE AWARENESS (BUSINESS, SHOPPING MALLS, PUBLIC PLACES)



- Put sanitizing hand rub dispensers in prominent places around the workplace. Make sure these dispensers are regularly refilled.
- Display posters promoting hand-washing –these can be accessed at [www.health.gov.za](http://www.health.gov.za); [www.NICD.ac.za](http://www.NICD.ac.za) and [www.WHO.int](http://www.WHO.int) .
- Combine this with other communication measures such as offering guidance from occupational health and safety officers, briefings at meetings and information on the intranet to promote hand-washing.
- Make sure that staff, contractors and customers have access to places where they can wash their hands with soap and water. Washing removes and/or kills the virus on hands and prevents the spread of COVID-19.
- Promote good respiratory hygiene in the workplace as referred in 3.4.2 above.
- Display posters promoting respiratory hygiene. Combine this with other communication measures such as offering guidance from occupational health and safety officers, briefing at meetings and information on the intranet etc.
- Ensure that and/or paper tissues are available at your workplaces, for those who develop a runny nose or cough at work, along with closed bins for hygienically disposing of them because good respiratory hygiene prevents the spread of COVID-19.
- Provision for the safe disposal of used tissues to be made where possible.
- Advise employees and contractors to consult national travel advice before going on business trips.

### **3.5 AWARENESS AT PUBLIC GATHERING PLACES AND EVENTS**

Places where the public gathers such as churches, malls, sporting events and others whether small or large have a potential of risk associated with the spread of COVID-19. Therefore, depending on the situation and the risk, events should be minimised. Adherence should be as per Statement by President Cyril Ramaphosa on measures to combat COVID-19 Epidemic 15 March 2020 which restrict the mass gathering of more than 100.

EHP's to be part of the planning of the major events and advice on the following;

- Keeping of records for all contacts and service providers for events;
- Regular cleaning and disinfection of surfaces;
- Good personal hygiene and hand washing practices;
- Limiting of contacts, avoiding handshaking and hugging;
- Identification of visibly sick attendees and advised or separated from the rest of the people.
- Advising notably sick people to stay away from major events;
- The organiser of an event should let all potential patrons declare their travel history;
- Reducing the number of people to minimise exposure.
- Keeping of bathrooms clean and disinfected regularly
- Distribution of hygiene messaging at the venue, such as washing hands with soap and use of sanitizers.
- Provision of hand wash facilities and soap to promote hand washing and hand drying paper with bins.

### **3.6 OTHER KEY MESSAGES FOR THE GENERAL PUBLIC**

- Avoid contact with live Animals, Poultry and Birds;
- Avoid Consumption of raw and undercooked meat;(observe the 5 keys to safer food)
- Avoid crowded places and People who are unwell;
- See a doctor if you are unwell and avoid mixing with others (self-isolate).

### **3.7 GUIDELINES FOR MONITORING OF THE MANAGEMENT OF WASTE**

EH should monitor the management of health care waste to avoid contamination and possible spread of the COVID-19 virus.

EH to ensure the following in HCW management;

- The management of HCRW in line with the SANS 10248-1 with regards to correct identification, segregation, storage and disposal.



- HCRW is segregated at the point of generation and shall be containerized to minimise the risk of contamination.
- Waste generated from patients in isolation or quarantine in a designated facility/health facility or home, is treated as health care risk waste (HCRW) as per SANS 10248-1:2008.
- The HCRW is properly packaged in sealed, leak and puncture proof containers/boxes.
- The HCRW is labelled with the bio- hazard symbol/sign and marked "Corona virus or COVID-19".
- The HCRW is stored separately from other wastes generated.
- The collection, transportation, treatment and disposal, is provided by only an appointed/appropriate contractor/service provider, however, ensure that waste is safely stored until the health care waste management company can pick it up and that the company knows and acknowledges that waste was generated by suspected or confirmed COVID-19.
- The waste management company collecting must ensure that and treated and disposal is conducted at licenced waste treatment /disposal facilities.
- All personnel or staff in contact with patients must be geared with appreciate personal protective equipment (PPEs) at all times to prevent exposure or risk to health.
- Monitoring should be done at such facilities.
- All bags, bins and boxes must be adequately sealed, as not to leak any fluids, and must be wiped down with 0.05% chlorine solution before being stored or removed.

### 3.8 REPORTING

- EHPs to provide reports to the province/national on cases, and investigations;
- EHPs should take part in the preparation of line lists as guided and have it submitted to NICD dedicated email address: [ncov@nicd.ac.za](mailto:ncov@nicd.ac.za)
- The team must try by all means to encourage patients to be separated from other contacts and restrict their activities.

### References

[www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19](http://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19)

Public health for mass gatherings: key considerations

[www.who.int/publications-detail/public-health-for-mass-gatherings-key-considerations](http://www.who.int/publications-detail/public-health-for-mass-gatherings-key-considerations)

Key planning recommendations for mass gatherings in the context of the current COVID-19 outbreak: interim guidance, 14 February 2020

[www.who.int/publications-detail/key-planning-recommendations-for-mass-gatherings-in-the-context-of-the-current-covid-19-outbreak](http://www.who.int/publications-detail/key-planning-recommendations-for-mass-gatherings-in-the-context-of-the-current-covid-19-outbreak)

Statement by President Cyril Ramaphosa on measures to combat COVID-19 Epidemic 15 March 2020



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