

**PRACTICAL GUIDELINES FOR THE
PREVENTION AND MANAGEMENT OF
CORONAVIRUS INFECTION IN LONG TERM
CARE FACILITIES (LTCF)**

(GUIDELINE COMPILED BY DEPARTMENT OF HEALTH IN
COOPERATION WITH DEPARTMENT OF SOCIAL
DEVELOPMENT WESTERN CAPE)



CONTENTS

Introduction	2
Part A. Prevention Strategies for COVID19	2
1. Immunization	2
2. Basic Infection Prevention and Control (IPC) measures to prevent the spread of coronavirus	2
2.1 identification of focal point/ person to support infection prevention and control	2
2.2 Handwashing and hand-sanitizers	3
2.3 Respiratory etiquette.....	4
2.4 Environmental cleaning and disinfection.....	5
2.5 Ventilation	6
2.6 Laundry	6
2.7 Catering.....	7
2.8 Receiving of goods and supplies	7
2.9 Waste management.....	7
2.10 Travelling to work	7
3. Physical distancing in LCTF.....	8
3.1 Visitors	8
3.2 Offices:	8
3.3 Residents sleeping area	8
3.4 Communal areas	8
4. identification of Risk	9
4.1 daily Screening Program	9
4.2 Perform a staff member risk assessment and work procedure plan	10
4.3 Conduct workplace health risk assessment	10
PART B. Guidelines for the management of residents and facility staff after exposure to coronavirus in a LTCF setting and of staff members testing positive for COVID-19	11
5. Management residents.....	12
5.1 Suspected COVID-19 /Person under investigation(PUI)	12
5. 2. Confirmed COVID-19 residents	12
6. Management of staff members who test positive for COVID-19	13
6.1. Immediate actions:	13
6.2 Subsequent Actions	18
6.3 Establish how the exposure occurred in the LTCF	18
6.4 Return to work of staff members who have tested positive for COVID-19	18
7. Handling of COVID-19 infected corpses.....	19
References:	20

INTRODUCTION

Long-term care facilities (LTCFs), such as nursing homes and rehabilitative centres, are facilities that care for people who are advanced of age or who suffers from physical or mental disabilities. The people living in LTCF are vulnerable populations who are at a higher risk for infection with the SARS-CoV-2 virus (COVID-19) due to living in close proximity to others, and for adverse outcomes due to their age and co-morbidities. Thus, LTCFs must take special precautions to protect their residents and employees.

It is important to note that the route of transmission is via **respiratory droplets** produced when sneezing, coughing, shouting and talking landing on the hands of, and on environmental surfaces surrounding, the infected person (up to a distance of 1-2 metres), which are then transferred by the contact route via contaminated hands to a person's face and mucous membranes. No airborne transmission has been recorded, except through aerosol generating procedures

This guideline outlines key activities for the prevention of spread of COVID-19, the response to any suspected or confirmed COVID-19 cases in a LTCF and to manage care workers and residents who have been exposed to the virus.

The document is divided into two main parts:

- Part A provides recommendations towards Prevention Strategies for COVID-19 in a LTCF
- Part B provides recommendations on what to do if residents and/or staff members are exposed/and or diagnosed with COVID-19 in a LTCF.

PART A. PREVENTION STRATEGIES FOR COVID19

The following preventative strategies are recommended:

- Immunization
- Basic IPC measures to prevent the spread of coronavirus
- Physical distancing in LCTF
- Identification of Risk
 - Daily screening program
 - Staff member risk assessment
 - Workplace risk assessment

1. IMMUNIZATION

- Provide annual influenza vaccination to employees and residents as these infections are important contributors to respiratory mortality in older people.

2. BASIC INFECTION PREVENTION AND CONTROL (IPC) MEASURES TO PREVENT THE SPREAD OF CORONAVIRUS

2.1 IDENTIFICATION OF FOCAL POINT/ PERSON TO SUPPORT INFECTION PREVENTION AND CONTROL

LTCF should ensure that there is an Infection Prevention and Control (IPC) focal point/ person at the facility to lead and coordinate IPC activities. The IPC focal point roles and responsibilities would need focus on:

- Train staff members on (at least) the following:

- COVID-19 transmission-based precautions including the use of Personal Protective Equipment (PPE);
 - How coronavirus is spread;
 - Symptoms of COVID-19;
 - What to do if they suspect they have COVID-19;
 - What IPC measures must be taken to prevent spread of the coronavirus;
 - Hand hygiene and respiratory etiquette;
 - The appropriate use of PPE;
 - How to don and doff PPE safely;
 - Safe use of cloth masks;
 - Cleaning and decontamination of areas (including surfaces and equipment);
 - Linen management;
 - Waste Management;
 - Management of dead bodies.
- Post reminders, posters, flyers around the facility, targeting employees and residents about:
 - handwashing and the use of hand-sanitiser;
 - to stop all physical touching such as hugging, kissing, shaking hands;
 - to sneeze or cough into the elbow or to use a tissue;
 - to dispose of the tissues immediately in a bin with a lid;
 - to avoid sharing of personal devices (mobility devices, books, electronic gadgets) with other residents;
 - the appropriate use and disposal of PPE.

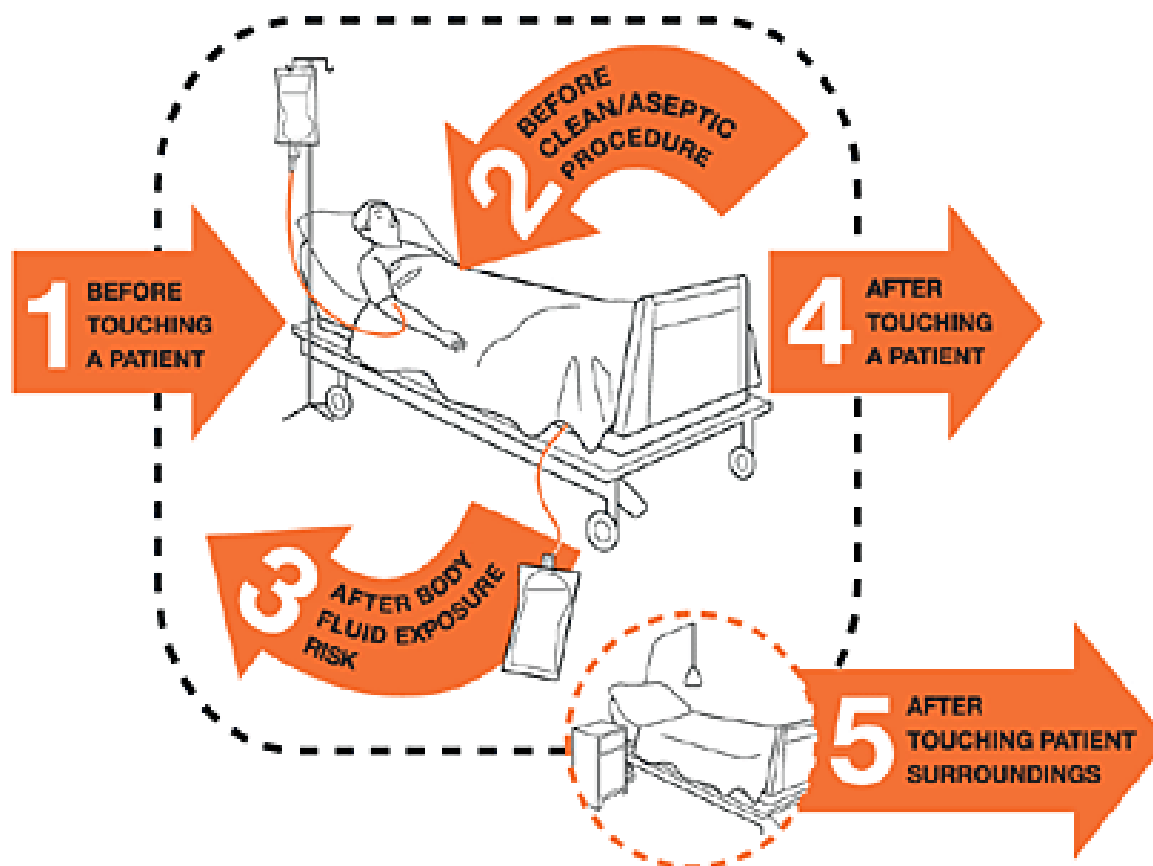
Coronavirus prevention communications materials should be put up in multiple locations and should be easily visible. If you do not have such materials, they may be downloaded and printed from here: <https://coronavirus.westerncape.gov.za/resources>

- Provide information sessions for residents on COVID-19 to inform them about the virus, the disease it causes and how to protect themselves from infection;
- Ensure the facility has the necessary cleaning items, PPE equipment, waste disposal systems, and adheres to all necessary IPC practises in the prevention and care of COVID-19;
- Refer or arrange for COVID-19 testing of any symptomatic residents or employees;
- Inform the relevant COVID-19 outbreak response teams of any residents or staff who test positive;
- Manage the isolation and quarantine of any confirmed or suspected COVID-19 infection of residents or staff.

2.2 HANDWASHING AND HAND-SANITIZERS

- Encourage frequent hand washing by staff and residents using soap and water for a minimum of 20 seconds or with alcohol-based hand sanitizer (containing at least 70% alcohol).
- Hand hygiene to be practised particularly when hands are soiled, before and after touching other people, after using the toilet, before eating, and after coughing or sneezing.
- If disposable gloves are used during resident washing, ablutions or feeding, dispose of the soiled gloves after use, wash hands thoroughly or apply hand sanitizer. Do not re-use disposable gloves on more than one resident.

- Ensure adequate availability of soap, clean water and disposable hand towels throughout the facility.
- Place hand sanitizer at all entrances, exits and points of care and remind staff to use according to hand washing guidelines.
- Clinical staff should strictly comply with the “WHO 5 Moments for Hand Hygiene” before touching a resident, before any clean or aseptic procedure, after exposure to body fluid, after touching a patient, and after touching a resident's surroundings.



2.3 RESPIRATORY ETIQUETTE

- Encourage residents and staff to sneeze or cough into the elbow or to use a tissue and dispose of the tissue immediately in a bin with a lid.
- Ensure adequate supplies of tissues and appropriate waste disposal in a stainless-steel foot-operated pedal bin with a lid.
- **The use of cloth face masks** are recommended for use by anyone going out in public. These should be worn by all facility staff in situations where no PPE is required (see Annexure A: Western Government Health PPE guidelines that can be used as a guide to inform PPE use in LTCF).
- Each person should have at least 2 cloth face masks so that one is available for use while the other is being washed. If a mask is worn, the other measures to prevent spread of the coronavirus should still be followed (i.e. keeping a 1.5 metre distance from other people and regular hand washing).
- The cloth mask should be put on, worn, and taken off safely.
- The following advice on safe cloth mask usage can be given to staff and residents:
 - Wash your hands before putting on the mask.
 - Once you have put on the cloth face mask and you are comfortable with the fit of the mask, **do not touch the mask** until you take it off.

- Wash your hands thoroughly after taking off the mask.
- Wash the cloth mask in warm water and iron it every day.
- If staff member needs to take off their mask during the work day (e.g. during tea/lunch break) and is then required to put it on again, care must be taken to only handle the masks by the strings of the mask. The mask must be stored in a paper bag (clearly labelled with the person's name) when not in use.

2.4 ENVIRONMENTAL CLEANING AND DISINFECTION

- All cleaning staff should be trained to understand the importance of cleaning surfaces as set out below and how to protect themselves.
- Clean all horizontal and frequently touched surfaces (e.g. light switches, door handles, bed rails, bed tables, phones) and bathrooms at least twice daily and when soiled.
- Use hospital-grade cleaning and disinfecting agents (e.g. Biocide D) for cleaning.
- Visibly dirty surfaces should first be cleaned with a detergent (commercially prepared or soap and water) and then a hospital-grade disinfectant (e.g. Biocide D) should be applied.
- If commercially prepared hospital-grade disinfectants are not available, use a diluted concentration of bleach or chlorine to disinfect the environment. The minimum concentration of chlorine should be 5000 ppm or 0.5% (equivalent to a 1:9 dilutions of 5% concentrated liquid bleach).
- Wear disposable gloves when cleaning and disinfecting surfaces and dispose after each use.
- Cleaning staff should wear routine PPE, as well as additional PPE for certain COVID-19 cleaning scenarios (refer to Annexure A as a guide).
- Clean and disinfect the general resident area of the facility twice a day (i.e. once per shift) with an appropriate schedule and program (including waiting rooms, resident areas, screening and testing areas etc.)
- Ensure that bins are large enough to hold multiple paper towels and/or empty the bins frequently.
- Line the bins with a plastic bag to allow easy emptying.
- Cleaning staff emptying the bins should wear gloves and wash their hands afterwards
- Toilets and bathrooms should be cleaned on a regular basis throughout the day –
- Use a record system to indicate the frequency that it is being done.
- To clean thoroughly, surfaces should first be cleaned with water and soap/detergent, rinsed, and then wiped with disinfectant. Suitable disinfectants include hypochlorite solution at a concentration of 1000ppm (e.g. 30 ml of standard 3.5% bleach mixed per litre water), or 70% alcohol surface cleaner).
- If the surfaces cannot be cleaned with soap and water, then they should be wiped carefully with disinfectant.

- Take care to clean and disinfect frequent touch surfaces in the **resident environment** well. These include bed rails, bedside cabinet, over-bed trolley, nurse call button, clinical equipment around the residents (Blood pressure monitors, drip stands, chairs).
- Clean and disinfect frequently touched surfaces outside of the resident environment (e.g. tables, desks, taps, sinks, telephones and electronics) with disinfectant wipes/solution every 30-60 minutes depending on frequency of use.
- Any equipment which is shared by staff members should be disinfected with 70% alcohol after each use.
- Trolleys and wheelchairs for transporting residents should be deep cleaned before every shift and at the mid-point of each shift.

- **Toilets and bathrooms** should be cleaned on a regular basis throughout the day – use a record system to indicate the frequency that it is being done.
- Do **not** use cloth towels in the bathroom. Rather make use of paper towels that can be disposed of into sealed bins (operated by a foot step).

- In **screening, triage and testing areas**, clean/disinfect chairs between each patient.
- Clean/disinfect sampling booths between each PUI

- **Cleaning of Designation Isolation area** by cleaning of all surfaces/objects that the infected person/s may have come into contact with.
- PPE must be worn during cleaning and cleaning staff must wash their hands thoroughly before and after cleaning.
- The following PPE should be worn during cleaning of isolation areas:
 - Heavy duty rubber Gloves
 - Face mask
 - Visor or goggles
 - Apron
 - Closed shoes
- The following materials should be used for cleaning and disinfecting isolation areas:
 - Green household soap should be used to clean all equipment and environmental surfaces that can tolerate it (e.g. walls, floors, blinds, surfaces) prior to disinfecting.
 - Disinfectant (6 teaspoons i.e. 30ml of bleach per litre of water) should be used after cleaning to disinfect all equipment and surfaces.
 - If the area/surface cannot be cleaned with soap and water, wipe down with a 70% alcohol solution.

2.5 VENTILATION

- Maximise natural ventilation (e.g. open windows) at the facility wherever possible.
- Where air conditioning cannot be avoided, then there should be no re-circulation with at least 12 air changes per hour.

2.6 LAUNDRY

- Machine washing with warm water at 60–90°C with laundry detergent is recommended. The laundry can then be dried according to routine procedures.
- Soiled linen of suspected and confirm COVID-19 residents should be washed separately from other resident's washing. Place in clearly labelled, leak-proof bags or containers, after carefully removing any solid excrement and putting it in a covered bucket to be disposed of in a toilet or latrine;
- Please note that clothes must not be shaken out as this can release the virus.
- Treat linen from PUIs/COVID-19 residents as contaminated linen.
- Routine procedures for the packaging and sealing, collection and laundering of contaminated linen applies.

- **Work clothing of staff** should remove work clothes at the workplace and place in a plastic bag. Clean separately from other household washing with a warm wash (at least 60–90°C) at home. Or else remove your work clothes immediately when you get home, bag and wash them separately from other household washing. . Wash your hands after removal and handling of clothes.

- Dispose of all used PPE in an infectious waste container and handle as medical waste;
- The upper part of shoes should be wiped with alcohol sanitiser.
- The underside of the shoes should not be touched. If the underside of the shoes needs to be cleaned, then wear gloves and wash hands thoroughly after removing and discarding the gloves.

2.7 CATERING

- Catering staff should use appropriate PPE in COVID-19 areas as indicated in Annexure A.
- Used crockery, cutlery and trays from COVID-19 areas (i.e. quarantine, Confirmed and /or PUI areas) should be treated as infectious and catering staff should wear gloves when handling these.

2.8 RECEIVING OF GOODS AND SUPPLIES

- Drivers should remain in their vehicle as far as possible.
- Physical distance should be maintained when receiving goods.
- Drivers must use hand sanitizer before handing any delivery documents to staff members.
- Disinfect all good received.

2.9 WASTE MANAGEMENT

- All waste items that have been in contact with individuals that are confirmed or suspected cases of COVID-19 (e.g. used tissues, disposable cleaning cloths, gloves, masks, etc.) are disposed of securely within disposable plastic bags.
- When full, the plastic bag should then be placed in a second bin bag and tied.
- These bags should be stored separately for five (5) days before being put out for collection by the municipality.
- Other household waste can be disposed of as normal.
 - Waste from waste containers should be disposed of into plastic bags and sealed before discarding into the general waste for refuse collection.
 - Employees handling waste must wear utility gloves when emptying the waste containers.
 - Waste handlers and cleaners should wear closed shoes.
 - Clean the waste storage area daily.

2.10 TRAVELLING TO WORK

- Staff members should always wear cloth masks when travelling in public or staff transport.
- When staff members travel in public transport or staff transport vehicles such as a minibus taxi or bus they should sit as far from other passengers as possible.
- The vehicle should not be filled to more than 50% of its loading capacity, and all windows of the vehicle must be open to maximise ventilation.
- Staff members should clean their hands with alcohol-based hand sanitizer before entering and after exiting the vehicle.
- Staff should avoid touching the door of the vehicle and surfaces inside the vehicle.

- Staff transport vehicles should be cleaned and disinfected after each trip by first washing surfaces with soap and water then wiping down with a disinfectant (e.g. a sodium hypochlorite solution at a concentration of 1000ppm, or 70% alcohol,)

3. PHYSICAL DISTANCING IN LCTF

- Avoid handshakes and physical contact with people.
- Greet people with a smile, a nod, a bow, or a wave.
- Maintain spatial distance between residents and staff wherever possible.

3.1 VISITORS

- No visitors should be allowed in the facility to eliminate exposure of residents or staff to COVID-19 infected visitors who may be asymptomatic;
- Under extreme circumstances a limited number of visitors who pass screening could be allowed entry only on compassionate grounds, specifically if the patient is gravely ill and the visitor is their next-of-kin or other person required for emotional care. Such visitors should be limited to one at a time to preserve physical distancing.
- Visitors should be instructed in respiratory and hand hygiene and to keep at least 1.5-2-meter distance from residents. They should visit the patient directly upon arrival and leave immediately after the visit.
- The facilities should not allow any non-essential visitation

3.2 OFFICES:

- Desks should be separated by at least 1.5m.
- Meetings should be held via teleconference or video conference whenever possible.
- In physical meetings, staff should sit at least 1.5m apart.

3.3 RESIDENTS SLEEPING AREA

- Maintain adequate bed distance between residents
- Bed distances to be at least 1.5 m apart;

3.4 COMMUNAL AREAS

- No group activities, or if unavoidable to be done in small groups of no more than 5 residents kept at least 1.5 m apart throughout activities;
- Stagger meals to ensure minimum distance of 1.5 m between residents at meal times or serve meals in rooms;
- Reduce movement of staff members (e.g. supervisors) between different sections of a facility and between different facilities.
- Break times should be staggered to minimise the number of staff members in the staff room.
- Seating in the staff room should be at least 1.5 metres apart.
- Wipe down kitchen equipment with alcohol sanitiser before using it.
- Where possible staff members should be encouraged to spend their breaks outdoors while continuing to practice physical distancing.

4. IDENTIFICATION OF RISK

4.1 DAILY SCREENING PROGRAM

- Each residential care facility should implement a screening of staff, residence, essential and non-essential visitors.
- Each facility should have a screening team that focusses on entry and exit screening for staff and essential non-staff visitors.
- All relevant staff should be involved in resident screening procedures.
- Screening of staff, residence and essential visitors should happen daily.
- Each facility should establish a schedule for screening staff and residence.
- Essential visitors should be screen on arrival before entering the facility.
- Essential visitor's movement should be limited to the purpose for which they are at the facility.
- No non-essential visitors should be given access to the facility

4.1.1 SCREENING OF RESIDENTS FOR COVID-19 SYMPTOMS

- Assess the health status of any new residents at admission to determine if the resident has signs of a respiratory illness including fever, cough, shortness of breath or other symptoms of COVID-19.
- Assess each resident twice daily for the development of a fever ($\geq 38^{\circ}\text{C}$), cough, shortness of breath or other symptoms.
- Other symptoms of COVID-19 include: -
 - Nasal symptoms
 - Muscle or body pains
 - Headache
 - Diarrhoea
 - Loss of taste or smell
- Immediately report residents with fever, respiratory or other COVID-19 symptoms to the IPC focal point and supervisor as a suspected case.

4.1.2 SCREENING OF VISITORS

- Establish a "Screening" area before entry into facility/unit (ideally this should be a structure outside of the facility)
- Do symptoms screening of all visitors and staff entering the facility for development of a fever ($\geq 38^{\circ}\text{C}$), cough, shortness of breath or sore throat.
- Ensure all visitors wear cloth masks.
- Ensure that facilities for hand-washing are available for all residents and staff to wash hands before entering and when exiting the facility. If a hand sanitiser is used, a staff member (e.g. a security guard) placed at the entrance should spray the sanitiser onto the hands of people entering and exiting the facility, rather than multiple people handling the sanitiser bottle.
- If doors are not automated, keep the door open where possible to minimise multiple people touching the door handles. Where this is not possible, either position a staff member (e.g. a security guard) at the door and instruct the staff member to open the door for all residents/staff, to ensure that multiple people do not touch the door handles, OR instruct staff members to sanitise their hands before and after touching the door handle.

4.1.3 SCREENING OF STAFF MEMBERS FOR COVID-19 SYMPTOMS AND EXPOSURE

- If a facility staff member develops symptoms of a possible acute respiratory illness (ARI) at home, they should telephone or electronically contact the on-duty occupational health practitioner (or designated person, e.g. the immediate supervisor) to assess their symptoms. If the symptoms are compatible with ARI, the staff member should be referred for SARS-CoV-2 testing. If not, routine sick leave procedures should be followed.
- At the facility, at the beginning and end of each shift, a designated person, (e.g. the immediate supervisor) should check with all staff in their unit whether they have experienced any of the symptoms associated with coronavirus disease 2019 (COVID-19).
- **Symptoms suggestive of possible coronavirus infection are:**
 - Fever**
 - Cough**
 - Sore throat**
 - Shortness of breath**
- If any of these symptoms are reported, the facility staff member should be provided with a surgical mask and be referred to IPC focal point person
- At the beginning and end of each shift, a designated person, (e.g. the immediate supervisor) should check with all staff in their unit if they have been **exposed** to a person with COVID-19 or a person under investigation for COVID-19 (PUI). If exposure has occurred, this should be assessed according to the guidelines in Section B of this document.
- Arrange for a COVID-19 test or refer them to their health care provider Follow up on employees with unexplained absences to determine their health status.

4.1.4 ACTIVATION OF TESTING SUPPORT

- Contact your nearest Primary Health Care Facility or contact tracing team for support.

4.2 PERFORM A STAFF MEMBER RISK ASSESSMENT AND WORK PROCEDURE PLAN

- Perform a staff risk assessment which will identify staff at increased risk for severe disease (e.g. elderly, diabetic, immunocompromised) and make arrangements for these staff members as per organisation policy.
- Structure work processes and workspace layout to minimise contact between employees and contact between residents and employees
- Place employees in teams/shifts and minimise contact with other teams/shifts
- Don't move employees between teams and shifts.

4.3 CONDUCT WORKPLACE HEALTH RISK ASSESSMENT

- Conduct a customised workplace health risk assessment for COVID-19 in resident's areas performing tasks related to the disease.
- These areas will include entrances and exits, transport routes within the facility, screening and testing areas, and resident living areas.
- Determine likely points where people would interact with each other and points/places where contact between people and objects would occur.
- For each of these points devise practical measures to limit contact and to disinfect after contact.

- **Consider the following key areas:**
 - Employee Entrances
 - Change rooms, Locker rooms
 - Visitors Entrances and exits
 - Screening and testing areas.
 - Work stations
 - Aisles
 - Shelving
 - Service areas
 - Employee/ Residents canteen/break room
 - Employee toilets
 - Residents toilets
 - Goods receiving areas
 - Waste storage areas
- Implement appropriate control measures according to risk assessment (see examples of measures below.).
 - Re-arranging work stations (surfaces, desks, chairs, equipment)
 - Placing floor markings with tape or paint to delineate 1.5 metre intervals
 - Placing hand sanitiser and wash stations
 - Placing signage
 - Stagger lunch / tea breaks of employees to enable social distancing

PART B. GUIDELINES FOR THE MANAGEMENT OF RESIDENTS AND FACILITY STAFF AFTER EXPOSURE TO CORONAVIRUS IN A LTCF SETTING AND OF STAFF MEMBERS TESTING POSITIVE FOR COVID-19

The section provides guidance to the isolation and care of suspected and confirmed COVID-19 cases amongst residents and staff to limit the spread of the disease in the LTCF.

It is important to limit the numbers of staff exposed to residents with suspected and confirmed COVID-19, and to provide and train staff in the use of PPE and to strictly adhere to IPC practices.

Furthermore, it is important to understanding the terms "Close" and "Brief" contact to describe people who was in contact with COVID-19 patients or Person under investigation (PUI). Examples of typical "close" or "brief" types of contact are also provided below. If contact scenarios other than these occur, the manager and staff member should jointly decide (with the help of the IPC focal person if available) whether the contact was brief or close, depending on the context of contact, the physical proximity and the duration of the contact.

****Close Contact**

- Being within 1 metre of COVID-19 case (or PUI) for 15 minutes or more.
- Direct physical contact with COVID-19 case (or PUI).
- Having unprotected direct contact with infectious secretions or excretions of the resident (or PUI).
- Performing an aerosol-generating procedure on a COVID-19 resident (or PUI).
- Being present in the room where an aerosol generating procedure was performed on an COVID-19 resident (or PUI).

***Brief Contact**

- Being in a room or ward with a COVID-19 case (or PUI) without having direct contact with their secretions/excretions.
- Conversing with a COVID-19 case (or PUI) at a distance of >1 metre.

5. MANAGEMENT RESIDENTS

5.1 SUSPECTED COVID-19 /PERSON UNDER INVESTIGATION(PUI)

- If a resident has symptoms consistent with COVID-19, they should be isolated immediately in a designated room.
- Arrange for the resident to be tested and continue to care for the resident in the designated room while awaiting test results.
- Limit the number of staff entering the room to one staff member per shift.
- In the case of a resident that is intellectually disabled and cannot be isolated, consider quarantining them in the designated room together with a designated staff member or one staff member per shift.
- The staff member should wear appropriate PPE
- Quarantine any other residents who came into close contact with the ill resident.
- During isolation suspected COVID-19 infected residents should not have contact with other residents, and should remain in their room for meals and all other activities of daily living;
- If the single room does not have separate ablution facilities, demarcate specific toilets, basins, showers for the exclusive use of suspected COVID-19 resident;
- Ensure regular cleaning of such dedicated ablution facilities;
- If no single rooms are available, consider cohorting residents with other suspected COVID-19 in one room separated from other residents;
- Residents with suspected COVID-19 should be cohorted only with other residents with suspected COVID-19 (not with confirmed cases);
- Do not cohort residents with suspected COVID-19 next to immunocompromised residents;
- Place a medical mask on the resident and on others staying in the room, and educate them on the appropriate use of the masks;
- Clearly sign the room by placing IPC signs, indicating droplet and contact precautions, at the entrance of the room;
- If possible, dedicate specific staff to care for suspected COVID-19 residents to minimise spread to other residents and staff;
- Ensure that the dedicated staff are trained in IPC precautions, and have access to appropriate PPE, including medical masks, disposable gloves and aprons.
- Dedicate specific medical equipment (e.g. thermometers, blood pressure cuff, pulse oximeter, etc.) for the use of medical professionals for resident(s) with suspected COVID-19 residents.
- Clean and disinfect equipment with 70% alcohol before re-use with another resident.
- Do not share medical equipment between suspected and confirmed COVID-19 cases.
- Reinforce standard and respiratory precautions.
- Dispose of any soiled adult or paediatric nappies of suspected COVID-19 residents in the medical waste.

5.2 CONFIRMED COVID-19 RESIDENTS

- If the resident/patient tests positive for COVID-19, continue to isolate them and monitor their clinical condition to evaluate whether further care (e.g. hospital admission) is required.
- If hospital admission is required, then contact the nearest hospital and arrange transport with the ambulance services.
- If there are multiple resident diagnosed with COVID-19 at the facility, each resident should as far as possible be isolated in single rooms.
- Where isolation in single rooms is not possible, consider cohorting several COVID-19 residents within a larger room.
- Do not cohort PUI's with confirmed positive COVID-19 residents.

- As far as possible keep PUI's separate from each other as among these some residents will be COVID-19 positive and others will be negative.
- Place a medical mask on the COVID-19 confirmed resident, and advise on its use.
- Clearly sign the rooms by placing IPC signs, indicating droplet and contact precautions, at the entrance of the room.
- As far as possible, keep staff in these areas separate i.e. ensure that staff who work in COVID-19 areas within your facility do not also work in non-COVID-19 areas.
- Ensure that the dedicated staff are trained in IPC precautions, and have access to appropriate PPE for procedures, including medical masks, disposable gloves, plastic aprons and eye protection (see table below and PPE guidelines).
- Strictly limit any other staff access to the isolation room to those providing the essential medical care and cleaning services.
- Dedicate specific medical equipment (e.g. thermometers, blood pressure cuff, pulse oximeter, etc.) for the use of medical professionals for resident(s) with confirmed COVID-19 resident.
- Clean and disinfect equipment with 70% alcohol before re-use with another patient.
- Dispose of any soiled adult or paediatric nappies of suspected COVID-19 resident in the medical waste.
- Confirmed COVID-19 residents should not leave their rooms.
- Restrict movement or transport of residents to essential diagnostic and therapeutic tests only.
 - Avoid transfer to other facilities (unless medically indicated).
 - If transport is necessary, advise transport services and personnel in the receiving area or facility of the required precautions for the resident being transported.
 - Ensure that residents who leave their room for strictly necessary reasons wear a mask and adhere to respiratory hygiene.
- De- Isolate COVID-19 residents
 - Asymptomatic: 14 days after initial positive test
 - Mild Disease: 14 days after symptom onset
 - Severe Disease: 14 days after clinically stable

6. MANAGEMENT OF STAFF MEMBERS WHO TEST POSITIVE FOR COVID-19

6.1. IMMEDIATE ACTIONS:

If the staff member is at work then:

- The staff member should be relieved of duty immediately and placed on sick leave.
- Separate him/her from residents and other staff members preferably by placing in a well-ventilated room until they leave the facility.
- Ask him/her to wash hands thoroughly.
- Provide him/her with a surgical mask.
- Disinfect relevant areas of the facility.
- Assist the staff member to follow the advice from the outbreak response team linked to your facility regarding isolation required to protect their family, friends, colleagues.
- Offer and provide counselling if required
- Use table below as guide to support decision-making.

If the staff member is at home, then:

- Place the staff member on immediate sick leave as per organisation policy.
- Assist the staff member to follow the advice from the outbreak response team regarding isolation required to protect their family, friends, colleagues.

Table 1: Guidelines on quarantine and isolation procedures for healthcare workers exposed to a Coronavirus infected person and PUI (Note that the coronavirus infected person or PUI could be a patient, or a work colleague, or a community member)

No.	Type and Degree of Exposure ^{§#}	Level of Risk	Initial Action	Follow-up Actions	Final Actions
1	Brief* contact with PUI with appropriate PPE	Minimal Risk	None	None	None
2	Close** contact with PUI with appropriate PPE***	Minimal Risk	None	None	None
3	Brief contact with PUI without appropriate PPE	Low Risk	<ol style="list-style-type: none"> 1. Continue working, ideally performing low transmission activities 2. Wear mask 3. Strict hand hygiene 4. Monitor for symptoms 5. Await test result of PUI 	<ol style="list-style-type: none"> 1. If PUI test result negative then resume normal activities, but maintain strict mask use and hand hygiene for 14 days##. 2. If PUI test result positive then continue to monitor for symptoms. 	<ol style="list-style-type: none"> 1. If symptoms develop then test for COVID-19. <ol style="list-style-type: none"> a. If test negative then resume normal activities, but maintain strict mask use and hand hygiene for 14 days. b. If test positive then isolate and initiate follow-up of contacts. 2. If no symptoms after 14 days then continue as normal.

No.	Type and Degree of Exposure ^{5#}	Level of Risk	Initial Action	Follow-up Actions	Final Actions
4	Close contact with PUI without appropriate PPE	Moderate Risk	<ol style="list-style-type: none"> 1. Continue working, ideally performing low transmission activities 2. Wear mask 3. Strict hand hygiene 4. Monitor for symptoms 5. Await test result of PUI 	<ol style="list-style-type: none"> 1. If PUI test result negative then resume normal activities 2. If PUI test result positive then quarantine as status changes to high risk. <p>Continue to monitor for symptoms.</p>	<p>None</p> <ol style="list-style-type: none"> 1. If symptoms develop then test for COVID19. <ol style="list-style-type: none"> a. If test negative then return to work and resume normal activities, but maintain strict mask use and hand hygiene for 14 days. b. If test positive then isolate and initiate follow-up of contacts. 2. If no symptoms after 14 days then end quarantine and continue as normal. (If the staff member is in a scarce skills category then consider return to work, while taking strict mask/hygiene precautions, if there are no symptoms after 8 days).
5	Brief contact with COVID-19 person with appropriate PPE	Minimal Risk	None	None	None

No.	Type and Degree of Exposure ^{5#}	Level of Risk	Initial Action	Follow-up Actions	Final Actions
6	Close contact with COVID-19 person with appropriate PPE	Minimal Risk	None	None	None
7	Brief contact with COVID-19 person without appropriate PPE	Low Risk	1. Continue working, ideally performing low transmission activities 2. Wear mask 3. Strict hand hygiene 4. Monitor for symptoms	1. If symptoms develop then test for COVID-19.	1. If test negative then resume normal activities, but maintain strict mask use and hand hygiene for 14 days. 2. If test positive then isolate and initiate follow-up of contacts.
				2. If no symptoms after 14 days continue as normal.	None
8	Close contact with COVID-19 person without appropriate PPE	High Risk	1. Quarantine (home or group facility) 2. Monitor for symptoms 3. Wear mask 4. Strict hand hygiene	1. If symptoms develop then test for COVID-19.	1. If test negative then return to work and resume normal activities, but maintain strict mask use and hand hygiene for 14 days. 2. If test positive then isolate and initiate follow-up of contacts.
				2. If no symptoms after 14 days, then end quarantine and return to work. (If the staff member is in a scarce skills category then consider return to work, while taking strict mask/hygiene precautions, if there are no symptoms after 8 days).	None

No.	Type and Degree of Exposure [§] #	Level of Risk	Initial Action	Follow-up Actions	Final Actions
9	Staff member has respiratory symptoms suggestive of COVID-19 infection, but no unprotected contact with COVID-19 patient or PUI.	Moderate Risk	1. Test for COVID-19 2. Quarantine at home until test result available 3. Wear mask 4. Strict hand hygiene	1. If test negative then return to work after symptom resolution, but maintain strict mask use and hand hygiene for 14 days.	None
				2. If test positive then isolate and initiate follow-up of contacts.	

*See description of brief contact above

**See description of close contact above

***For a list of appropriate PPE for various scenarios see Annexure A: Western Cape Provincial PPE Plan of 25 March 2020.

§The type and degree of exposure is whether the PUI or COVID -19 person was wearing a mask or not.

#The use of PPE refers to use by the staff member who has been exposed.

##Days throughout the table refers to time from the exposure

6.2 SUBSEQUENT ACTIONS

- Inform the outbreak response team linked to your facility
- Establish how the staff member was infected. See exposure investigations above.
- Assist with tracing Contacts and organising quarantine as required

6.3 ESTABLISH HOW THE EXPOSURE OCCURRED IN THE LTCF

- All exposed staff members should be interviewed to determine how the exposure occurred. It should be made clear that the interview is not meant for disciplinary purposes, but in order to prevent future exposures.
- It should be established if it was a work-related exposure or a community exposure.
- If work-related exposure then further inquiry based on whether exposure was to a staff member or to a patient.
- **If exposure was to a COVID-19 or PUI staff member, then:**
 - Did they follow strict hand and surface hygiene measures when interacting
 - Did they congregate together in the staff room?
 - Did they use the same kitchen equipment?
 - Did they have physical greeting contact
 - Did they share a work surface or desk?
 - Did they share a desktop computer, laptop, or tablet?
 - Did they share any equipment?
 - Did they share any stationery?
 - Did they travel together
 - Did they attend to a patient together?
 - Did they wear a mask?
 - Did their colleague wear a mask?
 - Was there any shortage of water, soap or alcohol-based sanitiser
- **If exposure was to a COVID-19 or PUI resident, then:**
 - Was hand and surface hygiene strictly followed during the shift
 - Was PPE used appropriately according to provincial guidelines?
 - Was any PPE reused? If yes, what were the circumstances of reuse? (e.g. how many times reused, how stored between uses)
 - Was any PPE unavailable?
 - How did the staff member don and doff PPE?
 - Was hand hygiene performed before and after direct patient contact or contact with the patient environment?
 - Was there any shortage of water, soap or alcohol-based sanitiser?
- Feedback from this interview should be used to review IPC practices in order to prevent future exposure.

6.4 RETURN TO WORK OF STAFF MEMBERS WHO HAVE TESTED POSITIVE FOR COVID-19

- These staff members may not return to work until 14 days after diagnosis if asymptomatic, 14 days after symptom onset in mild disease, or 14 days after clinical stability has been achieved in severe disease.

- Staff members returning to work should continue to practice social distancing (especially from severely immunocompromised resident), hand hygiene and respiratory hygiene.
- Staff members returning to work should continue self-monitoring for symptoms and be re-evaluated medically if these occur.

7. HANDLING OF COVID-19 INFECTED CORPSES

- Apply standard precautions including hand hygiene before and after interaction with the body and the environment;
- Use appropriate PPE according to the level of interaction with the body, including a gown and gloves;
- If there is a risk of splashes from the body fluids or secretions, personnel should use facial protection, including the use of face shield or goggles and medical masks;
- Prepare the body for transfer including removal of all lines, catheters and other tubes;
- Ensure that any body fluids leaking from orifices are contained;
- Keep both the movement and handling of the body to a minimum;
- Wrap body in cloth and arrange for transfer it as soon as possible to the holding area;
 - There is no need to disinfect the body before transfer to the holding area;
 - Body bags are not necessary, although they may be used for other reasons (e.g. excessive body fluid leakage); and
- No special transport equipment or vehicle is required

REFERENCES:

WHO. Infection Prevention and Control guidance for Long-Term Care Facilities in the context of COVID-19. Interim Guidance, 21 March 2020.

COVID-19 Infection Prevention and Control Guidelines for South Africa - Draft V1. Department of Health, South Africa. 31 March 2020.

Guidelines for PPE Use during the Coronavirus Disease 2019 (Covid-19), Western Cape Government: Health, 25 March 2020

WHO. Infection Prevention and Control for the safe management of a dead body in the context of COVID-19. Interim Guidance, 24 March 2020. National Department of Health. *COVID-19 infection prevention and control guidelines for South Africa – Draft V1*. 31 March 2020.

National Department of Health. *South African guidelines for quarantine facilities and isolation in relation to COVID-19*. 1 April 2020.

Centers for Disease Control and Prevention. *Interim U.S. guidance for risk assessment and public health management of healthcare personnel with potential exposure in a healthcare setting to patients with coronavirus disease (COVID-19)*. 7 March 2020. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

Groote Schuur Hospital. *Standard operating procedure: Occupational health and safety protection and management of staff in relation to the COVID-19 pandemic*. 1 April 2020.

World Health Organisation. *Infection prevention and control during health care when COVID-19 is suspected: Interim guidance*. 19 March 2020.

Western Cape department of Health. *Circular H58/2020: COVID-19 Occupational Health and Safety (OHS) policy*. 26 April 2020.

World Health Organisation. Risk assessment and management of exposure of health care workers in the context of COVID-19. Interim guidance 19 March 2020. Available from: https://apps.who.int/iris/bitstream/handle/10665/331496/WHO-2019-nCov-HCW_risk_assessment-2020.2-eng.pdf

Centers for Disease Control and Prevention. Interim U.S. guidance for risk assessment and public health management of healthcare personnel with potential exposure in a healthcare setting to patients with coronavirus disease (COVID-19). 7 March 2020. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

Hu Z, Song C, Xu C, Jin G, Chen Y, Xu X, Ma H, Chen W, Lin Y, Zheng Y, Wang J. Clinical characteristics of 24 asymptomatic infections with COVID-19 screened among close contacts in Nanjing, China. *Science China Life Sciences*. 2020 Mar 4:1-6. Available from: <https://link.springer.com/article/10.1007/s11427-020-1661-4>

Wei WE. Presymptomatic Transmission of SARS-CoV-2—Singapore, January 23–March 16, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 2020;69. Available from: https://www.cdc.gov/mmwr/volumes/69/wr/mm6914e1.htm?fbclid=IwAR1b_S3wC7pqWslF5wUhjMqQWXbxA6rc-YLy80so8Vcxx7160WQHHB0wmxM4

Tong ZD, Tang A, Li KF, Li P, Wang HL, Yi JP, Zhang YL, Yan JB. Potential Presymptomatic Transmission of SARS-CoV-2, Zhejiang Province, China, 2020. *Emerging infectious diseases*. 2020 May 17;26(5). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32091386>

Qian G, Yang N, Ma AH, Wang L, Li G, Chen X, Chen X. A COVID-19 Transmission within a family cluster by presymptomatic infectors in China. *Clinical Infectious Diseases*. 2020 Mar 23. Available from: <https://academic.oup.com/cid/article/doi/10.1093/cid/ciaa316/5810900>

Bai Y, Yao L, Wei T, Tian F, Jin DY, Chen L, Wang M. Presumed asymptomatic carrier transmission of COVID-19. *Jama*. 2020 Feb 21. Available from: <https://jamanetwork.com/journals/jama/article-abstract/2762028>

Rothe C, Schunk M, Sothmann P, Bretzel G, Froeschl G, Wallrauch C, Zimmer T, Thiel V, Janke C, Guggemos W, Seilmaier M. Transmission of 2019-nCoV infection from an asymptomatic contact in Germany. *New England Journal of Medicine*. 2020 Mar 5;382(10):970-1. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMc2001468>

Kimball A. Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility—King County, Washington, March 2020. *MMWR. Morbidity and Mortality Weekly Report*. 2020;69. Available from: https://www.cdc.gov/mmwr/volumes/69/wr/mm6913e1.htm?mod=article_inline

Du Z, Xu X, Wu Y, Wang L, Cowling BJ, Meyers LA. The serial interval of COVID-19 from publicly reported confirmed cases. *medRxiv*. 2020 Jan 1. Available from: <https://www.medrxiv.org/content/medrxiv/early/2020/03/20/2020.02.19.20025452.full.pdf>

Liu J, Liao X, Qian S, Yuan J, Wang F, Liu Y, Wang Z, Wang FS, Liu L, Zhang Z. Community Transmission of Severe Acute Respiratory Syndrome Coronavirus 2, Shenzhen, China, 2020. *Emerging infectious diseases*. 2020 Jun 17;26(6). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32125269>

Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, Ren R, Leung KS, Lau EH, Wong JY, Xing X. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *New England Journal of Medicine*. 2020 Jan 29. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMoa2001316>

Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, Zhang L, Fan G, Xu J, Gu X, Cheng Z. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*. 2020 Feb 15;395(10223):497-506. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30183-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30183-5/fulltext)

World Health Organization. Coronavirus disease 2019 (COVID-19): situation report, 73. Available from: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200402-sitrep-73-covid-19.pdf?sfvrsn=5ae25bc7_6

World Health Organization. Coronavirus disease 2019 (COVID-19): situation report, 82. Available from: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200411-sitrep-82-covid-19.pdf?sfvrsn=74a5d15_2

Gawande A. Keeping the Coronavirus from Infecting Health-Care Workers. *The New Yorker*. 2020 Mar 21. Available from: <https://www.newyorker.com/news/news-desk/keeping-the-coronavirus-from-infecting-health-care-workers>

Blumberg CC, Gray A, Mazanderani AH, Kufa-Chakeza T, Dawood H, Mabena F, Mehtar S, Mayet N, Mendelson M, Nel J, Preiser W. Clinical management of suspected or confirmed COVID-19 disease, version 3. NICD, 2020. Available from: <https://j9z5g3w2.stackpathcdn.com/wp-content/uploads/2020/03/Clinical-management-of-suspected-or-acute-COVID-19-Version-3.pdf>

Guan WJ, Ni ZY, Hu Y, Liang WH, Ou CQ, He JX, Liu L, Shan H, Lei CL, Hui DS, Du B. Clinical characteristics of coronavirus disease 2019 in China. *New England Journal of Medicine*. 2020 Feb 28. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMoa2002032>

West CP, Montori VM, Sampathkumar P. COVID-19 testing: the threat of false-negative results [published online ahead of print April 9, 2020]. *Mayo Clin Proc*. Available from: https://www.mayoclinicproceedings.org/pb/assets/raw/Health%20Advance/journals/jmcp/jmcp_ft95_4_4.pdf

Ai T, Yang Z, Hou H, Zhan C, Chen C, Lv W, Tao Q, Sun Z, Xia L. Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases. *Radiology*. 2020 Feb 26:200642. Available from: <https://pubs.rsna.org/doi/full/10.1148/radiol.2020200642>

Fang Y, Zhang H, Xie J, Lin M, Ying L, Pang P, Ji W. Sensitivity of chest CT for COVID-19: comparison to RT-PCR. *Radiology*. 2020 Feb 19:200432. Available from: <https://pubs.rsna.org/doi/full/10.1148/radiol.2020200432>

Li Z, Yi Y, Luo X, Xiong N, Liu Y, Li S, Sun R, Wang Y, Hu B, Chen W, Zhang Y. Development and clinical application of a rapid IgM-IgG combined antibody test for SARS-CoV-2 infection diagnosis. *Journal of medical virology*. 2020 Feb 27. Available from: https://onlinelibrary.wiley.com/doi/full/10.1002/jmv.25727?casa_token=TIJp92yM6VoAAAAA%3AJlbbQ0qrbrkJwJHOW2KcZuzw2gtN4aslQfVRO8qkJ7VIYhLmbl4spNaX4Owovs7m_AsHqFUuGhaNO-SdRw

NICD. Guide to management of staff in healthcare and laboratory settings with COVID-19 illness and exposure. 2020 April 1. Available from: https://j9z5g3w2.stackpathcdn.com/wp-content/uploads/2020/04/HCW-and-LAB-worker-evaluation-for-COVID-19-_v9_01APRIL2020.pdf

National Department of Health, Occupational Health and Safety Committee – COVID-19 response. *Guidelines for symptom monitoring and management of essential workers for COVID-19 related infection*. 16 April 2020.