ANNEX 8: INFECTION PREVENTION AND CONTROL (IPC) MEASURES IN MANAGING PERSON UNDER SURVEILLANCE (PUS), SUSPECTED, PROBABLE OR CONFIRMED CORONAVIRUS DISEASE (COVID-19)

A. INFECTION PREVENTION AND CONTROL (IPC) GUIDING PRINCIPLES

The principles of IPC for Acute Respiratory Infection (ARI) patient care include:

i. Early and rapid recognition AND source control that includes promotion of respiratory hygiene

   • Early identification, screening, isolation, prompt implementation of IPC precautions, reporting and surveillance based on the epidemiological AND Clinical Criteria in the case definition.

   • Post visual alerts (in appropriate languages) at the entrance to outpatient facilities (e.g., emergency departments, physicians’ offices, outpatient clinics) instructing patient and the persons who accompany them to inform healthcare personnel of symptoms of a respiratory infection or symptoms related to COVID-19 when they first register for care, and practice respiratory hygiene/cough etiquette.

ii. Application of routine IPC precautions (Standard Precautions) for all patients; Additional precautions (Transmission Based Precautions) in selected patients (i.e. contact, droplet, airborne) based on the presumptive diagnosis;

iii. Establishment of an IPC infrastructure for the healthcare facility, to support IPC activities.

iv. Provision of adequate and regular supply of personal protective equipment (PPE) and appropriate training of staff. Using the appropriate PPE reduces the risk of transmission of respiratory pathogens to health-care workers (HCW) and other people interacting with the patients in the health-care facility.

* Refer to Table 3 and Appendix 2 (pictorial) for recommended PPE to be used when attending/treating ILI/SARI patient.

B. STANDARD PRECAUTIONS

Standards Precautions are routine IPC precautions that should apply to ALL patients, in ALL healthcare settings. The precautions, described in detail within Chapter 3 of the ‘Policies and Procedures on Infection Prevention and Control – Ministry of Health Malaysia; 2019’ are:
i. 5 moments of hand hygiene: Hand hygiene before touching a patient; before any clean or aseptic procedure; after body fluid exposure risk; after touching a patient; and after touching a patient’s surroundings, including contaminated items or surfaces.

ii. Use of PPE guided by risk assessment concerning anticipated contact with blood, body fluids, secretions and non-intact skin for routine patient care.

- The use of surgical mask by HCWs:
  - All HCW must wear surgical masks when they are:
    - in clinical areas.
    - unable to maintain a physical distance of 1 meter from other individuals.
    - in prolonged contact with co-workers (e.g. procedures, meetings, workshop, conference).
  - All HCW should ensure that their surgical masks are fitted properly while on duty.
  - Avoid touching mask without hand hygiene. In case they touched the mask, hand hygiene must be performed immediately. Any soiled mask should be changed and discarded properly into a waste bin.

- All visitors, patients, and accompanying person are encouraged to wear surgical mask in hospital premises (based on the hospital resources and guidelines).

iii. Disinfection and Sterilisation

- All single use medical equipment should not be re-used.

- All reusable medical equipment (e.g. blood glucose meter and other point of care devices, surgical instruments, endoscope) is cleaned and reprocessed appropriately prior to use on another patient.

- Reusable medical equipment must be cleaned and reprocessed (disinfection or sterilisation).

iv. Environmental hygiene (cleaning and disinfection) procedures according to standard procedures.

v. Waste management, linen management and spillage management according to safe routine practices.

vi. Prevention of needle-stick or sharps injuries.
vii. Respiratory hygiene/cough etiquette should be applied by all individual with respiratory symptoms. All individuals (HCWs, patients and visitors) with signs and symptoms of a respiratory infection should:

- Use surgical mask (refer to Appendix 4 – How to wear a medical mask safely by World Health Organization).
- Cover their mouth and nose when coughing/sneezing.
- Use tissues, handkerchiefs, cloth/fabric or surgical masks and dispose them into waste containers.

C. GENERAL MEASURES FOR HEALTHCARE WORKERS (HCW) DURING PANDEMIC

i. Maintain physical distancing

- It is encouraged to limit number of HCW during clinical rounds in the wards, and during clinical teaching. When deciding on the number, the ability to maintain at least a 1-meter distance between HCW while conducting ward rounds.

ii. Surau/prayer rooms:

- For HCWs attending prayers at the mosques, they should follow the respective standard operating procedure (SOP) at the surau/prayer rooms.

iii. Instructions for HCW at any Service Counter

- Always wear a surgical mask (refer Appendix 5).
- Keep a minimum distance of 1 meter from the customer or alternatively have a blind/glass/plastic window in front of the counter.
- Advice customers to wear a surgical mask and perform hand hygiene.
- Minimize handling of cash. After handling cash, to perform hand hygiene. When using credit/debit card, practice contactless interaction by asking the customer to tap/insert and remove the card from the machine themselves.
- Ensure alcohol-based hand rub is always available by the side of each HCW and also at the counter.
• Ensure disinfectant wipes are available at counters to encourage regular cleaning of high-touch areas.

iv. Transport of HCWs

• If HCW are provided with transport, the following special precautions are to be taken:
  o Vehicles should be cleaned and disinfected (the seats, all handles, interior door panel, windows, locks, exterior door handles, poles, etc.) before transport of passengers to prevent possible cross contamination.
  o Arrange a vehicle with appropriate seating capacity according to number of HCW to enable them to maintain at least 1-meter distance inside the vehicle once seated.
  o All HCW must wear surgical masks while being transported.

D. INFECTION PREVENTION AND CONTROL (IPC) MEASURES IN MANAGING PATIENT UNDER SURVEILLANCE (PUS), SUSPECTED, PROBABLE OR CONFIRMED CORONAVIRUS DISEASE (COVID-19)

This guideline is based on current information available regarding disease severity, transmission efficacy and shedding duration. This document will be updated as more information is made available.

*Refer to Table 2 and Appendix 1 (pictorial) for recommended PPE to be used when managing Person Under Surveillance (PUS), Suspected, Probable or Confirmed COVID-19

i. POINT OF ENTRY to hospital emergency departments, health clinics/private GP clinics /fever centres/ambulatory care/ health quarantine centre/ health screening centre

Clinical Triage

• Use physical barriers to reduce exposure to the COVID-19 virus, such as blind/glass/plastic windows.

• Limit number of entrances to the hospitals.

• Rapid case identification visitors, accompanying persons, patients and HCW should be done at all entry points;
  o Temperature screening.
Screening questions (epidemiological, clinical and contact history), QR code/attendance record book
  - All patients and visitors are required to declare and provide correct information to healthcare providers.
  - All patients admitted to wards and their carers should fill up the Patient Declaration Form (Appendix 6).

Visual aids (i.e. poster, signage) to guide patients and visitors.

- Physical distancing more than 1 meter between patients, visitors and other HCW.
- All visitors, patients, and accompanying person must wear surgical mask in hospital premises.
- Provide resources for performing hand hygiene (alcohol-based hand rub made available) at all entrances (e.g. screening areas), counters, waiting areas and common areas (e.g. pantry, meeting room) as well as the availability of disinfectant wipes for regular cleaning of high touch areas.
- If visitors, accompanying persons or patients has ARI or fulfil the criteria of suspected COVID-19 based on the screening questionnaire, they should be sent to the dedicated waiting area which is well ventilated with spatial separation of at least 1 – 2 meters between patients in the waiting rooms.
- Must offer surgical mask (not N95 mask) if able to tolerate (not tachypneic, not hypoxic). If they are unable to tolerate, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow.
- Provide tissues with a no-touch bin for disposal of tissues/biohazard bag.
- Cleaning of high touch areas (i.e. chair, table, couch) at waiting and triage areas after patient leaves the area or as required (i.e. spillage, soiling).

Examination / isolation room
- Examination/ isolation room at entry points (i.e. ED/ primary care etc) should be in descending order of preference:
  i) Single room (nursed with door closed) and attached bathroom
  ii) Single room
ii. **PATIENT PLACEMENT ON ADMISSION**

- Patient should be placed in an adequately ventilated single room with attached bathroom. Cohorting confirmed COVID-19 patient is allowed and patient should be placed at least 1 meter apart. PUS, suspected and probable awaiting result should be placed in an isolation room.

- Dedicate the use of non-critical patient-care equipment to avoid sharing between clients/patients/residents.
  - E.g. stethoscope, sphygmomanometer, thermometer or bedside commode.
  - If unavoidable, then adequately clean and disinfect them between use for each individual patient with hospital recommended disinfectant.

iii. **AEROSOL-GENERATING PROCEDURES (AGP)**

- An aerosol-generating procedure (AGP) is defined as any medical procedure that can induce the production of aerosols of various sizes, including small (< 5μm) particles. The aerosol-generating procedures include:
  - Intubation, extubation and related procedures
  - Tracheotomy/tracheostomy procedures
  - Manual ventilation
  - Suctioning
  - Bronchoscopy
  - Nebulization
  - Non-invasive ventilation (NIV) e.g. Bi-level Positive Airway Pressure (BiPAP) and Continuous Positive Airway Pressure ventilation (CPAP)
  - Surgery and post-mortem procedures in which high-speed devices are used
  - High-frequency oscillating ventilation (HFOV)
  - High-flow Nasal Oxygen (HFNO)
  - Induction of sputum
  - Dental procedures

- Patient placement during AGP should be in descending order of preference:
  1. Negative pressure rooms/AIIR room.
  2. Adequately ventilated single room with at least natural ventilation with at least 160 L/s/patient air flow, with closed doors (**use with HEPA filter if possible**).
iv. PATIENT TRANSFER AND TRANSPORT FOR PERSON UNDER SURVEILLANCE (PUS), SUSPECTED, PROBABLE OR CONFIRMED COVID-19

- Avoid the movement of patients unless medically necessary.
- If movement of patient is required, use pre planned routes that minimize exposure to other staff, patients and visitors. Notify the receiving area before sending the patient.
- Clean and disinfect patient-contact surfaces (e.g. bed, wheelchair, incubators) after use.
- HCWs transporting patients must wear appropriate PPE (surgical mask, eye protection, isolation gown, gloves).
- When outside of the isolation room, patient should wear a surgical mask (not N95 mask) if not in respiratory distress. Oxygen supplement using nasal prong can be safely used under a surgical mask. If patient is unable to tolerate surgical mask, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow during transport.

v. SPECIMEN COLLECTION AND TRANSPORT

All specimens should be regarded as potentially infectious, and HCW who collect or transport clinical specimens should adhere rigorously to Standard Precautions, to minimize the possibility of exposure to pathogens.

- Deliver all specimens by hand whenever possible. Do not use pneumatic-tube systems to transport specimens.
- State the name of the PUS/Suspected/Probable/Confirmed COVID-19 case clearly on the accompanying request form. Notify the laboratory as soon as possible that the specimen is being transported.
- Ensure that HCW who collect respiratory specimens from PUS/Suspected/Probable/Confirmed COVID-19 patients wear appropriate PPE.
- Place specimens for transport in leak-proof specimen bags (please refer to Annex 5 Guidelines on Laboratory Testing for COVID-19).
- Ensure that HCW who transport specimens are trained in safe handling practices and spill decontamination procedures. There are no special requirements for transport of samples to laboratory and they can be transported as routine
samples for testing. However, HCW may wear gloves and plastic apron (optional) during transfer.

vi. DISINFECTION AND STERILIZATION

- Ensure environmental cleaning and disinfection procedures are followed consistently and correctly as per hospital recommendation.

- Clean and disinfect surfaces that are likely to be contaminated with pathogens, including those that are in close proximity to the patient (e.g., bed rails, over bed tables) and frequently-touched surfaces in the patient care environment (e.g., door knobs, surfaces in and surrounding toilets in patients’ rooms):
  - Recommended frequency of cleaning and disinfection of environmental surfaces in hospital setting are listed in Table 1.
  - Cleaning should be done from the least soiled (cleanest) to the most soiled (dirtiest) areas, and from the higher to lower levels and using standard hospital registered disinfectants, such as sodium hypochlorite 1000 ppm.
  - If visible contamination or spills, it is recommended to use a higher dilution of EPA registered disinfection such as sodium hypochlorite at 10,000 ppm.

- If equipment is reused, follow general protocols for disinfection and sterilization:
  - If not visibly soiled, wipe external surfaces of large portable equipment (e.g. X-ray machines and ultrasound machines) that has been used in the isolation room or area with an approved hospital disinfectant upon removal from the patient’s room or area.
  - Proper cleaning and disinfection of reusable respiratory equipment is essential in-patient care.
  - Follow the manufacturer’s recommendations for use or dilution, contact time and handling of disinfectants.
### TABLE 1: RECOMMENDED FREQUENCY OF CLEANING OF ENVIRONMENTAL SURFACES, ACCORDING TO THE PATIENT AREAS WITH PERSON UNDER SURVEILLANCE (PUS), SUSPECTED, PROBABLE OR CONFIRMED COVID-19 IN HOSPITAL SETTING

<table>
<thead>
<tr>
<th>Patient area</th>
<th>Frequency a</th>
<th>Additional guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening/triage area</td>
<td>At least twice daily</td>
<td>• Focus on high-touch surfaces, then floors (last)</td>
</tr>
<tr>
<td>Inpatient rooms/cohort – occupied</td>
<td>At least twice daily, preferably three times daily, in particular for high-touch surfaces</td>
<td>• Focus on high-touch surfaces, starting with shared/common surfaces, then move to each patient bed; use new cloth for each bed if possible; then floors (last)</td>
</tr>
<tr>
<td>Inpatient rooms – unoccupied (terminal cleaning)</td>
<td>Upon discharge/transfer</td>
<td>• Low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, bed thoroughly cleaned and disinfected</td>
</tr>
<tr>
<td>Outpatient/ambulatory care rooms</td>
<td>After each patient visit (in particular for high-touch surfaces) and at least once daily terminal clean</td>
<td>• High-touch surfaces to be disinfected after each patient visit • Once daily low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, examination bed thoroughly cleaned and disinfected</td>
</tr>
<tr>
<td>Hallways/corridors</td>
<td>At least twice daily b</td>
<td>• High-touch surfaces including railings and equipment in hallways, then floors (last)</td>
</tr>
<tr>
<td>Patient bathrooms/toilets</td>
<td>Private patient room toilet: at least twice daily Shared toilets: at least three times daily</td>
<td>• High-touch surfaces, including door handles, light switches, counters, faucets, then sink bowls, then toilets and finally floor (in that order) • Avoid sharing toilets between staff and patients</td>
</tr>
</tbody>
</table>

a Environmental surface should also be cleaned and disinfected whenever visibly soiled or if contaminated by a body fluid (e.g., blood);
b Frequency can be once a day if hallways are not frequently used.

Source: Cleaning and disinfection of environmental surfaces in the context of COVID-19 Interim guidance, World Health Organization, 15 May 2020
vii. TERMINAL CLEANING OF AN ISOLATION ROOM

A terminal cleaning and disinfection should be done following discharge/transfer of a patient as per hospital guideline.

- Before entering the room, cleaning equipment should be assembled before applying PPE.

- PPE must be removed, placed in an appropriate receptacle and hands cleaned before moving to another room or task.

- PPE must not be worn or taken outside the patient room or bed space.

- Protocols for cleaning must include cleaning of portable carts or built-in holders for equipment.

- The room should be decontaminated from the highest to the lowest point and from the least contaminated to the most contaminated.

- Remove curtains and placed in red linen bag with alginate plastic.

- Use disinfectants such as sodium hypochlorite. The surface being decontaminated must be free from organic soil. A neutral detergent solution should be used to clean the environment prior to disinfection or a combined detergent/disinfectant may be used.

In addition to the above measures, the following additional measures must be taken when performing terminal cleaning for Airborne Infection Isolation Rooms (AIIR).

- The cleaner should wait for sufficient air changes to clear the air before cleaning the room.

- After patient/resident transfer or discharge, the door must be kept closed and the Airborne Precautions sign must remain on the door until sufficient time has elapsed to allow removal of airborne microorganisms. Duration depends on ACHR;

  o With ACHR of 12 or 15, the recommended duration is 23 to 35 minutes and 18 to 28 minutes with 99%-99.9% efficiency respectively.

  o When the ACHR cannot be determined it is recommended that the room is left for time interval of 45 minutes before the cleaning and disinfectant is commenced.
viii. DISHES AND EATING UTENSILS

• Use disposable utensils as much as possible.

ix. LINEN MANAGEMENT

• Contaminated linen should be handled with minimal manipulation to prevent contamination of the air, surfaces and persons. **DO NOT**:
  
  o Carry contaminated linen against body.
  o Shake the linen.
  o Place used linen on the floor or other surfaces.
  o Overfill the laundry basket.

• The steps for handling linen:

  o Place the linen directly into red alginate plastic and secure, if there is any solid excrement on the linen, such as feces or vomit it should be segregated and removed first.

  o Place red alginate plastic into the red linen bag.

• All linen should be handled inside the isolation room/cohoot area/ward.

• Store all used linen in a designated area.

• HCW handling soiled bedding, towels and clothes from patient should wear appropriate PPE, which includes surgical mask, gloves, eye protection (face shield/goggles), long-sleeved plastic apron, boots or closed shoes before touching any soiled linen.

• Washing/disinfecting linen should be handled according to hospital protocol.

x. HEALTHCARE WORKER (HCW)

• HCW who are pregnant and with high risk condition/immune-compromised should not manage and provide routine care for PUS/Suspected/Probable/Confirmed COVID-19 patient.

• Ensure all HCW who are managing these patients are up to date with their vaccination schedule e.g. with influenza vaccine.
• HCW who are managing and providing routine care for PUS/Suspected/Probable/Confirmed COVID-19 patient need to be trained on proper use of PPE.

• Keep a register of HCW who have provided care for patients with PUS/Suspected/Probable/Confirmed COVID-19 for contact tracing.

• The creation of a dedicated team consisting of nurses, medical officers and specialist and other supportive staff from other areas are recommended for managing Suspected/Probable/Confirmed COVID-19 patient.

• The HCWs/support staff who are managing and providing routine care for PUS/Suspected/Probable/Confirmed COVID-19 patient should be monitored for symptoms minimum daily. If HCWs become symptomatic, he/she need needs to report to the supervisor in the team and managed accordingly (refer Annex 21 Management of HCW During COVID-19 Pandemic).

xi. VISITORS

• No visitor should be allowed.

• If absolutely necessary, discuss with the managing team.
  
  o All visitors should be screened for acute respiratory illness before allowing to enter.
  
  o Document and limit the number of visitors at scheduled time.
  
  o Appropriate instruction on use of PPE and other precautions (e.g., hand hygiene, limiting surfaces touched) should be given while in the patient’s room.
  
  o Visitors should be advised to limit their movement in the healthcare facility.
  
  o Exposed visitors should report any signs of symptoms to their healthcare providers.
  
• HCW must instruct and supervise all visitors on the donning and doffing of PPE (gown, glove, N95 mask) before entering the room.

• The visit time must be limited and avoid close contact (< 1m).

• Perform hand hygiene on entering and leaving the room.
• Visitors who have been in contact with the patient before and during hospitalization (i.e. parents taking care of their children) are a possible source/contact of the infection.

• PPE recommend for these long-term carers may be limited to surgical mask. The use of plastic aprons and gloves are recommended when anticipating exposure to bodily fluids.

xii. PATIENT RECORD/BED HEAD TICKET

• Bed head ticket (BHT) of PUS/Suspected/Probable/Confirmed COVID-19 should be tagged.

• The patient record/bed head ticket should be kept outside the patient room.

xiii. RATIONAL USE OF RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)

• Rational and appropriate use of PPE is important to protect our frontline HCW and to avoid supply shortages.

• PPE should be used according to the setting, target personnel, risk of exposure (e.g. type of activity) and the mode of transmission of the pathogen (e.g. contact, droplet or aerosol).

• If particulate respirator (e.g. N95) is used, fit test and user seal-check (fit check) should be done. It should be performed every time the respirator is to be worn by the user.

  o Fit test is conducted to determine if there is a gap in the seal of the respirator used.
  o Seal-check is conducted by the user to determine if the respirator is properly sealed to the face.

• Recommended PPE to be used when managing Person Under Surveillance (PUS), Suspected, Probable or Confirmed COVID-19 in hospital is listed in Table 2 and recommended PPE to be used when attending/treating Severe Acute Respiratory Infection (SARI)/Influenza like Illness (ILI) patient in hospital is shown in Table 3. For health clinic and district health office settings, recommended PPE to be used in general is listed in Table 4 and 5.
### TABLE 2: RECOMMENDED PPE TO BE USED WHEN MANAGING PERSON UNDER SURVEILLANCE (PUS), SUSPECTED, PROBABLE OR CONFIRMED COVID-19 IN HOSPITAL SETTING

<table>
<thead>
<tr>
<th>SETTING</th>
<th>TARGET PERSONNEL</th>
<th>ACTIVITY</th>
<th>TYPE OF PPE</th>
<th>NOTE</th>
</tr>
</thead>
</table>
| Any Areas in Healthcare Facility | HCW | Direct contact with any patient (Non-PUS/Non-Suspected/Non-Probable/Non-Confirmed COVID-19 patient OR patient without respiratory symptoms) | • Surgical mask  
• *Eye Protection (face shield/goggles)  
* If anticipating less than 1 metre spatial distance | • HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene |

**EMERGENCY DEPARTMENT**

| PRIMARY TRAICGE | HCW | Involved in triaging patients | • Surgical mask  
• *Eye Protection (face shield/goggles)  
* If anticipating less than 1 metre spatial distance | • May use physical barriers (such as glass or plastic windows or face shield) to reduce exposure  
• HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene  
• Full PPE set must be made available at the site in case of emergency |
|-----------------|-----|------------------------------|-----------------|
| PATIENT WAITING AREA | Patients | Patient with respiratory symptoms | • Surgical mask | • Patient should be seated at the designated area, to sit at least 1 metre apart  
• Waiting area should be well-ventilated |
| Secondary Triage | HCW | History taking and physical examination | Surgical mask  
Isolation Gown (fluid-repellent long-sleeved gown) OR long-sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles)  
Boot cover/shoe cover (ONLY when anticipating spillage and vomiting) | Patient should be reminded to wear a surgical mask when the HCW enters the cubicle /triage examination area |
| --- | --- | --- | --- |
| Examination Room/Consultation Room | HCW | History taking and physical examination | Surgical mask  
Isolation Gown (fluid-repellent long-sleeved gown) OR long-sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles)  
Boot cover/shoe cover (ONLY when anticipating spillage and vomiting) | Patient should be reminded to wear a surgical mask when the HCW enters the room |
| Cleaners | Cleaning the examination room/consultation room | Surgical mask  
Long-sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles)  
Boots or closed shoes | Increase frequency of cleaning for frequently touched surfaces |
| Ambulance transfer vehicle | Driver | Involved in driving PUS/ Suspected/Probable/ Confirmed COVID-19 BUT NO direct contact with patient | • Surgical mask | • Windows should be kept open throughout the drive (about 3cm only)  
• Use air conditioner with fresh air intake mode  
• Driver should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene |
|---------------------------|--------|-----------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           |        | Involved in driving PUS/ Suspected/Probable/ Confirmed COVID-19 and involved in loading and unloading of patients | • Surgical mask  
• Isolation Gown (fluid-repellent long-sleeved gown) OR long-sleeved plastic apron  
• Gloves  
• Eye Protection (face shield/goggles)  
* Full PPE is applied during loading and unloading of patient or contact with patient | • Driver should always maintain at foot end of stretcher and perform frequent hand hygiene  
• Windows should be kept open throughout the drive (about 3cm only)  
• Use air conditioner with fresh air intake mode |
|                           | HCW    | Transporting PUS/ Suspected/Probable/ Confirmed COVID-19 patient to the referral health care facility | • N95 mask  
• Isolation Gown (fluid-repellent long-sleeved gown)  
• Gloves  
• Eye Protection (face shield/goggles)  
• Head cover | • Windows should be kept open throughout the drive (about 3cm only)  
• Use air conditioner with fresh air intake mode  
• If windows cannot be opened, use fan  
• Healthcare worker seating arrangement (Figure 1): |
| Ambulance Transport Vehicle | HCW | Decontamination of ambulance that transported PUS/Suspected/ Probable/ Confirmed COVID-19 | A & B: When patient is not in distress  
C: When patient requires oxygen support/ intervention |
|-----------------------------|-----|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                             |     |  • Surgical mask  
• Long-sleeved plastic apron  
• Gloves  
• Eye Protection (face shield/goggles)  
• Boots or closed shoes       | Figure 1: Ambulance |
<table>
<thead>
<tr>
<th>Patient Cubicle/Resuscitation Zone</th>
<th>HCW</th>
<th>Performing Aerosol Generating Procedures (AGP) on PUS/Suspected/Probable/Confirmed COVID-19 patients</th>
<th>Minimum Recommendation:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Intubation, extubation and related procedures/CPR</td>
<td>• N95 mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tracheotomy/tracheostomy procedures</td>
<td>• Isolation Gown (fluid-repellent long-sleeved gown) with plastic apron</td>
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<tr>
<td></td>
<td></td>
<td>• Manual ventilation</td>
<td>• Gloves</td>
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<tr>
<td></td>
<td></td>
<td>• Suctioning</td>
<td>• Eye Protection (face shield/goggles)</td>
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<td></td>
<td></td>
<td>• Bronchoscopy</td>
<td>• Head cover</td>
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<td></td>
<td>• Nebulization</td>
<td>• Boot cover/shoe cover</td>
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<tr>
<td></td>
<td></td>
<td>• Others – Refer Guideline</td>
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<table>
<thead>
<tr>
<th>Specimen Collection Area</th>
<th>HCW</th>
<th>Performing oropharyngeal or nasopharyngeal swab</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>N95 mask</td>
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<td></td>
<td></td>
<td></td>
<td>Gloves**</td>
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<td></td>
<td></td>
<td></td>
<td>Isolation Gown (fluid-repellent long-sleeved gown)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Long-sleeved plastic apron**</td>
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<td>Eye protection (face shield/goggles)</td>
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<td></td>
<td>Head cover</td>
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<td></td>
<td>Boot cover/shoe cover (ONLY when anticipating spillage and vomiting)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Any soiled protective equipment’s should also be changed</td>
</tr>
</tbody>
</table>
**It is sufficient to change gloves and plastic apron between patients.**

<table>
<thead>
<tr>
<th>INPATIENT FACILITIES</th>
<th></th>
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</tr>
</thead>
</table>
| **Patient Room** | **Providing care PUS/Suspected/Probable/Confirmed COVID-19 patients who are not intubated and able to wear surgical mask** | **Surgical mask**
**Providing care to PUS/Suspected/Probable/Confirmed COVID-19 patients who are not intubated but NOT able to wear surgical mask** | **N95 mask**
**Performing oropharyngeal or nasopharyngeal swab to PUS/Suspected/Probable/Confirmed COVID-19 patients** | **N95 mask**

- Isolation Gown (fluid-repellent long-sleeved gown)
- Gloves
- Eye Protection (face shield/goggles)
- Boot cover/shoe cover (ONLY when anticipating spillage and vomiting)
- Head cover
- Boot cover/shoe cover (ONLY when anticipating spillage and vomiting)
<table>
<thead>
<tr>
<th>Patient Room</th>
<th>HCW</th>
<th>Performing Aerosol Generating Procedures (AGP) on PUS/ Suspected/Probable/ Confirmed COVID-19 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Intubation, extubation and related procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tracheotomy/tracheostomy procedures;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Manual ventilation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Suctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bronchoscopy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Option 1 (Preferred):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Powered air-purifying respirator (PAPR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Isolation Gown (fluid-repellent long-sleeved gown) with plastic apron / Coverall suit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Eye Protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Depends on type of PAPR</td>
</tr>
<tr>
<td>Providing care to PUS/ Suspected/ Probable/ Confirmed COVID-19 patients who are <strong>ventilated in a closed circuit</strong></td>
<td></td>
<td>• N95 mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Isolation Gown (fluid-repellent long-sleeved gown)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Eye Protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Boot cover/shoe cover (ONLY when anticipating spillage and vomiting)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eyes Protection (face shield/goggles) *</td>
</tr>
</tbody>
</table>

**Note:** *Depends on type of PAPR*
<table>
<thead>
<tr>
<th>Patient Room</th>
<th>HCW</th>
<th>Transporting specimen to lab</th>
<th>Cleaners</th>
<th>Cleaning the PUS/ Suspected/Probable/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Option 2:</td>
<td></td>
<td></td>
<td>Option 3 (if Option 1 &amp; 2 not available):</td>
</tr>
<tr>
<td></td>
<td>• Coverall suit</td>
<td>• Surgical mask</td>
<td>• Surgical mask</td>
<td>• Surgical mask</td>
</tr>
<tr>
<td></td>
<td>• N95 mask</td>
<td>• Gloves</td>
<td>• Gloves</td>
<td>• Gloves</td>
</tr>
</tbody>
</table>
|              | • Eye Protection (face shield/goggles) | • Plastic apron (optional) | • Plastic apron (optional) | • Isolation Gown (fluid-
|              | • Gloves | • Head cover | • Head cover | repellent long-sleeved gown) with plastic apron |
|              | • Boot cover/shoe cover | • Boot cover/shoe cover | • Boot cover/shoe cover | • Boot cover/shoe cover |

- Nebulization
- Non-invasive ventilation (NIV) e.g. Bi-level Positive Airway Pressure (BiPAP) and Continuous Positive Airway Pressure ventilation (CPAP)
- Surgery and post-mortem procedures in which high-speed devices are used
- High-frequency oscillating ventilation (HFOV)
- High-flow Nasal Oxygen (HFNO)
- Induction of sputum
- Dental procedures

*Detail information, refer to Intensive Care Preparedness and Management for COVID-19
| Laboratory | HCW | Confirmed COVID-19 patient’s room; who is **not intubated and able to wear surgical mask** | repellent long-sleeved gown)  
• Gloves  
• Eye Protection (face shield/goggles)  
• Boots or closed shoes |
| --- | --- | --- | --- |
|  |  | Cleaning the PUS/ Suspected/Probable/ Confirmed COVID-19 patients’ room; who are **not intubated but NOT able to wear surgical mask** | N95 mask  
• Isolation Gown (fluid-repellent long-sleeved gown)  
• Gloves  
• Eye Protection (face shield/goggles)  
• Head cover  
• Boots or closed shoes |
|  |  | • Manipulation of respiratory specimens which include oropharyngeal swabs, nasopharyngeal swabs, sputum, tracheal aspirate, bronchoalveolar lavage (BAL) must be accorded high risk  
• Specimen handling for RT-PCR or Antigen testing prior to viral inactivation step, must be carried out in BSL-2 or equivalent facilities | N95 mask  
• Isolation Gown (fluid-repellent long-sleeved gown)  
• Gloves  
• Eye Protection (face shield/goggles)  
• Head cover  
• Boots or closed shoes |
<table>
<thead>
<tr>
<th>Laboratory</th>
<th>HCW</th>
<th>Handling and processing of specimens from Suspected/Probable/Confirmed COVID-19 intended for additional laboratory tests, such as haematology, microbiology, biochemistry, cytology or histopathological processing should apply standard precautions to provide a barrier between the specimen and personnel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside patient room (more than 1-2 meters)</td>
<td>All staff including HCW</td>
<td>Any activity that does not lead to contact with PUS/Suspected/Probable/Confirmed COVID-19</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADMINISTRATIVE AREAS/ PUBLIC AREAS**

<table>
<thead>
<tr>
<th>Any Areas</th>
<th>All staff</th>
<th>Any activities not involving direct contact with patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Surgical mask is recommended if unable to maintain more than 1 metre spatial distance</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Surgical mask
- Isolation Gown (fluid-repellent long-sleeved gown)
- Gloves
- Eye Protection (face shield/goggles)
- Boots or closed shoes

- All staff including HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene
- All staff should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene
| Security Officer | Security officers in healthcare facilities | Surgical mask | Security officer should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene |
TABLE 3: RECOMMENDED PPE TO BE USED WHEN ATTENDING OR TREATING SEVERE ACUTE RESPIRATORY INFECTION (SARI) OR INFLUENZA LIKE ILLNESS (ILI) PATIENT IN HOSPITAL SETTING

<table>
<thead>
<tr>
<th>SETTING</th>
<th>TARGET PERSONNEL</th>
<th>ACTIVITY</th>
<th>TYPE OF PPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEVERE ACUTE RESPIRATORY INFECTION (SARI) PATIENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| SARI areas/ cubicles | HCW              | Providing care and able to maintain 1-2 metres spatial distance at all time | • Surgical mask                                  | • HCW should perform frequent hand hygiene  
• Patient should be reminded to wear a surgical mask (if tolerable). If not tolerable due to medical condition, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow. |
|                     |                  | Providing care and unable to maintain 1-2 metres spatial distance at all time | • Surgical mask  
• Gloves  
• Long-sleeved plastic apron  
• Eye protection (face shield/goggles) | • Patient should be reminded to wear a surgical mask (if tolerable). If not tolerable due to medical condition, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow. |
| SARI areas/ cubicles | HCW              | Performing Aerosol Generating Procedures       | • N95 mask  
• Gloves |                                                                      |
<table>
<thead>
<tr>
<th>(AGP)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• High-flow mask oxygen</td>
<td>• Isolation Gown (fluid-repellent long-sleeved gown)</td>
<td></td>
</tr>
<tr>
<td>• Intubation</td>
<td>• Eye protection (face shield/goggles)</td>
<td></td>
</tr>
<tr>
<td>• Suctioning</td>
<td>• Head cover</td>
<td></td>
</tr>
<tr>
<td>• Nebulization</td>
<td>• Boot cover/shoe cover (ONLY when anticipating spillage and vomiting) - not always necessary</td>
<td></td>
</tr>
</tbody>
</table>

Also, when performing oropharyngeal or nasopharyngeal swab
<table>
<thead>
<tr>
<th>Examination Room / Consultation Room</th>
<th>HCW</th>
<th>History taking/physical examination/providing care</th>
<th>Performing Aerosol Generating Procedures (AGP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Surgical mask</td>
<td>• Intubation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gloves**</td>
<td>• Suctioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Long-sleeved plastic apron**</td>
<td>• Nebulization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Eye protection (face shield/goggles)</td>
<td>• CPR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>**Change plastic apron and gloves after examination of each patient</td>
<td>Also when performing oropharyngeal or nasopharyngeal swab</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• N95 mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Isolation Gown (fluid-repellent long-sleeved gown)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Eye protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Head cover</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Boot cover / shoe cover (ONLY when anticipating spillage and vomiting) - not always necessary</td>
</tr>
</tbody>
</table>
## TABLE 4: RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE) TO BE USED IN HEALTH CLINIC SETTING

<table>
<thead>
<tr>
<th>SETTING</th>
<th>TARGET PERSONNEL</th>
<th>ACTIVITY</th>
<th>TYPE OF PPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare facilities</td>
<td>HCW</td>
<td>Direct contact with any patient other than PUS, Suspected/Probable/Non-Confirmed COVID-19 patient OR patient without respiratory symptoms</td>
<td>• Surgical mask&lt;br&gt; • *Eye Protection (face shield/goggles)&lt;br&gt; * If anticipating less than 1 metre spatial distance</td>
<td>• HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene</td>
</tr>
<tr>
<td>TRIAGE AREA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triage</td>
<td>HCW</td>
<td>Preliminary screening not involving direct contact with any patient and <strong>FULL PPE set must be made available at the site in case of emergency</strong></td>
<td>• Surgical mask&lt;br&gt; • *Eye protection (face shield/goggles)&lt;br&gt; * If anticipating less than 1 meter spatial distance</td>
<td>• May use physical barriers (such as glass or plastic windows or face shield) to reduce exposure&lt;br&gt; • HCW should perform frequent hand hygiene&lt;br&gt; • Patient to fill up the Patient Declaration Form (Appendix 6)&lt;br&gt; • Patient should be reminded to wear a surgical mask (if tolerable). If not tolerable due to medical condition, advise the patient to cover nose and mouth during coughing or...</td>
</tr>
<tr>
<td>ANNEX 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Preliminary screening not involving direct contact with any patient and UNABLE TO MAINTAIN 1-2 metres spatial distance at all time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| • Surgical mask  
• Long sleeved plastic apron  
• Gloves  
• Eye Protection (face shield/goggles)  
*Full PPE set must be made available at the site in case of emergency*  
• sneezing with tissue or flexed elbow  
• Alcohol base hand rub should be made available for patient |

<table>
<thead>
<tr>
<th>Patient Waiting Area</th>
<th>Patients</th>
<th>Patient with respiratory symptoms</th>
<th>Surgical Mask</th>
</tr>
</thead>
</table>
| • Surgical mask  
• Patient should be seated at the designated area, to sit at least 1 metre apart  
• Waiting area should be well-ventilated |

<table>
<thead>
<tr>
<th>ADMINISTRATIVE AREAS/ PUBLIC AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Registration area/counter</strong></td>
</tr>
</tbody>
</table>
| • All staff including HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene  
• May use physical barriers (such as glass or plastic windows or face shield) to reduce exposure |
## SECONDARY TRIAGE

<table>
<thead>
<tr>
<th>Secondary Triage</th>
<th>HCW</th>
<th>Screening for vital signs</th>
<th>Surgical mask *Eye Protection (face shield/goggles) If anticipating less than 1 metre spatial distance **Full PPE set must be made available at the site in case of emergency</th>
<th>HCW should perform frequent hand hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. General patient e.g. post-natal patient, DM, HPT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Influenza like illness (ILI)/Fever</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## GENERAL EXAMINATION AND TREATMENT ROOM

<table>
<thead>
<tr>
<th>Examination room e.g. OPD, MCH</th>
<th>HCW</th>
<th>History taking and physical examination Other procedures (non-aerosol generating procedure e.g. vaccination, dressing)</th>
<th>Surgical mask *Eye Protection (face shield/goggles) If anticipating less than 1 metre spatial distance *Gloves whenever indicated</th>
<th>HCW should perform frequent hand hygiene</th>
</tr>
</thead>
</table>
| Examination room e.g. OPD, MCH | HCW | Eye examination – Fundoscopy machine | • Surgical mask  
• *Eye protection (face shield/goggles) whenever possible | • Patient should be reminded to wear a surgical mask and minimal talking during examination  
• If using Fundoscopy machine, use physical barriers (such as breath guard) to reduce exposure  
• HCW should perform frequent hand hygiene |
| EXAMINATION ROOM/ AREA FOR INFLUENZA LIKE ILLNESS (ILI) | | History taking and physical examination | • Surgical mask  
• Long sleeved plastic apron  
• Gloves  
• Eye Protection (face shield/goggles) | • Patient should be reminded to wear a surgical mask (if tolerable). If not tolerable due to medical condition, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow |
| Examination room/area | HCW | Aerosol Generating Procedures (AGP) *Nebulisation* | N95 mask  
Isolation Gown (fluid-repellent long-sleeved gown)  
Long sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles)  
Head cover  
Boot cover/shoe cover (ONLY when anticipate spillage and vomiting) |
|---|---|---|---|
| Taking blood for investigation | | Surgical mask  
Long sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles) |
| Examination room/area | HCW | Transport specimen to lab | Surgical mask  
Gloves  
Plastic apron (optional) |
| ISOLATION/ DESIGNATED AREA FOR PERSON UNDER SURVEILLANCE (PUS), SUSPECTED OR PROBABLE | | Vital sign, history taking and physical examination | Surgical mask  
Isolation Gown (fluid-repellent long-sleeved gown)  
Long sleeved plastic apron  
Gloves  
Eye Protection (face shield/goggles)  
Patient should be reminded to wear a surgical mask (if tolerable). If not tolerable due to medical condition, advise the patient to cover nose and mouth during coughing or |
* Boot cover/shoe cover are not necessary (ONLY when anticipate spillage and vomiting)

*It is sufficient to change gloves and plastic apron between patients. Any soiled protective equipment’s should also be changed

<table>
<thead>
<tr>
<th>Aerosol Generating Procedures (AGP)</th>
<th>N95 mask</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Intubation, extubation and related procedures</td>
<td>Isolation Gown (fluid-repellent long-sleeved gown)</td>
</tr>
<tr>
<td>• Manual ventilation</td>
<td>Long sleeved plastic apron</td>
</tr>
<tr>
<td>• Suctioning</td>
<td>Gloves</td>
</tr>
<tr>
<td>• Nebulization</td>
<td>Eye Protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td>Head cover</td>
</tr>
<tr>
<td></td>
<td>Boot cover/shoe cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample collection area</th>
<th>HCW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing oropharyngeal or nasopharyngeal swab</td>
<td>N95 mask</td>
</tr>
<tr>
<td></td>
<td>Isolation Gown (fluid-repellent long-sleeved gown)</td>
</tr>
<tr>
<td></td>
<td>Long sleeved plastic apron</td>
</tr>
<tr>
<td></td>
<td>Gloves</td>
</tr>
<tr>
<td></td>
<td>Eye Protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td>Head cover</td>
</tr>
<tr>
<td></td>
<td>Boot cover/shoe cover</td>
</tr>
</tbody>
</table>

sneezing with tissue or flexed elbow
<table>
<thead>
<tr>
<th>Sample collection area</th>
<th>HCW</th>
<th>Performing RTK-Ab testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assisting oropharyngeal or nasopharyngeal swab</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ONLY when anticipate spillage and vomiting)</td>
</tr>
<tr>
<td><em>It is sufficient to change gloves and plastic apron between patients. Any soiled protective equipment’s should also be changed</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport specimen to lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ONLY when anticipate spillage and vomiting)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assisting oropharyngeal or nasopharyngeal swab</th>
</tr>
</thead>
<tbody>
<tr>
<td>• N95 mask</td>
</tr>
<tr>
<td>• Isolation Gown (fluid-repellent long-sleeved gown)</td>
</tr>
<tr>
<td>• Gloves</td>
</tr>
<tr>
<td>• Eye Protection (face shield/goggles)</td>
</tr>
<tr>
<td>• Head cover</td>
</tr>
<tr>
<td>• Boot cover/shoe cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport specimen to lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Surgical mask</td>
</tr>
<tr>
<td>• Gloves</td>
</tr>
<tr>
<td>• Plastic apron (optional)</td>
</tr>
<tr>
<td>AMBULANCE TRANSFER OF PUS/SUSPECTED/PROBABLE/INFLUENZA LIKE ILLNESS (ILI) PATIENT</td>
</tr>
<tr>
<td>---</td>
</tr>
</tbody>
</table>
| Ambulance transfer vehicle | HCW | Transporting PUS/Suspected/Probable/ILI patient to the referral health care facility | N95 mask  
Isolation Gown (fluid-repellent long-sleeved gown)  
Gloves  
Eye Protection (face shield/goggles)  
Head cover  
* Boot cover/shoe cover are not necessary |
|  |  |  | Windows should be kept open throughout the drive (about 3cm only)  
Use air conditioner with *fresh air intake* mode  
If windows cannot be opened, use fan |
| Healthcare worker seating arrangement (Figure 1): |  |  |  |
| A & B: When patient is not in distress  
C: When patient requires oxygen support/intervention |  |  |  |
| Ambulance transfer vehicle | Driver | Involved in driving the patient with PUS/Suspected/Probable/ILI BUT NO direct contact with patient | Surgical mask | • Windows should be kept open throughout the drive (about 3cm only)  
• Use air conditioner with fresh air intake mode  
• Driver should maintain more than 1 metre spatial distance at all times and perform hand hygiene |
|---------------------------|--------|-----------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           |        | Involved in driving the patient with PUS/Suspected/Probable/ILI and involved in loading and unloading of patients | Surgical mask  
• Isolation Gown (fluid-repellent long-sleeved gown) OR long-sleeved plastic apron  
• Gloves  
• Eye Protection (face shield/goggles) | • If the driver involves in loading and unloading of patients, he should always maintain at foot end of stretcher and perform hand hygiene  
• Windows should be kept open throughout the drive (about 3cm only)  
• Use air conditioner with fresh air intake mode |
| Ambulance transfer vehicle | HCW    | Decontamination of ambulance | Surgical mask  
• Long sleeved plastic apron  
• Gloves  
• Eye protection (face shield/goggles)  
• Boots or closed shoes | |
<table>
<thead>
<tr>
<th>LABORATORY</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory</td>
<td>Lab technician</td>
<td>Handling specimen</td>
<td>• Surgical mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Long sleeved plastic apron</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Gloves (2 layer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Eye protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Close shoe/shoe cover</td>
</tr>
<tr>
<td>Handling sputum</td>
<td></td>
<td></td>
<td>• N95 mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Long sleeved plastic apron</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Eye protection (face shield/goggles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Close shoe/shoe cover</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHARMACY</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy a. Satellite pharmacy at ILI area</td>
<td>Pharmacist</td>
<td>Dispensing medication to patient</td>
<td>• Surgical mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Long sleeved plastic apron</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• *Eye protection (face shield/goggles) if there is no physical barrier or unable to maintain 1-2 metre distance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Pharmacist should perform frequent hand hygiene</td>
</tr>
<tr>
<td>b. General pharmacy</td>
<td>Pharmacist</td>
<td>Dispensing medication to patient</td>
<td>• Surgical mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• *Eye protection (face shield/goggles) if there is no physical barrier or unable to maintain 1-2 metre distance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Pharmacist should perform frequent hand hygiene</td>
</tr>
</tbody>
</table>
| CLEANING & DISINFECTION | Cleaner | Cleaning and disinfection of isolation/treatment room/designated area | Surgical mask  
Long sleeved plastic apron  
Gloves  
Eye protection (face shield/goggles)  
Boots or closed shoes |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation/treatment room/designated area</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| HOME VISIT | HCW | Attending to antenatal, post-natal and child health | Surgical mask  
*Eye protection (face shield/goggles) if necessary  
*Long sleeved plastic apron, face shield and gloves should be made available | HCW should maintain 1-2 metres spatial distance with patient’s relatives  
HCW should perform frequent hand hygiene  
Patient to fill up the Patient Declaration Form (Appendix 6) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## TABLE 5: RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE) TO BE USED FOR ACTIVITIES BY DISTRICT HEALTH OFFICE

<table>
<thead>
<tr>
<th>SETTING</th>
<th>TARGET PERSONNEL</th>
<th>ACTIVITY</th>
<th>TYPE OF PPE</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RAPID ASSESSMENT TEAM (RAT)/ RAPID RESPONSE TEAM (RRT)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>HCW Investigators Team</td>
<td>Interview Suspected/Probable/Confirmed COVID-19 patients or their contacts (PUS) for the purpose of contact tracing</td>
<td>• No PPE if done remotely (e.g., by telephone or video conference)</td>
<td></td>
</tr>
</tbody>
</table>
| | | In-person interview of Suspected/Probable/Confirmed COVID-19 patients without direct contact | • Surgical Mask  
• Eye Protection (face shield/goggles)  
• Gloves  
** Full PPE set must be made available in case of emergency | • HCW should maintain spatial distance of at least 1 meter and perform frequent hand hygiene  
• The interview should be conducted outside the house or outdoors, and PUS/Suspected/Probable/Confirmed COVID-19 patients should wear a surgical mask if tolerated. |
| | | In-person interview with asymptomatic contacts (PUS) of COVID-19 patients | • Surgical mask  
• Eye Protection (face shield/goggles)  
• Gloves  
** Full PPE set must be made available in case of emergency | |
### SERVING HOME SURVEILLANCE ORDER/RELEASE ORDER

| Home visit | HCW | • Issuing the order and daily monitoring | • Surgical mask  
|            |     | • Eye Protection (face shield/goggles)  
|            |     | • Gloves  
|            |     | ** Full PPE set must be made available in case of emergency  
|            |     | • Remove PUS wrist band upon release order  
|            |     | • No PPE is needed  
|            |     | • For PUS among HCW who required early return to work, the officer needs to use surgical mask  
|            |     | • HCW should maintain spatial distance of at least 1 meter and perform frequent hand hygiene  
|            |     | • PUS/Suspected/Probable/Confirmed COVID-19 patients should wear a surgical mask if tolerated.  

### COVID-19 SAMPLING

| Outside Health Clinic setting e.g. at EMCO areas, targeted group screening etc. | HCW | Performing oropharyngeal or nasopharyngeal swab | • N95 mask  
|                                                                              |     |                                                | • Isolation Gown (fluid-repellent long-sleeved gown)  
|                                                                              |     |                                                | • Long sleeved plastic apron  
|                                                                              |     |                                                | • Gloves  
|                                                                              |     |                                                | • Eye Protection (face shield/goggles)  
|                                                                              |     |                                                | • Head cover  
|                                                                              |     |                                                | • Boot cover/shoe cover (ONLY when anticipate spillage and vomiting)  

<table>
<thead>
<tr>
<th>Activity</th>
<th>Equipment</th>
</tr>
</thead>
</table>
| Assisting oropharyngeal or nasopharyngeal swab | - N95 mask  
- Isolation Gown (fluid-repellent long-sleeved gown)  
- Gloves  
- Eye Protection (face shield/goggles)  
- Head cover  
- Boot cover/shoe cover (ONLY when anticipate spillage and vomiting) |
| Transport specimen to lab | - Surgical mask  
- Gloves  
- Plastic apron (optional) |

**COMMUNITY OUTREACHED PROGRAM**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>HCW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Promotional Activity</td>
<td></td>
</tr>
<tr>
<td>Known or suspected community transmission</td>
<td>Surgical mask</td>
</tr>
<tr>
<td>Sporadic transmission or clusters of COVID-19 cases</td>
<td>- HCW should maintain spatial distance of at least 1 meter and perform frequent hand hygiene</td>
</tr>
<tr>
<td>Preventive and control action</td>
<td>HCW</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----</td>
</tr>
</tbody>
</table>
ANNEX 8

Appendix 1

HEALTHCARE FACILITY

SETTING: ANY AREAS IN HEALTHCARE FACILITY

TARGET: HEALTHCARE WORKER

TYPE OF PPE
1. Surgical mask
2. Eye Protection (face shield/goggles)
3. If anticipating less than 1 metre spatial distance

NOTE
- HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene
- Full PPE not must be made available at the site in case of emergency

EMERGENCY DEPARTMENT

SETTING: PRIMARY TRIAGE
TARGET: HEALTHCARE WORKER

NOTE
- May use physical barriers (such as glass or plastic windows or face shield) to reduce exposure
- HCW should maintain more than 1 metre spatial distance at all times and perform frequent hand hygiene

EMERGENCY DEPARTMENT

SETTING: EXAMINATION ROOM/CONSULTATION ROOM
TARGET: CLEANER

TYPE OF PPE
1. Surgical mask
2. Long-sleeved plastic apron
3. Gown
4. Eye Protection (face shield/goggles)
5. Boots or closed shoes

NOTE
- Increases frequency of cleaning for frequently touched surfaces

EMERGENCY DEPARTMENT

SETTING: AMBULANCE TRANSFER VEHICLE (PUS/SUSPECTED/PROBABLE/CONFIRMED COVID-19)
TARGET: HEALTHCARE WORKER

TYPE OF PPE
1. 395 mask
2. Isolation Gown (fluid-resistant)
3. Goggles
4. Eye Protection (face shield/goggles)
5. Head cover

NOTE
- Windows should be kept open throughout the drive (except for patient)
- Air conditioner with fresh air intake mode
- Windows cannot be closed (except for patient)

EMERGENCY DEPARTMENT

SETTING: AMBULANCE TRANSFER VEHICLE (PUS/SUSPECTED/PROBABLE/CONFIRMED COVID-19)
TARGET: AMBULANCE DRIVER

TYPE OF PPE
1. Surgical mask
2. Isolation Gown (fluid-resistant)
3. Goggles
4. Eye Protection (face shield/goggles)

NOTE
- Drive should always maintain at foot end of ambulance and perform frequent hand hygiene
- Windows should be kept open throughout the drive (except for 2 passengers only)
- Use air conditioner with fresh air intake mode

EMERGENCY DEPARTMENT

SETTING: AMBULANCE TRANSFER VEHICLE (PUS/SUSPECTED/PROBABLE/CONFIRMED COVID-19)
TARGET: HEALTHCARE WORKER

TYPE OF PPE
1. Surgical mask
2. Long-sleeved plastic apron
3. Goggles
4. Eye Protection (face shield/goggles)
5. Boots or closed shoes

NOTE
- Transport PUS/Suspected/Probable/Confirmed COVID-19 patients to the nearest health care facility
- Windows should be kept open throughout the drive (except for patient)
- Use air conditioner with fresh air intake mode
- Windows cannot be closed (except for patient)
- Use air conditioner with fresh air intake mode
- Drive should always maintain at foot end of ambulance and perform frequent hand hygiene
- Windows should be kept open throughout the drive (except for 2 passengers only)
- Use air conditioner with fresh air intake mode
Pictorial can be downloaded from the link below:
https://drive.google.com/drive/folders/1AG3nD_R0K3D84pZAQMJ1RQhSnBKFOeYo?usp=sharing
ANNEX 8

Appendix 2

Pictorial can be downloaded from the link below:
https://drive.google.com/drive/folders/1AG3nD_R0K3D84pZAQM1RQhSnBKFOeYo?usp=sharing
Pictorial can be downloaded from the link below:
https://drive.google.com/drive/folders/1AG3nD_R0K3D84pZAQMJJ1RQhSnBKFOeYo?usp=sharing
Pictorial can be downloaded from the link below:
https://drive.google.com/drive/folders/1AG3nD_R0K3D84pZAQMJ1RQhSnBKFOeYo?usp=sharing
HOW TO WEAR A MEDICAL MASK SAFELY

**Do’s**
- Wash your hands before touching the mask
- Inspect the mask for tears or holes
- Find the top side, where the metal piece or stiff edge is
- Ensure the colored-side faces outwards
- Place the metal piece or stiff edge over your nose
- Cover your mouth, nose, and chin
- Adjust the mask to your face without leaving gaps on the sides
- Avoid touching the mask
- Remove the mask from behind the ears or head
- Keep the mask away from you and surfaces while removing it
- Discard the mask immediately after use preferably into a closed bin
- Wash your hands after discarding the mask

**Don’ts**
- Do not use a ripped or damp mask
- Do not wear the mask only over mouth or nose
- Do not wear a loose mask
- Do not touch the front of the mask
- Do not remove the mask to talk to someone or do other things that would require touching the mask
- Do not leave your used mask within the reach of others
- Do not re-use the mask

Remember that masks alone cannot protect you from COVID-19. Maintain at least 1 metre distance from others and wash your hands frequently and thoroughly, even while wearing a mask.
BORANG DEKLARASI SARINGAN PENYAKIT COVID-19
(Fasiliti kesihatan boleh membuat modifikasi yang bersesuaian, mengikut keperluan setempat)

<table>
<thead>
<tr>
<th>SILA JAWAB SEMUA SOALAN (TANDAKAN ✓ MANA YANG BERKENAAN)</th>
<th>Ya</th>
<th>Tidak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Adakah anda pernah menghadiri majlis/aktiviti ATAU pergi ke kawasan yang berkait dengan <strong>kluster COVID-19</strong> ATAU kawasan <strong>Zon Merah</strong>(^1). Jika YA, nyatakan nama tempat yang dilawati:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Adakah anda telah melawat/tinggal di <strong>luar negara</strong> dalam masa 14 hari Jika YA, nyatakan negara dilawati:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Adakah anda merupakan <strong>kontak rapat</strong> kepada individu yang disahkan positif COVID-19 dalam masa 14 hari Jika YA, sila jawab soalan a hingga c:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Bekerja bersama dalam jarak dekat atau berkongsi persekitaran bilik/ruang yang sama dengan pesakit COVID-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Tinggal serumah dengan individu yang disahkan positif COVID-19.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gejala</th>
<th>Ya</th>
<th>Tidak</th>
<th>Gejala</th>
<th>Ya</th>
<th>Tidak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demam</td>
<td></td>
<td></td>
<td>Batuk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menggigil</td>
<td></td>
<td></td>
<td>Sesak nafas</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Rigor</em></td>
<td></td>
<td></td>
<td>Kesukaran bernafas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakit badan</td>
<td></td>
<td></td>
<td>Hilang deria bau secara tiba-tiba</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakit kepala</td>
<td></td>
<td></td>
<td>Hilang deria rasa secara tiba-tiba</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakit tekak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muntah atau loya</td>
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<tr>
<td>Cirit-birit</td>
<td></td>
<td></td>
<td>Suhu badan</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Kelesuan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hidung tersumbat secara tiba-tiba atau selesema</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**HENTIKAN COVID-19!**
 KEJUJURAN ANDA BOLEH MENYELAMATKAN RAMAI NYAWA TERMASUK ANGGOTA KESIHATAN.
 BANTULAH KAMI UNTUK MEMBANTU ANDA.

**PASTIKAN ANDA MENDAFTAR DI DALAM MySejahtera**

Tandatangan Pesakit/Penjaga: ____________________________
Tandatangan Anggota Kesihatan Yang Menyaring: ____________________________

Nama: ____________________________________________
No. Kad Pengenalan: ____________________________
Tarikh: ____________________________

Nama: ____________________________________________
No. Kad Pengenalan: ____________________________
Tarikh: ____________________________

\(^1\)Senarai kawasan Zon Merah adalah berdasarkan 14 days moving data mengikut mukim/zon/presint yang terkini yang boleh diperolehi di http://covid-19.moh.gov.my/
References:

3. Policies and Procedures on Infection Prevention and Control – Ministry of Health Malaysia; 2018
4. Disinfection Guidelines 2018- Ministry of Health Malaysia, Malaysia
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