Western Cape Government
Health

PACK
Practical Approach to Care Kit

COVID-19

Version 5

Updated December 2020 for use in Primary Health Care facilities in Western Cape, SA.

This guidance is aligned to the NDoH/NICD Clinical management of suspected or confirmed Covid-19 disease, Version 5 (Aug 2020). Note that COVID-19 guidance is evolving.

Check **www.knowledgetranslation.co.za/resources** for latest versions.

Practical Approach to Care Kit: Coronavirus

Guidance for managing adults in Primary Health Care facilities
Updated December 2020 · Western Cape Edition

Contents

Orange-highlighted medications may be prescribed by a doctor or an authorised prescriber (clinical nurse practitioner or professional nurse) in accordance with his/her scope of practice within a specified field.

Blue-highlighted medications may be prescribed by a doctor or clinical nurse practitioner who is an authorised prescriber.

Green-highlighted medications may be prescribed by a doctor only

Arrows refer you to another page in the guide:
- The return arrow (⮌) guides you to a new page but suggests that you return and continue on the original page.
- The direct arrow (→) guides you to continue on another page.

Western Cape Government
Health

Knowledge Translation Unit
University of Cape Town LUNG INSTITUTE

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We would like to thank the Open Society Foundation for South Africa for funding this COVID-19 update: www.osf.org.za

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The response to COVID-19 is rapidly changing as new evidence becomes available and health systems adapt. The KTU welcomes feedback on this guidance as it continues to be updated for future versions. Please send feedback to www.knowledgetranslation.co.za/contact/feedback

Screen all patients for COVID-19

- Ensure triage staff wear a surgical mask and keep 1.5m distance from patients. Ask patients to keep 1.5m apart from others and wear cloth masks. Ensure queues are outside or in well ventilated area.
- Have 70% alcohol-based hand sanitiser or soap and water handwashing stations available for all patients entering facility.
- Ensure facility has separate patient pathways for patients who are suspected of having COVID-19 and those who are not.
- Ensure triage station has a supply of surgical masks to give to symptomatic patients and patient information leaflets for contacts.

If patient known with COVID-19 and returning with worsening symptoms, fast track this patient:
Give surgical mask and send patient to separate area identified for emergency care of COVID-19 patients for urgent attention ⮌ 4.

Screen all patients for respiratory symptoms at triage station before facility entrance
Ask each patient if s/he has respiratory symptoms:

- Shortness of breath or difficulty breathing
- Cough
- Sore throat
- Loss of sense of smell or change in sense of taste

Screen as at: December 2020

Yes to any

Does patient currently have shortness of breath or difficult breathing?

Yes

Give surgical mask and send to separate area identified for emergency care of COVID-19 patients for urgent attention →4.

No

Send to separate waiting area for patients with respiratory symptoms:

- Give patient a surgical mask to wear and advise on cough and hand hygiene.
- Ensure patients sit 1.5m apart.
- Consider TB and COVID-19:

Screen for TB:
If any of the following symptoms, test for TB ⮌ 7:

- Cough ≥ 2 weeks (or any duration if HIV positive)
- Weight loss ≥ 1.5kg
- Drenching night sweats
- Fever ≥ 2 weeks

Screen for COVID-19:

- Assess and manage for COVID-19 ⮌ 4 if:
  - New onset respiratory symptoms in the last 14 days
  - Worsening of chronic respiratory symptoms (known asthma/COPD)
- If patient has had COVID-19 and has ongoing symptoms ⮌ 18.
- Manage other symptoms/chronic conditions using PACK Adult.

No to all

In last 10 days, has patient been in close contact[1] with anyone who has COVID-19?

Yes

COVID-19 close contact
Ideally this patient should be quarantining at home. Give patient a surgical mask to wear and determine reason for clinic visit. Fast track patient if able. Does patient have symptoms today?

No

- If patient is a health worker ⮌ 28.
- If patient is not a health worker ⮌ 16.
- Manage any chronic conditions using PACK Adult.

Yes

COVID-19 may also present with less common symptoms.
Consider COVID-19 if patient has any of the following symptoms:

- If fever →12.
- If headache →13.
- If diarrhoea →14.
- If muscle aches or general/body pain →15.
- If close contact with none of above symptoms ⮌ 16.

- Manage other symptoms using PACK Adult.
- If attending for routine care of chronic condition, take steps to protect patient from COVID-19 →17.

No

- Send patient to attend normal waiting area.
- Ensure s/he continues to wear cloth mask. If patient does not have a cloth mask, give paper mask.
- Ask patients to sit 1.5m apart if possible.

[1]Close contact is when a person has had face-to-face contact (within 1 metre) of a COVID-19 person, or has been in a closed environment (like room or vehicle) with a COVID-19 person for at least 15 minutes.

Assess and manage the patient with suspected COVID-19

Before managing a patient with suspected COVID-19, ensure you are wearing appropriate personal protective equipment →23.

Consider severe COVID-19 as well as other causes[1].
Give urgent attention to the patient with suspected COVID-19 and any of:

- Short of breath at rest or while talking
- Respiratory rate ≥ 25
- Oxygen saturation < 95%
- Pulse rate > 120
- BP < 90/60
- Confused, agitated or decreased consciousness
- Sudden breathlessness, more resonant/decreased breath sounds/pain on 1 side, deviated trachea, BP < 90/60: **tension pneumothorax** likely
- Coughing up fresh blood

Manage and refer urgently:

- If short of breath or oxygen saturation < 95%, give oxygen:
  - Ideally use nasal prongs, start 1-4L/min. If only facemask available, give 6-10L/min. Aim for oxygen saturation ≥ 90%.
  - If patient remains distressed or oxygen saturation < 90%, give facemask oxygen with reservoir bag (non-rebreather) at 10-15L/min.
- If BP < 90/60, give sodium chloride 0.9% 250mL IV slowly over 30 minutes, repeat until systolic BP ≥ 90. Continue 1L 6 hourly. Stop if breathing worsens.

If known asthma/COPD and wheeze:

- Give inhaled salbutamol via spacer 400-800mcg (4-8 puffs) every 20 minutes ⮌PACK Adult to see how to use inhaler with spacer. Avoid nebuliser[2].
- Give single dose prednisone 40mg orally. If unable to take oral medication, give single dose hydrocortisone 100mg IM/slow IV.
- If poor response to salbutamol and patient still distressed whilst waiting for transport, give magnesium sulphate 2g in 100mL sodium chloride 0.9% IV slowly over 20 minutes.

If known diabetes and rapid deep breathing with glucose > 11:

- Discuss IV fluids with referral centre.
- If referral delay > 2 hours: give short-acting insulin 0.1units/kg IM (not IV[3]). Avoid using insulin needle to give IM insulin. Use 22-25 gauge needle depending on weight of patient.

If known heart problem
If difficulty breathing worse on lying flat and leg swelling, treat for **acute heart failure** (**pulmonary oedema**).

- Sit patient up.
- If systolic BP > 90: give furosemide 40mg slow IV. If no response after 30 minutes, give further furosemide 80mg IV. If good response, give 40mg IV over 2-4 hours.
- If systolic BP > 90: give sublingual isosorbide dinitrate 5mg even if no chest pain. Repeat once if pain relief needed. Then repeat after 4 hours.
- If BP ≥ 180/130: give single dose enalapril 10mg orally.

If tension pneumothorax likely:

- Insert large bore cannula above 3rd rib in midclavicular line.
- Arrange urgent chest tube. If not possible, refer urgently.

- If referral delay > 2 hours, temperature ≥ 38°C *and* respiratory rate ≥ 30, give ceftriaxone 2g IV/IM to treat for possible severe **bacterial pneumonia**.
- If unsure of management, consult a specialist according to referral pathway:

Tygerberg:
083 419 1452 or
021 938 4911 or
021 938 9645

Groote Schuur:
021 404 9111

If difficulty reaching specialist, phone:

- **NICD hotline** on 0800 11 1131 or 082 883 9920 or 066 562 4021 or
- **Provincial hotline** on 021 928 4102 or toll-free on 080 928 4102

If unable to reach any of adjacent, send an SMS with your name and query to NICD on 066 562 4021.

- Notify ambulance services and referral centre that the patient may have COVID-19.
- Clean and disinfect after patient has been referred ⮌ 23.

If patient not needing urgent attention, continue to assess and manage →5.

[1]Other causes may include influenza, TB, bacterial pneumonia, Pneumocystis pneumonia (PCP or PJP) if immunocompromised. [2]Avoid nebuliser: it is considered an aerosol-generating procedure that can spread coronavirus. [3]Avoid giving insulin intravenously (IV) as it may cause low potassium and heart dysrhythmia and needs in-hospital electrolyte monitoring

Approach to the patient with suspected COVID-19 not needing urgent attention

Before managing a patient with suspected COVID-19, ensure you are wearing appropriate personal protective equipment ⮌ 23.

Consider other conditions:

- Ask about and manage other symptoms: if cough ⮌ 10, sore throat ⮌ 11, fever ⮌ 12, headache ⮌ 13, diarrhoea ⮌ 14, general/body pain ⮌ 15. Manage other symptoms using PACK Adult.
- Ensure to screen for:

HIV
- If status unknown or tested negative > 6 months ago, test for HIV ⮌ PACK Adult.
- If newly diagnosed HIV or HIV not on ART: delay ART until symptoms resolve. Follow up in 2 weeks.

TB — **Remember TB**
- Send 2 sputums for Xpert MTB/RIF if:
  - HIV positive and cough.
  - HIV negative and has a close contact with TB.
  - Cough ≥ 2 weeks, weight loss ≥ 1.5kg, drenching night sweats, fever ≥ 2 weeks.
- Collect a good sputum specimen for TB testing ⮌ 7.

Diabetes
- Check fingerprick glucose if any of: obesity (BMI ≥ 30), hypertension, family history of diabetes (parent/sibling), symptoms suggestive of diabetes[1], or diabetes during pregnancy.
  - If glucose > 11: assess and manage glucose further ⮌ PACK Adult.
  - If glucose 6.1-11: arrange for fasting plasma glucose after an 8-hour overnight fast in 1 month.

- If known chronic condition, check that it is well controlled and take steps to protect patient from COVID-19 ⮌ 17.

Check if COVID-19 test should be done.

Manage according to the current testing strategy at your facility:

Universal testing
This means all patients with COVID-19 symptoms are able to have a test for COVID-19.

Expanded testing
This means patient may be tested if in high risk public setting or at risk of severe COVID-19.

Is patient in any of these high risk public settings?
- Public sector essential worker[2]
- Learner/staff attending school
- Worker attending workplace
- Offender incarcerated in correctional facility

Yes

No

Selective testing
This means patient may be tested if at risk of severe COVID-19.

Is patient a health care worker or does patient have any of these risk factors for severe COVID-19?
- Health care worker
- > 55 years old
- Diabetes
- HIV
- TB (current or previous)
- Chronic kidney disease
- Chronic lung disease (like asthma, COPD)
- Hypertension or heart disease
- Cancer
- Other immunosuppressive disorders (like SLE, RA)
- Living in a long-term care facility

Yes

No

Test for COVID-19.
- Collect a single upper respiratory swab, preferably a nasopharyngeal swab ⮌ 6.
- If previously tested positive for COVID-19, but new symptoms at this visit:
  - If ≥ 90 days since first COVID-19 test for COVID-19, repeat test at this visit. If < 90 days, discuss/refer.
- Then decide if patient able to safely isolate at home while waiting for result ⮌ 8.

- Explain that capacity for COVID-19 testing is limited and based on his/her symptoms, it is likely that s/he has COVID-19.
- Manage empirically for likely **COVID-19** ⮌ 9

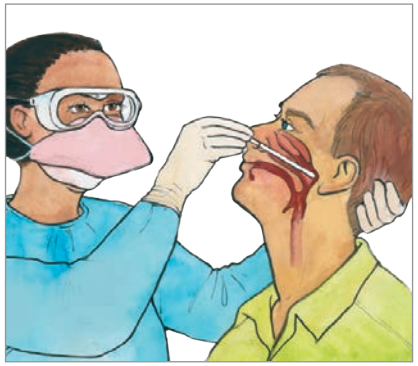
[1]Symptoms suggestive of diabetes include: weight loss, thirst (especially at night) or passing excessive amounts of urine often. [2]Police officer, correctional service officer, firefighter, municipal utility worker, Eskom service provider.

How to take a swab for SARS-CoV-2 (COVID-19)

- A patient with suspected COVID-19 needs testing for the virus SARS-CoV-2, which causes the disease COVID-19.
- Take one upper respiratory specimen: a nasopharyngeal or mid-turbinate specimen is preferred. Do oropharyngeal or nasal swab if unable to do nasopharyngeal or mid-turbinate swab.
- Sampling can be done at any time of day.
- Complete NHLS request form to send with specimen. Fill in 'SARS-COV-2 testing (PCR)' under other tests (all disciplines) section. Record correct contact details and alternative number.
- Before starting:
  - Wear appropriate PPE: N95 respirator, goggles/visor, gown/apron and gloves. Ensure PPE put on correctly ⮌ 24.
  - Explain procedure to patient and that s/he may feel some discomfort for a short time.
  - Open a sterile flocked swab with a plastic shaft.

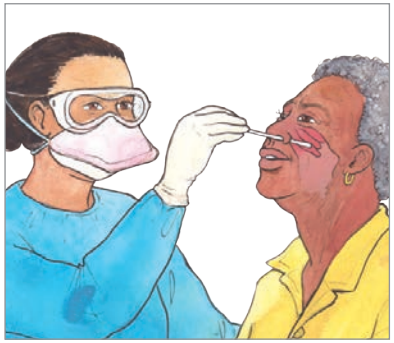
If taking nasopharyngeal specimen:

- Ask patient to tilt head back.
- Holding swab like a pen, insert swab into nostril and carefully advance swab backwards (not upwards), until you feel resistance at posterior nasopharynx (about 5-6cm). If resistance felt sooner, try other nostril.
- Gently rotate swab 2-3 times and hold in place for 2-3 seconds, then withdraw from nostril.



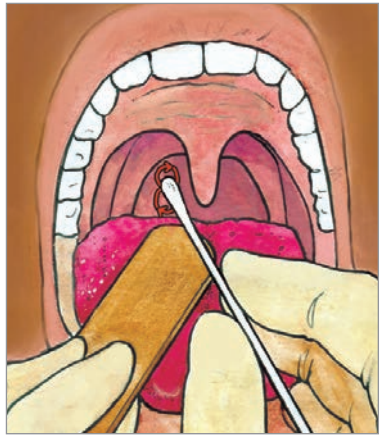
If taking mid-turbinate specimen:

- Ask the patient to tilt head back.
- Gently insert swab into nostril until you feel resistance at turbinates (about 2 cm).
- Gently rotate swab several times against nasal wall.
- Repeat in other nostril using same swab.



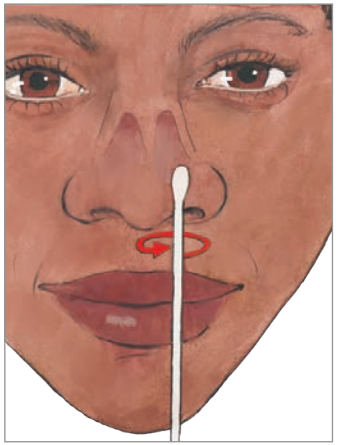
If taking oropharyngeal specimen:

- Ask patient to tilt head back and open mouth.
- Hold tongue down with tongue depressor.
- Ask patient to say "aahh" to elevate the uvula.
- Swab each tonsil first, then swab posterior pharynx using figure of 8 movement.
- Avoid swabbing the soft palate or the tongue as this can cause a gag reflex.



If taking nasal specimen:

- Gently insert swab into nostril (about 1 cm).
- Firmly rotate swab against nasal wall and leave it in place for 10-15 seconds.
- Repeat in other nostril using same swab.



- Break off the swab shaft at the break point dent on shaft and place it into universal transport medium (UTM) tube. Tightly close tube and place in plastic bag. Ensure sample is kept between 2-8°C until processed at laboratory.
  - If no UTM available and specimen will reach laboratory within 2 days, send dry swab at room temperature in sterile specimen jar/tube.
  - If no UTM available and specimen will reach laboratory after 2 days, place in normal saline in sterile specimen jar/tube instead.
- Change apron/gown and gloves, cleaning hands thoroughly, between each patient ⮌ 23. Once finished taking specimens, remove PPE correctly ⮌ 24.

How to collect a good sputum specimen for TB testing

Aim to collect sputum in the early morning if possible. This improves the chance of an accurate result. However, avoid missing the opportunity to collect sputum anytime during a consultation.

- Explain that sputum is the secretion that comes from deep within the lungs and a forceful cough is needed to bring it up for collection. A good quality sputum specimen is important to make an accurate diagnosis of TB.
- Advise patient that 2 sputum specimens are needed for TB testing.
- Label 2 specimen jars before giving them to patient: place barcode label horizontally on each specimen jar (not vertically) so that it is clearly visible and can be scanned easily in laboratory.
- Explain how to collect a good sputum specimen:

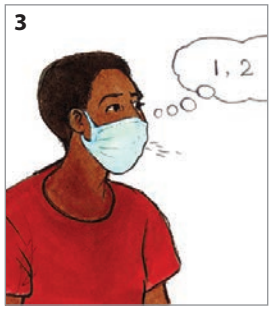
1

- Ensure collection area is well ventilated and private.
- Use a designated sputum collection area or outside sputum booth if available.

2

- Remove face mask briefly and rinse mouth with water to remove food, mouth wash or medication.
- Replace face mask.

3

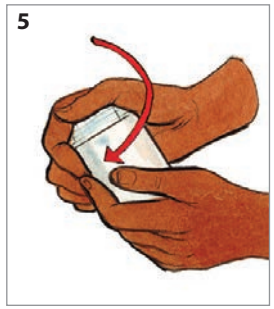


- Breathe in and out deeply two times.
- Have an open specimen jar ready.
- Keep the jar sterile (clean), avoid touching inside it.

4

- On the third breath, give a strong cough in an effort to bring sputum up.
- Remove mask and cough 5-10mL (1-2 teaspoons) sputum into the jar.
- You may need several coughs to get at least 5mL[1]. Try to replace mask in between these.

5



- Replace lid and screw on tightly to prevent leaking.
- Give to health worker.

6

- Wash your hands after sputum collection.
- Wait for 1 hour and then repeat steps 1-6 to collect the second sputum specimen.

Prepare specimens for transport to the laboratory:

- Check specimens are adequate: if patient unable to produce 5mL[1] (1 teaspoon) but quality of sputum is still good, still send specimens to laboratory. If quality of specimen is inadequate, see below.
- Ensure lids are closed tightly and correctly, and that both specimen jars are correctly labelled as above. Wash hands after handling specimens.
- If room temperature > 25°C or transport delayed > 24 hours, store in refrigerator (2-8°C). Keep cool but do not freeze.
- Complete request form and advise patient to return for results in 2 days.

If specimen inadequate:

- If specimen is inadequate after repeated attempts, discard used jar in medical waste bin and give patient new labelled specimen jar. Instruct how to collect sputum at home:
- Collect sputum specimen early in the morning after waking up, before eating or taking any medications.
- Collect sputum specimen outside home. Follow the same steps tried above.
- Once collected, protect sputum specimen sample from heat and light. Keep at room temperature and bring to the clinic as soon as possible.
- If specimen from home is adequate, prepare for transport to laboratory (below). If still not adequate, refer/discuss with doctor for chest x-ray and review.

Consider COVID-19 in all patients with symptoms suggestive of TB.

[1]If less than 5mL (1 teaspoon) sputum, results may be less accurate.

Continue to manage the patient who has had a COVID-19 test.

If patient is known diabetes:

- Discuss referral for admission if any of: 1) ≥ 65 years 2) chronic kidney disease 3) random fingerprick glucose > 11 *with* ketones present in urine, *or* 4) patient known with very poor glucose control (HbA_{1c} > 10%) *and* another risk factor such as BMI > 30, hypertension, ischaemic heart disease, peripheral vascular disease, previous stroke/TIA, HIV, TB, cancer, chronic respiratory disease.
- If none of above:
  - Explain that s/he is at risk of severe COVID-19. Advise that if s/he develops shortness of breath, weakness or high fevers/chills, s/he should go to nearest emergency centre without delay.
  - If no HbA_{1c} result in past 3 months: take HbA_{1c} and creatinine today.
  - If patient has glucometer at home, give glucose strips. Advise to check glucose each morning upon waking and keep a record: if fasting glucose persistently ≥ 8, advise to return for review of insulin doses.

- Explain that s/he will be sent an SMS message that will offer a Whatsapp service to allow communication about results and close contacts, and provide further guidance and support.
- Advise that there is no need to return to facility unless condition worsens. Advise to return if cough persists ≥ 2 weeks: test for TB. Ensure correct contact details. Include a second phone number.
- Advise patient to inform household members to use strict hygiene and prevention measures and monitor themselves for symptoms until patient's test result has been confirmed. If test result is positive, close contacts[1] should quarantine for 10 days since last contact with patient.

Assess if patient able to safely isolate at home

- Is patient able to isolate in a separate room from others?
- Is patient able to contact or return to health facility urgently if his/her condition worsens?

Yes to both

Discharge for home management

- For fever/pain, advise to take paracetamol 1g 6 hourly orally as needed, rather than NSAIDS[2]. If using NSAIDS[2] for other condition/s, do not discontinue.
- Check patient understands to monitor symptoms at home (see red box below).
- Check patient understands how to safely isolate ⮌ 16 and give information leaflet. Refer to community-based services for follow up if available.
- Provide medical certificate for sick leave for 10 days from date that symptoms started. This may need to be extended.

No to either

- Encourage referral for alternate accommodation within an isolation facility. If patient agrees, refer as per local process.
- If unsure, contact Provincial hotline 080 928 4102 (toll-free) or 021 928 4102.

Explain when to end isolation

- Explain that no repeat testing will be needed. Patient may discontinue isolation 10 days after date that symptoms started.
- If symptoms have not resolved by 10 days, advise to contact facility before ending isolation.

Clean and disinfect after patient has left facility ⮌ 23**.**

Advise to call health facility (give number) or Provincial hotline on 080 928 4102 (toll-free) or 021 928 4102 or National hotline on 0800 029 999 or return urgently to health facility if:
Shortness of breath, difficulty breathing, persistent chest pain/pressure, new confusion or worsening drowsiness.

Follow up test results as per facility protocol

SARS-CoV-2 positive: patient has **COVID-19**.

- Notify as Notifiable Medical Condition: notify electronically or download hard copies https://www.nicd.ac.za/nmc-covid-19-documents/
- Refer case for contact tracing.

SARS-CoV-2 negative

Also ensure protocols in place for follow up of other results (TB sputums, CD4 count/CrAg, HbA_{1c} and creatinine if taken): if Xpert or CrAg positive or HbA_{1c}/creatinine abnormal, recall patient.

[1]Close contact is when a person has had face-to-face contact (within 1 metre) of a COVID-19 person, or has been in a closed environment (like room or vehicle) with a COVID-19 person for at least 15 minutes. [2]Non-steroidal anti-inflammatory drugs (like ibuprofen).

Continue to manage the patient with COVID-19 symptoms who has not had a COVID-19 test.

- This refers to the patient with symptoms suggestive of COVID-19, but who is not eligible for a COVID-19 test[1].
- Manage this patient empirically for **presumptive COVID-19**: this means manage as if s/he has been diagnosed with COVID-19.

It is no longer required to notify suspected cases, notify only confirmed COVID-19 cases as a Notifiable Medical Condition.

Report close contacts[2]

- If able, complete contact line list form, especially persons at risk[3] ⮌ 31 and send to relevant co-ordinator.
- Advise patient to inform his/her close contacts to quarantine and monitor themselves for symptoms for 10 days since last contact with patient.

Assess if patient is able to safely isolate at home

- Is patient able to isolate in a separate room from others?
- Is patient able to contact or return to health facility urgently if his/her condition worsens?

Yes to both

Discharge to isolate at home

- For fever/pain, advise to take paracetamol 1g 6 hourly orally as needed, rather than NSAIDS[4]. If using NSAIDS[4] for other condition/s, do not discontinue.
- Check patient understands how to safely isolate ⮌ 16 and give information leaflet.
- Check patient understands to monitor symptoms at home (see red box below).
- Refer to community-based services for follow up if available.
- Provide medical certificate for sick leave for 10 days from date that symptoms started. This may need to be extended.

No to either

- Encourage referral for alternate accommodation within an isolation facility. If patient agrees, refer as per local process.
- If unsure, contact Provincial hotline 080 928 4102 (toll-free) or 021 928 4102.

Explain when to end isolation

- Patient may discontinue isolation 10 days after date that symptoms started.
- If symptoms have not resolved within 10 days, advise to contact facility to discuss with health care worker before ending isolation.

Clean and disinfect after patient has left facility ⮌ 23**.**

Advise to call health facility (give number) or Provincial hotline on 080 928 4102 (toll-free) or 021 928 4102 or National hotline on 0800 029 999 or return urgently to health facility if:
Shortness of breath, difficulty breathing, persistent chest pain/pressure, new confusion or worsening drowsiness.

[1]Refer to the current provincial testing protocol. [2]Close contact is when a person has had face-to-face contact (within 1 metre) of a COVID-19 person, or has been in a closed environment (like room or vehicle) with a COVID-19 person for at least 15 minutes. [3]Persons at risk include those > 55 years old, those with diabetes, HIV, TB (current or previous), chronic kidney disease, hypertension, heart disease, chronic lung disease (like asthma, COPD, chronic bronchitis) and immunosuppressive disorders (like cancer, SLE, RA). [4]Non-steroidal anti-inflammatory drugs (like ibuprofen).

Cough

- **If not already done, check if patient needs urgent attention** ⮌ 4.
- If wheeze ⮌ PACK Adult. Avoid nebuliser as it is considered an aerosol-generating procedure that can spread coronavirus. Rather use inhaler with spacer.

Approach to the patient with cough not needing urgent attention

If new cough that started < 14 days ago or if known with chronic lung disease and cough has significantly worsened, manage as **COVID-19** if not already done ⮌ 4.

Also consider and manage other possible conditions below:

- If HIV status unknown or tested negative > 6 months ago, test for HIV if not already done ⮌ PACK Adult.
- Ask about duration and recurrence of cough:

< 2 weeks duration *and* cough not recurrent

Is patient coughing sputum?

No

Viral illness/ **common cold** or **COVID-19** likely
Manage as COVID-19 ⮌ 4.

Yes

Is pulse rate ≥ 100 or respiratory rate ≥ 20 or temperature ≥ 38°C?

No

Acute bronchitis likely
- If known COPD and sputum increased or colour changed to yellow/green, give antibiotics ⮌ PACK Adult. Otherwise reassure antibiotics are not necessary.
- Advise to return same day if symptoms worsen, fever develops or no better after 2 weeks.

Yes

Pneumonia likely

Refer.

≥ 2 weeks or recurrent episodes of cough

- Exclude TB: send 2 sputums for Xpert MTB/RIF ⮌ 7.
- Also consider asthma and COPD ⮌ PACK Adult and other cause for cough:

HIV with CD4 < 200 and dry cough, worsening breathlessness on exertion.

Pneumocystis pneumonia likely

Refer.

Blocked/ runny nose or persistent snoring

⮌ PACK Adult.

Recent upper respiratory tract infection, no difficulty breathing

Post-infectious cough likely
- Reassure cough should resolve on its own.
- Advise to return if cough persists 8 weeks.

Smoker or recently stopped

- If weight loss, consider **lung cancer** ⮌ PACK Adult.
- If coughing sputum most days of 3 months for ≥ 2 years, **chronic bronchitis** likely. Discuss.

If diagnosis uncertain or poor response to treatment, refer.

Mouth and throat symptoms

Give urgent attention to the patient with mouth/throat symptoms and any of:

- Unable to open mouth or swallow at all
- If sudden face/tongue swelling and any of: wheeze, difficulty breathing, BP < 90/60, dizziness/collapse, abdominal pain, vomiting or exposure to possible allergen[1], check for anaphylaxis ⮌ PACK Adult.

Refer urgently.

Approach to the patient with mouth/throat symptoms not needing urgent attention

- Stand to the side when looking in mouth in case patient coughs/gags and avoid throat examination if possible. If throat examination essential, wear appropriate PPE: surgical mask, goggles/visor, gloves, apron/gown.
- If gum or tooth problem ⮌ PACK Adult.
- Ask about swallowing problems. If food/liquid gets stuck with swallowing, refer.
- Ask about sore throat and dry mouth, and safely look in and around mouth for white patches, blisters, ulcers or cracks:

Sore throat

- Manage as **COVID-19** ⮌ 4 if not already done.
- Safely examine throat while wearing appropriate PPE:
  - If red swelling blocking the airway, refer urgently.
  - Does patient have either of:
    - Enlarged tonsils with pus/white patches on tonsils
    or
    - Enlarged tonsils *without* cough or runny nose

No **Viral pharyngitis** likely

Explain that antibiotics not necessary.

Yes **Bacterial pharyngitis/tonsillitis** likely

- If ≤ 21 years old, give phenoxymethylpenicillin[3] 500mg 12 hourly for 10 days. If not available, give instead amoxicillin[3] 1g 12 hourly for 10 days.
- If > 21 years old, advise to return if symptoms persist/ worsen: discuss/refer.

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Advise to gargle with salt water[2] for 1 minute twice a day.

Dry mouth

- If thirst, urinary frequency or weight loss, exclude diabetes ⮌ PACK Adult.
- If runny or blocked nose ⮌ PACK Adult.
- Look for and treat oral candida (see adjacent).
- Review medication: furosemide, amitriptyline, chlorpheniramine, antipsychotics and morphine can cause dry mouth. Discuss with doctor.
- Advise to sip fluids frequently. Sucking on oranges, pineapple, lemon or passion fruit may help.
- If patient has a life-limiting illness, also consider giving palliative care ⮌ PACK Adult.

White patches on cheeks, gums, tongue, palate

Oral candida likely

- Give nystatin suspension 1mL 6 hourly for 7 days.
- Keep in mouth as long as possible. Continue for 2 days after white patches resolved.
- If on inhaled corticosteroids, advise to rinse mouth after use.
- Test for HIV ⮌ PACK Adult and diabetes ⮌ PACK Adult.
- If patient has a life-limiting illness, also consider giving palliative care ⮌ PACK Adult.

If difficulty or pain on swallowing, **oesophageal candida** likely:

- Give fluconazole 200mg daily for 14 days.
- If no better, refer.

Painful blisters on lips/mouth

Herpes simplex likely

- Test for HIV ⮌ PACK Adult.
- Advise to rinse mouth with salt water[2] for 1 minute twice a day.
- Apply petroleum jelly to blisters.
- For pain, apply tetracaine 0.5% to blisters 6 hourly and give paracetamol 1g 6 hourly as needed for up to 5 days.
- If HIV positive, give aciclovir 400mg 8 hourly for 7 days.
- If severe or no better after 1 week of treatment, refer.

Painful ulcer/s with Central white patch

Aphthous ulcer/s likely

- For pain, apply tetracaine 0.5% to ulcers 6 hourly.
- Refer if:
  - Not healed within 10 days.
  - Ulcer >1cm

Red, cracked corners of mouth

Angular stomatitis likely

- Apply zinc and castor oil ointment 8 hourly.
- If also oral candida, treat in adjacent column and apply clotrimazole cream 12 hourly for 2 weeks.
- If crusts and blisters around mouth, **impetigo** likely ⮌ PACK Adult.
- If very itchy, **contact dermatitis** likely. Identify and remove irritant.
- If dentures, ensure good fit and advise to clean every night.
- If on inhaled corticosteroids, advise to rinse mouth after use.
- If no better or uncertain of cause:
  - Check Hb.
  - Test for HIV ⮌ PACK Adult and diabetes ⮌ PACK Adult.
  - If still uncertain, refer.

- Advise the patient with a sore mouth/throat to avoid spicy, hot, sticky, dry or acidic food and to eat soft, moist food.
- Keep mouth and teeth clean by brushing and rinsing regularly.

[1]Common allergens include medication, food or insect bite/sting within the past few hours. [2]Add 2.5mL (½ teaspoon) of table salt to 200mL lukewarm water. [3]If penicillin allergy, give instead azithromycin 500mg daily for 3 days.

Fever

A patient with a fever has a temperature ≥ 38°C now or in the past 3 days.

- Fits or just had a fit ⮌ PACK Adult
- Respiratory rate ≥ 30 or difficulty breathing ⮌ 4

Give urgent attention to the patient with a fever and any of:

- BP < 90/60
- Neck stiffness, drowsy/confused or purple/red rash, **meningitis** likely
- Tender in right lower abdomen, **appendicitis** likely
- Severe abdominal or back pain
- Jaundice
- Easy bleeding or bruising

Management:

- If BP < 90/60, give sodium chloride 0.9% 500mL IV over 30 minutes, repeat until systolic BP > 90. Continue 1L 6 hourly. Stop if breathing worsens.
- If meningitis likely, give ceftriaxone[1] 2g IV/IM.
- If glucose < 3 or > 11 ⮌ PACK Adult.
- **Refer urgently:** notify ambulance services and referral centre that the patient may have COVID-19.

Approach to the patient with a fever not needing urgent attention
Consider and manage other possible causes of fever.

Has patient been in a malaria area in past 3 months?

Yes

Arrange same day malaria test[2]. If not available same day, refer.

Malaria test positive

Malaria likely
Refer same day.

Malaria test negative

Does patient have a tick bite (small dark brown/black scab) or tick present?

Yes

Tick bite fever likely

- May also have headache, body pain, rash or localised lymphadenopathy.
- If tick present, grip tick close to skin using forceps and remove.
- Give doxycycline 100mg 12 hourly for 7 days. If pregnant, give instead azithromycin 500mg 12 hourly for 3 days.
- Give paracetamol 1g 6 hourly as needed for 5 days.
- Advise patient to return if severe headache or no better after 3 days: refer.

No

- If cough ⮌ 10, sore throat ⮌ 11, diarrhoea ⮌ 14.
- If abdominal pain, nausea/vomiting, burning urine or skin problem ⮌ PACK Adult.

If none of above, continue to manage as **COVID-19** ⮌ 4.

No

[1]If severe penicillin allergy (previous angioedema, anaphylaxis or urticaria), discuss with doctor. [2]Test for malaria with rapid diagnostic test if available, and parasite slide microscopy.

Headache

Give urgent attention to the patient with headache and any of:

- Decreased consciousness ⮌ PACK Adult
- BP ≥ 180/130 and not pregnant ⮌ PACK Adult
- Pregnant or 1 week postpartum, and BP ≥ 140/90 ⮌ PACK Adult
- Sudden weakness/numbness of face/arm/leg or speech problem ⮌ PACK Adult
- New vision problem or eye pain ⮌ PACK Adult
- Sudden severe headache or dizziness
- Headache that is getting worse and more frequent
- Headache that wakes patient or is worse in the morning
- Neck stiffness, drowsy/confused or purple/red rash: meningitis likely
- Persistent nausea/vomiting
- Persistent headache since starting ART
- Following a first seizure
- Recent head injury
- Unequal pupils

Manage and refer urgently:

- If temperature ≥ 38°C or **meningitis** likely: give ceftriaxone[1] 2g IM/IV.
- If recent positive cryptococcal antigen test, give fluconazole[2] 1200mg (avoid if pregnant, breastfeeding or known liver disease).

Approach to the patient with headache not needing urgent attention

Has patient had recent runny/blocked nose and now any of: thick nasal/postnasal discharge, pain when pushing on forehead/cheeks, headache worse on bending forward?

Yes

Sinusitis likely

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Give sodium chloride 0.9% nose drops as needed.
- Give oxymetazoline 0.05% 2 drops in each nostril 8 hourly as needed for a maximum of 5 days. Advise against overuse which may worsen blocked nose.
- If symptoms ≥ 10 days, fever ≥ 38°C, purulent nasal discharge, face pain ≥ 3 days or symptoms worsen after initial improvement, give amoxicillin 500mg 8 hourly for 5 days. If penicillin allergy, give instead azithromycin 500mg daily for 3 days.
- If recurrent, test for HIV ⮌ PACK Adult.
- If tooth infection or swelling over sinus/around eye, refer same day.

No: does patient have fever or body pain?

Yes

- If in a malaria area in past 3 months, arrange same day malaria test[3]. If positive, **malaria** likely, refer same day.
- If patient has a tick bite (small dark brown/black scab) or tick present, **tick bite fever** likely ⮌ PACK Adult.

Also consider **COVID-19** and **influenza.**

- If no cause found, manage as **COVID-19** ⮌ 4.

No: does patient get recurrent headaches that are throbbing, disabling with nausea or light/noise sensitivity, that resolve completely within 72 hours?

Yes

Migraine likely

- Give immediately and then as needed: paracetamol 1g 6 hourly or ibuprofen[4] 400mg 8 hourly with food for up to 5 days.
- If nausea, also give metoclopramide 10mg 8 hourly up to 3 doses.
- Advise to recognise and treat migraine early, rest in dark, quiet room.
- Advise regular meals, keep hydrated, regular exercise, good sleep hygiene.
- Keep a headache diary to identify triggers like lack of sleep, hunger, stress, caffeine, chocolate, cheese. Avoid if possible.
- Avoid oestrogen-containing contraceptives ⮌ PACK Adult.
- If ≥ 2 attacks/month, refer/discuss for medication to prevent migraines.

No

- Check BP. If ≥ 140/90 ⮌ PACK Adult.
- Ask about type and site of pain:

Tightness around head or generalised pressure- like pain

Tension headache likely

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Assess for stress and anxiety ⮌ PACK Adult.
- Advise regular exercise.

Constant aching pain, tender neck muscles

Muscular neck pain likely ⮌ PACK Adult.

Patient > 50 years, pain over temples

Giant cell arteritis likely

- Check ESR.
- Give paracetamol 1g 6 hourly for up to 5 days.
- Review next day: if no better and ESR raised, discuss with specialist same day.

Advise to only use analgesia when necessary. Chronic overuse may cause headaches: if using analgesia > 2 days/week for ≥ 3 months, advise to reduce amount used. Headache should improve within 2 months of decreased use.

If diagnosis uncertain or poor response to treatment, discuss/refer.

[1]If severe penicillin allergy (previous angioedema, anaphylaxis or urticaria), discuss with doctor. [2]If no doctor available, nurse to get telephonic prescription from doctor. [3]Test for malaria with parasite slide microscopy or if unavailable, rapid diagnostic test.
[4]Avoid ibuprofen if peptic ulcer, asthma, hypertension, heart failure, kidney disease.

Diarrhoea

Give urgent attention to the patient presenting with diarrhoea and any of:
- Thirst, dry mouth, poor skin turgor, sunken eyes, drowsiness/confusion, BP < 90/60, pulse ≥ 100, dehydration likely

Manage and refer urgently:
- Give oral rehydration solution (ORS):
  - Encourage small frequent sips, giving as much as patient can tolerate. Aim for 1-2L in first 2 hours. If vomits, wait 10 minutes and try again more slowly.
  - If no better after 2 hours, give IV fluids as below and refer same day.
- If unable to drink or BP < 90/60, give sodium chloride 0.9% 1L IV rapidly, repeat until systolic BP > 90. Continue 1L 6 hourly. Stop if breathing worsens. Refer same day.

Approach to the patient with diarrhoea not needing urgent attention:
Confirm patient has diarrhoea: ≥ 3 loose stools/day. Ask about duration of diarrhoea:

Diarrhoea for ≤ 2 weeks

Is there blood in the stool?

Yes

Dysentery likely
- Give ciprofloxacin 500mg 12 hourly for 3 days.
- If no response, refer.

No

Has patient been in cholera outbreak area in past week?

Yes

Cholera likely
⮌ PACK Adult.

No

Gastroenteritis likely
- If loss of smell/taste and fever, **COVID-19** likely ⮌ 4.
- Also give loperamide 4mg initially, then 2mg, after each loose stool if needed, up to 12mg/day.
- If vomiting, give metoclopramide 10mg 8 hourly as needed for up to 5 days.
- Advise antibiotics are not needed and to drink lots of fluids.
- Advise to return if: blood in stool, diarrhoea worsens or persists > 2 weeks, or patient becomes confused.
- If not managed as COVID-19 today, educate: if s/he develops loss of smell/taste, fever, cough or sore throat, advise to phone to Provincial hotline on 080 928 4102 (toll-free) or 021 928 4102 as s/he may have COVID-19.

Diarrhoea for > 2 weeks

- If blood/mucus in the stool, refer.
- Send stool for 'ova, cysts and parasites'. Indicate on request form if patient has HIV.
- Test for HIV ⮌ PACK Adult and manage according to result:

HIV positive

- Give routine HIV care ⮌ PACK Adult.
- Review medication: lopinavir/ritonavir can cause ongoing loose stools.
- Review symptoms and stool result in 1 week:

Isospora belli
Give co-trimoxazole 320/1600mg (4 tablets) 12 hourly for 10 days.

Cryptosporidium

Give loperamide 2mg as needed up to 8mg/day.

HIV negative or unknown

Treat for **giardiasis**: give metronidazole[1] 2g daily for 3 days.

Review stool result.

Stool negative

Give loperamide 2mg as needed up to 8mg/day.

Stool positive

Treat according to result.

If diarrhoea persists despite treatment, refer.

- Advise to increase fluid intake. Advise frequent handwashing, with soap and water, before preparing food/after going to toilet. Wash all surfaces/equipment used in food preparation. Wash and peel all fruit and vegetables. Use only safe/disinfected water for preparing food/drinks/ice. Cook food thoroughly, avoid raw/uncooked food, especially meat and shellfish.
- If repeated episodes of diarrhoea and no access to clean water, refer to health promotion officer/social worker.
- If patient has a life-limiting illness, also give routine palliative care ⮌ PACK Adult.

[1]Advise no alcohol until 24 hours after last dose of metronidazole.

Body/general pain

- A patient has body/general pain if his/her body aches all over or most of body is painful.
- If pain localised to one area only: if in back, arm/hand, leg, foot, neck ⮌ PACK Adult.

Approach to the patient with body/general pain

- If fever now or in past 3 days, and in a malaria area in past 3 months, arrange same day malaria test[1]. If positive, **malaria** likely, refer same day.
- If tick bite (small dark brown/black scab) or tick present, tick bite fever likely ⮌ PACK Adult.
- If unintentional weight loss of ≥ 5% of body weight in past 4 weeks ⮌ PACK Adult.
- Are there any of: cough, blocked/runny nose, sore throat, abdominal pain, nausea/vomiting, diarrhoea, burning urine, headache, fever?

No

Screen for joint problem:
- Ask patient to place hands behind head, then behind back. Bury nails in palm and open hand.
- Press palms together with elbows lifted. Walk. Sit and stand up with arms folded.
- Is patient able to do all actions comfortably?

No

Check joints: are joint/s warm, tender, swollen or have limited movement?

Yes

→ PACK Adult.

No

- Test for HIV ⮌ PACK Adult. If low mood, stress or anxiety ⮌ PACK Adult.
- If patient has experienced recent trauma or abuse ⮌ PACK Adult.
- Review patient's medication. If on simvastatin and muscle pain/cramps and weakness, reduce simvastatin dose to 10mg daily or discuss with doctor/specialist.
- If patient has a life-limiting illness, also consider giving palliative care ⮌ PACK Adult.
- Ask about duration of pain:

< 4 weeks

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Explain that pain does not always mean a disease or cancer, and tests cannot always show the reason for the pain and often are not needed.
- Advise to return if no better after 2 weeks.

≥ 4 weeks

- Give paracetamol 1g 6 hourly as needed for up to 5 days. Advise to only use analgesia when necessary and avoid long term regular use.
- Assess and advise on chronic pain ⮌ PACK Adult.
- Check glucose ⮌ PACK Adult.
- Check Hb: if < 12 (woman) or < 13 (man) ⮌ PACK Adult.
- Check ESR, creatinine. If weakness/tiredness, weight gain, low mood, dry skin, constipation or cold intolerance, also check TSH. Review in 2 weeks:
  - If blood results normal, consider fibromyalgia ⮌ PACK Adult.
  - If blood results abnormal, refer to doctor.

Yes

Yes

- If cough ⮌ 10.
- If sore throat ⮌ 11.
- If diarrhoea ⮌ 14.
- If abdominal pain ⮌ PACK Adult.
- If nausea or vomiting ⮌ PACK Adult.
- If burning urine ⮌ PACK Adult.
- If none of above:

Is body pain recent onset?

Yes

Does patient have headache or fever?

Yes

If neck stiffness, drowsy/confused or purple/red rash, **meningitis** likely → PACK Adult.

COVID-19 or **influenza** likely
Manage as **COVID-19** → 4.

No

Discuss.

No

[1]Test for malaria with rapid diagnostic test if available, and parasite slide microscopy.

Manage the close contact without COVID-19 symptoms

A close contact is a person who has had face-to-face contact (within 1 metre) of a COVID-19 person, or has been in a closed environment (like room or vehicle) with a COVID-19 person for at least 15 minutes.

Assess and manage a patient who is a COVID-19 close contact

- Before managing a close contact, ensure you are wearing appropriate personal protective equipment ⮌ 23. Even if asymptomatic, s/he may still be infectious if s/he was infected during the close contact.
- If at high risk of severe COVID-19[1] or if living in confined spaces (prison, hostel, long-term care facility), arrange for patient to have a COVID-19 test on day 5 post-exposure.

Manage other symptoms and chronic conditions

Use PACK Adult to manage any other symptoms and/or chronic conditions. Also take steps to protect the patient with a chronic condition from COVID-19 ⮌ 17.

Advise the patient who is a COVID-19 close contact

- Patient needs to quarantine him/herself. This means that, in case s/he was infected during the close contact, s/he needs to separate him/herself from others to prevent possible spread of coronavirus.
- Advise to self-monitor for symptoms (like cough, sore throat, changes in taste or smell, fever, fatigue, body aches). Explain red box (below). If symptoms, advise to contact a hotline as below.

Assess if patient is able to safely quarantine at home:

- Is patient able to quarantine in a separate room from others?
- If patient develops symptoms, is s/he able to contact or return to health facility urgently if s/he develops severe symptoms?

Yes to both	No to either
• Discharge to safely quarantine at home. • Explain how to safely quarantine at home (below).	• Encourage referral for alternate accommodation within an isolation facility. If patient agrees, refer as per local process. • If unsure, contact Provincial hotline 080 928 4102 (toll-free) or 021 928 4102.

Patient may stop quarantine 10 days from date of last contact with COVID-19 person.

Clean and disinfect after patient has left facility ⮌ 23**.**

Advise to call health facility (give number) or Provincial hotline on 080 928 4102 (toll-free) or 021 928 4102 or National hotline on 0800 029 999 or return urgently to health facility if:
Shortness of breath, difficulty breathing, persistent chest pain/pressure, new confusion or worsening drowsiness.

Explain how to safely isolate or quarantine at home

If patient is able to safely isolate or quarantine at home, explain how and give patient information leaflet if available:

- Stay in own room and use own bathroom (if possible). Avoid unnecessary contact with others. If contact unavoidable, wear face mask, and if possible keep 1.5m away from others.
- Clean hands with soap and water frequently or use 70% alcohol-based hand sanitiser. Cough/sneeze in to elbow or a tissue. Immediately discard tissue in waste bin and clean hands.
- Clean and disinfect all high-touch surfaces like door handles, tabletops, counters, toilets, phones and light switches using diluted bleach solution (add 6 teaspoons of bleach to 1L of water).
- Avoid sharing household items like dishes, cups, eating utensils and towels. Wash these well after use.
- For laundry: if hand washing, use soap and if possible, hot water. If using washing machine, use highest temperature according to label (≥ 60^0C) and detergent. Dry well as usual and if possible, iron.
- Dispose of waste carefully: put rubbish bags in second rubbish bag and if possible, store for 5 days, before putting out for collection

[1]High risk of severe disease refers to those > 55 years old, diabetes, HIV, TB (current or previous), chronic kidney disease, chronic lung disease, hypertension or heart disease, cancer, other immunosuppressive disorders (like SLE, RA).

Protect the patient with a chronic condition from COVID-19

- The patient with a chronic condition is at risk of severe coronavirus disease.
  - Emphasise the need to adhere strictly to physical distancing, and good hand and respiratory hygiene.
  - Educate about symptoms of COVID-19 and encourage to seek healthcare urgently if s/he develops difficulty breathing.
  - Ensure the patient has the health facility and referral centre contact details and the Provincial hotline number 080 928 4102 (toll-free) or 021 928 4102.
- Limit the patient's contact with the health facility: keep visits brief and decrease number of routine visits. If possible, schedule appointments for routine visits.
- Ensure patient's contact details are up to date: check telephone number and address at each visit and update folder.
- Manage the patient's chronic condition. Review and optimise treatment. **Restart treatment if interrupted.** Ensure adequate medication supply, give 2 months' if possible.
- Give routine care as per PACK Adult and adjust usual care as in table below:

	Adjust and review prescribing	Adjust medication supply	Rearrange routine visits	Adjust advice giving
HIV	• Try to start ART same day wherever possible, ideally with TLD. • Switch patient on TEE to TLD if possible[1,2]. • Give influenza vaccine. • Switch the patient failing ART promptly.	• If on TLD, give up to 4 months' supply. • If on TEE, give up to 2 months' supply. • Check that medication delivery process is maintained.		
TB	• If HIV not on ART (for TB other than TB meningitis or brain tuberculoma): - If CD4 < 50, start ART within 2 weeks of starting treatment, if tolerating TB treatment. Consider PredART[3]. - If CD4 ≥ 50, start ART 8 weeks after starting TB treatment. • If on linezolid, check fingerprick Hb monthly: if Hb < 8g/dL, do FBC + differential count. If unable to do fingerprick Hb, do FBC + differential count and inform patient of result by phone.	• Do not do clinic DOTS. • Give pillbox if available. • At diagnosis, give medication for 2 weeks. • At 2-week visit, give medication for 2 weeks. • At 4-week visit, give monthly supply for remainder of treatment.	• Follow up at 1 week via phone or at facility if patient is unwell or likely to have adherence problems. • Stick to monthly visits. • Screen contacts by phone, especially if elderly or with a chronic condition. Do not bring child contacts to facility for sputums, discuss with specialist instead.	• Counselling session 1 at facility/by phone, session 2 by phone, omit session 3. • Ensure adherence support from family or CHW. • Emphasise infection prevention at home. Give a mask for 1st 2 weeks if DS-TB or until culture conversion if DR-TB.
NCD (Non-Communicable Diseases)	• Review and optimise treatment. • Give influenza vaccine if heart disease, stroke, hypertension, diabetes, asthma or COPD[4].	Give adequate medication supply.		
Mental Health	If on clozapine, decrease frequency of FBC + differential count checks from weekly to monthly, or monthly to 2-monthly if stable.	Give adequate medication supply.	Monthly visits if on injectable or clozapine, consider 2-monthly if stable.	Advise the patient on clozapine to return urgently if sore throat or fever, to exclude a clozapine-related neutropenia.

[1]TDF/3TC/DTG is also known as TLD. TDF/FTC/EFV is also known as TEE. [2]Patient is eligible to switch from TEE to TLD if: VL within last 6 months < 50 copies/mL. Use result of routine annual VL or if last VL done > 6 months ago, repeat VL now (new recommendation), OR patient on ART for more than 1 year and the last two viral loads < 50 copies/mL (even if the last one was up to 12 months ago) and there were regular pharmacy claims over the last year (new recommendation). [3]This refers to giving prophylactic prednisone to prevent TB-IRIS (see p45. of WC ART guideline 2020 for eligibility/exclusion/dosing/duration). [4]Give the patient a influenza vaccine if at risk of severe influenza. Follow the order of priority for at risk groups: health workers, > 65 years, CVD, hypertension, diabetes, asthma, COPD, pregnancy, HIV.

Manage the patient with ongoing COVID-19 symptoms

- Use this page for an approach to the patient with COVID-19 symptoms that have lasted for more than 10 days.
- Common ongoing symptoms include: tiredness, breathlessness, cough, smell/taste abnormalities, headache, dizziness, cognitive slowing ('brain fog'), joint/muscle pain and chest pain.
- Confirm that patient had COVID-19: either positive COVID-19 test or a typical history of COVID-19. If no positive test and uncertain about COVID-19 history, discuss with specialist.

Give urgent attention to the patient with ongoing COVID-19 symptoms and any of:

- Respiratory rate ≥ 25
- Oxygen saturation < 95%
- Temperature ≥ 38°C
- Pulse rate > 120
- BP < 90/60
- Headache with vomiting
- Severe or new chest pain ⮌ PACK Adult
- If new sudden asymmetric weakness or numbness of face, arm or leg; difficulty speaking or visual disturbance: consider **stroke** or **TIA** →PACK Adult
- If difficulty breathing worse on lying flat and leg swelling, **heart failure** likely ⮌ PACK Adult
- Decreased consciousness or new onset confusion/agitation
- Coughing up fresh blood
- Swollen painful calf

Manage and refer urgently ⮌ 4.

Approach to the patient with ongoing COVID-19 symptoms not needing urgent attention:

- If known with a chronic condition, check control and give routine care ⮌ PACK Adult.
- Test for TB if cough ≥ 2 weeks (any duration if HIV positive), weight loss ≥ 1.5kg, drenching night sweats, fever ≥ 2 weeks or fatigue: send 2 sputums for Xpert MTB/RIF ⮌ 7.

Ask about duration of symptoms:

< 3 weeks

- Reassure that many people have ongoing COVID-19 symptoms, even in mild cases.
- Explain that, normally, symptoms resolve slowly with time.
- Advise to rest and pace activity.
- Treat pain with paracetamol 1g 6 hourly or ibuprofen 400mg 8 hourly with food as needed for up to 5 days.
- Extend sick leave as needed.
- If stress, anxiety or low mood, assess and manage further ⮌ PACK Adult.

- If symptoms persist for > 3 weeks, advise to return for review.
- Advise when to return urgently: see red box below.

≥ 3 weeks

First check for pregnancy, HIV, diabetes, anaemia and screen mental health:

Check for pregnancy
If woman of child bearing age has missed period and is not on contraception: do pregnancy test. If pregnant →PACK Adult.

Check for HIV
If HIV status is unknown or negative, test for HIV ⮌ PACK Adult.

Check for diabetes
Check fingerprick glucose and interpret ⮌ PACK Adult.

Check for anaemia
Check fingerprick Hb. If < 12 (woman) or < 13 (man), anaemia likely ⮌ PACK Adult.

Screen mental health
If stress, anxiety or low mood, assess and manage further ⮌ PACK Adult.

If chest pain, joint pain, headache, dizziness, use symptom pages in PACK Adult to exclude other causes ⮌ PACK Adult.

'**Long COVID-19**' or **post-acute COVID-19** likely, give routine care ⮌ 19.

Advise to return urgently if breathlessness worsens, new or worsening confusion or unable to wake patient, chest pain or pressure that won't go away, new sudden weakness or numbness in face, leg or arm.

Long COVID-19: routine care

Assess the patient with Long COVID-19

Assess	When to assess	Note
Symptoms	Every visit	• Ask about symptom/s: specifically ask about difficulty sleeping and ongoing pain. If problem/s ⮌ PACK Adult. • If patient was hospitalised for COVID-19 and breathlessness lasts > 6 weeks after discharge, refer to physiotherapist, if available, for assessment/home programme. • If persistent dry cough ≥ 8 weeks, consider referral to a speech and language therapist, if available. • If symptoms still present and troubling after 12 weeks, or uncommon (like palpitations, skin rash), refer/discuss with doctor/specialist. • If for at least 6 months ≥ 1 of: memory problems, disorientation, language difficulty, consider dementia ⮌ PACK Adult.
TB	Every visit	Follow up TB sputum results. If no TB sputums sent during 'Long COVID-19' work-up, send 2 sputums for Xpert MTB/RIF at this visit ⮌ 7.
Daily activities	Every visit	If patient not able to cope with activities of daily living (like bathing, dressing, grooming, homemaking), consider referral to physiotherapist, occupational therapist, social worker or community care worker if available.
Chronic conditions	Every visit	If patient has chronic condition, check control and give routine care ⮌ PACK Adult. Check that routine bloods have been done.
Mental health	Every visit	If stress, anxiety or low mood, assess and manage further ⮌ PACK Adult.
Family planning	At diagnosis	If patient had severe COVID-19 and is on combined oral contraceptive (COC), doctor to discuss risks of thrombosis and consider switch to progestogen-only pill, intrauterine device (IUCD) or subdermal implant. Assess family planning needs ⮌ PACK Adult.
Carer/family	Every visit	Ask how carer/family is coping.
CVD risk	At diagnosis	Assess CVD risk at diagnosis ⮌ PACK Adult.
Weight	Every visit	If weight loss, assess further ⮌ PACK Adult.
Chest x-ray	If cough/breathlessness ≥ 12 weeks	If chest x-ray abnormal, refer/discuss.
Thyroid	Tiredness ≥ 12 weeks	Check TSH. If abnormal, refer to doctor.

Advise the patient with Long COVID-19

- Reassure that many people with COVID-19 have ongoing symptoms, even in mild cases. Explain that, normally, symptoms slowly resolve without specific treatment.
- Advise that symptoms may fluctuate and to expect good days and bad days. Advise to rest and pace activity. Set achievable targets and gradually increase activity according to symptom severity.
- Advise to look after general health: eat a healthy diet, get enough sleep, limit alcohol and caffeine and avoid illicit drugs.
- Extend sick leave as needed. Suggest patient speaks to employer about options to return to work more slowly. If unemployed, refer to SASSA to apply for COVID-19 Social Relief of Distress Grant.
- If needed, discuss what can be done to support carer/s and family. Identify local resources, social worker, counsellor, NGO , WoW![1], community action networks. Refer to occupational therapy if available.

Treat the patient with Long COVID-19

- Treat pain with paracetamol 1g 6 hourly or ibuprofen 400mg 8 hourly with food for up to 2 weeks. Review need for pain medications after 2 weeks.
- Chronic overuse may cause headaches: if using painkillers > 2 days/week for ≥ 3 months, advise to reduce or stop pain medication.
- Help patient to manage ongoing symptoms of tiredness, breathlessness and cough ⮌ 20. Avoid prescribing inhalers used for asthma to treat breathlessness unless patient known with asthma.

Review the patient with Long COVID-19

- If TB sputums sent at this visit: review in 2 days, otherwise review 2-4 weekly as needed. Expect gradual improvement.
- If no gradual improvement, refer/discuss. Advise to return urgently if breathlessness worsens, new or worsening confusion or unable to wake patient, chest pain or pressure that won't go away, new sudden weakness or numbness in face, leg or arm: refer.

[1]WoW! - WesternCape on Wellness (Healthy Lifestyle Initiative aimed at promoting increased physical activity, healthy eating and healthy weight management): information, groups and events can be accessed via the website https://www.westerncape.gov.za/westerncape-on-wellness/

Support the patient with 'Long COVID-19' to manage his/her symptoms at home

- Explain that symptoms may differ between patients (no typical presentation) and may vary from day to day. S/he may find normal activities difficult (like washing/dressing/doing housework).
- Invite patient to look at the below and help him/her to choose lifestyle changes that may help to manage his/her symptoms. Explore what might hinder or support this.

Pace yourself, plan and prioritise tasks

- Build a regular routine. Plan each day so important tasks are done first.
- Avoid overdoing things on a good day. This may cause exhaustion the next day.
- Allow enough time to complete activities and to rest in between. Break tasks down into smaller ones.
- Ask others to help with the less important tasks. Think about how others can help you save your energy, like helping with groceries, cleaning and cooking.

Keep a diary to track improvement

Learn your patterns: learn what brings on utter exhaustion or other symptoms, and try to avoid these.

Get enough sleep

- Tiredness feels much worse if sleep patterns are disturbed. If difficulty sleeping:
  - Establish a routine: try to get up at the same time each day (even if tired) and go to bed the same time every evening. Avoid day time napping if able.
  - Avoid caffeine and smoking for several hours before bedtime.
  - Allow time to unwind/relax before bed.
  - Use bed only for sleeping and sex.
  - Once in bed, avoid clock-watching. If not asleep after 20 minutes, do a low energy activity (read a book, walk around house). Once tired, return to bed.

Eat well

- Where possible, eat regular healthy meals that include fruit and vegetables.
- Drink plenty of water.
- Limit alcohol and caffeine.

Get help when you need it

- Discuss your worries with someone you trust. Join a support group, if available.
- Consider speaking to your employer about options to return to work more slowly.
- If you have financial worries, arrange to see a social worker.

Keep active

- Start with light exercise (walking) for around 4-6 weeks. Gradually increase intensity to aim for 150 minutes per week (moderate intensity - working in garden). Monitor immediate symptoms (like fatigue/breathlessness) as well as delayed symptoms and adapt as needed.
- Before returning to sport, ensure you are able to complete activities of daily living and walk 500m on the flat without excessive fatigue or breathlessness. Ensure you have at least 10 days' rest and be symptom-free for a minimum of 7 days before starting.

Look after your mental health

- Find time to relax: relaxing activities can help sleep and mental well-being– try deep breathing exercises, yoga, reading or having a relaxing bath or shower.
- Find a creative or fun activity that you enjoy.
- Set small achievable goals that will give you a sense of accomplishment.
- Stay connected: spend time with supportive family and friends.
- Talk to your family/family or friends: share/explain the impact that symptoms are having on your life. It can be hard for them to understand.

Help the patient to manage ongoing breathlessness and cough

- **Advise patient to do the following when feeling breathless:**
  - Stay calm, relax your neck and shoulders and choose a position that eases your work of breathing (see pictures). Think about your breathing: breathe in slowly through your nose, as if you are smelling roses. Breathe out through your mouth, pursing your lips as if you are blowing out a candle and try to relax rather than forcing it. Slowly count to 2 when inhaling and 3 counts during relaxation.
  - Wipe a cool wet cloth over your nose and cheeks, this can help to relieve the feeling of breathlessness.

- Sit on a chair and lean forward with elbows resting on knees.

- Lean forward with elbows resting on the back of a chair.

- Lean forward with hands resting on knees.

- Lean against a wall for support and rest your hand on your thigh or tuck your hand into your pocket.

- **Advise the patient with ongoing dry cough:**
  - Avoid breathing through your mouth as dry air irritates the airways and causes a cough. Try to interrupt cough cycle by closing your mouth, swallowing repeatedly and gently breathing through your nose until the urge to cough goes away. Sip drinks regularly (hot or cold). Suck boiled sweets or lozenges.
- **If productive cough, arrange physiotherapist for further techniques.**

Practise safely

- Keep yourself, your colleagues, your patients and your family safe from COVID-19 by practising safely using these steps:
- This section applies to all clinical staff (such as nursing assistants, nurses, doctors, occupational therapists, physiotherapists, dentists, oral hygienists, radiographers).

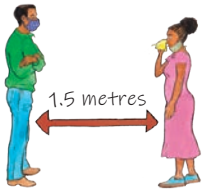
1. Monitor yourself for COVID-19 symptoms

- If unwell, stay home and inform your supervisor.
- Complete a COVID-19 symptom screen at beginning and end of each shift.
- If anyone at home with suspected or confirmed COVID-19, inform your supervisor.

2. Maintain physical distancing

- Avoid shaking hands, hugging, kissing, high fives. Greet instead with a smile, nod or wave.

- Keep a distance of at least 1.5 metres from colleagues and patients whenever possible.



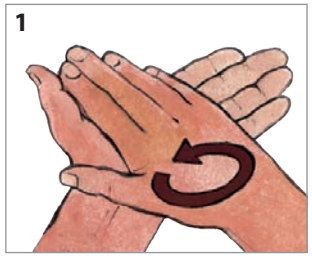
- Avoid sharing work surfaces, desks and equipment with other staff if possible.

Administrative staff:

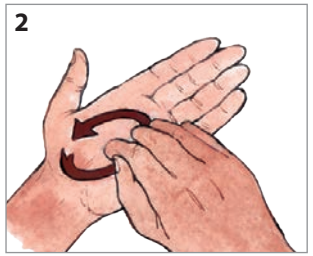
- Work from home if possible.
- Ensure desks are at least 1.5 metres apart.
- Use perspex screens between clerks and patients if possible.
- Avoid unnecessary meetings. If needed, ensure staff maintain physical distancing during meeting.

3. Practise good hand hygiene

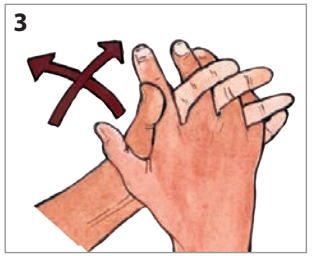
- All staff and patients entering and exiting the facility should clean hands with alcohol-based hand rub provided at entrance/exit.
- Clean your hands frequently throughout the day. Also remember the 5 moments for hand hygiene:
  1. Before touching a patient
  2. After touching a patient
  3. After touching patient surroundings
  4. After exposure to body fluids
  5. Before doing a procedure
- Use 70% alcohol-based hand rub or soap and water to clean hands. If hands visibly soiled, ensure you use soap and water.
- Follow these steps to clean your hands:
  - If using hand rub, apply palmful to cupped hand. If using soap and water, roll up sleeves, rinse hands in clean water and apply soap to palm.
  - Clean your hands for at least 20 seconds using steps 1- 6 below.
  - If using soap and water, rinse your hands with clean water and dry on paper towel or allow to dry on their own. Avoid shared towels.



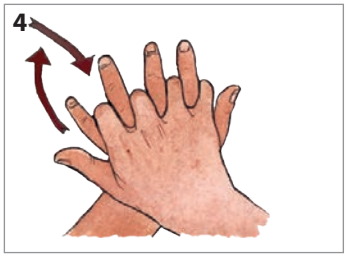
Rub palms together.



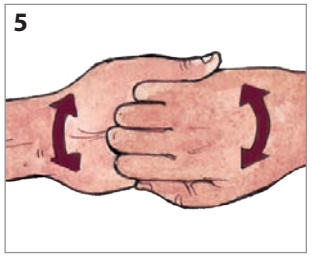
Rub tips of nails against palm. Swap hands.



Rub fingers between each other.



Place one hand over back of other, rub between fingers. Swap hands.

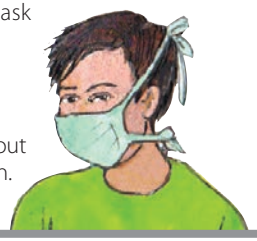


Grip fingers and rub together.

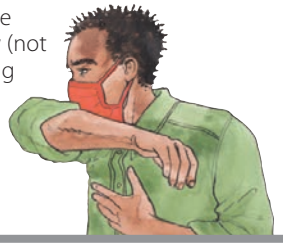
Rub each thumb with opposite palm. Swap hands.

4. Practise good respiratory hygiene

- Wear a surgical mask, N95 respirator or cloth mask according to your task and location in facility.
- Provide a surgical mask to patients with respiratory symptoms or suspected/confirmed COVID-19.
- If available, provide a cloth mask to patients without respiratory symptoms if they don't have their own.



- Cover mouth and nose with a tissue or elbow (not hands) when coughing or sneezing. If using a tissue, discard immediately and wash hands.



- Perform hand hygiene if contact with respiratory secretions.

- Avoid touching your face, eyes, nose and mouth with unwashed hands.

Who should wear a cloth mask?

- All staff working in non-clinical areas (like administration, finance, canteen).
- All patients without respiratory symptoms or suspected/confirmed COVID-19.
- All staff not needing a surgical mask or N95 respirator.
- All staff in tea rooms and canteens.

DO

- Wash hands before use.
- Ensure mask covers mouth and nose.
- Replace mask if wet. Put it in a container until you can wash it.

- Only touch straps to remove it.
- Wash hands immediately after removing it.

- Wash masks with soap and warm water.
- If possible, iron once dry to disinfect mask.
- Have at least 2 masks so that you have a clean one ready.

DON'T

- Touch your face or fiddle with mask.

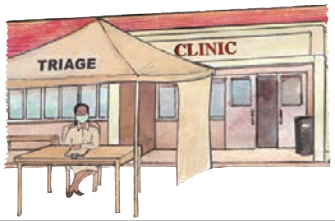
- Leave used masks lying around.

- Ever use someone else's mask. If you don't have a mask, use a scarf or bandana.

- Let the mask slip or pull it down so that your nose or mouth is exposed.

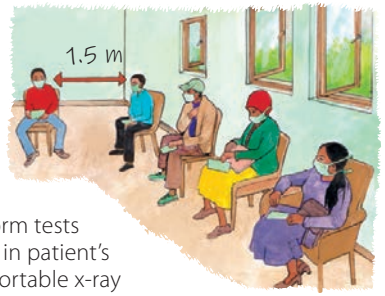
5. Manage patient flow within facility

- Ensure only one entrance and exit to facility available for patients.
- Have a separate, well-ventilated triage area near facility entrance for all patients.



- If suspected COVID-19, isolate patient in separate area allocated for patients with suspected COVID-19.
- If not suspected with COVID-19, send patient to standard waiting area.
- Establish separate routes to each area and indicate these clearly with colour-coded arrows and signs.

- Ensure patients queue and sit at least 1.5 metres apart.



- Limit patient movement within facility:
  - If possible, perform tests and procedures in patient's room and use portable x-ray equipment.
  - Ensure patient wears a surgical mask if needing to move through facility.

- Limit people in contact with patient, including health workers.
- Avoid visitors.

- Only one escort to accompany a patient and only if patient needs assistance.

- If possible, implement an appointment system. Only allow patients to enter facility at appointment time.

- Increase time between patients' follow-up visits and avoid unnecessary visits.

6. Practise good environmental infection control

Clean and disinfect patient areas regularly:

- First clean with detergent (soap) and water, and wipe with rinsed cloth. Then wipe with disinfectant like sodium hypochlorite 0.1% (use 0.5% if blood or body fluids) or 70% alcohol and allow to air dry.
- Frequency of cleaning will depend on area in facility:
  - Triage, testing and COVID-19 areas: at least three times a day. Disinfect chairs and testing booths between each patient.
  - Low-risk areas: at least once a day.
  - High-touch surfaces (tables, desks, phones, keyboards, mouse, door handles, light switches, taps): disinfect after each use or every 60 minutes.
  - The "patient zone" (bed rails, bedside cabinet, trolley, equipment): disinfect between each patient. If visibly dirty, clean first.

- Avoid touching surfaces unless necessary.
- Use feet or hips to open doors instead of using door handles.
- Ensure adequate ventilation by keeping windows and doors open where possible.

- If possible, use disposable or dedicated equipment (like stethoscopes, blood pressure cuffs, thermometers, saturation monitors).
- If sharing equipment between patients, disinfect between each use.
- Avoid performing aerosol-generating procedures[1], unless essential. If essential, ensure appropriate PPE is worn.

- Ensure laundry, food utensils and medical waste are managed according to safe standard procedures.
- For examination beds, change linen and/or linen saver between each patient. If patient with suspected or confirmed COVID-19, send linen to laundry marked as infectious.

7. Wear appropriate Personal Protective Equipment (PPE)

- Precautions are required by health workers to protect themselves and prevent transmission of COVID-19. This includes the appropriate use of PPE.
- Help ensure a safe supply of PPE by using it appropriately and only when indicated.
- Wear PPE according to your task. Follow your facility protocols but ensure you are wearing the minimum PPE as below:

Triaging or **screening** patients:

- Surgical mask

Managing a patient with suspected or confirmed COVID-19:

- Surgical mask
- Goggles or visor
- Apron
- Gloves

Performing **aerosol-generating procedure**[1] in patient with suspected or confirmed COVID-19:

- N95 respirator
- Goggles or visor
- Gown or apron
- Gloves

Change or clean your PPE when needed:

- Change gloves between each patient.
- Change apron/gown if wet, dirty, damaged or after performing aerosol-generating procedure.
- Clean and disinfect goggles/visor after removing.
- If using **surgical mask**:
  - May be used continuously for up to 8 hours because of current supply shortage.
  - Discard after 8 hours of use, or sooner if touched by unwashed hands or gets wet/dirty/damaged.
- If using **N95 respirator**:
  - It may be reused for up to 1 week because of current supply shortage.
  - If reusing respirator:
    - Perform seal test before each use.
    - Between uses, store in a clearly labelled, clean paper bag. Avoid crushing, bending or trying to disinfect respirator.
    - When replacing, wear gloves and avoid touching inside of respirator.
    - Discard after 1 week of use, or sooner if it gets wet/dirty/damaged or seal test fails..

[1]Aerosol-generating procedures include: collecting respiratory specimens (naso- or oropharangeal swabs), chest physiotherapy, nebulisers, sputum induction, endotracheal intubation. Avoid nebulisers and sputum induction if suspected/confirmed COVID-19.

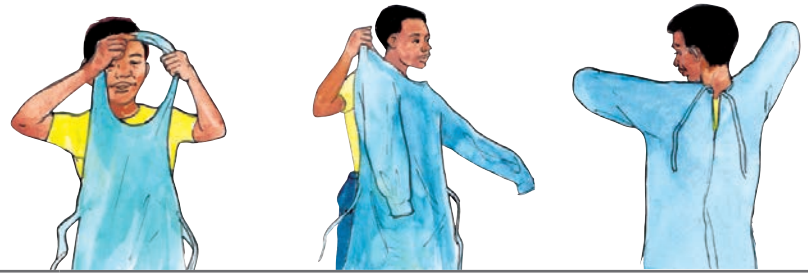
How to put on PPE correctly (donning)

- Ensure you always first put on PPE correctly, even before performing CPR or other emergency procedures.

See a video on how to put on PPE correctly here: www.medicine.uct.ac.za/news/covid-19-resources

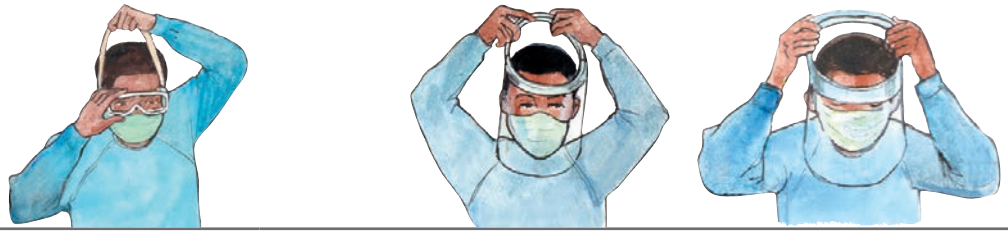
1 Clean hands for at least 20 seconds
- Disinfect hands using alcohol-based hand rub, or thoroughly wash hands using soap and water.

2 Put on apron/gown
- If gown, fully cover torso from neck to knees, arms to end of wrists, and wrap around back. Fasten at back of neck and waist.
- If apron, place loop over head and fasten around waist.
- When fastening, use bow (not a knot) for easy release.

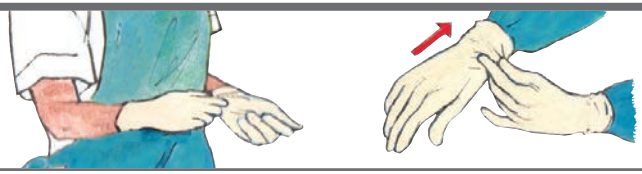


3 Put on mask/respirator
- Secure ties or elastic bands at middle of head and neck.
- Mould flexible band to nose bridge (do not pinch).
- Ensure mask is pulled down under chin.
- If respirator, check good fit by breathing in and out: mask should move in and out with breath.
- If reusing N95 respirator, put on clean non-sterile gloves before replacing it. Once on face, remove gloves, clean hands and continue to step 4.

4 Put on goggles/visor
- Place over face and adjust to fit.



5 Put on gloves
- Extend gloves to cover wrists/end of gown.



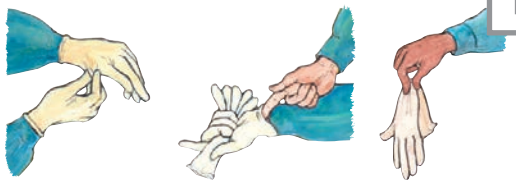
How to remove PPE correctly (doffing)

- Before leaving patient's room, remove all PPE except mask/N95 respirator.
- After leaving patient's room, close door and then remove mask/N95 respirator.
- When removing PPE, remember that outside of gloves, goggles/visor, gown/apron and mask/respirator is contaminated: if your hands touch the outside of any of these items during removal, immediately clean hands before removing next item.

See a video on how to remove PPE correctly here: www.medicine.uct.ac.za/news/covid-19-resources

1 Remove gloves

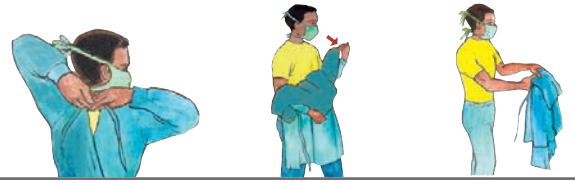
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove.
- Hold removed glove in gloved hand.
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove.
- Discard in medical waste bin.



Clean hands for at least 20 seconds

2 Remove apron/gown

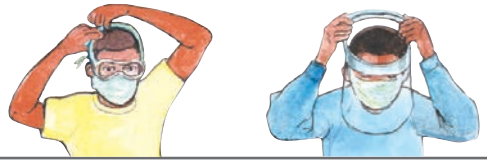
- If wearing a visor (not goggles), remove visor as below *before* removing gown/apron.
- Unfasten gown/apron ties. Ensure sleeves don't touch body when doing this.
- If gown: pull gown away from neck and shoulders, touching only inside of gown. Turn gown inside out.
- If apron: pull over head and roll downwards, touching only inside of apron.
- Fold or roll in to bundle and discard in medical waste bin.



Clean hands for at least 20 seconds

3 Remove goggles/visor

- Remove goggles/visor from back by lifting head band or ear pieces.
- Discard in medical waste bin.



Clean hands for at least 20 seconds

4 Remove mask/respirator

- If mask, first untie/break bottom ties, then top ties and remove without touching front of mask.
- If respirator, first grab bottom elastic, then top elastic and remove without touching front of respirator.
- Discard in medical waste bin.

5 Clean hands for at least 20 seconds

- Disinfect hands using alcohol-based hand rub, or thoroughly wash hands using soap and water.

8. What to do before work

Clothes
- Wear simple, short-sleeved clothing that can be easily washed.
- Wear dedicated closed work shoes.
- Avoid wearing a belt, jewellery, watch and lanyard.

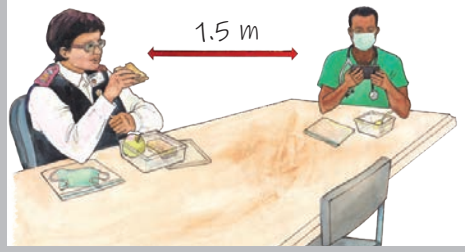
Wallet and keys
- Leave wallet at home – bring only essentials (like access card, drivers licence, bank card) in sealable plastic bag.
- Keep your keys in your pocket/ bag and do not remove until after you have washed hands when leaving work.

Phone
- Remove protective case from phone. Keep phone in sealable plastic bag and change this daily.
- Keep your phone in your pocket/bag, avoid placing it on work surfaces. Leave it on loud volume.
- If able, disinfect phone/bag frequently.

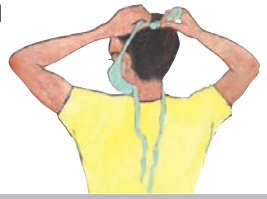
Food and drink
- Bring lunch from home in fabric shopping bag.
- Use own water bottle, avoid water coolers and sharing drinks.

9. How to take a break safely

- Stagger breaks to avoid crowded tearooms. Take break outside if possible.
- Remove all PPE before entering tea room.
- Keep 1,5 metres apart from colleagues.



When removing mask to eat or drink:
- Remove carefully without touching the outside.
- Store in clearly labelled, clean paper bag.
- Put mask back on as soon as finished eating or drinking.
- Wash hands well after removing mask and after putting it back on.



- Avoid sharing food and drink.
- Avoid bought lunches and drinks from canteen.
- Avoid water coolers.

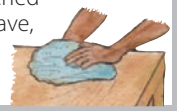
- Wash hands well before eating or drinking. Disinfect phone.

- Avoid sharing towels. Use paper towel instead.

- Keep windows and doors open. Report windows that don't open.

- Avoid sharing cups, bottles, cans, dishes, eating utensils – wash these well after use.

- Clean and disinfect frequently touched objects (like kettle, toaster, microwave, counters, door handles, window handles) regularly.



10. What to do after work

When leaving work

- Disinfect phone, stethoscope and pen regularly and again before leaving. Leave pen at work.

- Ensure used masks, gowns and aprons are discarded in designated waste bins.

- If possible, remove work clothes and place in plastic or washable fabric bag to take home.

- Perform thorough hand and arm wash.

- Keep hand sanitiser in bag or car, and use to clean hands after touching public surfaces.

When arriving home:

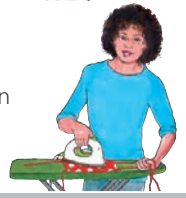
Step 1
- Remove shoes and leave outside, or just inside door, before entering home.
- Clean upper part of shoes with hand sanitiser. Avoid touching soles of shoes.

Step 2
- As you enter, remove cloth mask. Only touch straps to remove it.
- Then remove work clothes if not already changed.
- Put mask and work clothes straight into a hot wash or bucket with hot water and soap, along with fabric bags used for lunch and clothes.

Step 3
- Thoroughly wash hands and arms.

Step 4
- Immediately have shower/bath/wash.
- Avoid hugs, kisses and direct contact with family members until after shower/bath/wash.

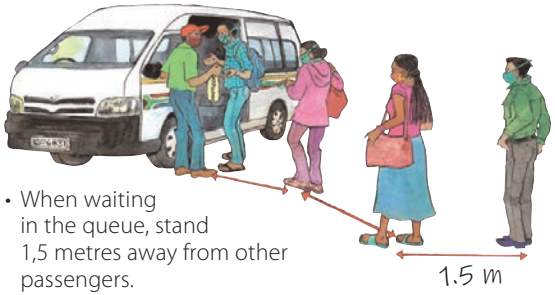
Step 5
- Dry cloth mask and work clothes in the sun or tumble dryer.
- Iron to disinfect.



11. How to travel safely using public of staff transport

- Wear a cloth mask while travelling.
- Avoid wearing work clothes if possible. Rather change into work clothes after arriving at work.

- Ensure all windows are kept open.



- When waiting in the queue, stand 1,5 metres away from other passengers.

- Avoid touching door handles, rails, windows and other surfaces.
- Sit as far from other passengers as possible.

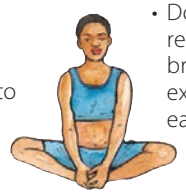
- Clean hands with hand sanitiser before entering and after exiting the vehicle.

12. Look after your mental health

- Get enough sleep.

- Talk to family, friends and colleagues.

- Find a creative or fun activity to do.



- Do a relaxing breathing exercise each day.

- Exercise regularly.

- Limit alcohol and avoid drugs.

- Seek help if you are struggling:
  - The Employee Assistance Programme (EAP) for Western Cape Government healthcare workers: 0800 611 093
  - Mental Health helpline: 0800 12 13 14

Manage the health worker exposed to a person with suspected or confirmed COVID-19

The health worker has had potential exposure to COVID-19 if s/he has had any contact with:
- A person with suspected COVID-19 who is waiting for test result or
- A person with confirmed COVID-19: this is a person with a positive COVID-19 test result. If a person with COVID-19 symptoms did not qualify for a test, manage exposure as for confirmed COVID-19.

First check if the health worker has new onset in the last 14 days of symptoms suggestive of COVID-19:
- Shortness of breath or difficulty breathing
- Cough
- Sore throat
- Loss of sense of smell or change in sense of taste
- If known with asthma or COPD with chronic symptoms: worsening cough or breathing

Yes to any

Health worker may have COVID-19

- Give a surgical mask to wear.
- Continue to assess and manage the health worker as a person with suspected COVID-19 →4.

No to all

During contact, was health worker wearing appropriate PPE?
If unsure ⮌ 23.

No

Establish the type of exposure health worker has had to person with suspected/confirmed COVID-19:
- Contact within 1 metre for ≥ 15 minutes with person
- Direct physical contact with person
- Direct contact with secretions of person
- Performed aerosol-generating procedure[1] on person
- Was in same room when an aerosol-generating procedure[1] was performed on person

Yes to any

Health worker has had **high risk exposure**.

No

Has health worker had any contact within 1 metre < 15 minutes with patient

Yes

Health worker has had **low risk exposure**.

No

- Reassure health worker they are at minimal risk.
- Advise to continue working and to monitor him/herself for COVID-19 symptoms daily before work.
- Ensure health worker knows how to use PPE correctly ⮌ 23.

Yes

Health worker has had **minimal risk exposure**.

Assess risk and manage according to type of contact:
If health worker had exposure to a patient with suspected COVID-19 →29.
If health worker had exposure to a patient with confirmed COVID-19 →30.

[1]Aerosol generating procedures include: tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation and bronchoscopy. Avoid nebulisers and sputum induction if suspected/confirmed COVID-19.

The asymptomatic health worker exposed to a patient with suspected COVID-19

What type of exposure did the health worker have with the patient with suspected COVID-19 as determined on previous page?

High risk exposure

- Advise to quarantine and give information leaflet.
- Advise to monitor for COVID-19 symptoms.
- Follow up the COVID-19 test results of person with suspected COVID-19:

Negative

Advise to:
- Resume normal work activities.
- Ensure strict mask use and hand hygiene.

Reassure health worker that s/he is unlikely to have COVID-19.

Positive

- Continue quarantine.
- Advise to continue to monitor for symptoms for 7 days:

If no symptoms develop within 7 days[1]: test on day 7 post-exposure.

If symptoms develop within 7 days: test early.

COVID-19 test not done

Test health worker for COVID-19:

Health worker positive

Health worker has **COVID-19**.
Provide medical mask, isolate and manage →4.

Health worker negative

Advise to:
- Resume normal work activities when well enough.
- Continue strict mask use and hand hygiene.

Low risk exposure

- Advise to:
  - Continue working but preferably low risk transmission activities.
  - Wear a mask.
  - Continue strict hand hygiene.
- Advise to monitor for COVID-19 symptoms.
- Follow up the COVID-19 test results of person with suspected COVID-19:

COVID-19 test not done

Advise to:
- Continue to monitor symptoms until 10 days after exposure.
- Continue working but preferably low risk transmission activities.
- Continue strict mask use and hand hygiene.

Symptoms develop within 10 days

Test health worker for COVID-19:

Positive

Advise to continue strict mask use and hand hygiene.

Negative

No symptoms develop within 10 days

Advise to resume normal work activities.

- Ensure the cause of the health worker's exposure is known and reported appropriately in order to improve infection control procedures in facility.
- Advise health worker to monitor him/herself for COVID-19 symptoms daily before coming to work. If symptom/s develop, stay home and inform supervisor.
- Ensure health worker knows how to use PPE correctly ⮌ 23.
- Manage occupational stress ⮌ PACK Adult.

[1]If health worker agrees, s/he can test on day 5 post-exposure and if negative, and still no symptoms, may return to work.

The asymptomatic health worker exposed to a patient with confirmed COVID-19

What type of exposure did the health worker have with the confirmed COVID-19 person as determined on page 28?

High risk exposure

- Advise to:
  - Quarantine and give information leaflet.
  - Wear a mask.
  - Continue strict hand hygiene.
- Advise to monitor for COVID-19 symptoms for 7 days after exposure:

If no symptoms develop within 7 days[1]: test on day 7 post-exposure.

If symptoms develop within 7 days: test early.

Low risk exposure

- Advise to:
  - Continue working but preferably low risk transmission activities.
  - Wear a mask.
  - Continue strict hand hygiene.
- Advise to monitor for COVID-19 symptoms until 10 days after exposure:

Symptoms develop within 10 days

No symptoms develop within 10 days

Advise to resume normal work activities.

Test health worker for COVID-19:

Health worker tests positive

Health worker has **COVID-19**.
Provide mask, isolate and manage ⮌ 4.

Health worker tests negative

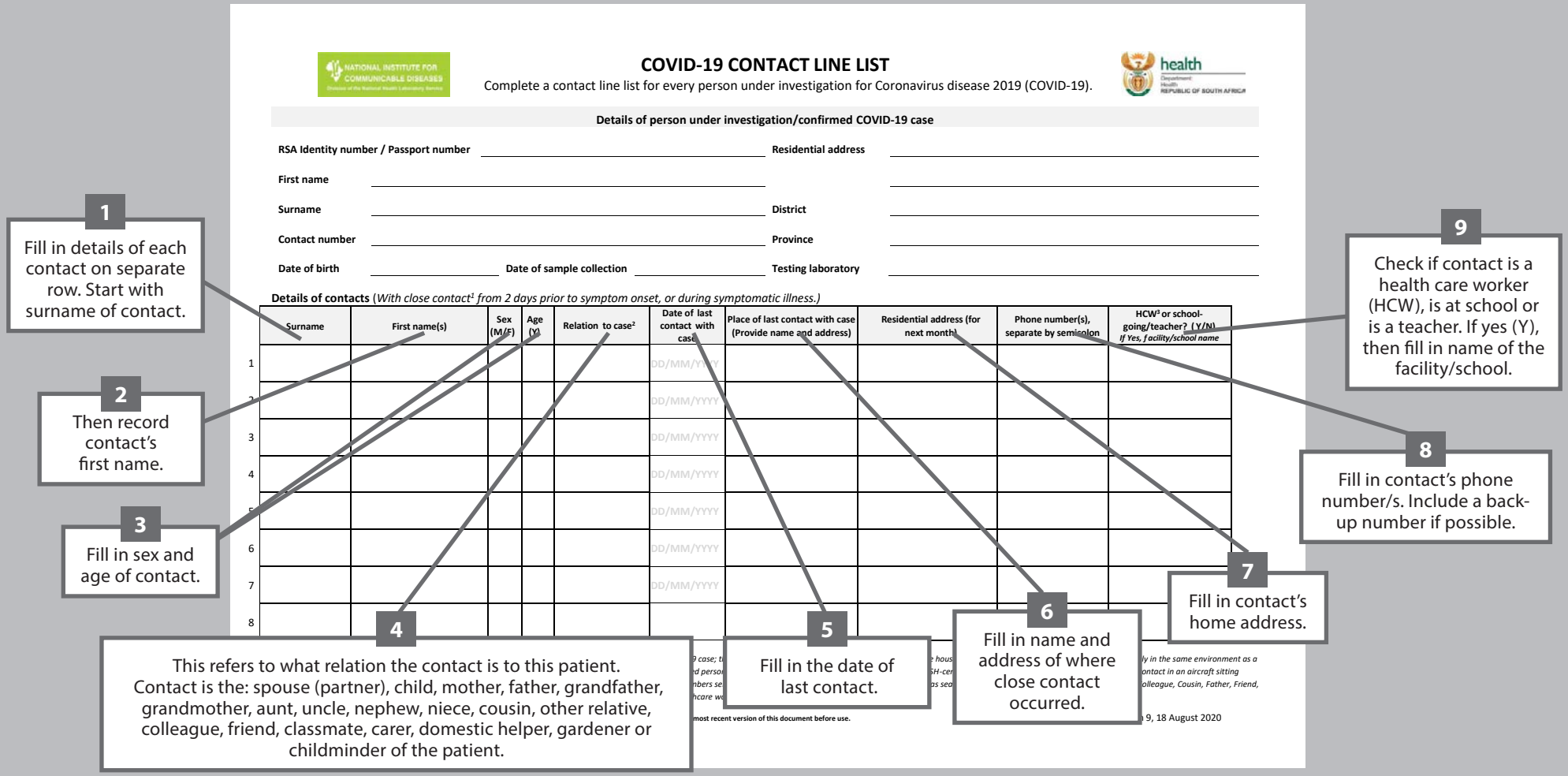
Advise to:
- Resume normal working activities when well enough.
- Continue strict mask use and hand hygiene.

- Ensure the cause of the health worker's exposure is known and reported appropriately in order to improve infection control procedures in facility.
- Advise health worker to monitor him/herself for COVID-19 symptoms daily before coming to work. If symptom/s develop, stay home and inform supervisor.
- Ensure health worker knows how to use PPE correctly ⮌ 23.
- Manage occupational stress ⮌ PACK Adult.

[1]If health worker agrees, s/he can test on day 5 post-exposure and if negative, and still no symptoms, may return to work.

Complete a COVID-19 contact list

- Complete a list of COVID-19 patient's close contacts, especially persons at risk[1].
- A close contact is a person who has had face-to-face contact (within 1 metre) of a COVID-19 person, or has been in a closed environment (like room or vehicle) with a COVID-19 person for at least 15 minutes.
- Complete hard copy shown below. If hard copies unavailable: download from https://www.nicd.ac.za/diseases-a-z-index/covid-19/covid-19-resources/
- Ask patient to tell you about the people s/he has been in close contact from the date s/he developed symptoms until now. Ask about household members, work colleagues and friends.
- **If test result positive or patient being managed empirically for COVID-19:** send completed form to the relevant co-ordinator according to facility protocol.



COVID-19 CONTACT LINE LIST

Complete a contact line list for every person under investigation for Coronavirus disease 2019 (COVID-19).

Details of person under investigation/confirmed COVID-19 case

RSA Identity number / Passport number _____ Residential address _____

First name _____

Surname _____ District _____

Contact number _____ Province _____

Date of birth _____ Date of sample collection _____ Testing laboratory _____

Details of contacts (*With close contact[1] from 2 days prior to symptom onset, or during symptomatic illness.*)

	Surname	First name(s)	Sex (M/F)	Age (Y)	Relation to case[2]	Date of last contact with case	Place of last contact with case (Provide name and address)	Residential address (for next month)	Phone number(s), separate by semicolon	HCW[3] or school-going/teacher? (Y/N) *If Yes, facility/school name*
1						DD/MM/YYYY				
2						DD/MM/YYYY				
3						DD/MM/YYYY				
4						DD/MM/YYYY				
5						DD/MM/YYYY				
6						DD/MM/YYYY				
7						DD/MM/YYYY				
8										

most recent version of this document before use.

9, 18 August 2020

1 Fill in details of each contact on separate row. Start with surname of contact.

2 Then record contact's first name.

3 Fill in sex and age of contact.

4 This refers to what relation the contact is to this patient. Contact is the: spouse (partner), child, mother, father, grandfather, grandmother, aunt, uncle, nephew, niece, cousin, other relative, colleague, friend, classmate, carer, domestic helper, gardener or childminder of the patient.

5 Fill in the date of last contact.

6 Fill in name and address of where close contact occurred.

7 Fill in contact's home address.

8 Fill in contact's phone number/s. Include a back-up number if possible.

9 Check if contact is a health care worker (HCW), is at school or is a teacher. If yes (Y), then fill in name of the facility/school.

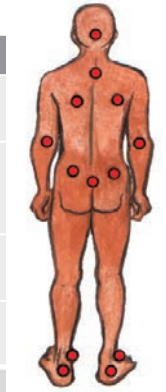
[1]Persons at risk include those > 55 years old, those with diabetes, HIV, TB (current or previous), chronic kidney disease, hypertension, heart disease, chronic lung disease (like asthma, COPD, chronic bronchitis) and immunosuppressive disorders (like cancer, SLE, RA).

Provide palliative care to the COVID-19 patient

- A doctor or palliative care team will down-refer a patient to receive palliative care at a primary health care/home level.
- When assessing and providing palliative care to a COVID-19 patient, ensure that you are wearing appropriate PPE: gown/apron, surgical mask, goggles/visor and gloves.

Assess the COVID-19 patient needing palliative care

Assess	Note
Symptoms	• If fever, shortness of breath, anxiety, nausea/vomiting, constipation, diarrhoea, abdominal cramps or itchiness manage ⮌ 33. • If dry mouth, oral candida or other symptoms, manage ⮌ PACK Adult.
Pain	• If pain, ask where the pain is and when the pain started. Does pain radiate anywhere? • Ask patient to grade pain on a scale from 0-10, with 0 being no pain and 10 being the worst pain: classify pain as **mild** (1-3), **moderate** (4-7) or **severe** (8-10). Manage pain depending on severity ⮌ 33.
Side effects	• Ask about and manage side effects from medication ⮌ 33. • If on morphine, advise that nausea, confusion and sleepiness usually resolve after a few days. Check that patient is using regular laxative.
Chronic care	• Check that the patient understands why s/he is receiving palliative care. • Assess ongoing need for chronic care in discussion with patient and health care team. Consider which medication/s could be discontinued.
Psychological well-being	Ask patient and family how they are feeling. Advise as below and arrange emotional support or counselling as available.
Carer/dependents	• Check that carer understands how to safely care for the patient to reduce his/her risk of contracting COVID-19. Check that s/he can access the necessary protection and cleaning products. • Ask how the carer is coping and what support s/he needs now and in the future. If needed, refer patient's dependents and family members to social worker.
Dying	If patient is deteriorating and 2 or more of: bedridden, decreased consciousness, only able to take sips of fluid or unable to take tablets, consider providing end-of-life care ⮌ 34.
Pressure ulcers	If bedridden or in wheelchair, check common areas daily for damaged skin (change of colour) and pressure ulcers (see picture). If pressure ulcer, manage ⮌ PACK Adult.



Advise the COVID-19 patient needing palliative care and his/her family

- Start by checking the patient/family understanding of the situation and ask what they have been told before. This can help move the conversation forward.
- Explain the condition and prognosis to the patient and his/her family. Be compassionate, but also honest and direct. Explaining what is happening relieves fear and anxiety.
- Check that family understands why the patient is receiving palliative care. If patient is not eligible for critical care, address any concerns and questions the family may have about this.
- Ask how the family is coping and what support they need. If needed, refer to social worker, counsellor, spiritual counsellor as available. Deal with bereavement issues ⮌ PACK Adult.
- Discuss the plan for caring for the patient. Advise whom to contact when pain or other symptoms get severe. Discuss advance-care plans and preferences with family. Document decisions.
- Ensure family understand that they will need to quarantine for 10 days from the last time they had contact with the patient. Provide information on how to do this and give information leaflet.

Advise what home care is needed for the COVID-19 patient needing palliative care

- Encourage the patient to do as much self-care as able.
- Encourage mouth care: patient to brush teeth and tongue regularly using toothpaste or dilute bicarbonate of soda. If able, advise to rinse mouth with ½ teaspoon of salt in 1 cup of water after eating and at night
- Offer small meals frequently, allow the patient to choose what s/he wants to eat from what is available and encourage fluid intake. The patient's appetite will get less as s/he gets sicker.
- If patient has pain, it is important to give pain medication regularly (not as needed), and if using tramadol or morphine to use a laxative daily to prevent constipation.
- If bedridden or in wheelchair:
  - Prevent pressure ulcers: wash and dry skin daily. Ensure linen is clean and dry. Move/turn patient every 1-2 hours if unable to shift own weight. Lift the patient, avoid dragging.
  - Prevent contractures: at least twice a day, gently bend and straighten joints as far as they go. Avoid causing pain. Gently massage muscles.
- Learn to recognise signs of deterioration and impending death: s/he may be less responsive, become cold, sleep a lot, have irregular breathing, and will lose interest in eating.

Treat the COVID-19 patient needing palliative care

- If **fever**:
  - Give paracetamol 500mg-1g orally 6 hourly as needed.
- If **shortness of breath** or **cough**:
  - Advise to place patient in high supported sitting position by propping up with pillows/cushions.
  - Ensure other symptoms (like fever and pain) are well controlled.
  - Explain to patient how to do breathing exercises if s/he is able:
    - Advise to relax his/her shoulders, place hand on abdomen, and breathe from abdomen up in to chest, while feeling this with hand. Then lean forward, purse lips and slowly breathe out.
    - Repeat several times until breathing slows.
  - Encourage regular change in position every 2 hours if able – back, one side, other side and, if able to tolerate, on stomach with head to side.
  - If no better with above:
    - Give morphine hydrochloride (mist morphine) 2.5-5mg orally 4 hourly. If unable to swallow, slowly dribble mist morphine in to side of patient's mouth. Note that amount of morphine solution will vary depending on the strength: if 20mg/5mL, give 0.6-1.25mL.
- If **pain**:
  - Manage causes of discomfort such as constipation, nausea, thirst. Ensure patient is in a comfortable position.
  - Start pain medication based on severity of pain. Aim to have patient pain free at rest and able to sleep:
    - If **mild** (1-3) pain, start at step 1. If **moderate** (4-7) or **severe** (8-10) pain start at step 2. If unsure, start at lower step and increase pain medication if needed
- If pain controlled, continue same dose. If pain persists or worsens, increase dose to maximum. If still no better, move to next step.

Step	Pain medication	Start dose	Maximum dose	Note
Step 1 Give:	Paracetamol	1g orally 6 hourly	4g daily	If starting, give paracetamol 1g orally and reassess pain after 4 hours. If no better or already on paracetamol for fever, add step 2.
Step 2 Add to step 1:	Tramadol	50mg orally 6 hourly	400mg daily	Also give lactulose 10-20 mL orally once daily as needed for constipation. If needed increase to 12 hourly.
Step 3 Stop tramadol, continue paracetamol and add:	Morphine hydrochloride (mist morphine)	• 5-10mg orally 4 hourly • If ≥ 65 years: start 2.5-5mg orally 4 hourly	• No maximum - titrate against pain. • If sedated/confused, respiratory rate < 12, skip 1 dose, then halve usual doses.	• Also give lactulose 10-20mL orally daily to prevent constipation. Avoid if diarrhoea. • Also give metoclopramide 10 mg orally 8 hourly as needed and haloperidol 1.5mg orally at night for 1 week. • If constipation, nausea or itchiness, manage as below. • If breakthrough pain (pain that occurs before next scheduled dose): - Give one extra dose morphine, then continue regular dose at scheduled times for the rest of that day. - Increase morphine doses the next day. Calculate new dose: add up total amount of extra morphine given in last 24 hours. Divide this amount by 6 and add this to each regular 4 hourly dose[1].

- Manage other symptoms and side effects:

Anxiety
- Consider polypharmacy: check medication/s and discontinue all non-essential medication.
- Manage causes of discomfort such as constipation, pain, full bladder, thirst. Ensure patient is in a comfortable position.
- Encourage deep breathing if able. Help patient to connect with family via phone or other device. If available, consider referral to counsellor.
- Give diazepam 2.5-5mg orally as needed or lorazepam 0.5-1mg orally as needed until settled.

Nausea
- Encourage frequent small sips of fluids like water, tea, juice or ginger drinks.
- Give metoclopramide 10mg orally 8 hourly as needed.

Constipation
- Give sennosides A and B 13.5mg at night and/or lactulose 15-30mL orally daily.
- If needed, increase sennosides A and B to 27mg at night and/or increase lactulose to 12 hourly.

Diarrhoea
Give loperamide 4mg initially, then 2mg after each loose stool up to 6 hourly.

Abdominal cramps
Give hyoscine butylbromide 10mg 6 hourly as needed for up to 3 days.

Generalised itchiness
Give chlorphenamine 4mg 6-8 hourly as needed.

[1]Example: patient on morphine 10mg orally 4 hourly has 3 episodes of breakthrough pain: 10mg x 3 = 30mg (total extra morphine); 30mg ÷ 6 = 5mg. Add 5mg to each 10mg regular dose: increase morphine to 15mg orally 4 hourly.

Provide end-of-life care to the dying COVID-19 patient

The patient is dying if s/he is deteriorating and has ≥ 2 of: bedridden, decreased consciousness, only able to sips fluid or unable to take tablets. A doctor should confirm this.

Assess the dying COVID-19 patient's needs regularly

Assess	Note
Symptoms	Assess for pain, noisy breathing, anxiety/restlessness and treat as below.
Current care	• Assess current medication and stop any that are non-essential (like vitamins). • If unable to swallow, consider switching medication route from orally to subcutaneous.
Intake	If patient is able to swallow, ensure patient receives sips of water and food as wanted for comfort.
Psychological well-being	• Ensure patient and family understand what is happening. • Ask how family are coping and what support and/or spiritual care is needed.
Mouth	Ensure patient's mouth is moist and clean. Consider using glycerine to keep lips/mouth moist.
Personal hygiene	Check skin care, clean eyes and change clothing according to patient's needs.

Advise the dying COVID-19 patient and his/her family

- Start by checking the patient/family understanding of the situation and ask what they have been told before. This will help move the conversation forward.
- Ensure patient and family receive full explanation and express understanding of current plan of care. Identify and document any concerns.
- Discuss patient's wishes, feelings, faith, beliefs and values. Discuss patient's needs now, at death and after death. Listen and respond to patient and family's worries/fears.
- Ensure that the family are able to manage the patient and also practise infection control measures at home.
- Ensure family knows that everyone in the household will need to quarantine for 10 days after last contact with patient and give information leaflet.

Treat the dying COVID-19 dying patient

- Ensure the patient's symptoms are managed:
  - If already on morphine continue and increase dose by 25%.
  - If not already on morphine, give morphine ↩ 33.
  - Also provide additional breakthrough dosages as needed: give extra dose orally every hour.
- If fever, give paracetamol 500mg-1g orally 6 hourly as needed.
- If noisy breathing, excessive secretions likely: try changing position.
- If anxiety, manage ↩ 33.

Manage the COVID-19 patient after death

- Diagnose death if no carotid (neck) pulse for 2 minutes *and* no heart sounds for 2 minutes *and* no breath sounds or chest movement for 2 minutes *and* pupils are fixed, dilated and do not respond to light.
- Ensure family receive emotional support following the patient's death and refer to counsellor as available.
- Ensure the deceased patient's body is safely removed from your facility ↩ 35 and that relevant notifications are completed ↩ 36.

Safely handle the body of a deceased COVID-19 patient

Safely remove the body of a DOA (dead on arrival) patient from your health care facility

- Check if the deceased patient has had a clinical history consistent with COVID-19: if yes, and s/he did not have a COVID-19 test, ensure a postmortem swab is taken for SARS-CoV-2 testing.
- Safely manage the deceased patient's body as below.

Follow these steps to safely remove the body of a deceased COVID-19 patient from your ward/casualty

- There is no need to contact Forensic Pathology (FPS) services for a natural death from COVID-19. For an unnatural death in a COVID-19 positive patient, FPS will need to be consulted.
- Ensure the undertaker/mortuary worker/FPS is aware that the deceased patient is a suspected or confirmed COVID-19 case.
- Have ready:
  - Disinfectant: at least 70% alcohol or 0.1% bleach (sodium hypochlorite) solution.
  - Red medical hazard waste bin in close proximity for safe disposal of PPE.

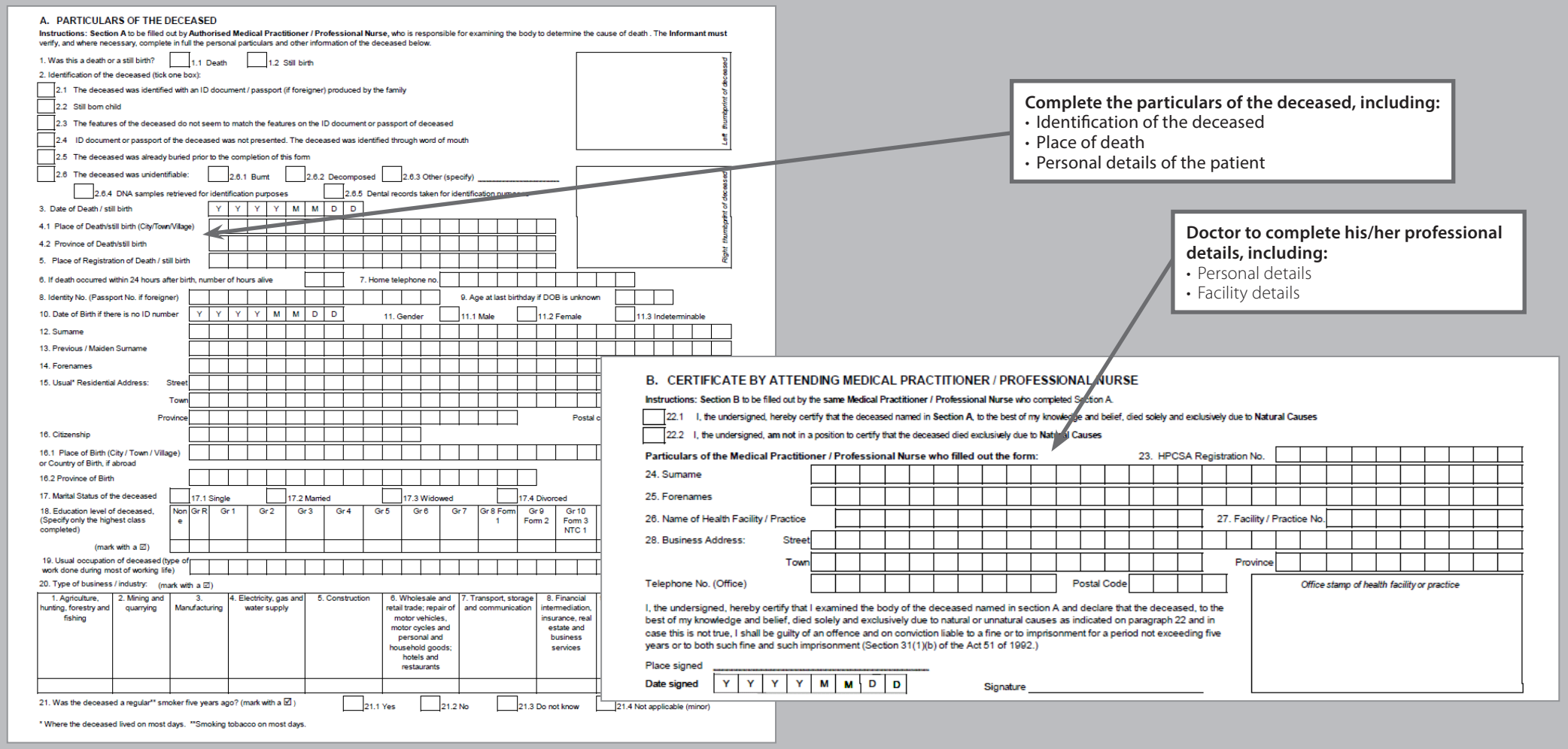
1. Perform hand hygiene and safely put on PPE: gown, waterproof apron, surgical mask, goggles/visor and non-sterile gloves.
2. Remove IV lines or other disposable medical equipment and dispose in red medical waste bin.
3. Wrap the body in a shroud and send to mortuary or holding area. Ensure that the trolley is wiped down with alcohol or bleach solution prior to leaving the ward/casualty.
4. Remove linen from bed, place into linen bag and mark as infectious. Ensure this is transferred to the laundry as soon as possible.
5. Clean the patient's bed and anything else the patient was in contact with using detergent and water. Then disinfect using alcohol or bleach solution.
6. Safely remove PPE and place disposable items in red medical hazard waste bin.
7. Perform thorough hand hygiene.

Safely remove the body from your health care facility

- Ensure the undertaker/mortuary worker/FPS is aware that the deceased patient is a suspected or confirmed COVID-19 case.
- When a deceased patient's body leaves the mortuary/facility premises, it should be contained within a single body bag (preferably with a transparent window for viewing).

Complete a death notification for the deceased COVID-19 patient

- A doctor must examine the patient's body and verify his/her death.
- For natural deaths, the same doctor must then complete a death notification (form DHA–1663 A and B): section A (particulars of the deceased), section B (certificate by attending medical practitioner/ professional comments), and section G (medical certificate of cause of death)
- It is important to record and report deaths due to COVID-19 in a uniform way. Use the following explanations to complete relevant sections correctly:



A. PARTICULARS OF THE DECEASED

Instructions: Section A to be filled out by **Authorised Medical Practitioner / Professional Nurse,** who is responsible for examining the body to determine the cause of death . The **Informant must** verify, and where necessary, complete in full the personal particulars and other information of the deceased below.

1. Was this a death or a still birth? 1.1 Death 1.2 Still birth
2. Identification of the deceased (tick one box):
2.1 The deceased was identified with an ID document / passport (if foreigner) produced by the family
2.2 Still born child
2.3 The features of the deceased do not seem to match the features on the ID document or passport of deceased
2.4 ID document or passport of the deceased was not presented. The deceased was identified through word of mouth
2.5 The deceased was already buried prior to the completion of this form
2.6 The deceased was unidentifiable: 2.6.1 Burnt 2.6.2 Decomposed 2.6.3 Other (specify) _____
2.6.4 DNA samples retrieved for identification purposes 2.6.5 Dental records taken for identification purposes
Left thumbprint of deceased
Right thumbprint of deceased
3. Date of Death / still birth Y Y Y Y M M D D
4.1 Place of Death/still birth (City/Town/Village)
4.2 Province of Death/still birth
5. Place of Registration of Death / still birth
6. If death occured within 24 hours after birth, number of hours alive
7. Home telephone no.
8. Identity No. (Passport No. if foreigner)
9. Age at last birthday if DOB is unknown
10. Date of Birth if there is no ID number Y Y Y Y M M D D
11. Gender 11.1 Male 11.2 Female 11.3 Indeterminable
12. Surname
13. Previous / Maiden Surname
14. Forenames
15. Usual* Residential Address: Street
Town
Province
Postal c
16. Citizenship
16.1 Place of Birth (City / Town / Village) or Country of Birth, if abroad
16.2 Province of Birth
17. Marital Status of the deceased 17.1 Single 17.2 Married 17.3 Widowed 17.4 Divorced
18. Education level of deceased, (Specify only the highest class completed)

None	Gr R	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8 Form 1	Gr 9 Form 2	Gr 10 Form 3 NTC 1
(mark with a ☑)											

19. Usual occupation of deceased (type of work done during most of working life)
20. Type of business / industry: (mark with a ☑)

1. Agriculture, hunting, forestry and fishing	2. Mining and quarrying	3. Manufacturing	4. Electricity, gas and water supply	5. Construction	6. Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods; hotels and restaurants	7. Transport, storage and communication	8. Financial intermediation, insurance, real estate and business services

21. Was the deceased a regular** smoker five years ago? (mark with a ☑) 21.1 Yes 21.2 No 21.3 Do not know 21.4 Not applicable (minor)

* Where the deceased lived on most days. **Smoking tobacco on most days.

B. CERTIFICATE BY ATTENDING MEDICAL PRACTITIONER / PROFESSIONAL NURSE

Instructions: Section B to be filled out by the **same Medical Practitioner / Professional Nurse** who completed Section A.

22.1 I, the undersigned, hereby certify that the deceased named in **Section A**, to the best of my knowledge and belief, died solely and exclusively due to **Natural Causes**
22.2 I, the undersigned, **am not** in a position to certify that the deceased died exclusively due to **Natural Causes**

Particulars of the Medical Practitioner / Professional Nurse who filled out the form: 23. HPCSA Registration No.
24. Surname
25. Forenames
26. Name of Health Facility / Practice 27. Facility / Practice No.
28. Business Address: Street
Town Province
Telephone No. (Office) Postal Code

Office stamp of health facility or practice

I, the undersigned, hereby certify that I examined the body of the deceased named in section A and declare that the deceased, to the best of my knowledge and belief, died solely and exclusively due to natural or unnatural causes as indicated on paragraph 22 and in case this is not true, I shall be guilty of an offence and on conviction liable to a fine or to imprisonment for a period not exceeding five years or to both such fine and such imprisonment (Section 31(1)(b) of the Act 51 of 1992.)

Place signed _____
Date signed Y Y Y Y M M D D Signature _____

Complete the particulars of the deceased, including:
- Identification of the deceased
- Place of death
- Personal details of the patient

Doctor to complete his/her professional details, including:
- Personal details
- Facility details

Continue to complete the section for Medical certificate of cause of death

- Use "COVID-19" as official terminology. As there are many types of coronaviruses, avoid the term "coronavirus" to reduce classification/coding uncertainty and correctly monitor deaths.
- Record "COVID-19" on the medical certificate of cause of death for all deceased patients if:
  - COVID-19 caused death (SARS-CoV-2 test positive) *or*
  - COVID-19 is assumed to have caused death (SARS-CoV-2 not identified but clinical picture compatible with COVID-19) *or*
  - COVID-19 contributed to death, along with other causes.

Complete cause of death Part 1:

- Specify the chain of events leading to death in Part 1. For example, in cases when COVID-19 causes pneumonia and fatal respiratory distress, both pneumonia and respiratory distress should be included, along with COVID-19, in Part 1.
- **Immediate cause:**
  - This is the final disease, injury or complication directly causing the death. It is not the mechanism of death or terminal event (e.g. heart failure, cardiac arrest, respiratory arrest).
  - For example, complete this section with "Acute Respiratory Distress Syndrome" and/or "Pneumonia".
- **Underlying cause:**
  - This is the disease that started the sequence of events leading directly to death.
  - Complete this section with:
    - "Confirmed COVID-19" if SARS-CoV-2 test positive.
    - "Suspected COVID-19" if clinical picture compatible with COVID-19 but SARS-CoV-2 not identified.
    - "Probable COVID-19" if clinical picture compatible with COVID-19 but SARS-CoV-2 test result pending or inconclusive.

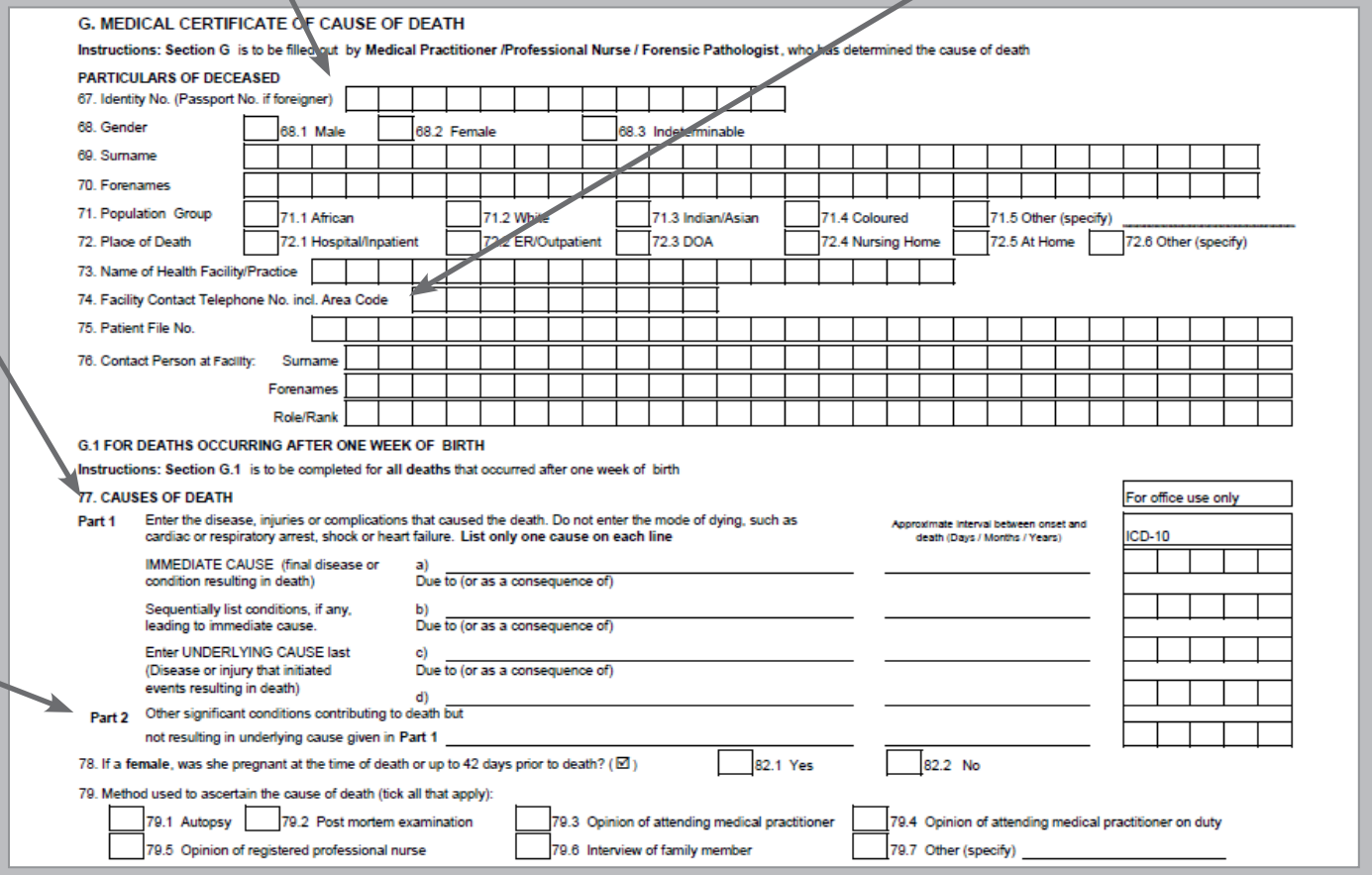
Complete particulars of deceased Part 2:

- Complete co-morbidities that may have contributed to the death, but not part of the direct cause. Include length of time that patient has had each co-morbidity e.g. "Coronary artery disease (5 years), Type 2 diabetes (14 years), Chronic obstructive pulmonary disease (8 years)'

Complete particulars of deceased:

- Personal details
- Demographic details

Complete details of contact person at facility



G. MEDICAL CERTIFICATE OF CAUSE OF DEATH

Instructions: Section G is to be filled out by **Medical Practitioner /Professional Nurse / Forensic Pathologist**, who has determined the cause of death

PARTICULARS OF DECEASED

67. Identity No. (Passport No. if foreigner)

68. Gender ☐ 68.1 Male ☐ 68.2 Female ☐ 68.3 Indeterminable

69. Surname

70. Forenames

71. Population Group ☐ 71.1 African ☐ 71.2 White ☐ 71.3 Indian/Asian ☐ 71.4 Coloured ☐ 71.5 Other (specify) _____

72. Place of Death ☐ 72.1 Hospital/Inpatient ☐ 72.2 ER/Outpatient ☐ 72.3 DOA ☐ 72.4 Nursing Home ☐ 72.5 At Home ☐ 72.6 Other (specify)

73. Name of Health Facility/Practice

74. Facility Contact Telephone No. incl. Area Code

75. Patient File No.

76. Contact Person at Facility: Surname / Forenames / Role/Rank

G.1 FOR DEATHS OCCURRING AFTER ONE WEEK OF BIRTH

Instructions: Section G.1 is to be completed for **all deaths** that occurred after one week of birth

77. CAUSES OF DEATH

For office use only

ICD-10

Part 1 Enter the disease, injuries or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. **List only one cause on each line**

Approximate interval between onset and death (Days / Months / Years)

IMMEDIATE CAUSE (final disease or condition resulting in death) a) Due to (or as a consequence of)

Sequentially list conditions, if any, leading to immediate cause. b) Due to (or as a consequence of)

Enter UNDERLYING CAUSE last (Disease or injury that initiated events resulting in death) c) Due to (or as a consequence of)

d)

Part 2 Other significant conditions contributing to death but not resulting in underlying cause given in **Part 1**

78. If a **female**, was she pregnant at the time of death or up to 42 days prior to death? (☑) ☐ 82.1 Yes ☐ 82.2 No

79. Method used to ascertain the cause of death (tick all that apply):

☐ 79.1 Autopsy ☐ 79.2 Post mortem examination ☐ 79.3 Opinion of attending medical practitioner ☐ 79.4 Opinion of attending medical practitioner on duty

☐ 79.5 Opinion of registered professional nurse ☐ 79.6 Interview of family member ☐ 79.7 Other (specify) _____

References | Acknowledgements

1. Clinical management of suspected or confirmed COVID-19 disease. Version 5. National Department of Health and National Institute for Communicable Diseases, South Africa. 24 August 2020. Available from: https://www.nicd.ac.za/wp-content/uploads/2020/08/Clinical-management-of-suspected-or-confirmed-COVID-19-V5-24-August-2020.pdf
2. Standard Treatment Guidelines and Essential Medicines List for South Africa: Primary Healthcare level. National Department of Health. 2018. Available from: http://www.health.gov.za/index.php/standard-treatment-guidelines-and-essential-medicines-list/category/285-phc
3. COVID-19 disease: infection prevention and control guidelines. Version 2. National Department of Health. 21 May 2020. Available from: http://www.health.gov.za/index.php/component/phocadownload/category/626#
4. Guidelines for symptom monitoring and management of workers for SARS-CoV-2 infection. Version 5. National Department of Health. 19 August 2020.
5. Greenhalgh Trisha, Knight Matthew, A'Court Christine, Buxton Maria, Husain Laiba. Management of post-acute covid-19 in primary care. BMJ 2020; 370 :m3026 Available from: https://doi.org/10.1136/bmj.m3026
6. Carvalho-Schneider C et al., Follow-up of adults with noncritical COVID-19 two months after symptom onset, Clinical Microbiology and Infection, 5 October 2020 Available from: https://doi.org/10.1016/j.cmi.2020.09.052
7. The Royal Australian College of General Practitioners. Caring for adult patients with post-COVID-19 conditions. East Melbourne, Vic: RACGP, 2020. https://www.racgp.org.au/FSDEDEV/media/documents/RACGP/Coronavirus/Post-COVID-19-conditions.pdf
8. NHS England. Your COVID recovery. Website. 2020 Available from: https://www.yourcovidrecovery.nhs.uk/
9. Providing palliative care in South Africa during the COVID-19 pandemic. Version 3. The Association of Palliative Care Practitioners of South Africa. 23 April 2020. Available from: https://palprac.org/wp-content/uploads/2020/04/PALPRAC_Providing-Palliative-Care-in-South-Africa-during-COVID-19-Update-5-April-2020-3.pdf
10. World Health Organization. Clinical management of COVID-19: interim guidance. 27 May 2020. Available from: https://apps.who.int/iris/handle/10665/332196
11. World Health Organization. Prevention and control for the safe management of a dead body in the context of COVID-19: interim guidance. 24 March 2020. Available from: https://apps.who.int/iris/handle/10665/331538
12. World Health Organization. International guidelines for certification and classification (coding) of COVID-19 as cause of death. 16 April 2020. Available from: https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf?ua=1

Western Cape Government Circulars:

1. Circular H41 of 2020: COVID-19: Management of decedents in the Western Cape. 30 March 2020.
2. Circular H79 of 2020: Clinical guidelines: COVID-19 providing palliative care. 14 May 2020.
3. Circular H88 of 2020: COVID-19 clinical guidelines for acute hospital admissions. 18 May 2020.
4. Circular H89 of 2020: COVID-19 guidance for health workers in primary health care facilities. 27 May 2020.
5. Circular H109 of 2020: Activation of digital COVID19 Track and trace service in the City of Cape Town.12 June 2020.
6. Circular H110 of 2020: Guidance for Emergency Centres in the Western Cape during the COVID-19 Response update. 12 June 2020.
7. Circular H125 of 2020: Guidance for health workers providing palliative and end-of-life care to COVID-19 patients in an inpatient setting. 1 July 2020.
8. Circular H144 of2020: Issuing of death notifications forms in natural deaths. 8 July 2020.
9. Circular H148 of 2020: Guidance for emergency centres in the Western Cape during the COVID-19 response update. 7 July 2020.
10. Circular H159 of 2020: SOP for management of people with diabetes and COVID 19. 28 July 2020.
11. Circular H169 of 2020: Antimicrobial stewardship for adult patients with COVID-19 in hospital. 17 August 2020.
12. Circular H174 of 2020: COVID-19 isolation and quarantine time periods. 3 September 2020.
13. Circular H175 of 2020: Expansion of Coronavirus PCR testing criteria. 03 September 2020.
14. Circular H176 of 2020: COVID-19 treatment guidelines update version 5. 27 August 2020
15. Circular H181 of 2020: Updates to WC ART guidelines DS-TB initiation NDOH RR-TB guideline.16 September 2020.
16. Circular H186 of 2020: Further expansion and simplification of Coronavirus PCR testing criteria. 6 October 2020.
17. Circular H199 of 2020: COVID-19 occupational health and safety (OHS) policy. 26 October 2020.

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