

**Zimbabwe Guidelines for the Management  
of COVID -19**

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Ministry of Health & Child Care  
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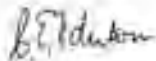
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## FOREWORD

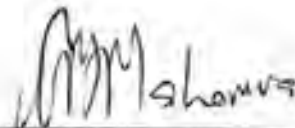
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It is the national objective that the health care of Zimbabweans is met through the provision and proper use of essential medicines and scientifically approved therapeutics. Sometimes we do not need to give medicines, that is, there is not always a "pill for every ill". Thus, there is need to use medicines appropriately, efficiently, and effectively.

This edition of the COVID-19 guidelines reflects the consensus of local experts, and takes into consideration factors such as the Zimbabwean setting, prevailing economic climate, practical experience as well as evidence-based therapeutics.

This first version of the COVID-19 guidelines has considered the current trends and science for the novel disease and will be updated as the ongoing research and clinical trials produce new evidence.

I urge all health workers to familiarise themselves with the guidelines, to prescribe within the bounds of this publication, and to recognise the critical importance of providing a quality service to all health care recipients through the rational use of medicines.



**Dr Agnes Mahomva**

**Permanent Secretary for Health and Child Care**



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| Contents   |    |
| ACKNOWLEDGEMENTS   | 1  |
| Foreword   | 2  |
| Preamble   | 4  |
| Testing for COVID-19   | 5  |
| Infection Prevention and Control (IPC)                                 | 5  |
| handling OF CONTACTS of COVID-19                                       | 6  |
| Care of suspected case with mild symptoms who is being sent back home: | 7  |
| Presenting symptoms and signs:   | 7  |
| <b>Who should be admitted?</b>   | 8  |
| MANAGING THE CASE:   | 8  |
| Laboratory testing of patient:   | 8  |
| Management of hypoxemic respiratory failure and ards                   | 9  |
| Management of septic shock   | 9  |
| How do we decide when to discharge a case?                             | 9  |
| Post –discharge:   | 10 |
| Recommended specific antiviral interventions for COVID-19              | 10 |
| References:  | 11 |

## **PREAMBLE**

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### **What is COVID-19?**

Corona viruses are responsible for the simple colds that we know about but COVID-19 is a viral infection due to the new/novel corona virus that was identified in China in December 2019. This new corona virus (SARS-CoV-2) is easily transmitted from person to person and those not exhibiting symptoms can transmit it too, unlike SARS/MERS where transmission appeared to be via those already exhibiting symptoms.

We expect that 80% of those who get infected will be able to take care of themselves at home. However, 20% will need to be admitted as they will have moderate /severe symptoms of COVID-19. We also expect that 5% of the total that will be infected will need ventilation in an intensive care setting.

Given our limited capacity to handle infected cases in our hospitals all over Zimbabwe, it is important that we avoid getting infected. Hence, we need to observe the current public health measures and practice infection prevention and control to the highest extent possible.

### **What is the incubation period?**

The incubation period appears to be about 14 days in most cases but most symptoms will appear at about day 5 of infection. Hence, WHO recommends that contacts of patients with laboratory-confirmed COVID-19 be quarantined for 14 days from the last time they were exposed to the patient.

### **What is self-quarantine and self-isolation?**

**Self-quarantine** refers to when you distance yourself from others after exposure or potential exposure just in case you may develop symptoms of COVID-19.

**Self-isolation** refers to those with symptoms suggestive of COVID-19 and therefore need to assume they are infected even if not yet tested so as to protect others around them. This will also apply to confirmed COVID-19 cases with mild symptoms and being managed at home i.e. not deemed sick enough to be admitted.

### **What are the symptoms?**

The case definition is changing all the time but in general a new fever, dry cough, myalgia, shortness of breath and extreme fatigue warrant an exclusion of COVID-19. Thus, anyone presenting with flu-like symptoms should be assumed to be a potential COVID-19 case until proved otherwise. Children may also have poor feeding, nausea and vomiting.

## TESTING FOR COVID-19

The testing is still limited. But the definitive test is a RT-PCR testing of nasopharyngeal swabs for most patients. The results have a turnaround time of about 6 hours. Point of care tests are likely to be available soon.

Definitions of COVID-19 cases and contacts are as per the World Health Organisation guidelines which are updated periodically. They are depicted in the table below:

|   |  |
|---|--|
| <b>Suspect cases meet one of the following criteria</b> | A. A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath), AND a history of travel to or residence in a location reporting community transmission of COVID-19 disease during the 14 days prior to symptom onset |
|   | B. A patient with any acute respiratory illness AND having been in contact with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to symptom onset   |
|   | C. A patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath; AND requiring hospitalization) AND in the absence of an alternative diagnosis that fully explains the clinical presentation.                   |
| <b>A probable case has either one of the following</b>  | A. A suspect case for whom testing for the COVID-19 virus is inconclusive  |
|   | B. A suspect case for whom testing could not be performed for any reason   |
| <b>Confirmed case</b>                                   | A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.  |

The following patients should be considered at high risk of dying if they have COVID-19 symptoms and should be considered for admission:

- Patients older than 60 years,
- Patients with underlying medical conditions (chronic lung disease, heart disease, diabetes mellitus, HIV infection)
- Pregnant women.

Healthy individuals with mild illness do not need to be tested but should stay at home and where possible isolate themselves even from household contacts to prevent spread of infection.

\*\*\*\*COVID-19 HOTLINE -Call 2019\*\*\*\*

### INFECTION PREVENTION AND CONTROL (IPC)

A COVID-19 IPC response plan should be embedded in the overall facility IPC policy and plan. In COVID-19, the hierarchy of control measures are:

1. Administrative – Policies and SOPs to enable early assessments and triaging of cases (including spatial distancing); early recognition and reporting of cases, adequate staffing levels, and implementation of the two-tier control measures (Standard and Transmission based precautions)
2. Engineering controls – including ventilation, isolation facilities with dedicated ablution facilities, restricting access, signage for contact and droplet precautions, provide hand

hygiene stations (with soap and water or sanitizers) at health facilities and mobilize clients and staff to use them

3. Personal Protective Equipment (PPE) – availability of appropriate and adequate PPE at all settings to prevent transmission of SARS-Cov2 to staff and other patients (refer to latest COVID-19 PPE Policy)

The following measures should be strictly observed in order to prevent transmission of SARS-Cov2

- Perform hand hygiene frequently with an alcohol-based hand rub (60 -80% alcohol content) or wash hands with soap and water if hands are visibly soiled. Avoid touching your face, mouth, nose and eyes with dirty hands. Also avoid hand shaking. To effectively clean hands, rub the hands for at least 20 seconds using the recommended steps (refer to the latest National IPC Guidelines on the 5 moments and the technique for hand hygiene).
- Staff who develop symptoms should self-quarantine until they are cleared of COVID-19 and are feeling better. Teach cough etiquette and provide IEC materials as a reminder for staff and patients.
- When caring for patients or working in areas providing care to suspected and confirmed cases of COVID-19, wear PPE as recommended in the PPE Policy for COVID-19. Training in the proper donning and doffing of PPE should be given.
- Increase the frequency of environmental cleaning and provide appropriate cleaning agents and disinfectants, which are active against enveloped viruses. Segregate linen, without shaking, according to the National IPC Guidelines. Wet linen should be placed in impervious bags before putting in laundry bags. It is crucial to train laundry workers on linen management and provide appropriate PPE.
- Manage waste as per National IPC Guidelines. Waste segregation at point of care (using colour coded bins and job aides), provision of PPE for waste handlers and timely disposal of the waste. Note waste from COVID-19 care areas is highly infectious and should not be kept in the facility waste holding area.
- It is critical that we apply infection prevention and control and avoid catching COVID-19 as there is no specific therapy for this infection right now apart from supportive care.

#### **In summary:**

Wash hands with soap and water as often as possible for at least 20 seconds.

If you have no access to water, use hand sanitizer ideally one with 60-80% alcohol.

Given that we will not know who is infected and who is not, healthcare workers (HCW) will need to use appropriate PPE in the hospital setting in particular at Emergency Rooms and when caring for a person with COVID-19

HCW must be trained in the donning and doffing of this PPE and its correct disposal.

We need to identify dedicated isolation centers/hospitals for COVID-19 treatment.

#### **What is social distancing?**

- We suggest that people keep a distance of at least 1 metre from each other so that if one coughs or sneezes, there is less likelihood of inhaling the droplets that might have the virus.
- Limit getting out of your home for social visits. Limit being in gatherings such as funerals, church services and adhere to the messages as provided by our government.

#### **HANDLING OF CONTACTS OF COVID-19**

Self-Quarantine - for all persons with history of exposure to COVID-19 who had a close contact with an infected person or have had limited contact with an infected person for a short period of time

including travel outside the country or exposure to a case of COVID-19. Those who feel sick should also stay home and self-quarantine even if symptoms seem mild.  
Self-isolation for all persons with symptoms suggestive of COVID-19 to prevent the spread of the virus, including those within your home. Those who are sick should be separated from others in their home to the greatest extent possible.

#### **How to handle a suspected case of COVID-19:**

##### **TRIAGE:**

- Early recognition of suspected COVID-19 cases.
- Suspected COVID-19 need to be quickly identified when they present to our healthcare settings/hospitals.
- Screen at arrival in hospital and refer appropriately. If you suspect COVID-19 refer to the nearest isolation centre for testing and avoid admitting patients to centres that may not be able to handle the case or risk infecting non-COVID cases.
- If you suspect a patient has Covid-19 symptoms, put a mask on them and isolate them in a separate room whilst waiting for the rapid response team to come and collect the patient to take them to the Isolation Centre or to the appropriate place for their admission. Keep the patient at least 3 meters from other suspect cases.
- If possible, use dedicated or disposable patient-care equipment.
- Clean and disinfect reused equipment before use on another patient.
- Keep a record of all patients who have had to be isolated at your unit and follow up their result. This is important for contact tracing should their test result be positive, especially the healthcare workers at that facility. ( Use appropriate surveillance tools for COVID-19)
- If the healthcare workers who looked after such a patient were not wearing appropriate PPE, they should be isolated from work until the disposition of that case is known (COVID-19 positive or negative), for up to 14 -21 days.
- Patients with mild symptoms can be sent back home for self-quarantining for at least 14 -21 days. When they are at home, they will need to stay in their own room and avoid infecting their family members. Ideally, they should be in their own room, use their own utensils i.e. not share these with other members of the family, use their own toilet/bathroom or use these facilities after every one else has used them. Their waste will need to be handled as infectious and disposed of safely.
- Those with underlying chronic disease like HIV, diabetes mellitus, chronic lung disease, chronic heart failure, cancer, older individuals, are at risk of developing moderate/severe infection.
  - Therefore, they need to be admitted
  - Check if they have a respiratory rate > 24, tachycardia >120, O<sub>2</sub> saturation <90%

##### **Where to refer to:**

You will need to know where to refer patients for admission from your site.

##### **Whom to contact:**

Keep the numbers of the local/focal person that you need to contact if you suspect COVID-19.

##### **CARE OF SUSPECTED CASE WITH MILD SYMPTOMS WHO IS BEING SENT BACK HOME:**

- practice social distancing- keep at least 2 meters away from other people
- practice infection prevention and control (IPC) e.g. washing hands frequently or using hand sanitizers, cough etiquette
- avoid elderly people as they are at risk of getting severe disease
- stay at home to limit exposing their infection to others or picking up COVID-19 just in case their illness is just a simple flu/other infection.

Presenting symptoms and signs:



- Suspect Covid-19 when a person presents with a **fever, dry cough and shortness of breath**. They may also have fatigue, muscle aching, diarrhea and /or vomiting.
- Having a runny nose is not that common in Covid-19.
- Thus, the symptoms of this COVID-19 are likely to be confused with our usual flu-like syndromes.
- Be wary of those who may have travelled from countries reporting a lot of COVID-19 cases which is now declared a pandemic by WHO as most countries have cases including Zimbabwe.
- Any person presenting with a **severe acute respiratory tract infection is a potential COVID-19 case** and in particular those with a flu-like illness with a fever, dry cough and shortness of breath.
- Any case of pneumonia should be considered as a potential COVID-19 case and have that possibility excluded through checking for risk factors i.e. have they travelled, have they been exposed to a COVID-19 case etc.

#### Who should be admitted?

- Assess the patient.
- If mild symptoms can go home
- If having **difficulty breathing, O2 saturation <90**, arrange for admission.
- Make sure that you have excluded other possible causes of fever and shortness of breath e.g. PCP, malaria, bacterial pneumonia, pulmonary embolism etc.

#### MANAGING THE CASE:

- Treat as we would normally do **for a case of pneumonia as per EDLIZ guidelines**
- Give empiric antibiotics to treat all likely pathogens causing pneumonia e.g. in most patients unless they have documented allergies give:
  - **Ceftriaxone 2g iv start followed by 1g bd iv x 1/52 &**
  - **Azithromycin 500mg od po on day 1 and then 250mg daily x 4 days**
- **For children -use Ceftriaxone 50-80mg/kg plus Azithromycin 10mg/kg**
- **Paracetamol 500mg -1gm every 6 -8 hours as required for fever**
  - Give patient a mask if you suspect COVID-19. Wear PPE yourself.
  - Give supplemental oxygen therapy immediately to patients with respiratory distress, hypoxaemia, or shock.
  - Avoid overloading the patient with intravenous fluids. Patients should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation.
  - O2 @ 5 L/min - SpO2 ≥90% in non-pregnant & SpO2 ≥92-95 % in pregnant patients.
  - Avoid using steroids in these cases.
  - Avoid rapid infusion of fluids
    - aim for maintenance fluids unless if there is evidence of septic shock or obvious dehydration.
    - Rapid IV fluid infusions may accelerate the respiratory decompensation in those with pneumonia and/or ARDS and
- Conduct a portable Chest X-ray which may show ground glass appearance especially in the peripheral areas.

#### LABORATORY TESTING OF PATIENT:

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- Conduct usual basic blood tests e.g. FBC, U&E, glucose, LFT
- Collect blood cultures for bacteria that cause pneumonia and sepsis, ideally before antimicrobial therapy.
- **DO NOT delay antimicrobial therapy just to collect blood cultures.**

## MANAGEMENT OF HYPOXEMIC RESPIRATORY FAILURE AND ARDS

- Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy
- High-flow nasal oxygen (HFNO) or non-invasive ventilation (NIV) should only be used in selected patients with hypoxemic respiratory failure. These modes of ventilation require negative ventilation in the ICU because they increase aerosolization and risk to HCW. We recommend CPAP is delivered in negative pressure room with air exchanges greater than regulatory thresholds (10 cycles per hour) if negative pressure room is not available, a neutral pressure room with air cycling is preferable.
- Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions.
- Implement mechanical ventilation using lung protective approach lower tidal volumes (4–8 ml/kg predicted body weight, PBW) and lower inspiratory pressures (plateau pressure <30 cmH<sub>2</sub>O). Target SPO<sub>2</sub> 88–95%, pH >7.25 and permissive hypercapnia PaCO<sub>2</sub>.
- In patients with severe ARDS, prone ventilation for >12 hours per day is recommended.
- Use a conservative fluid management strategy for ARDS patients without tissue hypoperfusion.
- Be extra careful when providing rehabilitation (e.g. chest physiotherapy etc) care to these patients

## MANAGEMENT OF SEPTIC SHOCK

- Recognize septic shock in adults when infection is suspected or confirmed AND vasopressors are needed to maintain mean arterial pressure (MAP)  $\geq 65$  mmHg AND lactate is  $\geq 2$  mmol/L, in absence of hypovolemia.
- Recognize septic shock in children with any hypotension (systolic blood pressure [SBP] <5th centile or >2 SD below normal for age) or 2-3 of the following: altered mental state; tachycardia or bradycardia (HR <90 bpm or >160 bpm in infants and HR <70 bpm or >150 bpm in children); prolonged capillary refill (>2 sec) or warm vasodilation with bounding pulses; tachypnoea; mottled skin or petechial or purpuric rash; increased lactate; oliguria; hyperthermia or hypothermia.
- Adults, give at least 30 ml/kg of isotonic crystalloid in 3 hours. Give 20 ml/kg as a rapid bolus and up to 40-60 ml/kg in the first 1 hr.
- Do not use hypotonic crystalloids, starches, or gelatines for resuscitation.
- Fluid resuscitation may lead to volume overload, including respiratory failure. If no response discontinues. This step is particularly important where mechanical ventilation is not available.
- Administer vasopressors when shock persists during or after fluid resuscitation. The initial blood pressure target is MAP  $\geq 65$  mmHg in adults and age-appropriate targets in children.
- Vasopressors (VPs) can be given through a peripheral IV if a central line is not available but use a large vein and closely monitor for signs of extravasation and local tissue necrosis. If extravasation occurs, stop infusion. **VPs can also be administered through intraosseous needles.**
- If signs of poor perfusion and cardiac dysfunction persist despite achieving MAP target with fluids and vasopressors, consider inotropes e.g. dobutamine.

## HOW DO WE DECIDE WHEN TO DISCHARGE A CASE?

- Will be based on clinical improvement as we do with pneumonias and other clinical problems. If COVID-19 testing becomes widely available, we can re-test the patient for COVID-19 before discharging
- Test 24 -48 hours apart and discharge if negative twice

- Recommend quarantine for 7-14 days after discharge if not tested prior to discharge to prove COVID-19 negative testing.

**POST-DISCHARGE:**

**How should the patient behave or what should they do to prevent getting infected again?**

- We have no concrete evidence that those infected with COVID-19 will develop immunity and if so for how long. We will extrapolate that information from other viral infections where immunity develops but if this new corona virus mutates, it is likely that one might get re-infected as happens with e.g. influenza.
- If a patient has been discharged on the basis of two negative COVID-19 tests, there will be no need for additional isolation post-discharge.
- If the patient has been discharged on the basis of clinical improvement, the patient should self-isolate at home for at least 72 hours after resolution of fever and shortness of breath.

**RECOMMENDED SPECIFIC ANTIVIRAL INTERVENTIONS FOR COVID-19**

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- We do not currently have any specific therapies for COVID-19 and any use of medicines is "off-label".
- Use of any medicines like *Chloroquine*, *Hydroxychloroquine*, *Lopinavir/Ritonavir*, *Interferon alpha-2b* or *Remdesivir* etc. should be in a clinical trial setting, e.g. WHO SOLIDARITY Trial or any other trials that will have been approved by our institutional and national review boards such as MRCZ, MCAZ.

**REFERENCES:**

1. MGH COVID treatment Guidance Version 1.03/17/2020
2. BMJ Visual Summary
3. WHO COVID-19 guidelines