



Ruj. Tuan :

Ruj. Kami :

Tarikh :

KKM.600-29/4/146 JLD.1 (1)  
28 Februari 2020

## SENARAI EDARAN

YBhg. Datuk/Dato' Indera/Dato'/Tuan/Puan,

### EDARAN *GUIDELINES ON COVID-19 MANAGEMENT IN MALAYSIA* NO. 04/2020 (EDISI KEEMPAT)

Dengan segala hormatnya perkara di atas adalah dirujuk.

2. Malaysia telah melaporkan beberapa kes jangkitan virus COVID-19 dalam kalangan bukan warganegara yang datang melawat Malaysia dan juga warganegara. Berikutan dari pengalaman mengendalikan situasi dalam negara serta maklumat terbaru berkaitan jangkitan virus ini yang diperolehi dari penerbitan artikel dan laporan luar negara, *Interim Guidelines Novel Coronavirus Management in Malaysia 2020* No. 03/2020 telah disemak dan ditambahbaik.

3. Bersama ini dikemukakan *Guidelines COVID-19 Management in Malaysia* No. 04/2020 (Edisi Keempat). Mohon kerjasama YBhg. Datuk/Dato' Indera/Dato'/tuan/puan untuk mengedarkan garis panduan ini kepada semua fasiliti kesihatan di bawah tanggungjawab masing-masing. Dokumen ini juga boleh dimuat turun dari laman sesawang rasmi KKM di [www.moh.gov.my](http://www.moh.gov.my). Penggunaan garis panduan ini berkuatkuasa serta merta, bersamaan dengan tarikh surat ini dikeluarkan.

5. Sebarang pertanyaan lanjut mengenainya boleh dikemukakan kepada para pegawai berikut:

Nama Pegawai : Dr. Wan Noraini Wan Mohamed Noor  
No. Telefon : 03 - 8884 4119  
E-mel : [drwnoraini@moh.gov.my](mailto:drwnoraini@moh.gov.my)



CERTIFIED TO ISO 9001 : 2008  
CERT NO : AR 3907

Nama Pegawai : Dr. Siti Aisah Mokhtar  
No. Telefon : 03 - 8884 2115  
E-mel : aisahmokhtar@moh.gov.my

6. Perhatian dan kerjasama YBhg. Datuk/Dato' Indera/Dato'/tuan/puan berhubung perkara ini amat kami hargai dan didahului dengan ucapan terima kasih.

Sekian.

**" BERKHIDMAT UNTUK NEGARA "**

**Saya yang menjalankan amanah,**



**(DATO' DR. CHONG CHEE KHEONG)**

Timbalan Ketua Pengarah Kesihatan (Kesihatan Awam)  
Kementerian Kesihatan Malaysia

s.k.

Ketua Pengarah Kesihatan  
Kementerian Kesihatan Malaysia

Timbalan Ketua Pengarah Kesihatan (Perubatan)  
Kementerian Kesihatan Malaysia

Timbalan Ketua Pengarah Kesihatan  
(Penyelidikan & Sokongan Teknikal)  
Kementerian Kesihatan Malaysia

Pengarah  
Bahagian Kawalan Penyakit

## **SENARAI EDARAN**

Pengarah Kanan  
Bahagian Perkhidmatan Farmasi  
Kementerian Kesihatan Malaysia

Pengarah Kanan  
Program Kesihatan Pergigian  
Kementerian Kesihatan Malaysia

Pengarah  
Bahagian Perkembangan Perubatan  
Kementerian Kesihatan Malaysia

Pengarah  
Bahagian Pembangunan Kesihatan Keluarga  
Kementerian Kesihatan Malaysia

Pengarah  
Bahagian Perkembangan Kesihatan Awam  
Kementerian Kesihatan Malaysia

Pengarah  
Institut Penyelidikan Perubatan (IMR)

Pengarah  
Makmal Kesihatan Awam Kebangsaan (MKAK)  
Sg. Buloh, Selangor

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Perlis

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Kedah

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Pulau Pinang

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Perak

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Selangor

Pengarah Kesihatan Negeri  
Jabatan Kesihatan WP Kuala Lumpur & Putrajaya

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri N. Sembilan

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Melaka

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Johor

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Pahang

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Terengganu

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Kelantan

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Sarawak

Pengarah Kesihatan Negeri  
Jabatan Kesihatan Negeri Sabah

Pengarah Kesihatan Negeri  
Jabatan Kesihatan WP Labuan

Pengarah  
Hospital Kuala Lumpur

Pengarah  
Institut Kanser Negara

Pengarah  
Pusat Darah Negara

Ketua Pengarah Perkhidmatan Kesihatan  
Markas Angkatan Tentera Malaysia  
Bahagian Perkhidmatan Kesihatan  
Kementerian Pertahanan Malaysia

*Chief Executive Officer (CEO)*  
Institut Jantung Negara

Pengarah  
Pusat Perubatan Universiti Malaya  
Lembah Pantai, Kuala Lumpur

Pengarah  
Hospital Universiti Sains Malaysia  
Kubang Kerian, Kelantan

Pengarah  
Hospital Canselor Tuanku Muhriz UKM  
Cheras, Selangor

Pengarah  
Hospital Universiti Putra Malaysia  
Serdang, Selangor

Ketua Pengarah Klinikal  
Hospital Universiti Teknologi MARA  
Sungai Buloh, Selangor

*President*  
*Malaysian Medical Association (MMA)*  
Tingkat 4, Bangunan MMA  
124, Jalan Pahang  
53000 Kuala Lumpur

*President*  
*Academy of Family Physicians of Malaysia*  
Suite 4-3, Tingkat 4, Bangunan MMA  
124, Jalan Pahang  
53000 Kuala Lumpur

*Master*  
*Academy of Medicine of Malaysia*  
G-1 Bangunan Akademi Perubatan  
210, Jalan Tun Razak  
50400 Kuala Lumpur

*President*  
*Association of Private Hospitals of Malaysia*  
A-17-01, Menara UOA Bangsar  
No. 5, Jalan Bangsar Utama 1  
59000 Kuala Lumpur

*President*  
*Primary Care Doctor's Organisation Malaysia (PCDOM)*  
2, Jalan SS3/31,  
University Garden,  
47300, Petaling Jaya,  
Selangor

*President*  
*Medical Practitioners Coalition Association of Malaysia (MPCAM)*  
No. 17-2, Jalan PJS 8/12,  
Dataran Mentari (Sunway)  
46150 Petaling Jaya  
Selangor

*Chief Executive Officer (CEO)*  
*Malaysia Healthcare Travel Council (MHTC)*  
Level 28, Lot 28-01, Tower 2,  
Menara Kembar Bank Rakyat  
Jalan Travers  
50470 Kuala Lumpur

**Guidelines COVID-19 Management In Malaysia**  
**No. 4/2020 (updated on 26 February 2020)**

<b>No.</b>	<b>Items</b>	<b>Page</b>
1.	<b>Annex 1:</b> Case Definition	1
2.	<b>Annex 2:</b> Management of PUI	2
3.	<b>Annex 2a:</b> Management of PUI Not Admitted	3
4.	<b>Annex 2b :</b> Management of PUI Admitted	7
5.	<b>Annex 2c :</b> Screening And Triaging	8
6.	<b>Annex 2d :</b> Work Process In Management of Suspected COVID-19 Patients in Emergency And Trauma Department	13
7.	<b>Annex 2e :</b> Clinical Management of Confirmed Case	14
8.	<b>Annex 3:</b> Senarai Hospital Rujukan Bagi Mengendalikan Kes <i>PUI</i> dan <i>Confirmed COVID-19</i>	16
9.	<b>Annex 4a:</b> Agihan Makmal Yang Mengendalikan Sampel Klinikal Mengikut Lokasi Fasiliti Yang Menghantar	20
10.	<b>Annex 4b:</b> Senarai Pegawai Untuk Dihubungi Untuk Penghantaran Sampel Di Luar Waktu Pejabat, Hujung Minggu Dan Cuti Umum	21
11.	<b>Annex 5a :</b> Guidelines On Laboratory Testing For COVID-19 For Patients Under Investigations	26
12.	<b>Annex 5b:</b> Laboratory Testing For Patient	28
13.	<b>Annex 5c:</b> Triple Layer Packaging	30
14.	<b>Annex 5d :</b> Clinical Sampling Process for OPS NPS at The Field	31
15.	<b>Annex 6a:</b> Health Alert Card	38
16.	<b>Annex 6b :</b> Mental Health Alert Card	43
17.	<b>Annex 7:</b> Notification Form	45
18.	<b>Annex 8 :</b> The Infection Prevention And Control (IPC) Measures	46
19.	<b>Annex 9 :</b> Management Of COVID-19 At Point Of Entry	56
21.	<b>Appendix 1 :</b> Passenger Locator Form (as per WHO/ICAO)	61
22.	<b>Appendix 2 :</b> Report Of Measures Taken On Board The Flight	62
23.	<b>Appendix 3 :</b> Clerking Sheet Template At Malaysia Point Of Entry	63

No.	Items	Page
24.	<b>Appendix 4</b> : Flow Chart For Screening Of Travellers And Crews Arriving From China At International Point Of Entry	65
25.	<b>Annex 10a</b> : Home Assessment Tool (Bahasa Malaysia)	67
26.	<b>Annex 10b</b> : Home Assessment Tool (English)	68
27	<b>Annex 10C</b> : Self Assessment Tool For Student From China	70
28.	<b>Annex 11:</b> Protocol For Ambulance Transfer For Patient Under Investigation (PUI) COVID-19.	72
29.	<b>Annex 12</b> : Management Of Close Contacts of Confirmed Case	74
30.	<b>Annex 13</b> : Field Response Activity	77
31.	<b>Annex 14</b> : Perintah Pengawasan Dan Pemerhatian Di Rumah Kediaman	80
32.	<b>Annex 15</b> : Borang Pemantauan Harian Bagi Kontak Rapat Kepada Kes Yang Berpotensi Dijangkiti COVID-19	81
33.	<b>Annex 16</b> : Borang Senarai Kontak rapat Kepada Kes Confirmed COVID-19	82
34.	<b>Annex 17a</b> : Pelepasan Dari Menjalani Perintah Pengawasan Dan Pemerhatian Di Rumah Kediaman	83
35.	<b>Annex 18</b> : Borang Pemantauan Home Surveillance	84
36.	<b>Annex 19</b> : Database senarai PUI	85
37.	<b>Annex 20</b> : Interim Guideline For Handling Dead Bodies Of Suspected / Probable /Confirmed COVID-19 Death	86
38.	<b>Appendix 5</b> : Flow Chart on Dead Body Management of confirmed COVID-19 from Ward/ETD	96
39.	<b>Appendix 6</b> : Flow Chart on Dead Body Management of Suspected COVID-19 (BID) to Forensic	97
40.	<b>Annex 21</b> : Management Of Healthcare Worker (HCW) During COVID-19 Outbreak	98
41.	<b>Annex 22</b> : Guidelines On Management Of Coronavirus Disease 2019 (COVID-19) In Surgery	114
42.	<b>Annex 23</b> : Guideline On Management Of Coronavirus Disease 2019 (COVID-19) In Pregnancy	119
43.	<b>Annex 24</b> : Workflow And Work Process For Radiological Examination During COVID-19 Outbreak	130



## **Case Definition of COVID-19**

### **1. PUI of COVID-19**

Fever **OR** acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)

**AND**

Travel to or reside in affected countries<sup>1</sup> in the 14 days before the onset of illness **OR**

Close contact<sup>2</sup> in 14 days before illness onset with a confirmed case of COVID-19

### **2. Confirmed Case of COVID-19:**

A person with laboratory confirmation of infection with the COVID-19

<sup>1</sup>affected Countries as for 26 February 2020:

- i. China (including Hong Kong, Macau and Taiwan)
- ii. South Korea
- iii. Japan
- iv. Italy
- v. Iran

<sup>2</sup>close contact defined as :

- Health care associated exposure without appropriate PPE (including providing direct care for COVID-19 patients, working with health care workers infected with COVID-19, visiting patients or staying in the same close environment of a COVID-19 patient).
- Working together in close proximity or sharing the same classroom environment with a with COVID-19 patient
- Traveling together with COVID-19 patient in any kind of conveyance
- Living in the same household as a COVID-19 patient

Note :

1.Please note that **transit** in an airport located in affecting countries is **not** considered as having travelled to that country.

## MANAGEMENT OF PUI

### ADMISSION CRITERIA

1. PUI COVID-19 who is clinically ill
2. PUI COVID-19 with uncontrolled medical conditions, immunocompromised status, pregnant women, extremes of age (< 2 or > 65 years old)
3. Symptomatic close contact of a confirmed case regardless of severity of illness
4. Laboratory confirmed case (asymptomatic or symptomatic)
5. Not suitable for home surveillance\* (i.e no carer, stay at hotel/hostel/ no private transport).

### CRITERIA FOR DISCHARGE FROM WARD

- Afebrile and clinical condition improved in 24 hours  
AND
- 2 samples at least 24 hours apart are negative

#### **\* Checklist for suitability of PUI to undergo home surveillance:**

(The checklist is provided as a guide, hence the assessment of patient suitability for home surveillance is tailored from one patient to another).

1. has a separate bedroom with en-suite bathroom (preferable); if not, common bathroom with
2. frequent disinfection
3. has access to food and other necessities
4. has access to face mask, glove and disinfectant at home
5. able to seek medical care if necessary and return with own private transport
6. able to adhere to instruction to follow home surveillance order
7. able to stay away (at least 2 meter apart) from the high-risk household members (eg. people > 65 years old, young children <2 years, pregnant women, people who are immunocompromised or who have chronic lung, kidney, heart disease)

## MANAGEMENT OF PUI NOT ADMITTED

**(Refer to the flowchart below)**

1. Patients who come to the respective health facilities should be screened for suspected COVID-19 at triage.
  - a. Person who come to the clinic or emergency hospitals shall be screened using Case Definition For Person Under Investigation (PUI): **Refer Annex 1**
  - b. A special area should be set up for COVID-19, to which he / she can come directly and to be assessed there.
    - i. Basic examination of PUI in isolation area / room
      - Taking vital sign eg Respiratory rate, Temperature
      - Using full PPE while taking history and examine the PUI
    - ii. The PUI should be managed by a dedicated team where possible.

## PROCESS OF REFERRING TO SCREENING HOSPITAL

1. Consultation with Physician-on-call of screening hospital for decision on:
  - Further review of patients at screening hospitals
  - Admission of PUI to admitting hospital who fulfilled admission criteria (Annex 2)
  - PUI not admitted but put on home surveillance (Annex 2a)
2. Those PUI who **do not fulfilled** admission criteria he/she shall be transfer to screening hospital / centre using either:
  - **arrangement after discussing with PKD OR**
  - own transport **OR**
  - arrange for designated ambulance from MECC.
3. Those PUI who **fulfilled admission criteria**, he/she shall be transferred to admitting hospital using designated ambulance as above.

#### 4. Management at screening hospital / centre

- PUI from GP/private hospital shall be reassessed by screening hospital / centre and either will be admitted to the ward or not at admitting hospital
- Screening hospital / centre need to inform the admitting hospital if admission needed
- PUI shall be sent to the admitting hospital using **designated ambulance**.
- Those PUI who do not fulfill admission criteria:
  - Sample shall be taken at screening hospital / centre
  - They shall send home and put under Daily Home Surveillance for 14 days (Annex 15a)
  - Samples of PUI should be send to IMR
  - Explain to patient regarding home surveillance and COVID-19 infection and risk of transmission to family and community
    - Provide Home Assessment Tool (Annex 10a,10b)
    - Notify PUI COVID-19 to PKD.

**All PUI either being fit criteria for admission or not shall be notified to the nearest PKD through telephone, fax or email using notification form (Annex 7) and put under home surveillance.**

#### **INFECTION, PREVENTION AND CONTROL (IPC)**

5. All health care workers involved in managing the PUI shall adhere to the Infection and Prevention Control Guideline at all time.
6. Personal Protective Equipment (PPE) shall be used per recommendation below:
  - a. Registration counter
    - Surgical mask
    - Glove
    - Maintain distance >1m
    - Frequent hand hygiene/ strict hand hygiene adherence, preferably with alcohol-based hand rub.
  - b. Examining PUI
    - Disposable gown (L4)
    - Face shield/goggle
    - Mask N95

- Gloves
- Head cover
- Plastic apron

c. Driver (not involved in patient care)

- Face mask - Surgical mask
- Gown
- Glove

d. Paramedic and driver who directly involve in patient care:

- Disposable gown (L4)
- Face shield/goggle
- Mask N95
- Gloves
- Head cover
- Plastic apron

7. Degowning of PPEs shall be done at the screening hospital or admitting hospital after transfer of PUI to the hospital.
8. Decontamination of designated ambulance at the screening or treating hospital by the ambulance driver

\*\* screening hospital is listed in Annex 3. However, JKN may identify appropriate screening centre if necessary. Please consult with respective PKD/JKN.

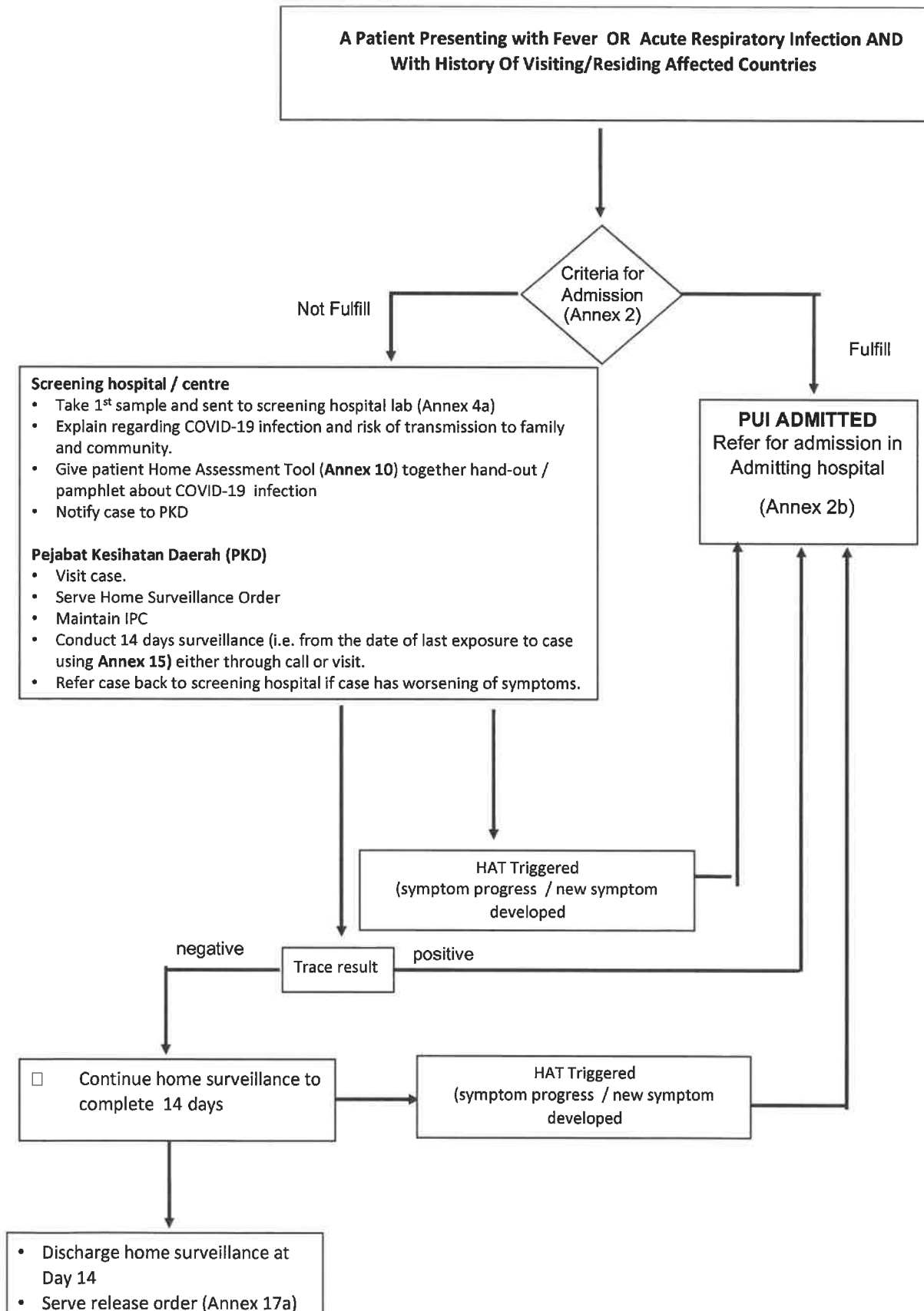
## MANAGEMENT OF PUI NOT ADMITTED

**(Refer to the flowchart below)**

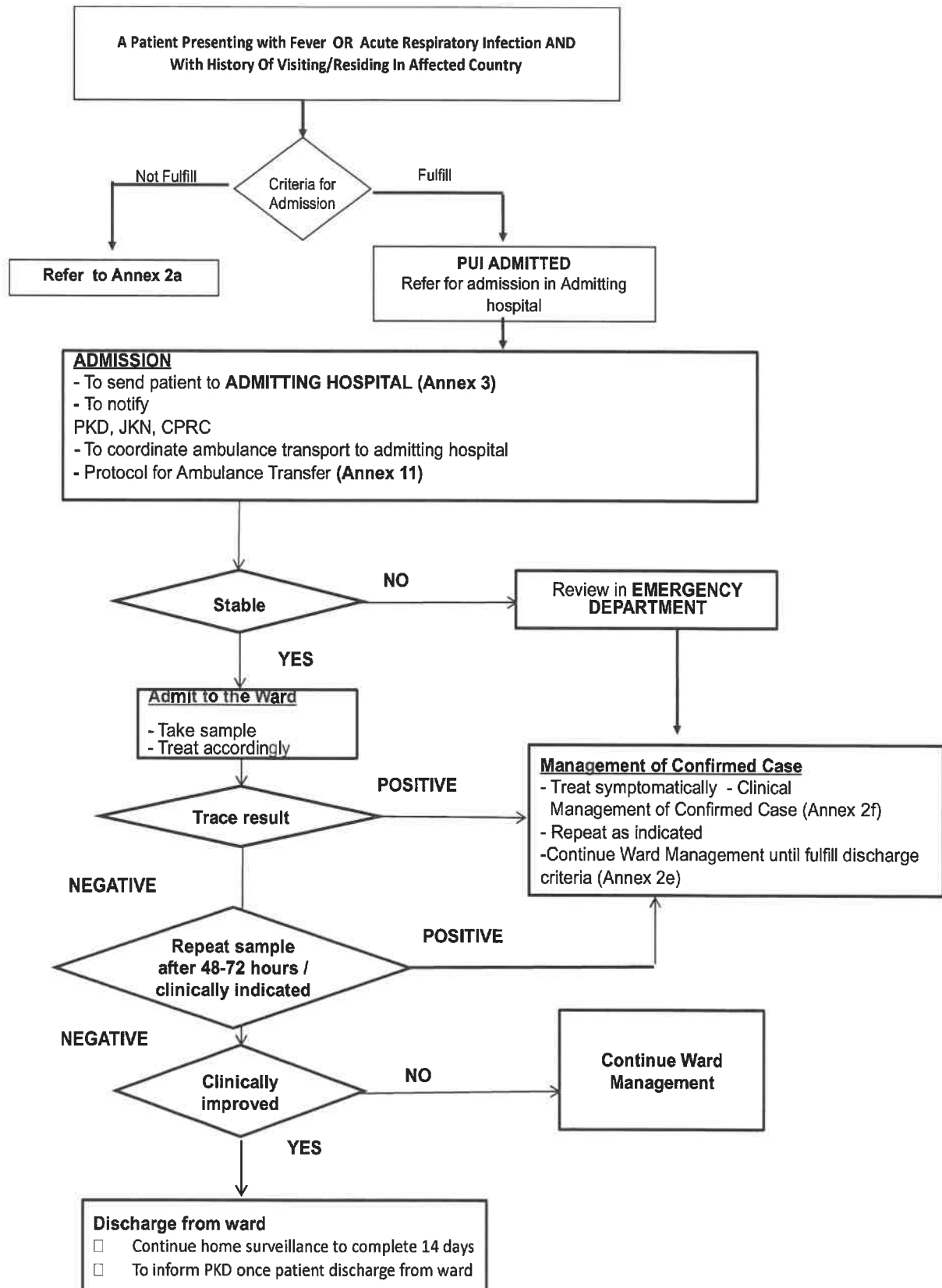
1. Patients who come to the respective health facilities should be screened for suspected COVID-19 at triage.
  - a. Person who come to the clinic or emergency hospitals shall be screened using Case Definition For Person Under Investigation (PUI): **Refer Annex 1**
  - b. A special area should be set up for COVID-19, to which he / she can come directly and to be assessed there.
    - i. Basic examination of PUI in isolation area / room
      - Taking vital sign eg Respiratory rate, Temperature
      - Using full PPE while taking history and examine the PUI
    - ii. The PUI should be managed by a dedicated team where possible.

## PROCESS OF REFERRING TO SCREENING HOSPITAL

1. Consultation with Physician-on-call of screening hospital for decision on:
  - Further review of patients at screening hospitals
  - Admission of PUI to admitting hospital who fulfilled admission criteria (Annex 2)
  - PUI not admitted but put on home surveillance (Annex 2a)
2. Those PUI who **do not fulfilled** admission criteria he/she shall be transfer to screening hospital / centre using either:
  - **arrangement after discussing with PKD OR**
  - own transport **OR**
  - arrange for designated ambulance from MECC.
3. Those PUI who **fulfilled admission criteria**, he/she shall be transferred to admitting hospital using designated ambulance as above.



### MANAGEMENT OF PUI ADMITTED TO WARD





## SCREENING AND TRIAGING

### 1. PRIVATE FACILITIES

#### Private Clinic

- **Provide good visual signages** in all relevant languages requesting patients to declare symptoms, travel or contact with a confirmed case
- Through verbal and visual cues, identify those with respiratory symptoms and **offer masks and hand sanitizer**
- **Rapidly assess verbally** if the patient has epidemiological links that might qualify him/her as a PUI. (**refer to Annex 1**)
  - If uncertain, discuss with medical / Infectious disease specialist at nearest screening hospital
- If PUI
  - place patient in a pre-designated waiting area<sup>1</sup>
  - Take patients identifiers (name, IC/passport, telephone number, address) for notification to PKD (and arranging transport if necessary)
  - Patient may use his/her own transport to nearest screening hospital (public transport not allowed)
  - If patient does not have private transportation, contact PKD for transport arrangement.
- After patient leaves – disinfect waiting area

<sup>1</sup>Pre-designated area

- more than 1m away from other patients and staff
- minimal surrounding items to minimize items requiring disinfecting

#### Private Hospital

**Provide good visual signages** in all relevant languages requesting patients to declare symptoms, travel or contact with a confirmed case

Through verbal and visual cues, identify those with respiratory symptoms and **offer masks and hand sanitizer**

**Clinically assess the severity** and whether the patient qualifies as a PUI (in isolation room using appropriate).

- If uncertain, discuss with medical / Infectious disease specialist at nearest screening hospital

If severe PUI

- Contact admitting medical / ID specialist at Admitting Hospital to arrange for admission.
- If case accepted, to contact PKD to arrange transportation.

If mild PUI:

- Take patients identifiers (name, IC/passport, telephone number, address) for notification to PKD (and arranging transport if necessary)
  - Patient may use his/her own transport to nearest screening hospital (public transport not allowed)
  - If patient does not have private transportation, contact PKD for transport arrangement.
- After patient leaves – disinfect isolation room
  - If the patient does not fulfill PUI criteria, but clinical suspicion remains, take samples and send to designated private laboratories (Annex 4a)

## 2. GOVERNMENT FACILITIES

- Patients who come to the respective health facilities should be screened for suspected COVID-19 at triage.
- A special area should be set up for PUI of COVID-19, to which he / she can come directly and to be assessed there.
- The PUI should be managed by a dedicated team where possible.
- **WHEN SHOULD YOU SUSPECT COVID-19?**

COVID-19 is to be suspected when a patient presents to Triage Counter with the following:

Fever **OR** acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)  
**AND**  
 Travel to Affected in the 14 days before the onset of illness **OR**  
 Close contact<sup>1</sup> in 14 days before illness onset with a confirmed case of COVID-19

- Should a patient fulfill the description, to institute infection prevention and control measures as the following:
  - ✓ Place patients at least 1 meter away from other patients or health care workers. Clinics and Emergency Departments are to prepare an isolation area / room for patients.
  - ✓ Ensure strict hand hygiene for all clinic staffs and suspected patient.
  - ✓ Provide surgical mask to patients if not contraindicated.
  - ✓ Personal protective equipment as per recommendation should be worn at all times.
  - ✓ After the encounter, ensure proper disposal of all PPE that have been used

- ✓ Decontamination of the isolation area and equipments used should be done.
- A group of suspected PUI who come to any healthcare facilities in a specific vehicle (e.g. bus, van) should be contained in that vehicle until being evaluated by a dedicated team to minimize exposure to healthcare workers and other patients.

**NOTE:**

It is not always possible to identify patients with COVID-19 early because some have mild or unusual symptoms. For this reason, it is important that health care workers apply standard precautions consistently with all patients – regardless of their diagnosis in all work practices all the time.

## WORK PROCESS IN MANAGEMENT OF SUSPECTED COVID-19 PATIENTS IN EMERGENCY AND TRAUMA DEPARTMENT

### GENERAL GUIDES TO ALL EMERGENCY AND TRAUMA DEPARTMENT (ETD)

1. All Emergency Trauma Departments should be prepared to accept the following patients scenarios:
  - a. Walk-in patients to be screened for criteria as Person under Investigation (PUI).
  - b. Referred patients send for Screening Purpose. This will only apply if the ETD is regarded as Screening Centre based on MOH Guidelines.
  - c. Referred patients send for Admission Purpose. This will only apply if the ETD is part of the hospital regarded as Admitting Hospital based on MOH Guidelines (Annex 3).
2. All ETDs should have their internal pathway to screen walk-in patients from triage.

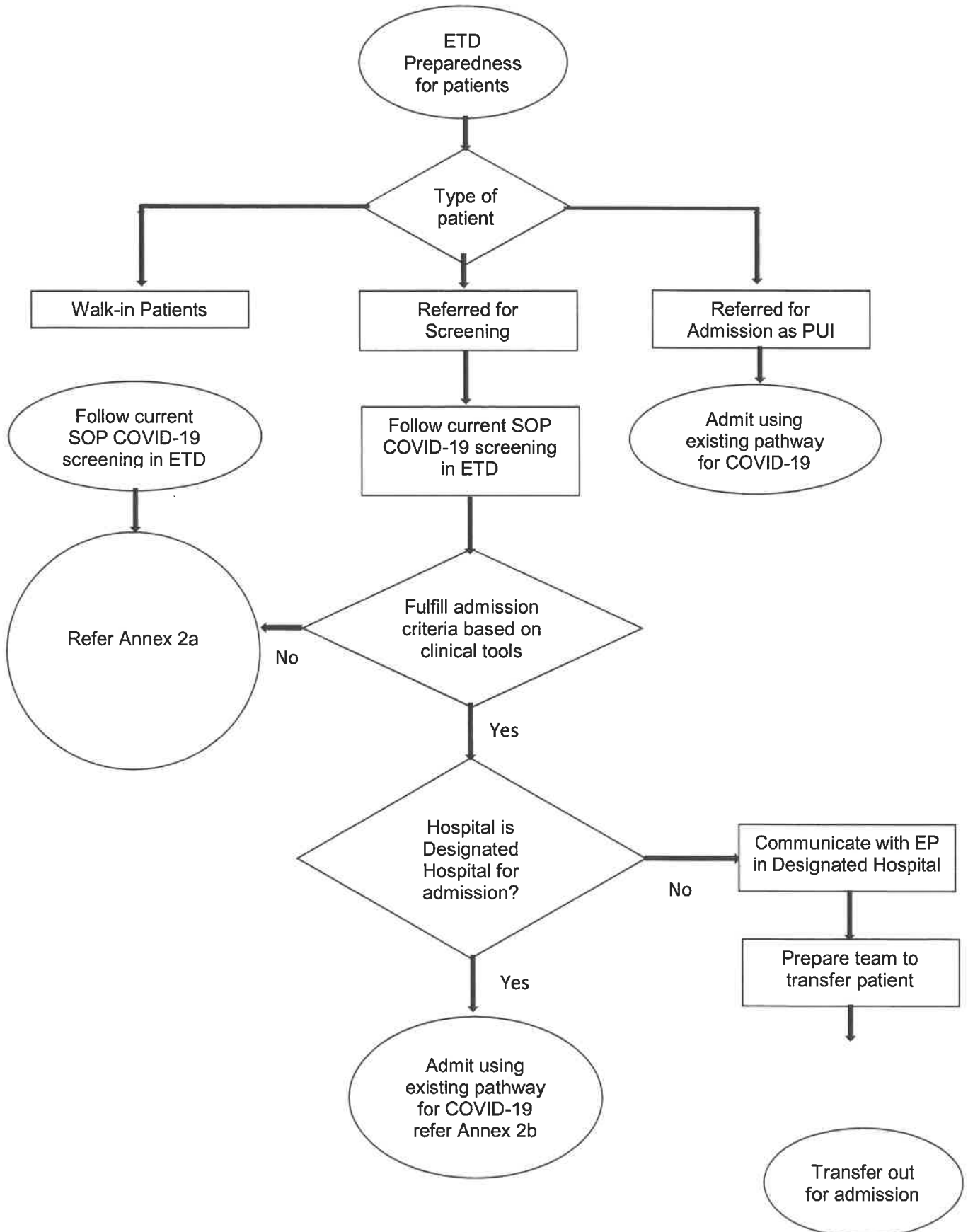
### ETD MANAGEMENT OF PATIENTS REFERRED FOR SCREENING.

1. The **Primary Team Physician** (ID Physician, Physician or Paediatrician) has the responsibility to inform the dedicated Screening ETD Hospitals (based on the MOH list of screening hospitals) regarding such patients.
2. The ETDs will screen the patients using the existing screening method similar for walk-in patients.
3. Outcome for these patients are:
  - a. Fulfill the criteria as PUI for admission in the hospital.
  - b. Fulfill the criteria as PUI requiring transfer to Admitting Hospital.
  - c. Fulfill the criteria as PUI but not require admission to hospital, patient will out under home surveillance.
  - d. Does **NOT** fulfill the criteria as PUI, thus discharged home
4. PUI not admitted and send home for surveillance will follow the Annex 2a.
5. Patients that are admitted to the hospital will follow existing hospital's current process for admitting COVID-19 patients (Annex 2b).
6. Patients that are transferred to another facility for admission will be transported based on the current agreed local protocol for interfacility transfer. EP to EP communication between referring and referral centre should occur prior to transport.

**ETD MANAGEMENT OF PATIENTS REFERRED FOR ADMISSION.**

1. The **Primary Team Physician** has the responsibility to inform the ETD regarding such patients.
2. Patients that are admitted to the hospital will follow existing hospital's current process for admitting COVID-19 patients.

**WORKFLOW OF MANAGING SUSPECTED PATIENTS OF COVID-19cOV IN EMERGENCY AND TRAUMA DEPARTMENT**



## CLINICAL MANAGEMENT OF CONFIRMED CASE

### Clinical Classification of Syndrome Associated With COVID-19

Severity	Symptoms and Signs
Mild to moderate	<ul style="list-style-type: none"> <li>• Fever, respiratory symptoms with stable vital signs</li> <li>• Child with non-severe pneumonia has cough or difficulty in breathing+ fast breathing (define as below):               <ul style="list-style-type: none"> <li>• &lt;2 months:&gt;&gt;60 breaths/min</li> <li>• 2-11months:&gt;&gt; 50 breaths/min</li> <li>• 1-5 years:&gt;&gt; 40 breaths/min</li> </ul> </li> </ul>
Severe	<ul style="list-style-type: none"> <li>• Respiratory distress:               <ul style="list-style-type: none"> <li>• RR&gt; 30/min;</li> <li>• SpO<sub>2</sub> ≤93% at rest;</li> <li>• PaO<sub>2</sub>/FiO<sub>2</sub>≤300mmHg</li> </ul> </li> <li>• Child with cough or difficulty in breathing, plus at least one of the following:               <ul style="list-style-type: none"> <li>• central cyanosis or SpO<sub>2</sub>&lt;90%</li> <li>• severe respiratory distress (e.g. grunting, very severe chest indrawing)</li> <li>• sign of pneumonia with general danger sign (inability to breastfeed or drink, lethargy or unconsciousness or seizures (fit)</li> <li>• In very young child: respiratory exhaustion or apnoea</li> </ul> </li> </ul> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> <li>• In shock and/or multi-organ failure</li> <li>• Shock in children: any hypotension (SBP&lt;5<sup>th</sup> centile for age) with 2-3 of the followings:               <ul style="list-style-type: none"> <li>• altered mental status</li> <li>• tachycardia or bradycardia (HR&lt;90 bpm or &gt;160 bpm for infants: HR&lt;70 bpm or&gt;150bpm in children</li> <li>• prolonged capillary refill time OR</li> <li>• Warm vasodilation with bounding pulses; tachypnoea; mottled skin or presence of petechiae/purpura; increased lactate; decrease urine output or temperature instability.</li> </ul> </li> </ul>

## 1) General Care

- a. Supportive care and symptomatic treatment, optimal nutritional support, maintain fluid and electrolytes balance, and close monitoring.
- b. Monitor vital signs (BP/PR/RR/SpO<sub>2</sub>) 12 hourly to 8hourly with increase in monitoring during intensive care.
- c. Blood investigations, e.g. trend FBC, CRP, LFT, RP, coagulation, Blood culture according to clinical indications. ABG if needed according to severity of disease, inform laboratory staff before sending specimens.
- d. Supplemental oxygen according to SpO<sub>2</sub>.
- e. Monitor sugar when needed.
- f. For children who needs bronchodilator therapy e.g. Salbutamol; avoid using nebulizer. Instead use MDI with spacer.
- g. Ensure good hydration in children by encouraging their usual milk/diets.

### Note:

Although recent publications suggest that newer High Flow Nasal oxygenation (HFNO) and Non-invasive ventilation (NIV) systems with good interface fitting do not create widespread dispersion of exhaled air and therefore it is thought to be associated with low risk of airborne transmission. In general, the use of **non-invasive ventilation is discouraged** when managing patient with COVID-19.

For children with severe disease: preferred to be managed in intensive care unit or neonatal intensive care unit with isolation facilities.

## 2) Specific Treatment

- No specific treatment for COVID-19 infection is currently available.
- There are limited data on inhalational  $\alpha$ -interferon therapy and lopinavir/ritonavir extrapolated from study in SARS-associated infections. Likewise, there is no conclusive data to prove the benefit of IV immunoglobulin.
- Corticosteroids should be avoided unless indicated for other reasons (for example, chronic obstructive pulmonary disease exacerbation or septic shock per protocol), because of the potential for prolonging viral replication as observed in MERS-CoV patients.
- Kindly discuss with ID physician or ID paediatricians for specific treatment.



Senarai *Designated Hospital* Bagi Mengendalikan Kes COVID-19

## A) Hospital KKM

NEGERI	BIL	SCREENING HOSPITALS	BIL	ADMITTING HOSPITALS* FOR 'PUI' & 'CONFIRMED COVID-19'
PERLIS	1	Hospital Tuanku Fauziah, Kangar	1	Hospital Tuanku Fauziah, Kangar
KEDAH	2	Hospital Sultanah Bahiyah, Alor Setar	2	Hospital Sultanah Bahiyah, Alor Setar
	3	Hospital Sultan Abdul Halim, Sg. Petani		
	4	Hospital Kulim		
	5	Hospital Sultanah Maliha, Langkawi	3	Hospital Sultanah Maliha, Langkawi
PULAU PINANG	6	Hospital Pulau Pinang	4	Hospital Pulau Pinang
	7	Hospital Seberang Jaya		
	8	Hospital Bukit Mertajam		
	9	Hospital Kepala Batas		
PERAK	10	Hospital Raja Permaisuri Bainun, Ipoh	5	Hospital Raja Permaisuri Bainun, Ipoh
	11	Hospital Taiping		
	12	Hospital Teluk Intan		
	13	Hospital Seri Manjung		
	14	Hospital Slim River		
SELANGOR	15	Hospital Tengku Ampuan Rahimah Klang	6	Hospital Sungai Buloh
	16	Hospital Ampang		
	17	Hospital Selayang		
	18	Hospital Serdang		
	19	Hospital Sungai Buloh		

<b>NEGERI</b>	<b>BIL</b>	<b>SCREENING HOSPITALS</b>	<b>BIL</b>	<b>ADMITTING HOSPITALS* FOR 'PUI' &amp; 'CONFIRMED COVID-19'</b>
	20	Hospital Shah Alam		
	21	Hospital Kajang		
	22	Hospital Banting		
WP KL/ PUTRAJAYA	23	Hospital Kuala Lumpur	7	Hospital Kuala Lumpur
	24	Hospital Putrajaya		
NEGERI SEMBILAN	25	Hospital Tuanku Jaafar, Seremban	8	Hospital Tuanku Jaafar, Seremban
	26	Hospital Jempol		
	27	Hospital Tampin		
	28	Hospital Tuanku Ampuan Najihah, Kuala Pilah		
MELAKA	29	Hospital Melaka	9	Hospital Melaka
	30	Hospital Alor Gajah		
	31	Hospital Jasin		
JOHOR	32	Hospital Sultan Ismail, Johor Bahru	10	Hospital Sultanah Aminah, Johor Bahru (Hospital Permai)
	33	Hospital Sultanah Nora Ismail, BatuPahat		
	34	Hospital Pakar Sultanah Fatimah, Muar		
	35	Hospital Sultanah Aminah, Johor Bahru		
	36	Hospital Enche' Besar Hj Kalsom, Kluang		
	37	Hospital Segamat		
PAHANG	38	Hospital Tengku Ampuan Afzan, Kuantan	11	Hospital Tengku Ampuan Afzan, Kuantan
	39	Hospital Sultan Hj Ahmad Shah, Temerloh		
	40	Hospital Kuala Lipis		

<b>NEGERI</b>	<b>BIL</b>	<b>SCREENING HOSPITALS</b>	<b>BIL</b>	<b>ADMITTING HOSPITALS* FOR 'PUI' &amp; 'CONFIRMED COVID-19'</b>
TERENGGANU	41	Hospital Sultanah Nur Zahirah, Kuala Terengganu	12	Hospital Sultanah Nur Zahirah, Kuala Terengganu
	42	Hospital Hulu Terengganu		
	43	Hospital Kemaman		
KELANTAN	44	Hospital Raja Perempuan Zainab II, Kota Bharu	13	Hospital Raja Perempuan Zainab II, Kota Bharu
	45	Hospital Tanah Merah		
	46	Hospital Sultan Ismail Petra, Kuala Krai	14	Hospital Sultan Ismail Petra, Kuala Krai
	47	Hospital Tumpat	15	Hospital Tumpat
SABAH	48	Hospital Queen Elizabeth I, Kota Kinabalu	16	Hospital Queen Elizabeth I, Kota Kinabalu
	49	Hospital Duchess Of Kent, Sandakan	17	Hospital Duchess Of Kent, Sandakan
	50	Hospital Tawau	18	Hospital Tawau
	51	Hospital Wanita dan Kanak- kanak, Likas	19	Hospital Wanita dan Kanak- kanak, Likas
	52	Hospital Lahad Datu	20	Hospital Lahad Datu
	53	Hospital Keningau	21	Hospital Keningau
SARAWAK	54	Hospital Umum Sarawak, Kuching	22	Hospital Umum Sarawak, Kuching
	55	Hospital Miri	23	Hospital Miri
	56	Hospital Bintulu	24	Hospital Bintulu
	57	Hospital Sibul	25	Hospital Sibul
	58	Hospital Sarikei		
WP LABUAN	59	Hospital Labuan	26	Hospital Labuan

**B) Hospital Bukan KKM**

<b>NEGERI</b>	<b>BIL</b>	<b>SCREENING HOSPITALS</b>	<b>BIL</b>	<b>ADMITTING HOSPITALS* FOR 'PUI' &amp; 'CONFIRMED COVID-19'</b>
---------------	------------	----------------------------	------------	--

WP KL/ PUTRAJAYA	1	Pusat Perubatan Universiti Malaya	1	Pusat Perubatan Universiti Malaya
---------------------	---	--------------------------------------	---	--------------------------------------

**\* Admitting Hospitals are hospitals with:**

1. Appropriate and adequate isolation facilities
2. Where a core team of health care workers have been trained in managing patients with COVID-19.

**\* JKN may added additional screening centre if necessary.**

## SENARAI MAKMAL YANG MENJALANKAN UJIAN RT-PCR BAGI COVID-19

<b>A. FASILITI KESIHATAN KERAJAAN</b>		
<b>SAMPEL DI KALANGAN KES</b>		
1.	Perlis	Hospital Sultanah Bahiyah, Alor Setar, Kedah
2.	Kedah	Hospital Sultanah Bahiyah, Alor Setar, Kedah
3.	Pulau Pinang	Hospital Pulau Pinang
4.	Perak	Hospital Raja Permaisuri Bainun, Ipoh, Perak
5.	Selangor	Hospital Sungai Buloh, Selangor
6.	WP Kuala Lumpur & Putrajaya	Hospital Kuala Lumpur
7.	Negeri Sembilan	Hospital Tuanku Jaafar, Seremban, N. Sembilan
8.	Melaka	Hospital Melaka
9.	Johor	Hospital Sultanah Aminah, Johor Bahru, Johor
10.	Pahang	Hospital Tengku Ampuan Afzan, Kuantan, Pahang
11.	Terengganu	Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu
12.	Kelantan	Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan
13.	Sarawak	Hospital Umum Sarawak, Kuching
14.	Sabah	Makmal Kesihatan Awam, Kota Kinabalu, Sabah
15.	WP Labuan	Makmal Kesihatan Awam, Kota Kinabalu, Sabah
<b>SAMPEL DI KALANGAN KONTAK</b>		
1.	Zon Tengah( Negeri Sembilan, Melaka, Selangor, WP Kuala Lumpur,WP Putrajaya, Pahang) dan Sarawak	Makmal Kes. Awam Kebangsaan (MKAK) Sg. Buloh, Selangor
2.	Zon Utara( Perlis, Pulau Pinang, Kedah, Perak)	Makmal Kesihatan Awam, Ipoh, Perak
3.	Zon Selatan( Johor)	Makmal Kesihatan Awam, Johor Bharu, Johor
4.	Zon Timur (Kelantan, Terengganu)	Makmal Kesihatan Awam, Kota Bharu, Kelantan
5.	Sabah, WP Labuan	Makmal Kesihatan Awam, Kota Kinabalu, Sabah
6.	Sarawak	Hospital Umum Sarawak
<b>SAMPEL SERUM DI KALANGAN KES DAN KONTAK RAPAT DENGAN KES YANG DISAHKAN (TERMASUK ANGGOTA KESIHATAN), YANG DIKESAN MELALUI AKTIVITI ACD DI LAPANGAN</b>		
1.	Seluruh negara	Unit Virologi, Institut Penyelidikan Perubatan (IMR), Kuala Lumpur
<b>B. FASILITI KESIHATAN SWASTA</b>		
1.	Seluruh negara	Lablink(M) Sdn Bhd (KPJ)
		Pantai Premier Pathology Sdn Bhd
		Neogenix Laboratories Sdn Bhd
		Clinipath (M) Sdn Bhd

**SENARAI PEGAWAI UNTUK DIHUBUNGI UNTUK PENGHANTARAN SAMPEL DI LUAR WAKTU  
PEJABAT, HUJUNG MINGGU DAN CUTI UMUM**

**UNIT VIROLOGI, IMR/ MKAK/ MKAKK/ MKAI/ MKAJB/ MKAKB**

No.	Nama Pegawai IMR	Jawatan	No. Pejabat	No. H/P
1.	Dr. Ravindran Thayan	Ketua Unit Virologi	03-26162671	016-286 7647
2.	Dr. Rozainanee Mohd Zain	Pakar Patologi (Mikrobiologi Perubatan)	03-26162671	013-341 2468
3.	Pn Tengku Rogayah Tg Abd Rashid	Pegawai Penyelidik Kanan	03-33628942	0192283955
4.	Dr. Jeyanthi Suppiah	Pegawai Penyelidik Kanan	03-33628944	0165532067
5.	Dr. Kamal Haikal Mat Rabi	Pegawai Perubatan	03-26162671	019-3621747
6.	Dr. Khayri Kamel	Pegawai Perubatan	03-26162671	011-15649265

No.	Nama Pegawai MKA Kebangsaan (MKAK)	Jawatan	No. Pejabat	No. H/P
1.	Dr Donal Huda Nasril	Pakar Patologi (Mikrobiologi Perubatan)	03-61261281	016-2217131
2.	Pn Yu Kie A/P Chem	Pegawai Sains Mikrobiologi	03-61261304	013-2081724
3.	En Selvanesan A/L Sengol	Pegawai Sains Mikrobiologi	03-61261301	016-2657105

No.	Nama Pegawai MKA Kota Kinabalu (MKAKK)	Jawatan	No. Pejabat	No. H/P
1.	Pn Rashidah Mohammad	Pegawai Sains Mikrobiologi	088-251710 ext 19041	016-8091076
2.	En Joel Judson Jaimin	Pegawai Sains Mikrobiologi	088-251710 ext 19041	013-8682785

No.	Nama Pegawai MKA Ipoh (MKAI)	Jawatan	No. Pejabat	No. H/P
1.	Dr Thevendran Sadasivam	Pegawai Perubatan UD54	05-5287832	012-6961110
2.	Dr. Muhammad Hasyim Chew	Pegawai Sains Mikrobiologi	05-5287832	012-5211838
3.	Cik Nur Diyana binti Mastor	Pegawai Sains Mikrobiologi	05-5287832	0132482352
4.	Cik Yusnita Alwia binti Yusof	Pegawai Sains Mikrobiologi	05-5287832	013-4669039

No.	Nama Pegawai MKA Johor Bahru (MKAJB)	Jawatan	No. Pejabat	No. H/P
1.	Dr Norhamimah Abdullah	Pakar Kesihatan Awam , Pengarah MKAJB	07-2387162	019-7237740
2.	Norlin Abdul Latif	Pegawai Sains (Mikrobiologi), Ketua Seksyen Penyakit	07-2387162	019-3551972
3.	Nik Nur Azma Nordin	Pegawai Sains(Mikrobiologi)	07-2387162	016-9866206

**ANNEX 4b**

<b>No.</b>	<b>Nama Pegawai MKA Kota Bharu (MKAKB)</b>	<b>Jawatan</b>	<b>No. Pejabat</b>	<b>No. H/P</b>
1.	Dr Fauziah Bt Mohd Nor	Pakar Kesihatan Awam, Pengarah MKAKB	09-7138000	019-9386622
2.	Dr Suhana Bt Hashim	Pakar Patologi (Mikrobiologi Perubatan)	09-7138000	012-9555842
3.	Syahida Bt Omar	Pegawai Sains (Mikrobiologi)	09-7138000	019-9828223

**SENARAI PEGAWAI UNTUK DIHUBUNGI UNTUK PENGHANTARAN SAMPEL  
DI LUAR WAKTU PEJABAT, Hujung Minggu dan Cuti Umum**

**UNIT MIKROBIOLOGI HOSPITAL**

No	Hospital	Nama Pegawai	Jawatan	No.Pejabat	No. H/P
1.	Hospital Sultanah Bahiyah, Alor Setar, Kedah	Dr. Amizah Othman	Pakar Patologi (Mikrobiologi Perubatan)	04-7406244	019-4983246
		Cik Salwani Saad	Pegawai Sains Mikrobiologi	04-7406244	019-4788074
2.	Hospital Pulau Pinang, Pulau Pinang	Dr. Booh Kah Ying	Pakar Patologi (Mikrobiologi Perubatan)	04-2225220 Ext 5152	012-5862278
		Dr. Ch'ng Wei Choong	Pegawai Sains Mikrobiologi	04-2225220 Ext 5152	017-4283579
3.	Hospital Raja Permaisuri Bainun, Ipoh, Perak	Dr. Fatimah Dzohran Sharaddin	Pakar Patologi (Mikrobiologi Perubatan)	05-2085233/ 5204	013-3292248
		Pn. Norizah Ismail	Pegawai Sains Mikrobiologi	05-2085233/ 5204	012-2016922
4.	Hospital Sungai Buloh, Selangor	Dr. Nur Izati Mustafa	Pakar Patologi (Mikrobiologi Perubatan)	03-61456333	017-6820942
		Pn. Iliyana bt Ismail	Pegawai Sains	03-61456333	012- 5066637
5.	Hospital Kuala Lumpur	Datin Dr. Salbiah binti Nawi	Pakar Perunding Patologi (Mikrobiologi Perubatan)	03-26156852 0326155590	012-3295350
		Dr. Salmah binti Idris	Pakar Perunding Patologi (Mikrobiologi Perubatan)	03-26156852	0132502137
		Pn. Nur Hidayah Binti Mas'od	Pegawai Sains	03-26156852 03-26155590	012-2893829
6.	Hospital	Dr. Suhaila	Pakar Patologi	06-76844721	013-5339001



No	Hospital	Nama Pegawai	Jawatan	No.Pejabat	No. H/P
	Tuanku Jaafar, Seremban, Negeri Sembilan	Baharuddin	(Mikrobiologi Perubatan)		
		Pn. Aishah bt Salleh	Pegawai Sains	06-76844721	017-6454456
7.	Hospital Melaka, Melaka	Dr. Padmaloseni @ Nur Humairah Binti Thangarajah	Pakar Patologi (Mikrobiologi Perubatan)	06-2892879	019-7705778
		Pn. Zuraiha Mohammad	Pegawai Sains	06-2892879	013-3510021
8.	Hospital Sultanah Aminah, Johor Bahru, Johor	Dr. Dayangku Seritul Akmar bt Abd Razak	Pakar Patologi (Mikrobiologi Perubatan)	07-2257000 Ext 2408/ 2660/ 2222	013-7027249
		En. Shamsulbahri n bin Sidik	Pegawai Sains	07-2257000 Ext 2408/ 2660/ 2222	011- 13015150
9.	Hospital Tengku Ampuan Afzan, Kuantan, Pahang	Dr. Roesnita Baharudin	Pakar Patologi (Mikrobiologi Perubatan)	09-5572869 09-5572870	019-9883697
		Pn. Noradilah Marzuki	Pegawai Sains	09-5572869 09-5572870	013-6185265
10	Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu	Dr. Fatimah Haslina Abdullah	Pakar Patologi (Mikrobiologi Perubatan)	09-6212121 Ext 2105/ 2104	013-9229256
		Pn. Norazita Sapie	Pegawai Sains	09-6212121 Ext 2105/ 2104	013-9229256
11	Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan	Dr. Azura Hussin	Pakar Patologi (Mikrobiologi Perubatan)	09-7452425 09-7452426	019-9370793
		Pn. Normaizura Mokhter	Pegawai Sains	09-7452425 09-7452426	019-2125528

No	Hospital	Nama Pegawai	Jawatan	No.Pejabat	No. H/P
12	Hospital Umum Sarawak, Kuching, Sarawak	Dr. Amira Amir	Pakar Patologi (Mikrobiologi Perubatan)	082-276666 Ext 6062	019-7360402
		En. Cyrus Anak Arong	Pegawai Sains	082-276666 Ext 6062	012-8506640

## GUIDELINES ON LABORATORY TESTING FOR COVID-19

### Clinical Specimens To Be Collected From Symptomatic Patients

Category	Test	Type of sample	Timing	Storage and transportation
Symptomatic patient	RT-PCR	Lower respiratory tract specimen - Sputum (if produced) - Tracheal aspirate - Bronchoalveolar lavage  Upper respiratory tract specimen - Nasopharyngeal <b>AND</b> oropharyngeal swabs - Nasopharyngeal wash / aspirate	Collect on presentation.	If transportation of samples is within 72 hours, store at 2- 8°C.  If transportation of samples is more than 72 hours, store at - 80°C and transport in ice.
	Serology	Serum	Collect at Day 5-8 or upon discharge from hospital.	As above

A single negative test result, particularly if the sample was collected from an upper respiratory tract does not exclude the infection. Repeat sampling and testing.

Lower respiratory tract specimen is strongly recommended in severe or progressive disease.

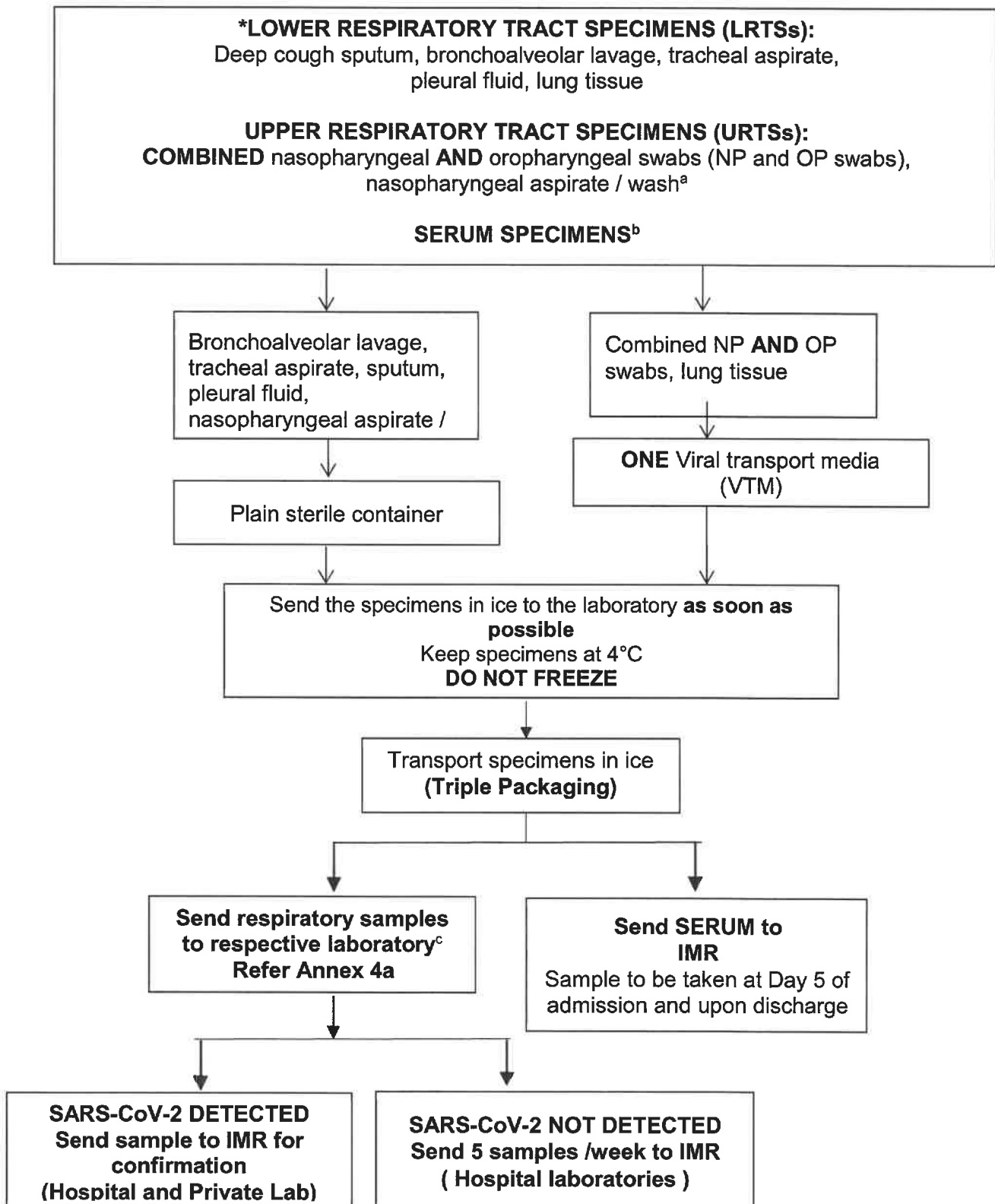
A positive result for any other pathogens does not necessarily rule out COVID-19.

## GUIDELINES ON LABORATORY TESTING FOR COVID-19

### Clinical Specimens To Be Collected From Asymptomatic Contacts

Category	Test	Type of sample	Timing	Storage and transportation
Asymptomatic contacts	<b>RT-PCR</b>	Nasopharyngeal <b>AND</b> oropharyngeal swabs	Within 14 days of last documented contact – to collect on first encounter.	<p>If transportation of samples is within 72 hours, store at 2- 8°C.</p> <p>If transportation of samples is more than 72 hours, store at - 80°C and transport in ice.</p>

## LABORATORY TESTING FOR PUI OF COVID-19 IN HOSPITAL AND PRIVATE LABORATORIES



### NOTE:

<sup>a</sup>Do not use wooden shaft / cotton swab. Use dacron / rayon / polyester swabs.

<sup>b</sup>Serum sample to be collected in serum separator tube and send to IMR.

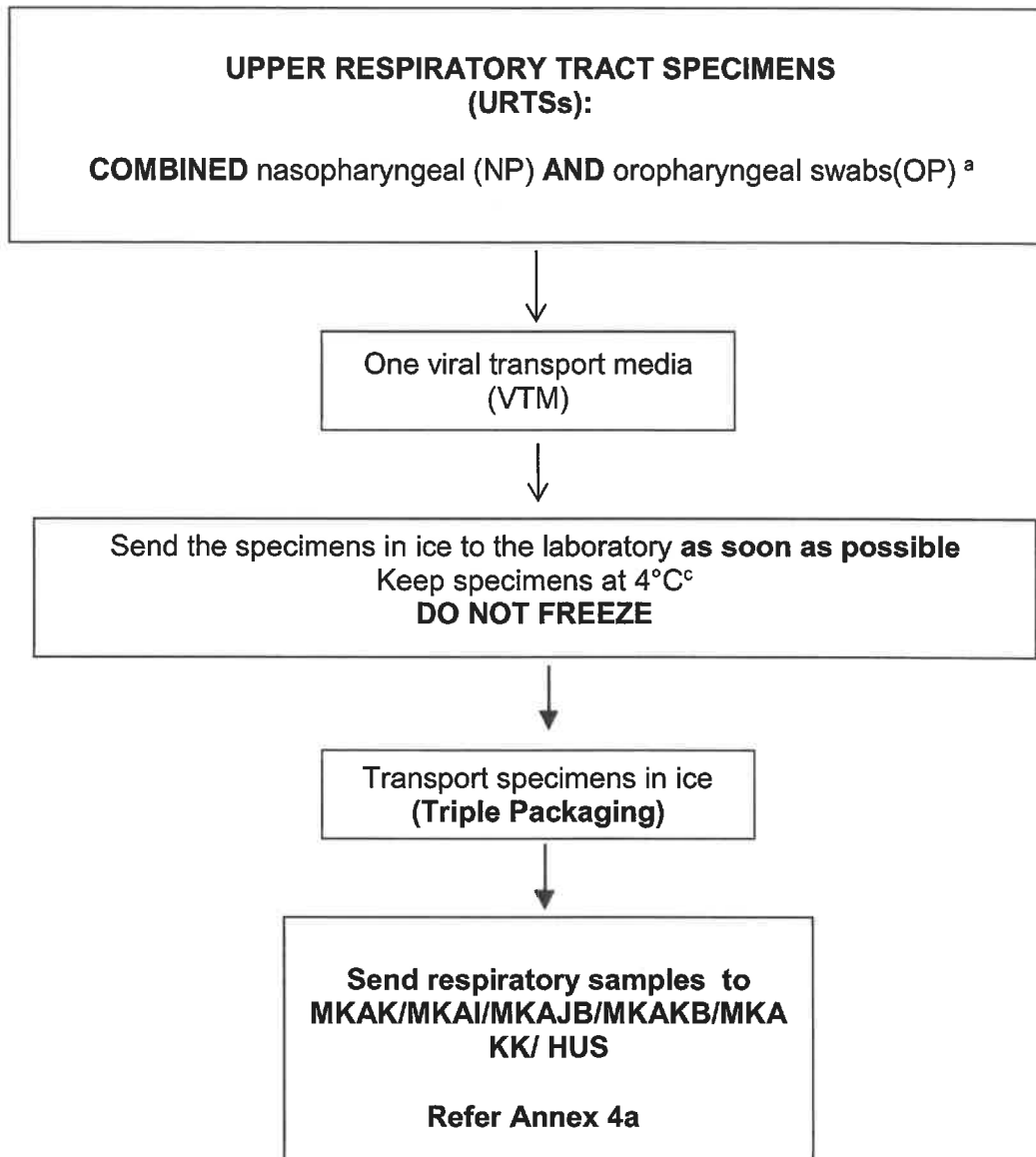
<sup>c</sup>All clinical sample while awaiting to be send to the laboratory

➤ If transportation of sample is within 72 hours, store at 2-8°C

➤ If transportation of sample is after 72 hours, store at -80°C

<sup>d</sup>Consult with Laboratory Officers first before sending samples.

**FOR PRIVATE LABORATORIES: SEND POSITIVE SAMPLES TO IMR FOR CONFIRMATION**

**LABORATORY TESTING FOR ASYMPTOMATIC CONTACTS OF COVID-19****NOTE:**

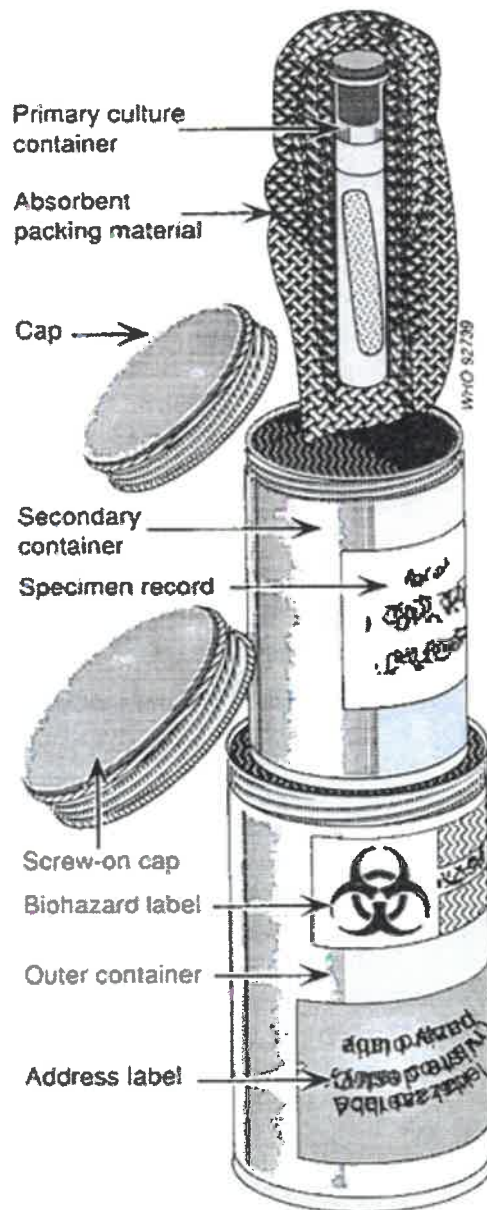
<sup>a</sup>Do not use wooden shaft / cotton swab. Use dacron / rayon / polyester swabs.

<sup>c</sup>All clinical sample while awaiting to be send to the laboratory

- If transportation of sample is within 72 hours, store at 2-8°C
- If transportation of sample is after 72 hours, store at -80°C

<sup>d</sup>Consult with Laboratory Officers first before sending samples.

### TRIPLE LAYER PACKAGING



#### NOTE:

This annex is a summary of specific MOH Malaysia guidance on transport of biological specimens which has already been published. For further information, kindly refer to this document:

- i. Standard Operating Procedure for Transport of Biological Specimens in Malaysia. Ministry of Health Malaysia, 2012

## Clinical Sampling for OPS/NPS at Health Centre and Field Setting

1. Laboratory screening at health centre and field setting shall be done for person as below :
  - a. Close contacts of confirmed case
  - b. PUI (not fulfilled Admission Criteria)
  - c. Humanitarian aid mission
  - d. etc
  
2. Preparation for sampling procedure :
  - a. Full set PPE (refer Annex 8a)
    - i. Head cover
    - ii. Face shields
    - iii. Mask N95
    - iv. Double glove
    - v. Isolation gown (Level 4-5)
    - vi. Plastic gown
    - vii. Boot cover
  - b. Set for sampling Nasopharyngeal swab (NPS) or Oropharyngeal swab and VTM
  - c. Triple packaging set for transportation of samples
  - d. Biohazard waste
  
3. All monitoring sheet and progress report for each PUI shall be reported to PKD and State CPRC on daily basis.

### Preparation of Clinical Sample Process at Field

1. Identify team consist of Epidemiologist/ Supervisor, Medical Officer, Paramedic and Assistant Environmental Officer. The role of the team are as stated below:
  - a. Epidemiologist/ Team Leader
    - a. To do risk assessment and guide team on setting up area for NPS/OPS
    - b. To do risk communication to patient, other family members in the household and neighbours if around.
    - c. To guide team on Donning/Doffing PPE as stated in Annex 8.
  
  - b. Medical Officer
    - a. The person who will do the NPS/OPS
    - b. To brief patient on the procedure process
    - c. To set up clean area for sampling process
  
  - c. Paramedics
    - a. The person who will do the NPS/OPS
    - b. To assist MO in fulfilling the laboratory request form beforehand
    - c. To label the specimen bottle before entering 'dirty area'



- d. To bring all the equipment as listed below in an appropriate bag. Do not rest the bag at any place at the 'dirty area'.
  - e. To assist MO in sampling process and specimen packaging.
- d. Assistant Environmental Officer
    - a. The person who will do the NPS/OPS
    - b. To documented names of HCW who handle the specimens.
    - c. To become documenter for any activities.
    - d. To assist epidemiologist in monitoring the safety procedures of the sampling activities

**The role of staff will be change according to situation and needs.**

2. Identify number of cases that need to be sample at the field. Fill in the line-listing form as **Reten Keputusan Ujian Makmal COVID-19**
3. Identify the type of sample need to be taken. Refer **Annex 5a: Guideline on Laboratory Testing For COVID-19 For Patients Under Investigation** and prepare Viral Transport Media, Container dan Packaging materials.
4. Fill in the laboratory request form and label at specimen container before entering the dirty area..
5. Documented the name of Health Care Worker who involve in the activities and fill in the **Monitoring Form for Personnel Potentially Exposed to COVID-19**.
6. Prepare PPE and Items for biological sampling as listed in the **LIST OF COVID-19 FIELD SAMPLING EQUIPMENT AND PPE**.
7. Continue with the clinical sampling procedure at the field.

### **Clinical Sampling Procedure at The Field**

- i. Use full PPE for Medical Officer and Paramedic.
- ii. Get permission to enter the house/hotel/patient's compound before going to field. Ensure that the person is agreeable and available. (If the patient refuse, lodge police report.
- iii. Enter the compound and explain to the patient the sampling procedure and find the suitable place to do the procedure.
- iv. Epidemiologist/Supervisor to do risk assessment and brief team on the process.
- v. Choose appropriate place with good ventilation.
- vi. Medical officer to set up the clean area to place the tools. The clean area is determined by the line boundary of the paper.
- vii. Prepare the biohazard waste bag for disposal of contaminated items.
- viii. Explain the sampling procedure to patient
- ix. Medical Officer (dirty hand) to take clinical sample following the procedure as stated in **Annex 5b: Laboratory Testing For Patient**.
- x. Take Nasopharyngeal Swab and Oropharyngeal Swab and put in one VTM. Recap the specimen bottle tightly.

- xi. Remove 2<sup>nd</sup> layer glove and disinfect the first layer glove with hand sanitizer (poured by the assistant (clean hand).
- xii. Paramedic to pass the second glove to be wear by the Medical Officer.
- xiii. Medical officer to wrap the primary container with absorbent packing material.
- xiv. Paramedic to open secondary container that already pre label and received the primary container from the Medical Officer.
- xv. Paramedic to seal the second container and sterilized with sanitizing wipes tissue.
- xvi. Paramedic to place the sample in the outer container that had Biohazard Label.
- xvii. Medical Officer to explain to patient that the procedure is completed.
- xviii. Documenter to document all the process and document the number of specimen taken.
- xix. Epidemiologist to instruct the team to wrap all the tools and throw into biohazard waste bag.
- xx. Team to go out from dirty area and doffing as guided by epidemiologist.
- xxi. Transport specimen to the receiving laboratory as in Annex 4a: Agihan Makmal yang Menjalankan Ujian COVID-19.**
- xxii. All team to undergone daily health surveillance as per stated in (Annex 21)

## 6.1 LIST OF COVID-19 FIELD SAMPLING EQUIPMENT AND PPE.

### a. Medical Officer (Dirty Hand)

No.	ITEM	QUANTITY
1	A3-sized White Paper/ non-absorbable paper	2
2	Gauze	4
3	Boot Cover	2
4	N95 face mask	1
5	Head cover	1
6	3-ply surgical mask	1
7	Eye shield/ face shield	1
8	Non-sterile glove	2
9	Surgical glove	1
10	Apron	1
11	Hand rub	1
12	Clinical bag (Yellow bag)	1
13	Pen	1

### b. Paramedic (Clean Hand)

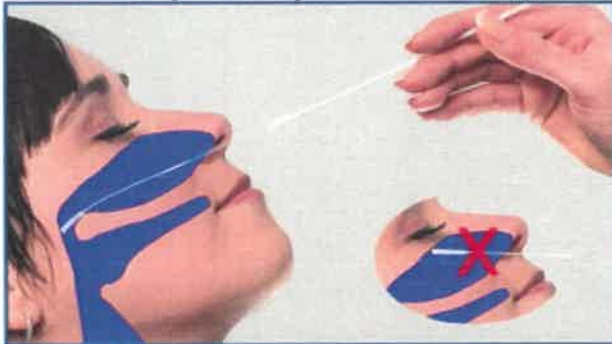
No.	ITEM	QUANTITY
1	A3-sized White Paper	1
2	Viral Transport Media	2
3	Gauze	4
4	Boot Cover	2
5	N95 face mask	1

6	Head cover	1
7	3-ply surgical mask	1
8	Eye shield/ face shield	1
9	Non-sterile glove	2
10	Surgical glove	1
11	Apron	1
12	Hand rub	1
13	Biohazard specimen zipper bag	2

**c. Assistant Environmental Health Officer (Documentor)**

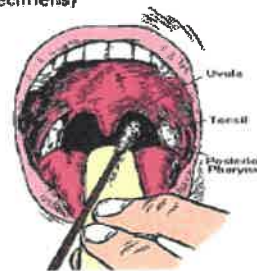
No.	ITEM	QUANTITY
1	A3-sized White Paper	1
2	Boot Cover	2
3	N95 face mask	1
4	Head cover	1
5	3-ply surgical mask	1
6	Eye shield/ face shield	1
7	Non-sterile glove	2
8	Surgical glove	1
9	Apron	1
10	Hand rub	1
11	Biohazard specimen zipper bag	2
12	Specimen container	
13	Woven bag	1
14	Adhesive Tape	1
15	Clerking Sheet	1
16	Lab Request Form	1
17	Tranparent zipper bag (A4 sized)	1
18	Pen	1

### 6.2 Technique for specimen Taking OPS/ NPS



**Oropharyngeal Swab**  
(preferred specimens)

1. Ask the subject to open his or her mouth
2. Depress the tongue
3. Swab the posterior pharynx behind the tonsils
4. Avoid the tonsils



*\* Contact referring Microbiologist at your state for further training and information*

### 6.3 Example of Triple Packaging Container



### 6.4 Reten Keputusan Ujian Makmal COVID-19 dari Makmal ke CPRC Negeri

Nama Hospital/ Makmal : \_\_\_\_\_  
 Tarikh: \_\_\_\_\_

#### Keputusan Ujian COVID-19 PCR

Bil	Nombor Makmal	ID/ IC Pesakit	Nama Pesakit	Umur (Tahun)	Jantina	Pemohon (JKN/PKD/KK)	Keputusan	Warga negara	Symptom	Tarikh sampel diambil	Tarikh sampel diterima <sup>a</sup>	Tarikh Ujian dijalankan
1												
2												
3												

\* Keputusan ujian telah verify oleh MKAK/ IMR

Disediakan oleh :

Disemak oleh :

Disahkan oleh :

\***Sampel Positif** – semua sampel positif hendaklah dihantar kepada MKAK dan IMR bagi tujuan virus isolasi.

Input SIMKA:

Keputusan positif – key in SIMKA selepas press conference dijalankan

Keputusan negative – setelah mendapat kebenaran dari Pengarah masing-masing

## 7.6 Reten Keputusan Ujian Makmal COVID-19 dari CPRC Negeri ke CPRC KKM

Nama CPRC Negeri : \_\_\_\_\_  
 Tarikh: \_\_\_\_\_

## Keputusan Ujian COVID-19 PCR

Bil	Nombor Makmal	ID/ IC Pesakit	Nama Pesakit	Umur (Tahun)	Jantina	Pemohon (JKN/PKD/KK)	Keputusan	Warga negara	Symptom	Tarikh sampel diambil	Tarikh sampel diterima	Tarikh Ujian dijalankan
1												
2												
3												

\* Keputusan ujian telah verify oleh MKAK/ IMR

Disediakan oleh :

Disemak oleh :

Disahkan oleh :

**HEALTH ALERT CARD****MINISTRY OF HEALTH MALAYSIA****HEALTH ALERT CARD  
FOR TRAVELERS AND FLIGHT CREW RETURNING  
FROM CHINA**

Keep this card for the next 14 days after returning to Malaysia. Monitor your body temperature and look out for fever ( $\geq 38^{\circ}\text{C}$ ) and symptoms of cough with breathless. If these symptoms were to develop or worsen and you are not feeling well, please seek medical treatment at nearest healthcare facility **IMMEDIATELY**.

As such, kindly practice the following:

- i. Cover your mouth and nose using tissue whenever you cough or sneeze. Throw the tissue in the trash after you use it. Wash your hands with soap and water or use hand sanitizer regularly;
- ii. Always follow cough etiquette
- iii. Use face mask whenever being in public or close contact with people;
- iv. Always maintain good personal hygiene and cleanliness

**Attention to The Attending Doctor:**

The person who is presenting this **ALERT CARD** to you had recently travelled or returned from China or other affected countries with active transmission (within the past 14 days). If the person presents with fever ( $\geq 38^{\circ}\text{C}$ ), pneumonia or severe respiratory infection with breathless, please refer him/her **IMMEDIATELY** to the nearest hospital.



## KEMENTERIAN KESIHATAN MALAYSIA

### KAD AMARAN KESIHATAN BAGI PELAWAT DAN ANAK KAPAL YANG BARU PULANG DARI CHINA

Simpan kad ini selama 14 hari setelah kembali ke Malaysia. Pantau suhu badan anda dan awasi gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), batuk dan susah bernafas. Sekiranya anda mengalami gejala atau bertambah teruk dan berasa tidak sihat, sila dapatkan rawatan perubatan di fasiliti kesihatan berdekatan dengan **SEGERA**.

Sekiranya anda mempunyai gejala tersebut:

- i. Tutup mulut dan hidung anda menggunakan tisu apabila anda batuk atau bersin. Sejurus selepas itu, buang tisu yang telah digunakan kedalam tong sampah. Cuci tangan dengan sabun dan air atau bahan pencuci tangan (*hand sanitizer*) selepas batuk atau bersin;
- ii. Amalkan adab batuk yang baik;
- iii. Pakai penutup mulut dan hidung (*mask*) apabila terpaksa berhubung / berurusan dengan orang lain;
- iv. Pastikan anda menjaga kebersihan diri sepanjang masa.

#### Kepada Pengamal Perubatan Yang Merawat Pesakit Ini

Individu yang membawa kad ini adalah merupakan penumpang atau anak kapal yang baru pulang dari China atau negara yang mengalami penularan aktif jangkitan (dalam tempoh 14 hari yang lepas). Jika anda mendapati beliau mengalami gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), radang paru-paru, jangkitan respiratori serius dan susah bernafas, sila rujuk ke hospital yang berhampiran dengan **SEGERA**.



## KAD AMARAN KESIHATAN

BAGI PELAWAT DAN ANAK KAPAL YANG BARU PULANG DARI  
KAWASAN YANG DIJANGKITI 2019 NOVEL CORONAVIRUS (2019 -nCoV)

Simpan kad ini selama 14 hari setelah kembali ke Malaysia. Pantau suhu badan anda dan awasi gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), batuk dan susah bernafas. Jika anda tidak sihat sila berjumpa doktor dengan **SEGERA**.



• Demam



• Batuk



• Masalah Pernafasan

Jika anda mempunyai gejala tersebut :

- Amalkan adab batuk dan bersin yang baik ;
- Tutup mulut dan hidung anda menggunakan tisu apabila anda batuk dan bersin. Buang tisu yang telah digunakan ke dalam tong sampah.
- Cuci tangan dengan sabun dan air atau bahan pencuci tangan (*hand sanitizer*) selepas batuk atau bersin ;
- Pakai penutup mulut dan hidung (*mask*) apabila terpaksa berhubung/ berurusan dengan orang lain ;
- Pastikan anda menjaga kebersihan diri sepanjang masa.

### KEPADA DOKTOR YANG MERAWAT PESAKIT INI :

Individu yang membawa kad ini adalah merupakan penumpang atau anak kapal yang baru pulang dari negara yang mengalami penularan aktif jangkitan (dalam tempoh 14 hari yang lepas). Jika anda mendapati beliau mengalami gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), batuk dan susah bernafas, sila rujuk ke klinik/hospital yang berhampiran dengan **SEGERA**.

## KAD AMARAN KESIHATAN

BAGI PELAWAT DAN ANAK KAPAL YANG BARU PULANG DARI  
KAWASAN YANG DIJANGKITI 2019 NOVEL CORONAVIRUS (2019 -nCoV)

Simpan kad ini selama 14 hari setelah kembali ke Malaysia. Pantau suhu badan anda dan awasi gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), batuk dan susah bernafas. Jika anda tidak sihat sila berjumpa doktor dengan **SEGERA**.



• Demam



• Batuk



• Masalah Pernafasan

Jika anda mempunyai gejala tersebut :

- Amalkan adab batuk dan bersin yang baik ;
- Tutup mulut dan hidung anda menggunakan tisu apabila anda batuk dan bersin. Buang tisu yang telah digunakan ke dalam tong sampah.
- Cuci tangan dengan sabun dan air atau bahan pencuci tangan (*hand sanitizer*) selepas batuk atau bersin ;
- Pakai penutup mulut dan hidung (*mask*) apabila terpaksa berhubung/ berurusan dengan orang lain ;
- Pastikan anda menjaga kebersihan diri sepanjang masa.

### KEPADA DOKTOR YANG MERAWAT PESAKIT INI :

Individu yang membawa kad ini adalah merupakan penumpang atau anak kapal yang baru pulang dari negara yang mengalami penularan aktif jangkitan (dalam tempoh 14 hari yang lepas). Jika anda mendapati beliau mengalami gejala seperti demam ( $\geq 38^{\circ}\text{C}$ ), batuk dan susah bernafas, sila rujuk ke klinik/hospital yang berhampiran dengan **SEGERA**.

## HEALTH ALERT CARD

FOR TRAVELERS AND FLIGHT CREW RETURNING FROM COUNTRIES WITH ACTIVE TRANSMISSION OF 2019 NOVEL CORONAVIRUS (2019 -nCoV) INFECTION

Keep this card for the next 14 days after returning to Malaysia. Monitor your body temperature and look out for fever ( $\geq 38^{\circ}\text{C}$ ) and symptoms of cough and/or breathing difficulty. If these symptoms were to develop and you are not feeling well, seek medical advice **IMMEDIATELY**.



• Fever



• Cough



• Breathing Difficulty

Kindly practice the following :

- i. Always follow cough and sneeze etiquette ;
- ii. Cover your mouth and nose using tissue whenever you cough or sneeze. Throw the tissue in the trash after you use it ;
- iii. Wash your hands with soap and water or use hand sanitizer regularly ;
- iv. Use face mask whenever being in public or close contact with people ;
- v. Always maintain good personal hygiene and cleanliness.

### ATTENTION TO THE ATTENDING DOCTOR

The person who is presenting this health alert card to you had recently travelled or returned from affected countries with active transmission (within the past 14 days). If the person presents with fever ( $\geq 38^{\circ}\text{C}$ ), cough and breathing difficulty, please refer him/her **IMMEDIATELY** to the nearest clinic/hospital.

## HEALTH ALERT CARD

FOR TRAVELERS AND FLIGHT CREW RETURNING FROM COUNTRIES WITH ACTIVE TRANSMISSION OF 2019 NOVEL CORONAVIRUS (2019 -nCoV) INFECTION

Keep this card for the next 14 days after returning to Malaysia. Monitor your body temperature and look out for fever ( $\geq 38^{\circ}\text{C}$ ) and symptoms of cough and/or breathing difficulty. If these symptoms were to develop and you are not feeling well, seek medical advice **IMMEDIATELY**.



• Fever



• Cough



• Breathing Difficulty

Kindly practice the following :

- i. Always follow cough and sneeze etiquette ;
- ii. Cover your mouth and nose using tissue whenever you cough or sneeze. Throw the tissue in the trash after you use it ;
- iii. Wash your hands with soap and water or use hand sanitizer regularly ;
- iv. Use face mask whenever being in public or close contact with people ;
- v. Always maintain good personal hygiene and cleanliness.

### ATTENTION TO THE ATTENDING DOCTOR

The person who is presenting this health alert card to you had recently travelled or returned from affected countries with active transmission (within the past 14 days). If the person presents with fever ( $\geq 38^{\circ}\text{C}$ ), cough and breathing difficulty, please refer him/her **IMMEDIATELY** to the nearest clinic/hospital.

## 健康警示卡

所有从中国入境的旅客和机组人员

回马 14 天内，请保留此卡片，并检测体温。  
若出现发烧 (>38°C)、咳嗽或呼吸困难等症状，请即刻前往邻近诊所或医院就医。



• 发烧



• 咳嗽



• 呼吸困难

若出现以上症状：

1. 请遵循咳嗽礼仪。
2. 咳嗽或打喷嚏时用纸巾或手帕掩住口鼻，并将用过的纸巾丢进垃圾桶。
3. 咳嗽或打喷嚏后清洗双手。
4. 使用口罩。
5. 时刻保持个人卫生。

### 至医务人员

拥有此卡片者在过去的 14 天内曾到访中国或疫情感染的国家。  
若检测之后发现病人出现发烧 (>38°C)、咳嗽及呼吸困难等症状，请即刻送往邻近医院。

## 健康警示卡

所有从中国入境的旅客和机组人员

回马 14 天内，请保留此卡片，并检测体温。  
若出现发烧 (>38°C)、咳嗽或呼吸困难等症状，请即刻前往邻近诊所或医院就医。



• 发烧



• 咳嗽



• 呼吸困难

若出现以上症状：

1. 请遵循咳嗽礼仪。
2. 咳嗽或打喷嚏时用纸巾或手帕掩住口鼻，并将用过的纸巾丢进垃圾桶。
3. 咳嗽或打喷嚏后清洗双手。
4. 使用口罩。
5. 时刻保持个人卫生。

### 至医务人员

拥有此卡片者在过去的 14 天内曾到访中国或疫情感染的国家。  
若检测之后发现病人出现发烧 (>38°C)、咳嗽及呼吸困难等症状，请即刻送往邻近医院。



### MENTAL HEALTH ALERT CARD

To the responders / volunteers / individuals coming back from the outbreak area

Please tick (/) if you are experiencing any of the following symptoms:

- Easily anxious
- Difficulty in sleeping
- Feeling extremely sad
- Feeling hopeless/helpless
- Feeling guilty
- Easily irritated /angry
- Flashbacks /nightmares
- Crying without any specific reasons

If you are experiencing any of the above please seek professional help from nearest clinic/hospital and present this card for further assessment.

#### **To the Doctor**

The person who's presenting this mental health alert card has returned from a disaster/crisis/outbreak area \_\_\_\_\_

\_\_\_\_\_

If the person presents with symptoms related to mental health problems, kindly perform further assessment and appropriate intervention for him/her.

**TIPS ON MANAGING YOUR MENTAL HEALTH  
UPON RETURNING FROM A DISASTER/CRISIS/OUTBREAK AREA**

- Do not be alone or isolate yourself
- Talk to someone that you trust or share your feelings about the events that you have experience
- Try to eat even if you do not have the appetite
- Manage your stress by relaxation techniques, enough sleep, balance diet and exercises
- Practice deep breathing exercises or other forms of relaxation techniques
- Pay extra attention to rekindling your interpersonal relationships with your family members and friends, continue to communicate.
- Anticipate that you will experience recurring thoughts or dreams and they will decrease over time
- Try to get back to your normal routines
- Give yourself time and chance to recover from the memories of events

**THANK YOU**

## NOTIFICATION FORM

\*JADUAL  
(Peraturan 2)  
Borang  
(Peraturan 2)  
AKTA PENCEGAHAN DAN PENGAWALAN PENYAKIT BERJANGKIT 1988  
PERATURAN-PERATURAN PENCEGAHAN DAN PENGAWALAN PENYAKIT BERJANGKIT (BORANG NOTIS (PINDAAN) 2018

Borang Notis: Rev/2020  
No. Siri:

## NOTIFIKASI PENYAKIT BERJANGKIT YANG PERLU DILAPORKAN

(Seksyen 10, Akta Pencegahan Dan Pengawalan Penyakit Berjangkit 1988)

A. MAKLUMAT PESAKIT		
1. Nama Penuh (HURUF BESAR): <input type="text"/>		
Nama Pengiring (Ibu/Bapa/Penjaga): <input type="text"/> (Jika belum mempunyai Kad Pengenalan diri) <input type="text"/>		
2. No. Kad Pengenalan Diri / Dokumen Perjalanan <input type="text"/> <input type="checkbox"/> Sendiri <input type="checkbox"/> Pengiring (Untuk Bukan Warganegara)		
No. Daftar Hospital / Klinik <input type="text"/> Nama Wad: _____ Tarikh Masuk Wad: <input type="text"/> / <input type="text"/> / <input type="text"/>		
3. Kewarganegaraan: Warganegara: <input type="checkbox"/> Ya    Keturunan: <input type="text"/> Suketurunan: <input type="text"/> (Bagi C/Asli, Pribumi Sabah/Sarawak) <input type="checkbox"/> Tidak    Negara Asal: <input type="text"/> Status Kedatangan: <input type="checkbox"/> Izin <input type="checkbox"/> Tanpa Izin <input type="checkbox"/> Penduduk Tetap		4. Jantina: <input type="checkbox"/> Lelaki <input type="checkbox"/> Perempuan 5. Tarikh Lahir: <input type="text"/> / <input type="text"/> / <input type="text"/> 6. Umur: <input type="text"/> Tahun <input type="text"/> Bulan <input type="text"/> Hari 7. Pekerjaan: _____ (Jika tidak bekerja, nyatakan status diri)
8. No. Telefon: <input type="checkbox"/> Rumah <input type="checkbox"/> Tel. Bimbit <input type="checkbox"/> Pejabat <input type="text"/> - <input type="text"/>		
(Untuk dihubungi)		
9. Alamat Kediaman <input type="text"/>		10. Alamat Tempat Kerja / Belajar: <input type="text"/>
B. DIAGNOSIS PENYAKIT		
<input type="checkbox"/> 1. Poliomyelitis	<input type="checkbox"/> 17. Human Immunodeficiency Virus Infection	<input type="checkbox"/> 33. Typhus - <i>Scrub</i>
<input type="checkbox"/> 2. Viral Hepatitis A	<input type="checkbox"/> 18. Leprosy ( <i>Multibacillary</i> )	<input type="checkbox"/> 34. Tuberculosis - <i>PTB Smear Positive</i>
<input type="checkbox"/> 3. Viral Hepatitis B	<input type="checkbox"/> 19. Leprosy ( <i>Paucibacillary</i> )	<input type="checkbox"/> 35. Tuberculosis - <i>PTB Smear Negative</i>
<input type="checkbox"/> 4. Viral Hepatitis C	<input type="checkbox"/> 20. Leptospirosis	<input type="checkbox"/> 36. Tuberculosis - <i>Extra Pulmonary</i>
<input type="checkbox"/> 5. Viral Hepatitis ( <i>Others</i> )	<input type="checkbox"/> 21. Malaria - <i>Vivax</i>	<input type="checkbox"/> 37. Typhoid - <i>Salmonella typhi</i>
<input type="checkbox"/> 6. AIDS	<input type="checkbox"/> 22. Malaria - <i>Falciparum</i>	<input type="checkbox"/> 38. Typhoid - <i>Paratyphoid</i>
<input type="checkbox"/> 7. Chancroid	<input type="checkbox"/> 23. Malaria - <i>Malariae</i>	<input type="checkbox"/> 39. Viral Encephalitis - <i>Japanese</i>
<input type="checkbox"/> 8. Cholera	<input type="checkbox"/> 24. Malaria - <i>Others</i>	<input type="checkbox"/> 40. Viral Encephalitis - <i>Nipah</i>
<input type="checkbox"/> 9. Dengue Fever	<input type="checkbox"/> 25. Measles	<input type="checkbox"/> 41. Viral Encephalitis - ( <i>Others</i> )
<input type="checkbox"/> 10. Dengue Haemorrhagic Fever	<input type="checkbox"/> 26. Plague	<input type="checkbox"/> 42. Whooping Cough / Pertussis
<input type="checkbox"/> 11. Diphtheria	<input type="checkbox"/> 27. Rabies	<input type="checkbox"/> 43. Yellow Fever
<input type="checkbox"/> 12. Dysentery	<input type="checkbox"/> 28. Relapsing Fever	<input type="checkbox"/> 44. Avian Influenza
<input type="checkbox"/> 13. Ebola	<input type="checkbox"/> 29. Syphilis - <i>Congenital</i>	<input type="checkbox"/> 45. MERS-CoV
<input type="checkbox"/> 14. Food Poisoning	<input type="checkbox"/> 30. Syphilis - <i>Acquired</i>	<input type="checkbox"/> 46. Zika Virus Infection
<input type="checkbox"/> 15. Gonorrhoea	<input type="checkbox"/> 31. Tetanus Neonatorum	<input type="checkbox"/> 47. Others: <i>please specify:</i> _____
<input type="checkbox"/> 16. Hand, Foot and Mouth Disease	<input type="checkbox"/> 32. Tetanus ( <i>Others</i> )	
Selain dari notifikasi bertulis, penyakit berikut perlu dinotifikasi melalui telefon dalam tempoh 24 jam iaitu:- Avian Influenza, Demam Denggi, Demam Kuning, Diphtheria, Ebola, Keracunan Makanan, Kolera, Measles, MERS-CoV, Plague, Poliomyelitis Akut, Rabies dan Zika Virus Infection.		
11. Cara Pengesanan Kes: <input type="checkbox"/> Kes <input type="checkbox"/> Kontak <input type="checkbox"/> FOMEMA * <input type="checkbox"/> Ujian Saringan _____	12. Status Pesakit: <input type="checkbox"/> Hidup <input type="checkbox"/> Mati <input type="text"/> - <input type="text"/> - <input type="text"/>	13. Tarikh Onset: <input type="text"/> - <input type="text"/> - <input type="text"/>
14. Ujian Makmal: Nama Ujian: (i) _____ (ii) _____ (ii) _____ Tarikh Sampel Diambil: <input type="text"/> - <input type="text"/> - <input type="text"/>	15. Keputusan Ujian Makmal: <input type="checkbox"/> Positif ( _____ ) <input type="checkbox"/> Negatif <input type="checkbox"/> Belum Siap	16. Status Diagnosis: <input type="checkbox"/> Sementara ( <i>Provisional/Suspected</i> ) <input type="checkbox"/> Disahkan ( <i>Confirmed</i> ) Tarikh Diagnosis <input type="text"/> - <input type="text"/> - <input type="text"/>
17. Maklumat Klinikal Yang Relevan: <input type="text"/>	18. Komen: <input type="text"/>	
C. MAKLUMAT PEMBERITAHU		
19. Nama Pengamal Perubatan: <input type="text"/>		
20. Nama Hospital / Klinik dan Alamat: <input type="text"/>		
21. Tarikh Pemberitahuan: <input type="text"/> - <input type="text"/> - <input type="text"/>		
..... Tandatangan Pengamal Perubatan		

**THE INFECTION PREVENTION AND CONTROL (IPC) MEASURES  
WHEN CORONA VIRUS DISEASE (COVID-19) INFECTION IS SUSPECTED OR  
CONFIRMED**

**THE INFECTION AND PREVENTION CONTROL GUIDING PRINCIPLES**

The principles of IPC for acute respiratory infection patient care include:

- a) Early and rapid recognition AND source control that includes promotion of respiratory hygiene
  - Early recognition and investigation, prompt implementation of IPC precautions, reporting and surveillance, and supportive treatment to make patients non-infectious by strictly adhering to Interim definitions of 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 when they first register for care, and practice respiratory hygiene/cough etiquette
- a) Application of routine IPC precautions (Standard Precautions) for all patients;
- b) Additional precautions in selected patients (i.e. contact, droplet, airborne) based on the presumptive diagnosis;
- c) Establishment of an IPC infrastructure for the healthcare facility, to support IPC activities.
- d) Provision of adequate and regular supply of PPE and appropriate training of Staff using the PPE serves to further reduce the risks of transmission of respiratory pathogens to health-care workers and other people interacting with the patients in the health-care facility

**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; 2018' are:

- a) 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

- b) Use of personal protective equipment (PPE) guided by risk assessment concerning anticipated contact with blood, body fluids, secretions and non-intact skin for routine patient care.
- c) Respiratory hygiene in anyone with respiratory symptoms
- d) Environmental control (cleaning and disinfection) procedures according to standard procedures
- e) Waste management according to safe routine practices
- f) Packing and transporting patient-care equipment, linen, laundry and waste from the isolation areas
- g) Prevention of needle-stick or sharps injuries

**INFECTION PREVENTION AND CONTROL MEASURES IN MANAGING PATIENT UNDER INVESTIGATION (PUI) OR CONFIRMED CORONA VIRUS DISEASE (COVID-19)**

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

**A. UPON ARRIVAL TO HEALTHCARE FACILITY AT VARIOUS POINTS OF ENTRY**  
***(Applies to hospital emergency departments, health clinics/ private GP clinics/ fever centres/ ambulatory care units and travellers screening points)***

- Clinical triage - rapid case identification of patients at risk by using visual aid, and proper travel history taking in patient presenting with fever and cough.
- Rapid triage of patients with acute febrile respiratory diseases is recommended.
- Must offer **surgical mask** (not N95 mask) if patient is able to tolerate (not tachypnoeic, not hypoxic).  
If patient is unable to tolerate, advise the patient to cover nose and mouth during coughing or sneezing with tissue or flexed elbow.
- Separate PUI to a dedicated waiting area which is well ventilated with spatial separation of at least 1 - 2m between patients in the waiting rooms.
- Provide tissues/ surgical mask and no-touch bins or biohazard bag for disposal of tissues/ surgical mask.



- Provide resources for performing hand hygiene (alcohol-based hand rub made available).
- 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).

## **B. FOR HEALTHCARE WORKERS AT FIRST ENCOUNTERS**

***PPE recommendation will be based on exposure risk.***

### a) General triage counter/ travellers screening points

(Casual contact i.e. defined as a person who has less than 15 minutes face to face contact and more than 1m distance).

- i. Surgical mask
- ii. Frequent hand hygiene/ strict hand hygiene adherence, preferably with alcohol-based hand rub.

*\* However, if there is a possibility of increased risk of prolonged contact or aerosolization it is recommended that Health Care Worker (HCW) uses full PPE (N95 mask, eye protection, isolation gown/apron and gloves).*

*\* Ensure these PPE are available on site.*

*\* Avoid touching the face, surfaces and objects with contaminated gloves.*

### b) Examination Room

- Ensure patient maintains surgical mask and cough etiquette
- HCW should wear:
  - i. N95 mask (should be fit checked)
  - ii. Face shield/goggle
  - iii. Standard isolation gown (fluid-repellent long-sleeved gown).
  - iv. Gloves
  - v. Frequent hand hygiene/ strict hand hygiene adherence
- Examination/ isolation room should be in descending order of preference:
  - i. Airborne Infection Isolation Room (AIIR)
  - ii. Single room (nursed with door closed) and en-suite bath
  - iii. Single room

### **C. FOR HEALTHCARE WORKERS WHEN DEALING WITH PUI/ CONFIRMED CASES ON ADMISSION.**

#### **Patient placement**

In descending order of preference:

- i. Airborne Infection Isolation Room (AIIR)
- ii. Single room (nursed with door closed) and en-suite bath
- iii. Single room

Cohorting is not recommended at this moment. If need arises, it should be done after consulting respective ID physician/Microbiologist/ managing physicians.

#### **Recommended PPE**

In addition to Standard Precautions, all healthcare workers/support staff, when in close contact (within 1 metre) or upon entering the room or cubicle of patients, should always have

- N95 mask
  - Appropriate fit check must be performed before each encounter.
  - Avoid touching the mask
  - Change if soiled / or failed fit check.
- Eye protection (goggles or a face shield). Do not use conventional eye glasses as eye protection, because they are not designed to protect against splashes to the eye mucosa.
- A clean, non-sterile, standard isolation gown (fluid-repellent long-sleeved gown). Optional to wear a plastic apron over the gown especially in case of excessive spillage is anticipated.
- Gloves that cover over the cufflinks of the gown.
- Hand Hygiene before and after wearing gloves and according to doffing protocols.
- 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.

## **D. FOR HEALTHCARE WORKERS WHEN PERFORMING AEROSOL-GENERATING PROCEDURES**

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 with or without cardiopulmonary resuscitation- the strongest evidence for needing airborne precaution
- Manual ventilation
- Non-invasive ventilation (e.g., BiPAP, BPAP) – avoid if possible
- Tracheostomy insertion
- Bronchoscopy
- Sputum induction
- Nebulization
- Airborne precaution also recommended when taking oropharyngeal/nasopharyngeal swab

### **Patient placement**

In descending order of preference:

- i. Negative pressure rooms/AIRR room
- ii. Adequately ventilated single room with at least natural ventilation with at least 160 l/s/patient air flow, with closed doors.

### **Recommended PPE**

- Powered Air Purifying Respirator (PAPR\*) or at least a particulate respirator i.e. fit tested N95 mask (always check the seal).
- Eye protection (goggles or a face shield). Do not use conventional eyeglasses as eye protection, because they are not designed to protect against splashes to the eye mucosa.
- A clean, non-sterile, standard isolation gown (fluid-repellent long-sleeved gown) and gloves (some of these procedures require sterile gloves. Limit the number of persons present to the bare minimum.
- Perform hand hygiene before and after contact with the patient and surroundings and after PPE removal.

\* if available and staff have been trained to use it

*In routine care of ventilated patients with closed circuit, where no aerosolization is expected (i.e. suctioning/ nebulization/ tracheal aspiration), the use of PAPR is not required. N95 mask use is sufficient.*

## E. TRANSPORTING PATIENTS

- 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, fluid-repellent long-sleeved isolation gown and gloves).
- When outside of the airborne 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.

## F. SPECIMEN COLLECTION AND TRANSPORT

All specimens should be regarded as potentially infectious, and health-care workers 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 infection that the patient is a PUI clearly on the accompanying request form State the name of the PUI suspect of potential concern clearly on the accompanying request form. Notify the laboratory as soon as possible that the specimen is being transported.
- Ensure that health-care workers who collect respiratory specimens from PUI / Confirmed patients wear appropriate PPE.
- Place specimens for transport in leak-proof specimen bags (please refer to Annex 5c for instructions on specimen packaging).
- Ensure that personnel who transport specimens are trained in safe handling practices and spill decontamination procedures. There are no special

requirements for transport of samples to the lab and they can be transported as routine samples for testing. However, personnel may wear gloves ± plastic apron during transfer.

## G. 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):
  - The Minimum requirement of cleaning and disinfection recommended is at least once a day and more frequently if visibly soiled 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 10000ppm
- 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.

### Recommended PPE For Cleaning Personnel

- N95 mask
  - Appropriate fit check must be performed before each encounter.
  - Avoid touching the mask
  - Change if soiled / or failed fit check.
- Eye protection (goggles or a face shield). Do not use conventional eye glasses as eye protection, because they are not designed to protect against splashes to the eye mucosa.
- A clean, non-sterile, standard isolation gown (fluid-repellent long-sleeved gown). Optional to wear a plastic apron over the gown especially in case of excessive spillage is anticipated.

- Gloves that cover over the cufflinks of the gown
- Hand hygiene before and after wearing gloves and according to doffing protocols.

## H. 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 place in red linen bag with alginate plastic after patient is discharged
- 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.
  - 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

- When the ACHR cannot be determined it is recommended that the room is left for time interval of 45 mins before the cleaning and disinfectant is commenced.
- PPE recommended for cleaners are surgical mask, eye protection, gloves, isolation gown and plastic apron.
- If the room is urgently needed before the air has been sufficiently cleared, an N95 respirator must be worn during cleaning.
- Remove N95 respirator only after leaving room and door has been closed.

### **I. DISHES AND EATING UTENSILS**

- Use disposable utensils as much as possible
- Wash reusable dishes and utensils in a dishwasher with recommended water temperature.

### **J. LINEN MANAGEMENT**

- Contaminated linen should be handled as little as possible to prevent gross microbial contamination of the air. Washing / disinfecting linen should be handled according to hospital protocol.

### **K. HEALTHCARE WORKER (HCW)**

- Healthcare worker with high risk condition / immune-compromised should not be allowed managing and providing routine care for PUI/ confirmed cases.
- Ensure all health care workers who are managing these patients are up to date with their vaccination schedules.
- Healthcare worker who are managing and providing routine care for PUI cases with Acute Respiratory Infections need to be trained on proper use of PPE.
- Keep a register of health-care workers who have provided care for patients with ARIs of potential concern, 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.
- The HCWs/ support staff who are managing and providing routine care for PUI/ confirmed cases should be monitored for symptoms minimum daily. If HCWs become symptomatic, he / she needs to report to the supervisor in the team and managed accordingly.

**L. VISITORS**

- No visitor should be allowed.
- If absolutely necessary, discuss with the managing team.
  - All visitors should be screened for acute respiratory illness before allowing to enter.
  - Document and limit the number of visitors at scheduled time
  - 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
  - Visitors should be advised to limit their movement in the healthcare facility.
  - Exposed visitors should report any signs of symptoms to their healthcare providers.
- Staff 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.

**References**

1. Policies and Procedures on Infection Prevention and Control – Ministry of Health Malaysia; 2018
2. Interim infection prevention and control recommendation for patients with confirmed 2019- Novel coronavirus or patient under investigation for COVID-19 in healthcare setting. Updated Feb 3 2020. CDC
3. Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care. World Health Organization 2014
4. Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS) Version 2. CDC 2004
5. Disinfection Guidelines 2018 - Ministry of Health Malaysia, Malaysia
6. Infection prevention and control during health care when novel coronavirus (COVID-19) infection is suspected, Interim Guidance. WHO Jan 2020



**GUIDELINES FOR ENTRY POINT SCREENING OF TRAVELLERS FROM / EXITING CHINA (INCLUDING MAINLAND CHINA, SAR HONGKONG, SAR MACAU AND TAIWAN), SOUTH KOREA, JAPAN, IRAN, AND ITALY (SCREENING FOR CORONAVIRUS DISEASE-2019, COVID-19)**

**A. Screening On-Board of Aircraft Passengers and Cabin Crews from <sup>1</sup>Affected Countries (China (including mainland China, SAR Hong Kong, SAR Macau and Taiwan), Japan, South Korea, Iran, Italy) for Suspected Coronavirus Disease 2019 (COVID-19)**

**1. MEASURES ON BOARD THE FLIGHT (for all flights from <sup>1</sup>Affected countries)**

**1.1. Announcements**

- i. The flight commander of the aircraft shall make in flight announcements. These announcements shall be made, during the flight and just before landing.
- ii. These announcements shall include the following messages:

**(A) During flights**

The needs for cabin crew to make an announcement of the requirement for passengers with symptoms to identify themselves to the crew, e.g. 'Any passenger with symptoms of COVID-19 infection i.e. fever, cough, sore throat and/or breathlessness to identify themselves to the crew'.

**(B) Upon Landing**

Passengers should also be informed that they will be subjected to undergo thermal scanner upon arrival.

**1.2. Visual Assessment**

Crew members must be vigilance on passengers who have symptoms (e.g. fever, cough, sore throat and/or breathlessness) but they do not identify themselves.

**1.3. Management of passengers with symptoms of COVID-19 Infection**

- i. The commander of the aircraft is to inform the authorities of the destination airport with regards to the number of passengers with COVID-19 Infection symptoms as soon as possible.
- ii. The passengers identified are to be given appropriate protective masks (three-ply mask) and if possible, these passengers are to be shifted to an empty area of the aircraft. Otherwise vacate two rows in front and two rows at the back of the passenger with symptoms.

- iii. A separate toilet is to be identified for use of such passengers only.
- iv. The crew must wear protective masks and disposable gloves if they have to handle the suspected passengers or their utensils. These utensils are to be packed separately.
- v. The commander of the aircraft is to identify the contacts of the passengers. These contacts are passengers sitting in the same row or within two rows in front or behind the ill passenger, all flight attendants on board, anyone having contact with respiratory secretions of the ill passenger, anyone on the flight living in the same household as the ill passenger and if it is a flight attendant who is a suspect of COVID-19 Infection case, all the passengers are considered as contacts.
- vi. Contacts should provide their contact number and address for the next 14 days to the health authorities.
- vii. If the passenger with symptoms becomes classified as a PUI case of COVID-19 Infection, the health authority where the case is being cared for should inform other health authorities in those areas in which the contacts reside that active surveillance of each contact (daily temperature check and interview by health care worker) should be undertaken until 14 days after the flight.
- viii. Flight attendants have to fill up Passenger Locator Form (Appendix 1).
- ix. All measures taken on board to be written and recorded in Report of Measures Taken Onboard Form (Appendix 2).
- x. Both Appendix 1 and Appendix 2 are to be submitted to health officials upon arriving.

#### **B. Suspected COVID-19 Infection case on-board flight**

- i. Public Health Team, consisting of a medical doctor, Nurse/Medical Assistant and Assistant Environmental Health Officer (AEHO) will be stationed at the arrival gates.
- ii. The Public Health Teams will go onboard to make announcement on health inspection to be carried out. The team must also request for the passenger locator form (Appendix 1), report of measures taken onboard (Appendix 2), general declaration of health and flight manifest. The flight attendants will inform the team on suspected passengers. The suspected passengers will be tagging with red tags. The passengers identified are to be given appropriate protective masks (N95) and if possible, these passengers are to be shifted to the rear of the aircraft. Otherwise vacate two rows in front and two rows at the back of the passenger with symptoms.
- iii. All passengers except cases suspected of COVID-19 Infection will be allowed to disembark the aircraft to proceed for fever screening. Passengers and crew without symptoms will be provided a Health Alert Card (HAC - Annex 6a). The details of passengers and crews will be recorded for follow up actions as required.

- iv. The suspected case which has been identified by the crew will be interviewed and history taking and physical examination will be conducted. Cases that do not fulfil the case definition of a suspected case of PUI for COVID-19 Infection (Annex 6a) will be provided with health advice and issued with a HAC.
- v. Cases suspected of PUI for COVID-19 Infection will be referred to the nearest hospital for further management. Doctor in charge should call Infectious Disease Physician for opinion before referred to nearest hospital.
- vi. All international flights arriving Malaysian international PoE with PUI of COVID-19 Infection are required to disinfect the aircraft.
- vii. All cases of PUI for COVID-19 Infection are to be notified to the National and State CPRC and the nearest District Health Office.

**C. Screening for Passengers and Cabin Crews from <sup>1</sup>Affected Countries at Arrival of Point of Entry (Flow Chart - Appendix 4)**

- i. For direct flights, health officials will be stationed at the arrival gate to perform health screening.
- ii. All other passengers need to go to temperature screening either by:
  - Thermal scanner at screening area,
  - Referred by Immigration Department, or
  - Passenger's self-declaration.
- iii. Passenger and crew who do not have fever will be given Health Alert Card and allowed to proceed to Immigration.
- iv. Passenger who having temperature  $\geq 38^{\circ}\text{C}$  will be screened for COVID-19 Infection through history taking and examination as detailed in Appendix 3.
- v. Officer in charge will contact nearest screening centre to consult whether the passenger / crew is fit of criteria PUI or not PUI.
- vi. If the passenger / crew fit the criteria of PUI, officer in charge need to refer to nearest admitting hospital, initiate Infection Prevention and Control, and notify PKD for staff surveillance and progress.
- vii. If the passenger / crew do not fit criteria of PUI, officer in charge will discharge the passenger with home assessment tool and home surveillance. Officer in charge has to fax Home Surveillance Letter (Appendix 10a) to the nearest / responsible District Health Office for monitoring of the passenger / crew. The passenger / crew will be monitored for approximately 14 days (incubation period) or up until recovered fully from symptoms.
- viii. If the passenger / crew status is uncertain, officer in charge will refer to nearest screening hospital for further management.

#### **D. Screening of Passenger / Cruise Ships / Conventional Ships from \*Affected Countries or with Suspected PUI of COVID-19**

- i. Assistant Environmental Health Officer (AEHO) receives information from Ship Captain or Shipping Agent on ship from affected countries.
- ii. If the ship is from these countries or there is a suspected case, ship will be given quarantine status and to be anchored at the wharf.
- iii. Medical Officer / AEHO will go on board and verify the health status of passengers or crew from affected countries from the Captain / Medical Officer on board. The team must also request for report of measures taken onboard, maritime declaration of health and other relevant documents.
- iv. Temperature screening of passengers and crew who disembark is carried out by the Medical Team. Passengers and crew with PUI of COVID-19 infection will be referred to the nearest health facility for management and investigations.
- v. All passengers and crew free of symptoms who disembarks will be given Health Alert Card (Appendix 6a).
- vi. AEHO will carry out inspection on sanitation on the ship.
- vii. Free Pratique and Port Health Clearance will be issued to the Captain or Shipping Agent if the ship has good sanitary condition and as Ship Sanitation Control Certificate (SSCC) and Ship Sanitation Control Exemption Certificate (SSCEC) still valid.
- iv. Order of Ship Sanitation (OSS) will be issued to the Captain or Shipping Agent should there be unsatisfactory sanitary condition. Reinspection will be done by AEHO and Free Pratique and Port Health Clearance will be issued to the Captain or Shipping Agent if the Order of Ship Sanitation is complied.
- v. All cases of PUI COVID-19 infection are to be notified to the National and State CPRC and the nearest District Health Office.

#### **E. Awareness to public, passengers, crew and health staff on COVID-19 Infection**

Increase awareness on COVID-19 infection prevention and control measures such as:

- i. Distribution of education materials such as pamphlets and posters to passengers, crew, airport workers.
- ii. Update information on social media – Website, Facebook (FB)

- iii. Distribution of Health Alert Card (HAC) to passengers and crews with history of visiting to affected countries.
- iv. Providing talks and briefings about the disease, mode of transmission and prevention and control measures.
- v. To make health announcements and messages focused at public and tourist area, especially at international airports and seaports.
- vi. Continuous updating information and training including environmental cleaning and disinfection at PoE for all health staffs and ground handlers.

**F. Collaboration with other Agencies/Ministries**

- i. Ministry of Health (MoH) Malaysia collaborate with other relevant agencies such as The Immigration Department of Malaysia, Airport/Port/Ground crossing authorities and agencies, Airlines, Shipping companies, Ground handlers etc.
- ii. Dissemination of information regarding COVID-19 infection to personnel and clients going to / coming from the affected countries thus increasing their awareness and to prevent the spread of disease into Malaysia.
- iii. Immigration Department of Malaysia to assist in referring travellers from Wuhan at the international PoE to Health Personnel, Health screening area/Health Quarantine Centre for assessment.
- iv. All aircrafts / ships / vehicles are required to inform the health authorities at the points of entry if there are passengers from affected countries showing signs and symptoms of COVID-19 infection.
- v. To obtain assistance and cooperation as and when needed from all agencies/stake holders in disease prevention and control activities.

### Passenger Locator Form (as per WHO/ICAO)

**Public Health Passenger Locator Form:** To protect your health, public health officers need you to complete this form whenever they suspect a communicable disease onboard a flight. Your information will help public health officers to contact you if you were exposed to a communicable disease. It is important to fill out this form completely and accurately. Your information is intended to be held in accordance with applicable laws and used only for public health purposes.  
 ~Thank you for helping us to protect your health.

One form should be completed by an adult member of each family. Print in capital (UPPERCASE) letters. Leave blank boxes for spaces.

**FLIGHT INFORMATION:** 1. Airline name \_\_\_\_\_ 2. Flight number \_\_\_\_\_ 3. Seat number \_\_\_\_\_ 4. Date of arrival (yyyy/mm/dd)  
 \_\_\_\_\_ 2 0 \_\_\_\_\_

**PERSONAL INFORMATION:** 5. Last (Family) Name \_\_\_\_\_ 6. First (Given) Name \_\_\_\_\_ 7. Middle Initial \_\_\_\_\_ 8. Your sex  
 \_\_\_\_\_  Male  Female

**PHONE NUMBER(S)** where you can be reached if needed. Include country code and city code.  
 9. Mobile: \_\_\_\_\_ 10. Business: \_\_\_\_\_  
 11. Home: \_\_\_\_\_ 12. Other: \_\_\_\_\_  
 13. Email address: \_\_\_\_\_

**PERMANENT ADDRESS:** 14. Number and street (Separate number and street with blank box) \_\_\_\_\_ 15. Apartment number \_\_\_\_\_  
 \_\_\_\_\_  
 16. City \_\_\_\_\_ 17. State/Province \_\_\_\_\_  
 18. Country \_\_\_\_\_ 19. ZIP/Postal code \_\_\_\_\_

**TEMPORARY ADDRESS:** If you are a visitor, write only the first place where you will be staying.  
 20. Hotel name (if any) \_\_\_\_\_ 21. Number and street (Separate number and street with blank box) \_\_\_\_\_ 22. Apartment number \_\_\_\_\_  
 \_\_\_\_\_  
 23. City \_\_\_\_\_ 24. State/Province \_\_\_\_\_  
 25. Country \_\_\_\_\_ 26. ZIP/Postal code \_\_\_\_\_

**EMERGENCY CONTACT INFORMATION** of someone who can reach you during the next 90 days  
 27. Last (Family) Name \_\_\_\_\_ 28. First (Given) Name \_\_\_\_\_ 29. City \_\_\_\_\_  
 \_\_\_\_\_  
 30. Country \_\_\_\_\_ 31. Email \_\_\_\_\_  
 32. Mobile phone \_\_\_\_\_ 33. Other phone \_\_\_\_\_

**34. TRAVEL COMPANIONS – FAMILY:** Only include age if younger than 18 years

	Last (Family) Name	First (Given) Name	Seat number	Age <18
(1)	_____	_____	_____	_____
(2)	_____	_____	_____	_____
(3)	_____	_____	_____	_____
(4)	_____	_____	_____	_____

**35. TRAVEL COMPANIONS – NON-FAMILY:** Also include name of group (if any)

	Last (Family) Name	First (Given) Name	Group (tour, team, business, other)
(1)	_____	_____	_____
(2)	_____	_____	_____

**REPORT OF  
MEASURES TAKEN ON BOARD THE FLIGHT**

Name of Flight Commander:.....

Name of Airline:.....Flight Number:.....

Port of embarkation :.....Date of Arrival:.....

No. of passengers with symptoms of suspected Coronavirus Disease 2019 (COVID-19) Infection.....

Seat numbers of passengers with symptoms.....

Measures Taken Onboard :

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

Name of authorized airline representative:.....

Signature.....

Date .....

## CLERKING SHEET TEMPLATE AT MALAYSIA POINT OF ENTRY

Date: \_\_\_\_\_ Interviewer's Name : \_\_\_\_\_

### A. Patient's Details

Patient's Name : \_\_\_\_\_

I/C / Passport No. : \_\_\_\_\_ Age : \_\_\_\_\_ Gender : M / F

Address in country of origin : \_\_\_\_\_

Address in Malaysia : \_\_\_\_\_

Contact number in Malaysia: \_\_\_\_\_

Nationality : Malaysian / Non – Malaysian \_\_\_\_\_

Next of Kin (Name & Contact) : \_\_\_\_\_

### B. Travel History

No.	Country/State/Province Visited	Duration of Stay		Name of Airline, Flight No. and Seat Number:
		From (dd/mm/yr)	To (dd/mm/yr)	
1.				
2.				
3.				
Date of return to Malaysia:		Entry Point:		

### C. Sign and Symptoms

i. Symptoms		ii. Vital Sign	
Date of Onset:		Temperature:	
Fever:		*Blood Pressure (mmHg)	
Cough:		*Pulse Rate (/min):	
Breathlessness:		*Respiratory Rate (/min):	
		*SpO <sub>2</sub> (if available)	
Other symptoms:		*Other vitals:	
iii. *Respiratory Findings			
iv. *Other relevant clinical history and examination			

\* to be filled by paramedic or doctor



**D. Epidemiological Risk Assessment**

Within 14 days before onset of the illness, did you: *(Please tick the relevant answer)*

1. have close contact<sup>2</sup> with a confirmed or probable (hospitalized or under quarantine) suspected COVID-19 infection case in <sup>1</sup>affected countries?
2. Travel to or reside in country with known transmission of COVID-19 infection outbreak? (name the country: \_\_\_\_\_)
3. Any additional information:  
\_\_\_\_\_

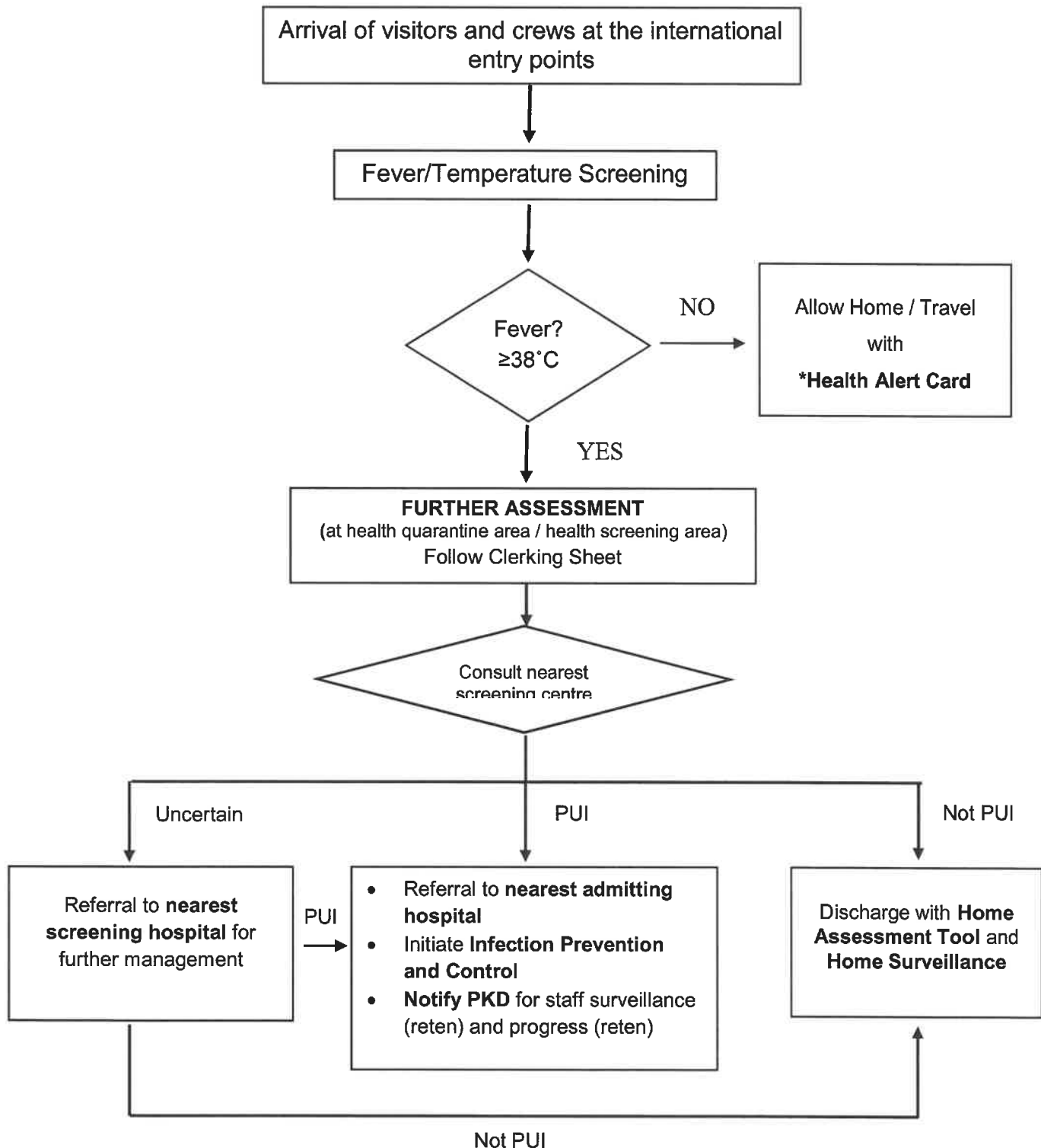
<sup>1</sup> Affected Countries as for 26 February 2020:

- China (including Hong Kong, Macau and Taiwan)
- South Korea
- Japan
- Italy
- Iran

<sup>2</sup>Close contact is defined as:

- a) Health care associated exposure without appropriate PPE (including providing direct care for COVID-19 patients, working with health care workers infected with COVID-19, visiting patients or staying in the same close environment of a COVID-19 patient).
- b) Working together in close proximity or sharing the same classroom environment with a with COVID-19 patient
- c) Traveling together with COVID-19 patient in any kind of conveyance
- d) Living in the same household as a COVID-19 patient

**FLOW CHART FOR SCREENING OF TRAVELLERS AND CREWS ARRIVING FROM AFFECTED COUNTRIES AT INTERNATIONAL POINT OF ENTRY**



# For direct flight, temperature screening is usually done at arrival gate. Whereas for indirect flight, temperature screening will be at health screening area.  
 # Assessment of passengers with fever **MUST** be done at health quarantine center / health screening area.

## Borang Pemantauan Harian

1. *Patient Under Investigation (PUI) / Self Assessment* bagi yang bergejala jangkitan saluran pernafasan tetapi tidak dimasukkan ke wad
2. **Kontak Rapat Kepada Kes yang Dijangkiti COVID-19**

Nama	:	
No. Kad Pengenalan	:	
No. Telefon	:	Bimbit: ..... Rumah: .....
Jenis Pendedahan	:	<b>Kategori (1) ATAU (2)</b> (bulatkan salah satu dan isi butiran di bawah)
Alamat Rumah	:	:
<b>PATIENT UNDER INVESTIGATION (PUI)</b>		
Tarikh Tiba di Malaysia	:	
No. Penerbangan	:	
Tarikh mula bergejala	:	
<b>KONTAK RAPAT KEPADA KES COVID-19</b>		
Hubungan Kepada Kes	:	
Tarikh Pendedahan Kepada Kes*	:	

\* nyatakan tarikh pendedahan terawal

## JADUAL PEMANTAUAN HARIAN

**ARAHAN:** Bagi sebarang gejala yang dilaporkan oleh kontak, sila tandakan (√) pada ruangan yang berkenaan,

Hari 1	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )

Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )

**NOTA:** Bilangan hari pemantauan perlu ditambah mengikut kesesuaian, terutama sekali jika individu terlibat mempunyai pendedahan yang berulang-ulang kepada kes terbabit.

**Amalkan langkah-langkah berikut semasa anda diletak di bawah pengawasandan pemantauan di rumah (*home surveillance*):**

- Perlu sentiasa boleh dihubungi pada setiap masa.
- Sentiasa berada di rumah sepanjang dalam tempoh pengawasan ini.
- Hadkan pelawat atau tetamu yang datang ke rumah anda.
- Senaraikan semua orang yang datang menziarahi anda.
- Sentiasa amalkan adab batuk yang baik.
- Sekiranya anda bergejala, sentiasa pakai *face mask*. Jika tidak memakai *face mask*, tutup mulut dan hidung anda menggunakan tisu apabila batuk dan bersin. Buang tisu yang telah digunakan ke dalam tong sampah dan **CUCI TANGAN serta merta** dengan sabun atau *hand sanitiser*.
- Hadkan jarak anda dengan mereka yang sihat sekurang-kurangnya 1 meter.
- Pakai *face mask* sekiranya keluar dari bilik dan elakkan bergaul dengan orang lain.
- Pastikan pengudaraan rumah dalam keadaan baik dengan membuka tingkap.
- Elakkan perkongsian peralatan makanan dan penjagaan diri.

**PANTAU DIRI ANDA UNTUK SEBARANG GEJALA ATAU GEJALA BERTAMBAH TERUK**

**JIKA ANDA ADALAH KATEGORI 1:** *Patient Under Investigation (PUI) / Self Assessment* bagi yang bergejala jangkitan saluran pernafasan tetapi tidak dimasukkan ke wad

Sekiranya gejala anda bertambah teruk seperti:

- Kesukaran bernafas – tercungap-cungap, pernafasan menjadi laju atau warna bibir bertukar menjadi kebiruan; ATAU
- Demam yang berpanjangan sehingga melebihi 3 hari

**SEGERA** hubungi Pejabat Kesihatan Daerah di talian \_\_\_\_\_.

**JIKA ANDA ADALAH KATEGORI 2:** Kontak Rapat Kepada Kes Yang Berpotensi Dijangkiti **COVID-19**

Sekiranya mengalami gejala demam atau batuk atau sakit tekak, **SEGERA** hubungi Pejabat Kesihatan Daerah di talian \_\_\_\_\_.

## Daily Self Monitoring Form

1. Patient Under Investigation (PUI) / Self Assessment for person with symptoms and signs of respiratory tract infection but is not warded.
2. Close contact of person infected and positive of COVID-19

Name	:	
No. Identity Card	:	
No. Telephone	:	Mobile: ..... Home: .....
Type of exposure:		<b>Category (1) OR (2)</b> (please circle an appropriate choice and fill the details below)
Home Address	:	
<b>PATIENT UNDER INVESTIGATION (PUI)</b>		
Date Arrival in Malaysia	:	
Flight No.		
Date of symptom onset	:	
<b>CLOSE CONTACT OF POSITIVE COVID-19 CASE</b>		
Relationship with case	:	
Date of exposure to case *	:	

\* please state the date of first contact

## TABLE FOR DAILY MONITORING

**INSTRUCTION:** Please(√) the symptoms that you experience for each day.

Day 1	Day 2	Day 3	Day 4	Day 5	Day6	Day 7
Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....
Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )

Day8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....	Date: ...../...../.....
Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )	Symptoms : Fever ( ) Cough ( ) Shortness of breath ( )

**NOTE:** Days of self monitoring can be added to the instructed period IF a person has recurrent exposure to the risk of infection.

**Please do all the below while you are under *home surveillance*:**

- Be contactable at all time.
- Stay at home during the self-monitoring period.
- Limit visitors to your house.
- List the name of those visiting you.
- Always practice good cough etiquette.
- If you develop any symptom, always wear face mask. If you did not wear *face mask*, close your mouth and nose with tissues when coughing or sneezing. Throw the tissues into closed dustbin and **immediately WASH YOUR HANDS** with soap or hand sanitiser.
- Limit your distance with healthy person (s) to at least 1 meter.
- Wear face mask when you go out of your room and avoid contact with others.
- Open all windows in your house to ensure good ventilation.
- Do not share utensils, tableware and personal hygiene items.

**MONITOR YOURSELF FOR DEVELOPMENT OR WORSENING OF SYMPTOMS**

**IF YOU ARE CATEGORY 1: Patient Under Investigation (PUI) / Self Assessment for person with symptoms and signs of respiratory tract infection but is not warded.**

If your symptoms worsen, such as:

- Difficulty in breathing – shortness of breath, fast breathing or lips turning blue; OR
- Prolonged fever more than 3 days

**IMMEDIATELY contact the District Health Office at \_\_\_\_\_.**

**IF YOU ARE CATEGORY 2: Close contact of person infected and positive of COVID-19**

If you develop any fever or cough or sore throat, **IMMEDIATELY contact the District Health Office at \_\_\_\_\_.**

## SELF ASSESSMENT TOOL FOR STUDENT FROM CHINA

Name	:	
No. Identity Card / Passport No.	:	
No. Telephone	:	Mobile: ..... Home: .....
Home Address	:	
Date Arrival in Malaysia	:	
Flight No.	:	

### TABLE FOR DAILY MONITORING

**INSTRUCTION:** Please (✓) the symptoms that you experience for each day.

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....
<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )

Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....	<b>Date:</b> ...../...../.....
<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )	<b>Symptoms :</b> Fever ( ) Cough ( ) Shortness of breath ( )

**NOTE:** Days of self monitoring can be added to the instructed period IF a person has recurrent exposure to the risk of infection.

**Please do all the below while you are under *home surveillance*:**

- Be contactable at all time.
- Stay at home during the self-monitoring period.
- Limit visitors to your house.
- List the name of those visiting you.
- Always practice good cough etiquette.
- If you develop any symptom, always wear face mask. If you did not wear *face mask*, close your mouth and nose with tissues when coughing or sneezing. Throw the tissues into closed dustbin and **immediately WASH YOUR HANDS** with soap or hand sanitiser.
- Limit your distance with healthy person(s) to at least 1 meter.
- Wear face mask when you go out of your room and avoid contact with others.
- Open all windows in your house to ensure good ventilation.
- Do not share utensils, tableware and personal hygiene items.

### **MONITOR YOURSELF FOR ANY SYMPTOMS**

If you develop fever or cough or sore throat, **IMMEDIATELY** contact the **District Health Office** at \_\_\_\_\_.



## PROTOCOL FOR AMBULANCE TRANSFER FOR PATIENT UNDER INVESTIGATION (PUI) OF COVID-19

### PREPARATION OF THE AMBULANCE

- It is advisable to remove all non-essential equipment related to care of the intended patient.
- Ambulance must be equipped with spillage kits, disinfectant wipes, sharps bin and clinical waste ready to be used by responders.
- Use of disposable bed sheet is encouraged.

### NUMBER OF PATIENTS IN AN AMBULANCE

- It is advisable to only transport one patient in an ambulance.
- Medical direction from Emergency Physician can be obtained to allow transport of more than one patient with similar provisional diagnosis.
- There can be no mix of patient under investigation (PUI) with confirmed nCoV case.

### PREPARATION OF STAFF

- All staffs accompanying patient in the ambulance must wear the recommended PPE:
  - Gloves.
  - N95 mask with goggles.
  - Disposable apron or gown.

### CARE OF THE PATIENT DURING TRANSPORT

#### 1. Respiratory Hygiene

- In absence of respiratory distress, patients can be provided with surgical mask.
- Oxygen supplement using nasal prong can be safely used under a surgical mask.
- Placement surgical mask on other oxygen supplement delivery device require Medical Direction from Emergency Physician.

#### 2. Placement of patient

- Patient should be propped up in sitting position in stretcher unless clinically contraindicated.

### **3. Intervention in Pre-Hospital**

- Do not perform any procedures on the patient unless absolutely necessary.
- Medical Direction must be obtained for transportation of patient requiring more than nasal prong oxygen.

### **4. Communication with Medical Emergency Call Centre (MECC) and Receiving Facility (if relevant)**

- MECC must be informed regarding estimated time of arrival, patients' clinical condition or any updates in clinical status or transportation.
- It is the responsibility of MECC to inform and update receiving facility regarding estimated time of arrival and patients' clinical condition.

## **DECONTAMINATION**

- If spillage occurs in the ambulance
  - Use chlorine granules in the spillage kit to absorb the spill.
  - After 2 minutes or when the granules crystallize, cover the spillage with the absorbent material e.g. tissue or blue sheet.
  - Do not remove the spill while the patient or staff is in the ambulance. The decontamination of the spillage is to be done at the designated hospital.
- Decontamination of the ambulance
  - The ambulance is to be decontaminated at the designated ambulance decontamination area at receiving hospitals.
  - Decontamination agent to be used as per recommendation.
- Decontamination of staff
  - Staff from other health facility that accompany patient should undergo decontamination in the designated receiving hospital ED before returning to their respected base.

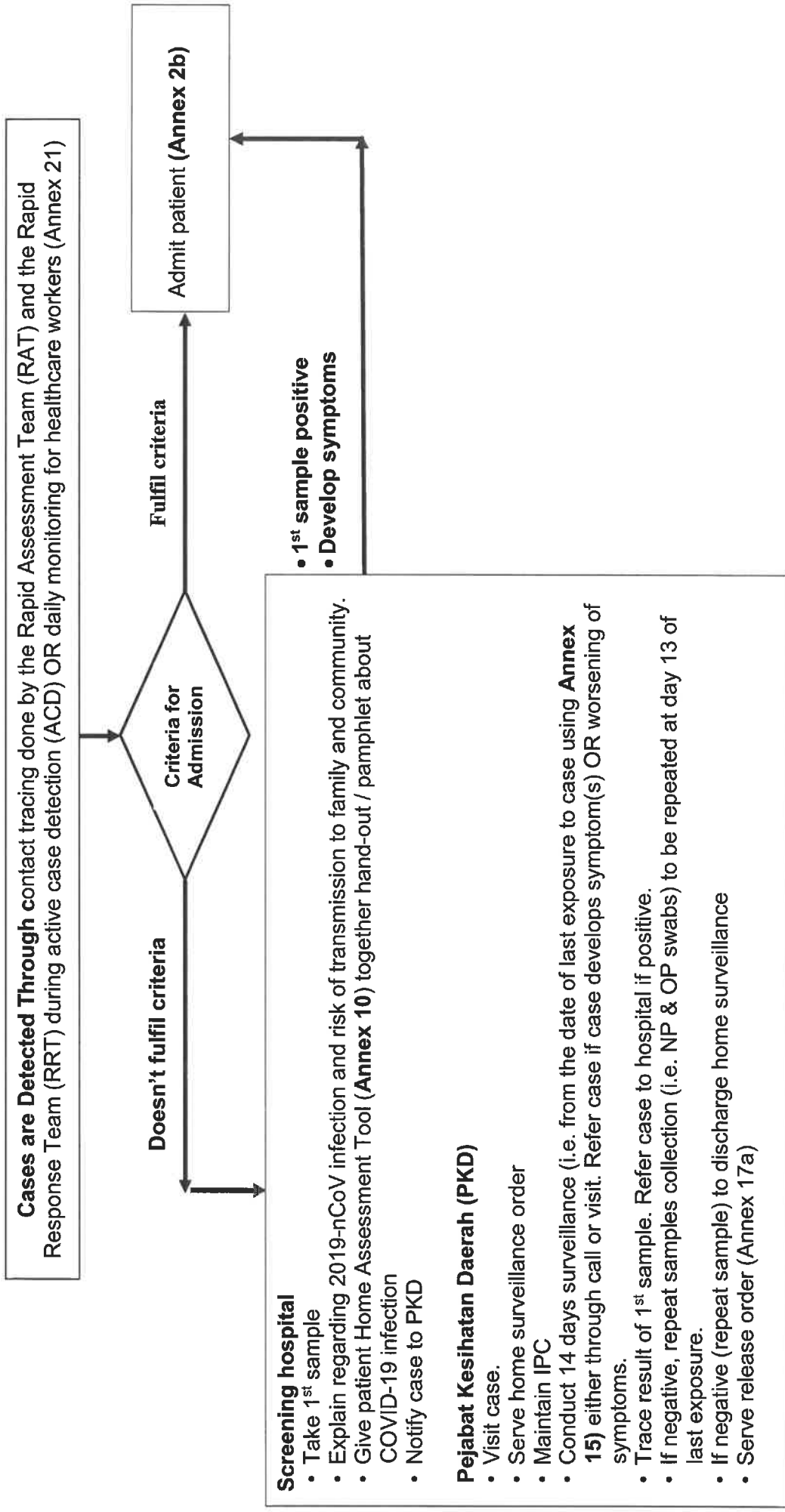
## **DISINFECTION OF REUSABLE UTENSILS & DISPOSAL OF WASTE**

- All reusable patient care utensils should be put into the appropriate biohazard receptacles and labelled for cleaning and disinfecting later.
- All waste disposals from the affected patient should follow guidelines of Clinical Waste Management.

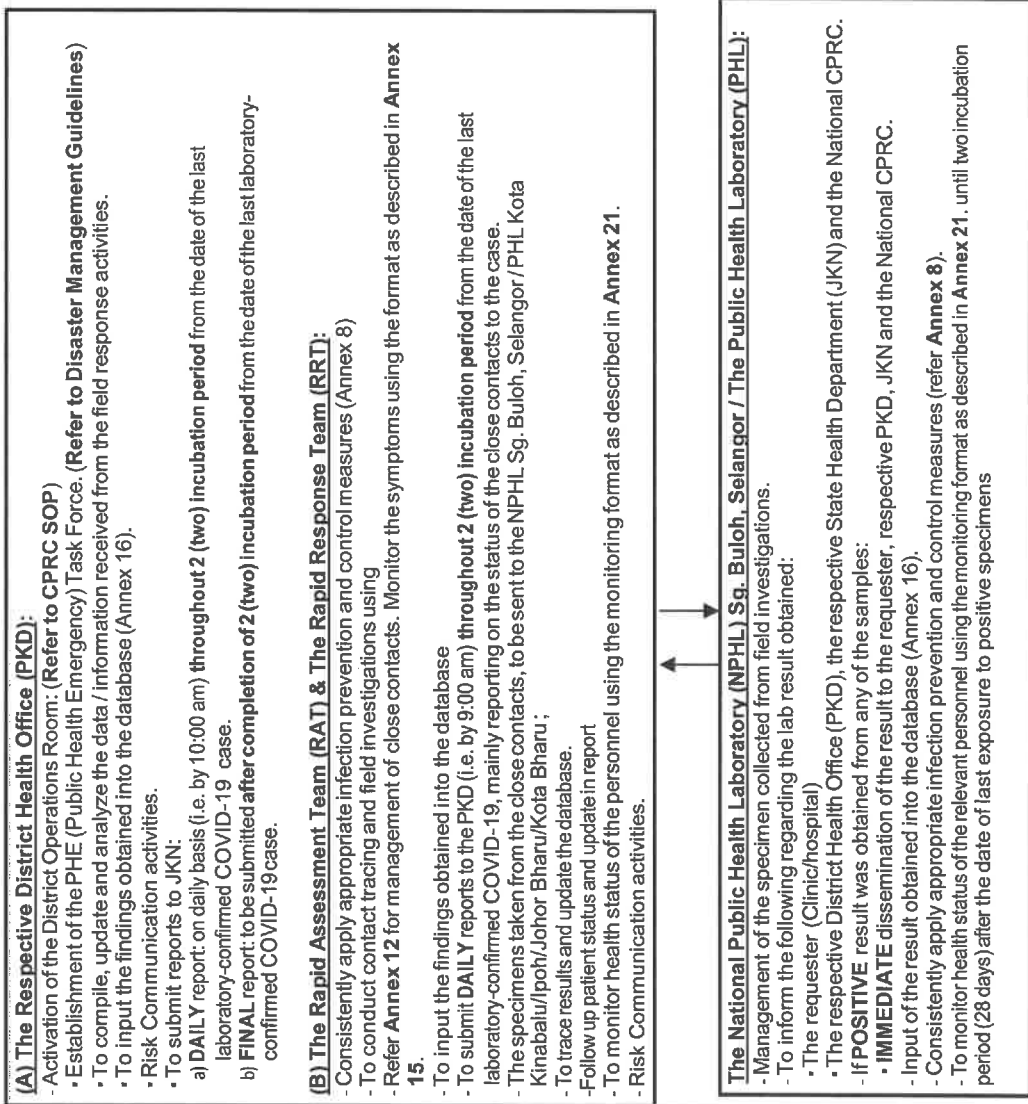
## Management Of Closed Contacts of Confirmed Case

1. Closed contacts of confirmed case were those as below:
  - a. Health care associated exposure, including providing direct care for COVID-19 patients without using appropriate PPE, working with health care workers infected with COVID-19, visiting patients or staying in the same close environment of a COVID-19 patient.
  - b. Working together in close proximity or sharing the same classroom environment with a with COVID-19 patient
  - c. Traveling together with COVID-19 patient in any kind of conveyance
  - d. Living in the same household as a COVID-19 patient
  
2. Close contacts can be detected through the following activities:
  - a. Contact tracing by the Rapid Assessment Team (RAT) and the Rapid Response Team (RRT) on the field;
  - b. Monitoring of personnel who were in close physical contact to the case or who were handling the relevant specimens;
  - c. Health screening at the point of entry (POE)
  - d. Person who came and declare themselves at either government and private hospital and clinic
  
3. All close contacts of confirmed case shall be screened for COVID-19 at designated hospitals and health centres as follows:
  - a. Fulfilled admission criteria
    - i. Admit case to admitting hospital (**Annex 2b**)
  - b. Doesn't fulfilled admission criteria:-
    - i. Screening Hospital/ Health Clinic
      - Taken first sample immediately (NP and OP)
      - Explain regarding COVID-19 infection and risk of transmission to family and community.
      - Allow patient to go home and put under home surveillance
      - Give patient Home Assessment Tool (**Annex 10**), health education materials
      - Give appointment for 2<sup>nd</sup> sample (at screening hospital/ health clinic/ field) – **at Day 13 from last exposure to case**
      - Notify case to PKD
    - ii. District Health Office
      - Visit case at home (first day of home surveillance)
      - Ask for strict home surveillance, fill *Form for Supervision and Observation at Home* (**Annex 14**) and ask case to sign it.
      - Call case twice daily to ask for symptoms
      - If first sample negative, repeat second sample after at day 13 from last exposure. Continue strict home surveillance.

- he / she will be given *Release From Undergoing Supervision and Observation Order at Home* (**Annex 17**) by the authorized officer at Day 14, if the second result are negative.
  - Immediately refer to admitting hospital if contact developed symptoms.
4. To consult ID Physician / Specialist On-Call of the identified hospital (**Annex 3**) for referral of the respective contact, if the following were to occur:
- a. the contact become symptomatic; or
  - b. the result of RT-PCR positive



A Laboratory-Confirmed COVID-19 Infection: Flow Chart For Field Response Activities





**KEMENTERIAN KESIHATAN MALAYSIA**

**Fail Rujukan:**

Pejabat Kesihatan Daerah

.....  
 .....  
 .....

No. Telefon: .....

**Kepada:**

Nama: .....

No. Kad Pengenalan: .....

Alamat: .....

.....  
 .....

**Perintah Pengawasan Dan Pemerhatian Bagi Kontak COVID-19 Di Bawah Seksyen 15(1) Akta Pencegahan Dan Pengawalan Penyakit Berjangkit 1988 [Akta 342]**

Bahawasanya Tuan / Puan telah dikenalpasti sebagai kontak terdekat kepada seorang yang telah disahkan dijangkiti penyakit berjangkit COVID-19 dan berkemungkinan Tuan / Puan telah terdedah atau mungkin telah terdedah kepada risiko jangkitan itu. Maka, menurut seksyen 15(1) Akta Pencegahan dan Pengawalan Penyakit Berjangkit 1988 [Akta 342], mana-mana pegawai yang diberikuasa boleh memerintahkan Tuan / Puan untuk menjalani pengawasan dan pemerhatian di mana-mana tempat yang difikirkannya patut sehingga dia boleh dilepaskan tanpa membahayakan orang ramai.

2. Bagi menjalankan kuasa di bawah Seksyen 15(1) Akta 342, saya ....., pegawai diberikuasa memerintahkan Tuan / Puan untuk berada di bawah pengawasan dan pemerhatian di rumah seperti alamat di atas dengan syarat-syarat seperti yang dinyatakan di '**Lampiran A**'.

3. Sepanjang tempoh Tuan / Puan diletakkan di bawah pengawasan dan pemerhatian, Tuan / Puan adalah dikehendaki mematuhi segala perintah yang ditetapkan dan memantau kesihatan diri menggunakan borang (*Home Assessment Tool*) yang diberi bersama ini. Kegagalan Tuan / Puan untuk mematuhi perintah ini, sekiranya disabitkan dengan kesalahan boleh dikenakan hukuman di bawah seksyen 24 Akta 342.

<b>Pegawai Yang Diberikuasa</b>	
<b>Nama</b> :	
<b>Jawatan</b> :	
<b>Tarikh &amp; Masa</b> :	
<b>Pengesahan Menerima Sesalinan Perintah oleh Kontak yang Diletakkan di Bawah Pengawasan</b>	
<b>Nama</b> :	
<b>No. Kad Pengenalan</b> :	
<b>Tarikh &amp; Masa</b> :	
<b>Tandatangan</b> :	

## Perintah Pengawasan Dan Pemerhatian Di Rumah Kediaman Bagi Kontak Jangkitan COVID-19 Di Bawah Seksyen 15(1) Akta Pencegahan Dan Pengawalan Penyakit Berjangkit 1988 (Akta 342)

### Tindakan Yang Perlu Dilakukan Semasa Dalam Tempoh Pemerhatian Dan Pengawasan

#### A. Tinggal Di Rumah Kediaman Beralamat Di Atas

- i. Hendaklah tinggal di rumah kediaman seperti di alamat yang dinyatakan sepanjang masa bermula dari ..... hingga .....
- ii. Anda dikehendaki mengasingkan diri daripada ahli keluarga yang lain, umpamanya berada di bilik yang berasingan. Sekiranya perlu berinteraksi dengan ahli keluarga, anda dikehendaki untuk memakai penutup mulut dan hidung (*mask*).
- iii. Aturkan dengan waris / saudara mara / rakan untuk membeli keperluan harian.
- iv. Jika anda terpaksa pergi ke suatu tempat kerana tidak dapat ditangguhkan, sila hubungi dan dapatkan nasihat daripada Pegawai Kesihatan Daerah di nombor telefon: .....
- v. Jika anda memerlukan bantuan mengenai keperluan harian, sila hubungi nombor telefon: .....
- vi. Elakkan daripada berhubung secara dekat dengan ahli-ahli keluarga / rakan-rakan. Sekiranya saudara mara, sahabat handai menziarahi anda – adalah menjadi tanggungjawab anda untuk mencatatkan nama, nombor telefon dan tarikh kunjungan mereka.
- vii. Pasangan, anak-anak, adik beradik atau mana-mana individu lain yang tinggal serumah tetapi TIDAK dikenakan perintah pengawasan dan pemerhatian di rumah adalah BEBAS untuk melakukan aktiviti seharian mereka.
- viii. Anda hanya akan diberi pelepasan oleh Pejabat Kesihatan daerah (PKD) daripada menjalani perintah pengawasan dan pemerhatian dirumah selepas 14 hari dari tarikh akhir anda terdedah kepada kes yang disahkan COVID-19.

#### B. Periksa Gejala Jangkitan

- i. Periksa suhu badan setiap hari dan keadaan ini perlu dipantau selama EMPAT BELAS (14) hari bermula dari tarikh .....
- ii. Penutup mulut dan hidung (*mask*) hendaklah dipakai sepanjang masa jika anda demam atau batuk sebelum bantuan perubatan tiba.
- iii. Jika anda mengalami mana-mana gejala dan tanda seperti berikut, **SEGERA** hubungi Pegawai Kesihatan Daerah di nombor telefon: ..... untuk tindakan selanjutnya:
  - a. Kesukaran bernafas –tercungap-cungap, pernafasan menjadi laju atau warna bibir bertukar menjadi kebiruan
  - b. Batuk berdarah



- c. Sakit dada yang berterusan
- d. Demam yang berpanjangan sehingga melebihi 3 hari atau demam yang berulang semula selepas 3 hari

**C. Amalkan Kebersihan Diri**

- i. Sentiasa amalkan tahap kebersihan diri yang tinggi seperti kerap mencuci tangan dengan menggunakan air dan sabun atau bahan pencuci tangan (*hand sanitizer*), terutamanya selepas batuk atau bersin.
- ii. Amalkan adab batuk yang baik. Tutup mulut dan hidung anda menggunakan tisu apabila anda batuk dan bersin. Sejurus selepas itu, buang tisu yang telah digunakan ke dalam tong sampah bertutup.
- iii. Dapatkan pengudaraan yang baik di dalam rumah.
- iv. Bersihkan permukaan dan objek yang mungkin dicemari dengan kahak, cecair batuk/bersin atau bendalir serupa yang keluar dari hidung atau mulut dengan menggunakan bahan cucian seperti *chlorox*. Bancuhan yang disyorkan ialah 1 bahagian *chlorox* kepada 50 bahagian air.

**D. Perkara-Perkara Yang Dilarang**

- i. Menanggalkan penutup mulut dan hidung (*mask*) apabila dikunjungi oleh waris atau tetamu.
- ii. Meninggalkan rumah kediaman beralamat di atas bagi tujuan membeli belah, bersiar-siar ke padang permainan atau ke tempat awam.

- E.** Salinan surat ini boleh dikemukakan kepada majikan sebagai bukti arahan perintah pengawasan & pemerhatian di rumah kediaman. Bersama ini disertakan juga panduan pengendalian isu-isu berhubung wabak berjangkit termasuk novel coronavirus di tempat kerja oleh Jabatan Tenaga Kerja Semenanjung Malaysia, Kementerian Sumber Manusia.

**PERINGATAN**

Pemeriksaan mengejut akan dilakukan bagi memastikan perintah-perintah di atas dipatuhi dan kegagalan mematuhi perintah-perintah di atas boleh menyebabkan tindakan mahkamah dikenakan ke atas Tuan/Puan.

**Borang Pemantauan Harian Bagi Kontak Rapat Kepada Kes Yang Berpotensi Dijangkiti  
COVID-19**

Nama	:	
No. Kad Pengenalan	:	
No. Telefon	:	Bimbit: ..... Rumah: .....
Hubungan Kepada Kes	:	
Alamat Rumah	:	
Tarikh Pendedahan Terakhir Kepada Kes*	:	
Jenis Kontak Kepada Kes Yang Berpotensi Dijangkiti COVID-19		:

\* Senaraikan KESEMUAANYA, gunakan mukasurat yang seterusnya – jika perlu

**JADUAL PEMANTAUAN HARIAN**

**ARAHAN:**

Bagi sebarang gejala yang dilaporkan oleh kontak, sila tandakan (✓) pada ruangan yang berkenaan,

Hari 1	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )

Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )	<b>Gejala :</b> Demam ( ) Batuk ( ) Sakit dada ( ) Sesak Nafas( )

**NOTA:**

\* Hari 1 adalah sehari selepas tarikh pendedahan terakhir dengan kes.

\* Bilangan hari pemantauan perlu ditambah mengikut kesesuaian, terutama sekali jika individu terlibat mempunyai pendedahan yang berulang-ulang kepada kes terbabit.

## NAMA KES CONFIRMED COVID-19

## SENARAI KONTAK RAPAT KEPADA KES CONFIRMED COVID-19

Cata tan	*Status Pemantauan Kontak Rapat ( <i>NOTA: Bilangan lajur untuk disediakan hendaklah mengikut bilangan hari pemantauan bagi KESEMUA kontak</i> )													
	Tarikh (Hari 14)	Tarikh (Hari 13)	Tarikh (Hari 12)	Tarikh (Hari 11)	Tarikh (Hari 10)	Tarikh (Hari 9)	Tarikh (Hari 8)	Tarikh (Hari 7)	Tarikh (Hari 6)	Tarikh (Hari 5)	Tarikh (Hari 4)	Tarikh (Hari 3)	Tarikh (Hari 2)	Tarikh (Hari 1)

## # PETUNJUK:

**S** Kontak berada dalam keadaan sihat.

**R** Kontak mempunyai gejala jangkitan **DAN** dimasukkan ke hospital berdekatan bagi menerima rawatan lanjut.

**P** Kontak tidak mempunyai sebarang gejala **TETAPI** dikesan positif melalui ujian RT-PCR yang dijalankan **DAN** dimasukkan ke hospital berdekatan bagi menerima rawatan lanjut.

**T** Tempoh pemantauan kontak telah tamat.



**KEMENTERIAN KESIHATAN MALAYSIA**

**Fail Rujukan:**

**Kepada:**

Nama: .....

No. Kad Pengenalan: .....

Alamat: .....

.....

**Pelepasan Dari Menjalani Perintah Pengawasan Dan Pemerhatian Di Rumah Kediaman Bagi Kontak Jangkitan COVID-19 Di Bawah Seksyen 15(1) Akta Pencegahan Dan Pengawalan Penyakit Berjangkit 1988 (Akta 342)**

Dengan segala hormatnya perkara di atas adalah dirujuk.

2. Terdahulu, Tuan/Puan telah dikenalpasti sebagai kontak terdekat kepada seorang yang telah disahkan menghidapi jangkitan COVID-19 dan Tuan/Puan telah dikenakan Perintah Pengawasan Dan Pemerhatian di rumah kediaman sebagaimana yang tertakluk di bawah Seksyen 15(1) Akta Pencegahan dan Pengawalan Penyakit Berjangkit 1988 (Akta 342) bermula dari ..... hingga .....

3. Hasil pemeriksaan yang dijalankan oleh pihak kami mendapati status kesihatan Tuan/Puan adalah memuaskan. Oleh itu, Tuan/Puan adalah diberikan pelepasan dari menjalani pemerhatian dan pengawasan di bawah Akta 342, bermula dari tarikh seperti tersebut di bawah. Perhatian dan kerjasama yang telah Tuan/Puan berikan berhubung perkara ini adalah amat dihargai.

Sekian, terima kasih.

<b>Pegawai Yang Diberikuasa</b>	
<b>Nama</b>	:
<b>Jawatan</b>	:
<b>Tempat Bertugas &amp; No. Telefon</b>	:
<b>Tarikh &amp; Masa</b>	:

## Borang Pemantauan Harian

- 1 **Patient Under Investigation (PUI) / Self Assessment** bagi yang bergejala jangkitan saluran pernafasan tetapi tidak dimasukkan ke wad  
ATAU
- 2 **Kontak Rapat Kepada Kes yang Dijangkiti COVID-19**

Nama	:	
No. Kad Pengenalan	:	
No. Telefon	:	Bimbit: ..... Rumah: .....
Jenis Pendedahan	:	<b>Kategori (1) ATAU (2)</b> (bulatkan salah satu dan isi butiran di bawah)
Alamat Rumah	:	
<b>PATIENT UNDER INVESTIGATION (PUI)</b>		
Tarikh Tiba di Malaysia	:	
No. Penerbangan	:	
Tarikh mula bergejala	:	
<b>KONTAK RAPAT KEPADA KES COVID-19</b>		
Hubungan Kepada Kes	:	
Tarikh Pendedahan Kepada Kes*	:	

\* nyatakan tarikh pendedahan terawal

## JADUAL PEMANTAUAN HARIAN

**ARAHAN:** Bagi sebarang gejala yang dilaporkan oleh kontak, sila tandakan (√) pada ruangan yang berkenaan,

Hari 1	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )

Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14
Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....	Tarikh: ...../...../.....
Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )	Gejala : Demam ( ) Batuk ( ) Sesak nafas ( )

**NOTA:** Bilangan hari pemantauan perlu ditambah mengikut kesesuaian, terutama sekali jika individu terlibat mempunyai pendedahan yang berulang-ulang kepada kes terbabit.

## DATABASE SENARAI PUJ

*Status Pemantauan PUJ (NOTA: Bilangan lajur untuk disediakan hendaklah mengikut bilangan hari pemantauan bagi KESEMUA kontak)	Tarikh (Hari 14)	Tarikh (Hari 13)	Tarikh (Hari 12)	Tarikh (Hari 11)	Tarikh (Hari 10)	Tarikh (Hari 9)	Tarikh (Hari 8)	Tarikh (Hari 7)	Tarikh (Hari 6)	Tarikh (Hari 5)	Tarikh (Hari 4)	Tarikh (Hari 3)	Tarikh (Hari 2)	Tarikh (Hari 1)	Catatan	
	No. Telefon															
	Alamat															
	Umur															
	Jantina (L/P)															
	No. Kad Pengenalan															
	Tarikh Pendedahan															
	* Kategori Kontak															
	Nama															
	Bil.															

**# PETUNJUK:**

**S** Individu berada dalam keadaan sihat.

**R** Individu mempunyai gejala jangkitan **DAN** dimasukkan ke hospital berdekatan bagi menerima rawatan lanjut.

**T** Tempoh pemantauan kontak telah tamat.

\*softcopy template telah emel kepada kepada semua JKN

**NATIONAL INSTITUTE OF FORENSIC MEDICINE MALAYSIA**

**GUIDELINES FOR HANDLING DEAD BODIES OF**

**SUSPECTED/PROBABLE/CONFIRMED COVID-19 DEATH**

- A. GUIDELINES FOR TRANSPORT OF BODY WITH SUSPECTED/PROBABLE/CONFIRMED COVID-19 INFECTION FROM EMERGENCY DEPARTMENT OR WARD TO MORTUARY.**
- B. GUIDELINES FOR MANAGEMENT OF BROUGHT IN DEAD CASES DUE TO SUSPECTED OR PROBABLE COVID-19 INFECTION.**
- C. GUIDELINES FOR POST-MORTEM EXAMINATION OF CASES DUE TO SUSPECTED/PROBABLE COVID-19 INFECTION.**
- D. GUIDELINES FOR THE DISPOSAL OF DECEASED IN CASES DUE TO SUSPECTED/PROBABLE/CONFIRMED COVID-19 INFECTION.**

**(A) GUIDELINES FOR TRANSPORT OF BODY WITH SUSPECTED/PROBABLE/CONFIRMED COVID-19 INFECTION FROM EMERGENCY DEPARTMENT OR WARD TO MORTUARY**

1. Bodies of suspected/probable/confirmed COVID-19 infection shall be sent from the Emergency Department or ward to the mortuary as soon as practicable.
2. Staff must wear the appropriate personal protective equipment and clothing (N95 or N100 masks, long sleeve fluid repellent disposable gown and gloves) while handling / preparing the body.
3. Relatives are **STRICTLY FORBIDDEN** to touch or kiss the body. The number of relatives allowed to view the body for identification must be minimized to 1 person. They must wear mask N95/N100, gloves and protective aprons. They should only be allowed to stand at a minimum of 1 meter from the body.
4. Relatives are **STRICTLY FORBIDDEN** to handle the body at any circumstances.
5. Body shall be prepared in the ward by the ward staff before conveying to the mortuary.
6. Body preparation;
  - 6.1 First layer :Wrap body with white cotton linen.
  - 6.2 Second layer :Place body in body bag.
  - 6.3 Third layer :Place body in body bag, then wipe with 0.5% sodium hypochlorite/disinfectant
7. Body transfer from the ward / ED shall be carried out by 2 attendants (one each from the ED/ward and mortuary). Both attendants must wear appropriate personal protective equipment (N95/N100, gloves and protective apron).
8. On arrival at the mortuary, the body must be immediately placed in a designated refrigerated body storage compartment.
9. Sampling for all suspected or probable COVID-19 cases shall be taken in Emergency Department or ward by respective team.
10. No autopsy to be performed for all confirmed COVID-19 dead bodies.



**(B) GUIDELINES FOR MANAGEMENT OF BROUGHT IN DEAD (BID) CASES DUE TO SUSPECTED OR PROBABLE COVID-19 INFECTION.**

1. Bodies of suspected or probable COVID-19 infection which are brought in dead shall be sent to the mortuary at the respective hospital.
2. The bodies must be placed in 2 layers body bag. The outermost body bag must be wipe with 0.5% sodium hypochlorite/disinfectant.
3. The receiving medical staff shall:
  - 3.1 Wear appropriate PPE.
  - 3.2. Obtain a police order (Polis 61) for post-mortem examination.
  - 3.3. Communicate/discuss the case with the forensic pathologist at the referral forensic centre to decide how to perform the post-mortem.
  - 3.4. Notify the case to the following **SIMULTANEOUSLY**:
    - 3.3.1. The National Crisis Preparedness and Response Centre.
    - 3.3.2. The respective State Health Department (JKN).
    - 3.3.3. The respective District Health Office (PKD).
4. Post-mortem examination of fatal suspected or probable infection with COVID-19 shall be conducted at the **RESPECTIVE HOSPITAL**.

**(C) GUIDELINES FOR POST-MORTEM EXAMINATION OF CASES DUE TO SUSPECTED/PROBABLE COVID-19 INFECTION**

1. Post-mortem examination, if indicated, of suspected or probable infection with COVID-19 shall be performed at the respective hospital.
2. For cases died in emergency department or ward (death in department, DID), the attending clinician shall obtain a written consent from next of kin for the clinical autopsy.
3. For BID case with post mortem order from police (Polis 61), post mortem examination shall be done by forensic pathologist.
4. Staff must wear personal protective equipment for highly infectious post-mortem while handling the body.
5. The post-mortem examination requires strict adherence to protocols and precautions on the use of recommended personal protective equipment (primary barriers) and autopsy room BSL 2 (secondary barriers).
6. Three or four trained personnel shall conduct the post-mortem examination. These personnel should comprise of a trained Forensic Pathologist/Histopathologist, a Medical Officer, a Forensic Medical Assistant and a Forensic Attendant. The specific task and functions of each team member shall be clearly defined as to who will be the prosecutor, who will be assisting during the post-mortem examination procedures and who will collect the specimens.
7. Respiratory tract specimen for COVID-19 PCR test and blood specimen for serology will be taken as early as possible and to be send to Pathology Department (Refer annex 4a and 5b of Interim Guidelines COVID-19 Management in Malaysia 2020).
8. During post-mortem examination, the following procedures must be strictly adhered:
  - 8.1. Only one person should dissect at any particular time.
  - 8.2. Prevention of percutaneous injury: Including never recapping, bending or cutting of needles and ensuring appropriate sharps container is available.

- 8.3. Absolute cleanliness must be followed. Spilling on the floor and soiling the aprons etc. should be avoided. In the event of spillage on the floor, wash immediately and clean with 1 in 10 sodium hypochlorite / disinfectant.
- 8.4. Adherence to strict and safe autopsy techniques is essential.
9. Specimens should be collected as per annex 5b.
10. Specimens collected should be managed as per annex 5c.
11. While stitching the body, make sure the staff uses a needle holder. After stitching, the body should be cleaned with water and followed by 0.5 % sodium hypochlorite or any suitable / recommended disinfectant.
12. The body shall be wrapped in 2 layered body preparation as follows:
- 12.1 First layer : Wrap body with a white sheet.
  - 12.2 Second layer : Place in body bag
  - 12.3 Third layer : Place in body bag, then wipe bag with 0.5% sodium hypochlorite
13. The body will be placed in the refrigerated body compartment before disposal.
14. The entire autopsy suite must be cleaned and mopped. All infected waste materials such as contaminated clothing of the body, linen and disposable items must be put in 2 layers yellow plastic bags. Instruments are washed thoroughly and immersed in 0.5% sodium hypochlorite. Autopsy table, workstation, floor and walls are to be cleaned thoroughly and then disinfected with the same 0.5% sodium hypochlorite solution.
15. The autopsy personnel must spray over their body with disinfectant before removing the Personal Protective Equipment (PPE). All disposable garments including the hood, coverall, gloves and aprons must be placed in the double layered yellow plastic bag for incineration. The respirator, blower and hose must be thoroughly sprayed and wiped with a disinfectant after removal, then left to dry in the storage or changing room.

**(D) GUIDELINES FOR THE DISPOSAL OF DECEASED IN CASES DUE TO SUSPECTED/PROBABLE COVID-19 INFECTION**

1. It is recommended that bodies of suspected or probable COVID-19 infection (after post-mortem examination) shall be disposed off (burial or cremation) as soon as practicable.
2. Religious body preparation must be conducted under supervision of the Environmental Health Officer.
3. Embalming must be avoided.
4. The release of the body to the relatives must be carried out with strict precautionary measures under the supervision of the Environmental Health Officer.
5. Relatives are prohibited from opening the sealed coffin and the Environmental Health Officer must ensure this precaution is strictly adhered.
6. All suspected or probable infection with COVID-19 bodies are recommended to be taken for burial or cremation directly from the mortuary, preferably within the same day of the post-mortem examination.

**The Personal Protective Equipment (PPE) is the Protective Garments and the Respiratory Protection.**

**PROTECTIVE GARMENTS INCLUDE: -**

- Disposable Scrub suit or equivalent.
- Disposable waterproof Coverall / jump-suit with full feet cover.
- Knee length Boots.
- Disposable shoe covers.
- Impervious full-length sleeve disposable plastic apron.
- Cut-resistant gloves.
- Double gloves (with the outer layer is elbow length gloves)

**RESPIRATORY PROTECTION INCLUDE: -**

Full faced *Powered Air Purifying Respirators* (PAPR) with HEPA filter (A loose fitting type is recommended). This respirator consists of a hood or helmet, breathing tube, battery-operated blower, and HEPA filters. It meets the CDC guidelines.

## FORENSIC MEDICINE REFERRAL CENTER

Bil.	Hospital
1.	Hospital Kuala Lumpur
2.	Hospital Sultanah Bahiyah, Alor Setar, Kedah
3.	Hospital Pulau Pinang
4.	Hospital Raja Permaisuri Bainun, Ipoh, Perak
5.	Hospital Sungai Buloh, Selangor
6.	Hospital Serdang, Selangor
7.	Hospital Tengku Ampuan Rahimah, Klang, Selangor
8.	Hospital Seremban
9.	Hospital Melaka
10.	Hospital Sultan Ismail, Johor Bahru, Johor
11.	Hospital Sultanah Aminah, Johor Bahru, Johor
12.	Hospital Tengku Ampuan Afzan, Kuantan, Pahang
13.	Hospital Sultanah Nur Zahirah
14.	Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan
15.	Hospital Queen Elizabeth, Kota Kinabalu, Sabah
16.	Hospital Umum Sarawak, Kuching, Sarawak
17.	Hospital Miri, Sarawak

## **GUIDELINES FOR MANAGEMENT OF BROUGHT IN DEAD (BID) CASES OF SUSPECTED OR CONFIRMED CASE OF COVID-19 INFECTION**

1. Bodies of suspected or confirmed COVID-19 which are brought in dead (BID) found in locations such as home, Institutions and streets etc., shall be sent to the mortuary as soon as practicable.

2. Steps to be taken by respective responsible personnel:

- i. The receiving personnel shall communicate/discuss the case with the forensic pathologist at the respective referral forensic centre to decide on how to manage the case.
- ii. Staff must wear the appropriate personal protective equipment whilst handling/preparing the body (Annex 8(i)).
- iii. Relatives are **STRICTLY PROHIBITED** from touching or kissing the body. Ensure the number of relatives allowed to view the body for identification should be limited to not more than 3 persons at a time. They must wear the appropriate personal protective equipment. They can only be allowed to stand at least 3 feet away from the body.
- iv. Relatives are **STRICTLY FORBIDDEN** to handle the body under any circumstances.
- v. The police shall call the district health office for assistance of the health inspector to ensure all precautionary measures are taken during transfer. Cordon the area.
- vi. The body should be placed inside a body bag (double) before being transferred to a designated hospital after in consultation with Forensic Specialist.
- vii. Body transfer by the police shall be carried out by 2 personnel (to minimize number of personnel). Both must wear appropriate personal protective equipment.
- viii. The police transportation lorry used to transfer the deceased must be decontaminated at the designated hospital as soon as the body is transferred.
- ix. The receiving personnel shall notify the following agencies **SIMULTANEOUSLY**:
  - ✓ The National CPRC, Ministry of Health.
  - ✓ The respective State Health Departments (JKN).
  - ✓ The respective District Health Offices (PKD).

3. Post-mortem examination of suspected or confirmed case of COVID-19 shall be conducted at the identified hospital after consultation with Forensic Specialist.

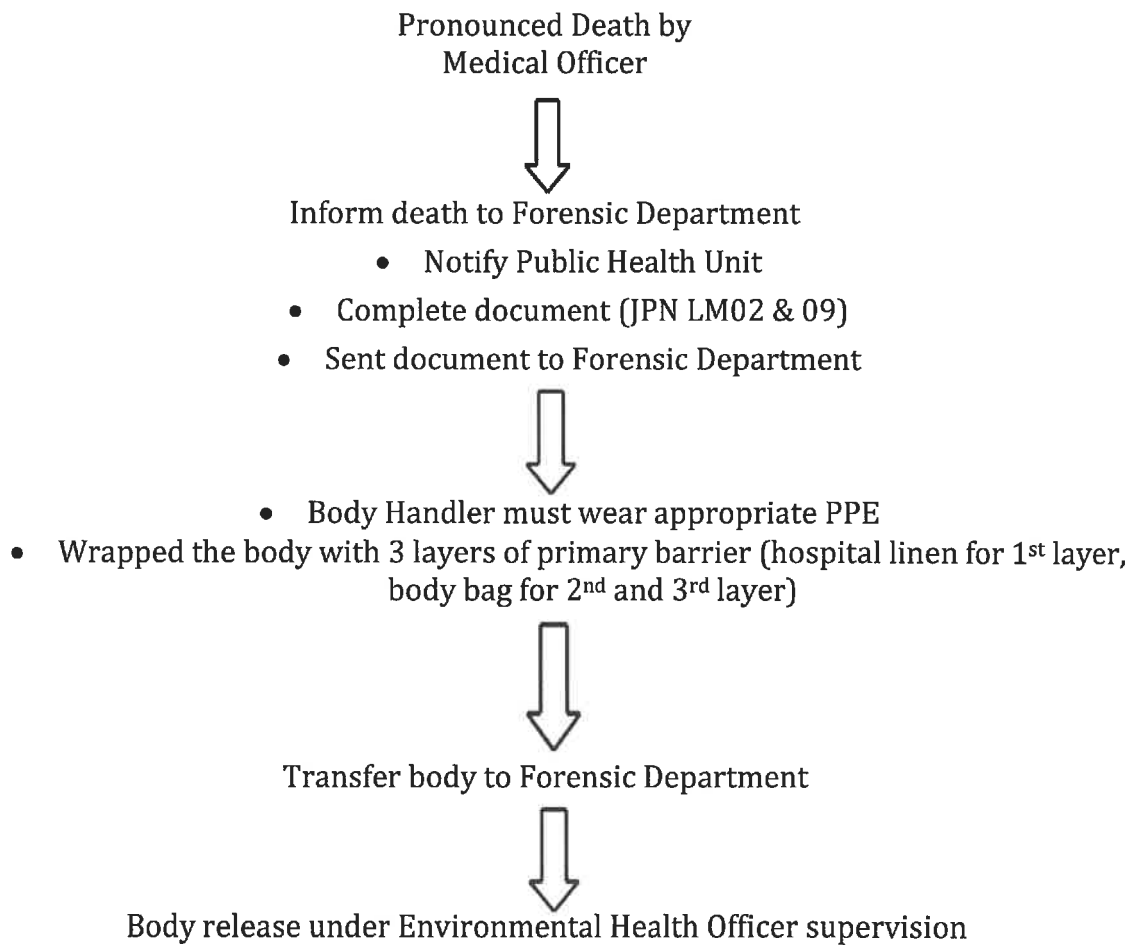
## **THE PERSONAL PROTECTIVE EQUIPMENT (PPE) ARE THE PROTECTIVE GARMENTS**

**Protective Garments Include:**

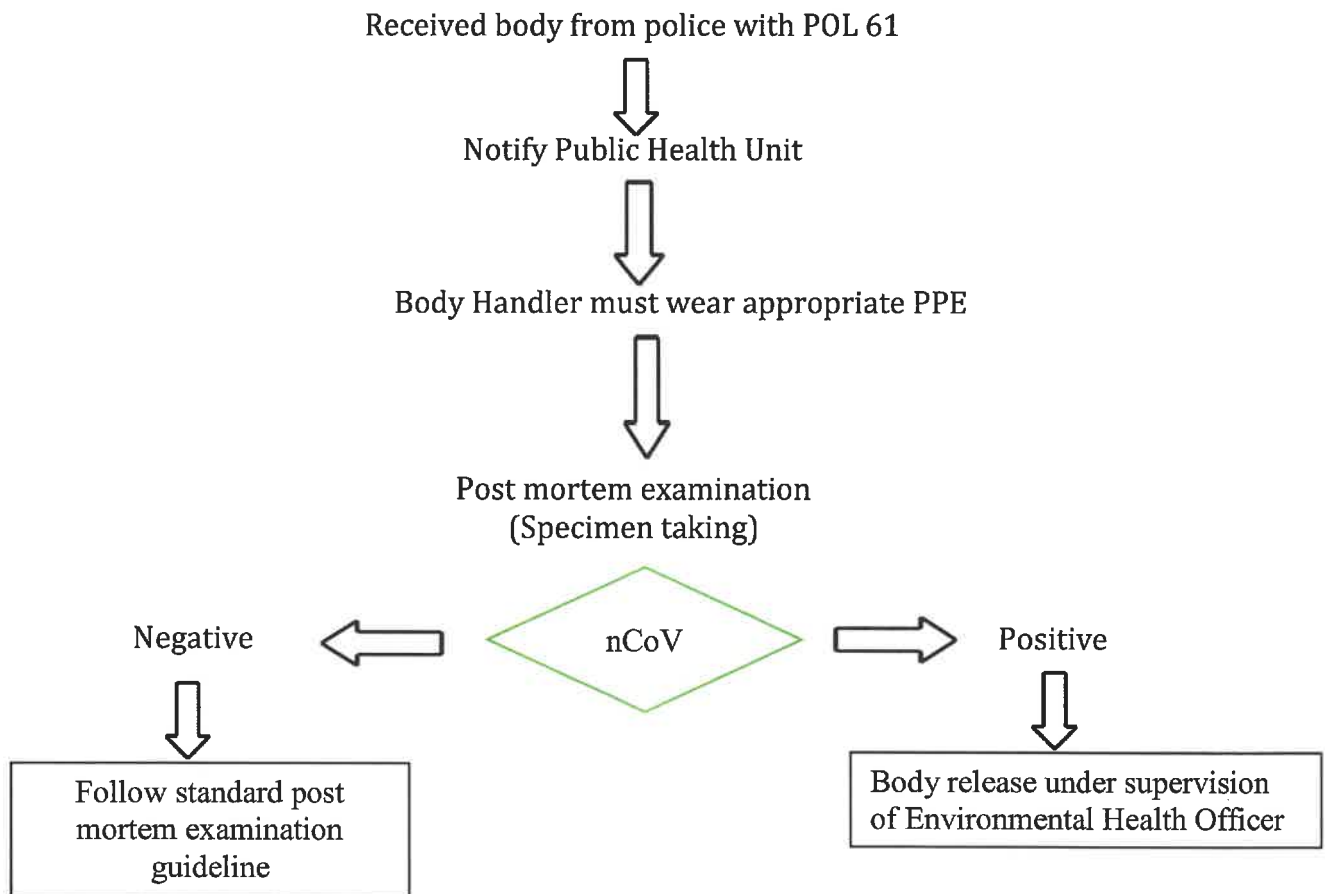
- Disposable Scrub suit or equivalent.
- Disposable waterproof bodysuits/coverall.
- Disposable impervious long-sleeved full length gowns.
- Knee length Boots.
- Disposable boot covers.
- Cut-resistant gloves.
- Double gloves (with the outer layer being elbow-length gloves)
- N95 masks.
- Full face shield head gear/helmet.



**Flow Chart on Dead Body Management of confirmed COVID-19 from Ward/ETD**



**Flow Chart on Dead Body Management of Suspected COVID-19 (BID) to Forensic**



## MANAGEMENT OF HEALTHCARE WORKER (HCW) DURING COVID-19 OUTBREAK

### General Considerations

Healthcare workers should adhere to strict infection control procedures as per recommendations including the use of appropriate PPE.

Health-care workers who are providing care for PUI will be monitored daily by the OSH Unit/Safety and Health Committee of the healthcare facility. Healthcare workers monitored must be recorded in a database for contact tracing purpose. The format of the monitoring is as below.

Management of symptomatic healthcare workers who were exposed to PUI is as per Flow 1

Assessment of mental health shall be conducted by the Mental Health and Psychosocial Support Team.

### Reporting

All healthcare workers who are positive for COVID-19 must be reported:

1. Communicable Diseases Notification using the Communicable Diseases Notification Form Annex 7
2. Occupational Health Notification using WEHU L1/L2 form from KPAS
3. Monitoring of HCW managing COVID-19 returns

**Monitoring Form for Personnel Potentially Exposed To COVID-19**

Name	:	
I/C number	:	
Telephone numbers	:	Mobile: ..... Home: .....
Job title	:	
Work location	:	
Date(s) of Exposure*	:	
Type of contact with patient with potential COVID-19 infection, with patient's environment or with virus / clinical specimen	:	

\* List ALL, use back of page if necessary

Was the following personal protective equipment (PPE) used during the encounter whereby the status of the respective patient is yet to be categorized confirmed for COVID-19?

Type of PPE	Yes	No	Don't Know
Gown			
Gloves			
Particulate respirator			
Medical mask			
Eye protection			
Other (please specify): .....			

List any possible non-occupational exposures (e.g. exposure to anyone with severe acute febrile respiratory illness, excluding the potential patient or the relevant clinical specimen):

.....  
.....

Daily Monitoring Table

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....
AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....
PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....
ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )

Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....	Date ...../...../ .....
AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....	AM Temp. (°C): ..... .....
PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....	PM Temp. (°C): ..... .....
ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )	ILI symptoms: No ( ) Yes ( )

**NOTE:**

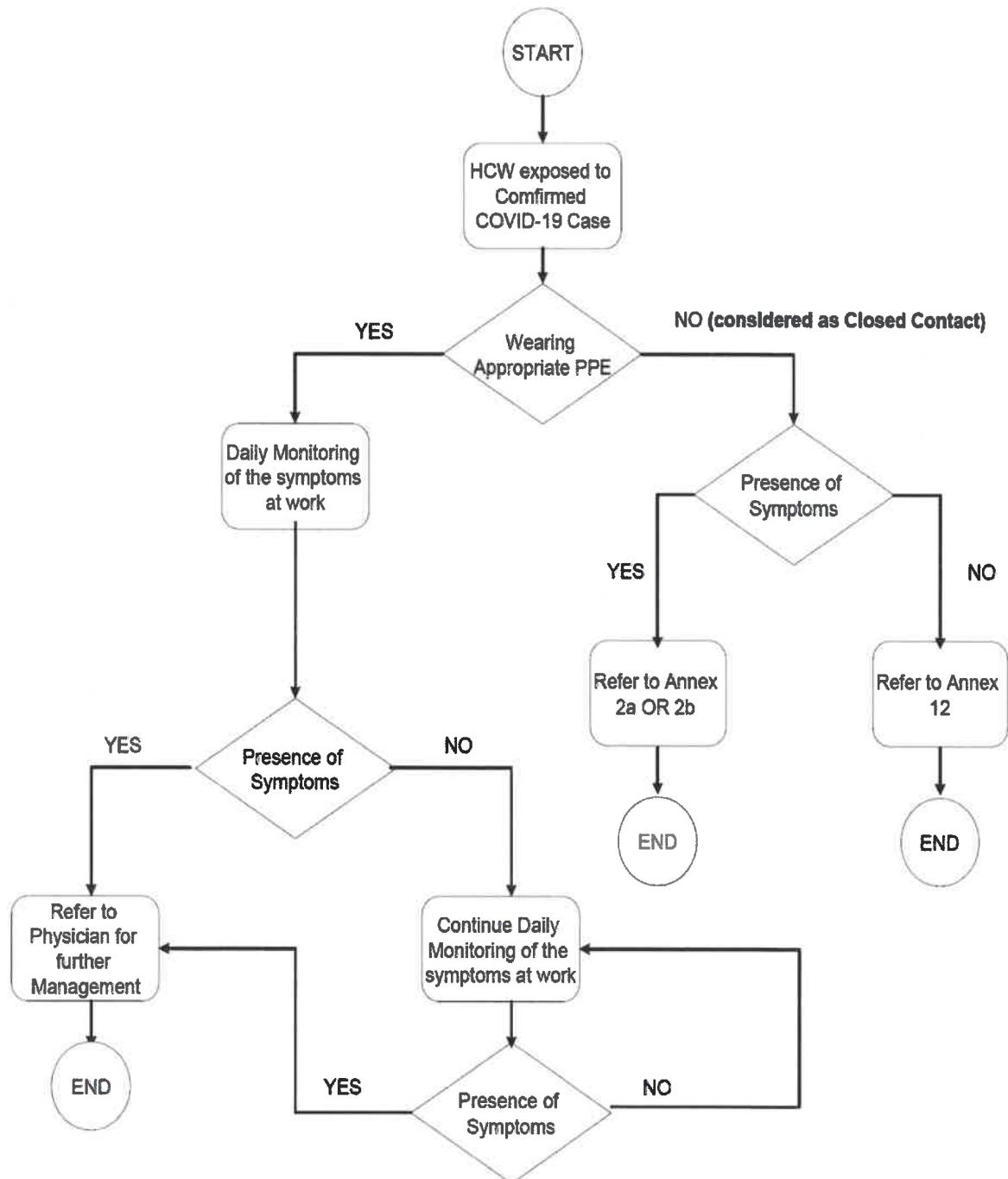
- The influenza-like illness (ILI) symptoms include fever ( $\geq 38^{\circ}\text{C}$ ), cough, sore throat, arthralgia, myalgia, prostration and gastrointestinal symptoms (e.g. diarrhoea, vomiting, abdominal pain).
- The number of days needs to be increased if the personnel have repeated encounters / exposures to the respective patient.

**NOTIFICATION OF OCCUPATIONAL LUNG DISEASE**

**WEHU - LI  
(JKKP 7)**

<p><b>Send to:</b> Pangarah Kesehatan Negeri Jabatan Kesehatan Negeri _____</p>	<p style="text-align: center;"><b>Part B - Affected person</b></p> <p>Name _____</p> <p>Date of Birth _____ New IC/ Passport no. _____  <small>DD MM YY</small></p> <p>Nationality _____ Gender <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>Ethnic Group _____ Occupation _____</p> <p>Name and address of organization _____</p> <p>District _____ State _____</p> <p>Location of incident _____</p>
<p style="text-align: center;"><b>Part A - Notifier</b> <small>(Regulation 7(2) Registered Medical Practitioner)</small></p> <p>Name _____</p> <p>Designation _____</p> <p>Address of clinic / hospital _____</p> <p>Contact no. _____</p>	
<p style="text-align: center;"><b>Part C - Occupational Lung Disease</b></p> <p>Date of diagnosis: _____  <small>DD MM YY</small></p> <p>Diagnosis/ Provisional diagnosis _____</p>	
<p style="text-align: center;"><b>Part D</b></p> <p>a) What kind of work did the patient do which may be associated with the disease? (Describe the work activities)</p> <p>b) What was the hazard or agent been exposed to the patient?</p> <p>c) How long had the patient been exposed to the hazard or agent?</p> <p>d) How long had the patient been experiencing the symptoms?</p>	
<p>Signature of Notifier _____</p> <p>Date _____</p>	<p>Name and address of attending doctor (Official Stamp) _____</p>

## Summary of Management of MOH Health Care Workers During COVID-19 Outbreak



**Risk Assessment and Management of Healthcare Worker (HCW) with Potential Exposure in a Healthcare Setting to Patients with COVID-19**

It is important that the HCW should not attend a healthcare setting if there is a risk they could spread COVID-19.

HCW involves in providing care to patient with confirmed COVID-19 should be

- Not having high risk condition/ immunocompromised illness – eg: uncontrolled diabetes mellitus, chronic lung / liver / kidney disease, malignancy, HIV infection etc
- Not on prolonged steroids / immunosuppressant treatment
- Non-pregnant

**A. Health care workers (HCW) with relevant travel history \* ( countries affected as per updated case definition )**

Healthcare workers who intend to travel to or have returned from affected countries, should declare their travel plans to their respective head of department/unit promptly.

HCWs are advised to reconsider their non essential travel plan to affected countries (as per updated case definition) during the interim period.

**By “health care worker” (HCW) with relevant travel history** we refer to those who work in a healthcare setting who had travelled to affected countries and has returned to Malaysia within the past 14 days.

<b>Asymptomatic HCW with exposure within the past 14 days</b>	<b>Actions</b>
Travelled to affected countries within the last 14 days before arriving in Malaysia (Subject to organization’s directive)	<ul style="list-style-type: none"> <li>• HCW to inform OSH and respective head of department/unit</li> <li>• OSH to provide home assessment tool</li> <li>• HCW will be at home for 14 days upon arrival</li> <li>• HCW will update daily health status to OSH and respective head of department/unit</li> </ul>



	<ul style="list-style-type: none"> <li>• HCW will be referred and investigated further if he/she develop symptoms suggestive of COVID-19</li> <li>• Symptomatic HCW will be reviewed as per assessment of PUI</li> <li>• If HCW does not require admission, follow the assessment as Annex 2a , PUI and continue home isolation</li> <li>• If HCW requires admission, follow the MOH guideline for Annex 2b.</li> </ul>
<p><b>Return to work:</b></p> <p>For HCW who never had symptoms or have had symptoms, tested negative and symptoms have resolved, can return to work after 14 days of home isolation from the day of return.</p> <p>If symptoms persist or HCW develops new symptoms within 14 days of travel, they need to be reassessed.</p>	

### **Asymptomatic HCW with household contact who are being investigated as PUI for COVID-19**

For asymptomatic HCW who has a household member being investigated as PUI for COVID-19, the **HCW should inform supervisor immediately** and be excluded from work until first PCR result of the PUI is available (within 24 hours). If the PCR result is negative, the HCW can return to work immediately.

**B. Management of HCW who were exposed to patient with confirmed COVID-19**

When assigning risk, factors to consider include:

- I. the duration of exposure (e.g., longer exposure time likely increases exposure risk)
- II. clinical symptoms of the patient (e.g., coughing likely increases exposure risk)
- III. whether the patient was wearing a facemask (which can efficiently block respiratory secretions from contaminating others and the environment)
- IV. whether an aerosol generating procedure was performed
- V. the type of PPE used by HCW

Psychological support and assistance are to be consider for HCW when needs arises.

**Exposure Risk Assessment**

Category of risk exposure	Circumstances
<b>High-risk exposures</b>	<ul style="list-style-type: none"> <li>• HCW who performed or were present in the room for procedures that generate aerosols or during which respiratory secretions are likely to be poorly controlled* on patients with COVID-19 <b>AND</b></li> <li>• when the healthcare providers' eyes, nose, or mouth were not protected.</li> </ul>
<b>Medium-risk exposures</b>	<ul style="list-style-type: none"> <li>• HCW who had prolonged close contact with patients with COVID-19</li> <li>• where HCW mucous membranes or hands were exposed to potentially infectious materials for COVID-19</li> </ul> <p>These exposures could place the exposed HCP at risk of developing disease.</p>
<b>Low-risk exposures</b>	To account for any inconsistencies in use or adherence that could result in unrecognized exposures in a fully PPE gown HCW.

Category of risk exposure	Circumstances
<b>No identifiable risk</b>	<ul style="list-style-type: none"> <li>• HCW with no direct patient contact and</li> <li>• no entry into active patient management areas</li> <li>• who adhere to routine safety precautions</li> </ul> <p>These HCWs are not considered to have a risk of exposure to COVID-19</p>

\* e.g., *cardiopulmonary resuscitation, intubation, NIV, extubation, bronchoscopy, nebulizer therapy, sputum induction*

**Table 1. Healthcare workers' (HCW) risk of exposure and guide to work restrictions.**

The table describes possible scenarios that can be used to assist with risk assessment. These scenarios do not cover all potential exposures and should not replace an individual assessment of risk for the purpose of clinical decision making.

Epidemiologic risk factor	Exposure category		Recommended monitoring	Work restrictions for asymptomatic HCW	Epidemiologic risk factor
	Circumstances				
Unprotected eyes, nose, or mouth <sup>1</sup>	Who perform <u>or</u> are present in the room for a procedure likely to generate higher concentrations of respiratory secretions or aerosols *		High	Active <sup>#</sup>	Exclude from work and put on home surveillance for 14 days after last exposure
Not using a gown and gloves.	Who perform or are present in the room for a procedure likely to generate higher concentrations of respiratory secretions or aerosols *		Medium Note: If the HCP's eyes, nose, <u>or</u> mouth were also unprotected they would fall into the high-risk category above.	Active <sup>#</sup>	Exclude from work and put on home surveillance for 14 days after last exposure
Unprotected eyes, nose, or mouth <sup>1</sup> <i>Note: A respirator (eg N95 mask) confers a</i>	who have <b>**</b> prolonged close contact with a patient who was not wearing a facemask.		Medium	Active <sup>#</sup>	Exclude from work and put on home surveillance for 14 days after last exposure

Epidemiologic risk factor	Exposure category	Recommended monitoring	Work restrictions for asymptomatic HCW	Epidemiologic risk factor
	Circumstances			
<p><b>HCW's PPE</b></p> <p><i>higher level of protection than a facemask. However, they are group together in this scenario because (even if a respirator or face mask was worn) the eyes remain uncovered while having prolonged close contact with a patient who was not wearing a facemask.</i></p>				
	<p>Who have ** prolonged close contact with a patient who was wearing a facemask</p>	<p>Medium</p>	<p>Active#</p>	<p>Exclude from work and put on home surveillance for 14 days after last exposure</p>
<p>Unprotected eye, nose, and mouth<sup>1</sup></p> <p>Not wearing gloves</p>	<p>Who have direct contact with the secretions / excretions of a patient and the HCW failed to perform immediate hand hygiene</p>	<p>Medium</p> <p>Note: If the HCW performed hand hygiene immediately after contact, this would be considered low risk.</p>	<p>Active#</p>	<p>Exclude from work and put on home surveillance for 14 days after last exposure</p>

Epidemiologic risk factor	Exposure category		Recommended monitoring	Work restrictions for asymptomatic HCW	Epidemiologic risk factor
	Circumstances				
Wearing a face mask or respirator only	Who have **prolonged close contact with a patient who was wearing a facemask		Low  <i>Note: A respirator (eg N95 mask) confers a higher level of protection than a facemask. However, they are grouped together in this scenario and classified as low-risk because the patient was wearing a facemask for source control.</i>	Active#	No work restrictions
Using all recommended PPE (i.e., a respirator, eye protection, gloves and a gown)	While caring for or having contact with the secretions / excretions of a patient		Low	Active#	No work restrictions
Not using all recommended PPE	Who have brief interactions with a confirmed COVID-19 patient regardless of whether patient was wearing a facemask		Low	Active#	No work restrictions

Epidemiologic risk factor	Exposure category	Recommended monitoring	Work restrictions for asymptomatic HCW	Epidemiologic risk factor
	Circumstances			
No PPE	(e.g., brief conversation at a triage desk; briefly entering a patient room but not having direct contact with the patient or their secretions/excretions; entering the patient room immediately after they have been discharged)			
	Who walk by a patient or who have no direct contact with the patient or their secretions / excretions and no entry into the patient room.	No identifiable risk	None	No work restrictions

HCW=healthcare worker; PPE=personal protective equipment

<sup>1</sup>Unprotected' means not wearing any PPE over the specified body part e.g. unprotected eyes, nose & mouth mean HCW are not wearing eye protection and either face mask or respirator.

\* e.g., cardiopulmonary resuscitation, intubation, NIV, extubation, bronchoscopy, nebulizer therapy, sputum induction

\*\* Prolonged Closed Contact refers to exposure more than 15 minutes

**#Active monitoring means that**

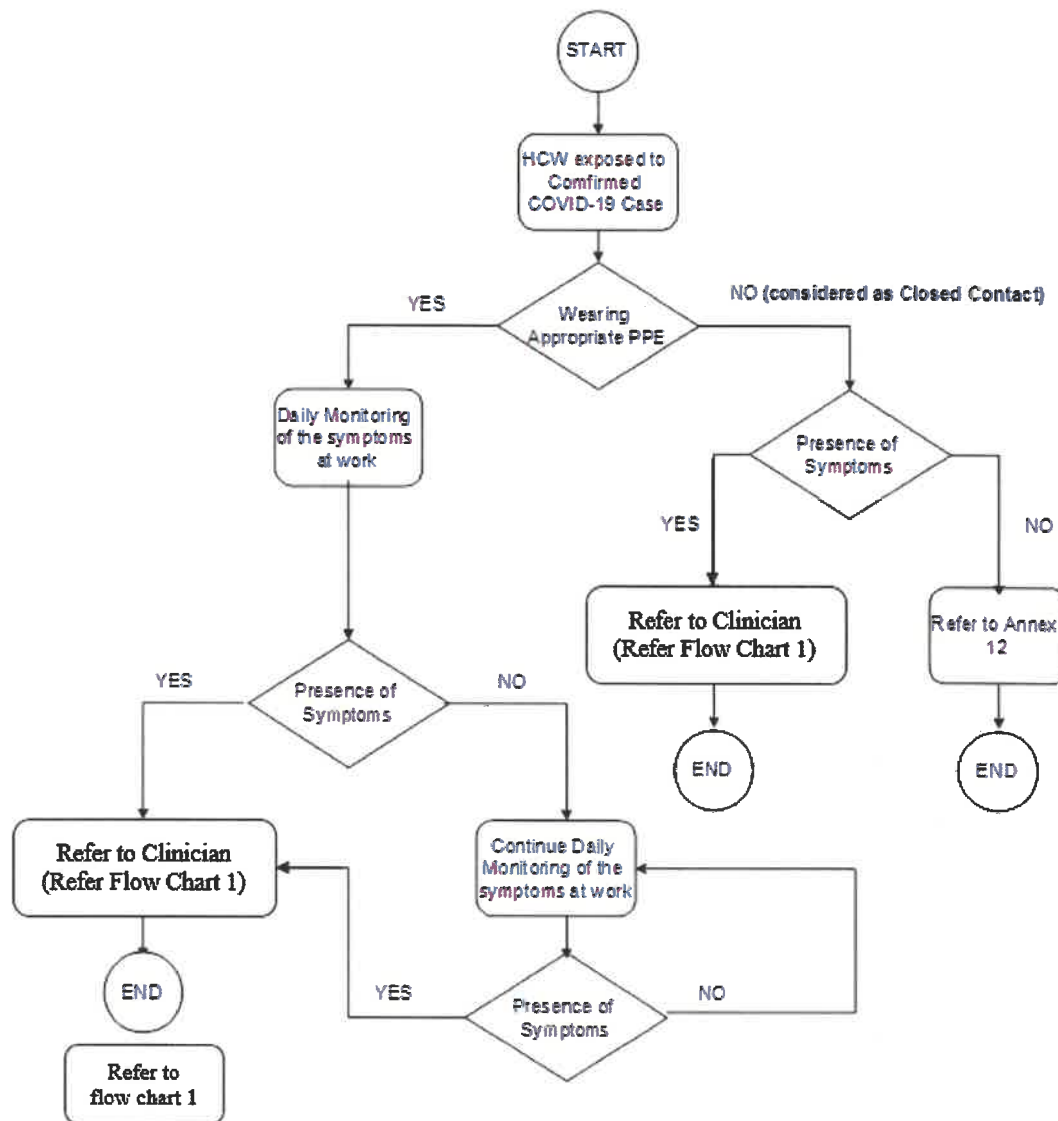
- the OSH assumes responsibility for establishing regular communication with potentially exposed people to assess for the presence of fever or respiratory symptoms (e.g., cough, shortness of breath, sore throat).
- For HCP with **high- or medium-risk exposures**, this communication occurs at least once each day. The mode of communication can be determined by the authority and may include telephone calls or any electronic or internet-based means of communication.

**Notify OSH / Hospital Public Health Unit as soon as possible if HCW in any of the risk exposure categories who develop signs or symptoms compatible with COVID-19 for medical evaluation.**

Exposure category	Recommendations for monitoring
<b>High- and Medium-risk</b>	<ul style="list-style-type: none"> <li>• should undergo active monitoring</li> <li>• restriction from work in any healthcare setting and put on home surveillance until 14 days after their last exposure for High and Medium Risk</li> </ul>
<b>Low-risk</b>	<p>If they develop any fever (<i>measured temperature <math>\geq 100.0^{\circ}F/37.8^{\circ}C</math> or subjective fever</i>) OR respiratory symptoms consistent with COVID-19 (<i>e.g., cough, shortness of breath, sore throat</i>)</p> <ul style="list-style-type: none"> <li>• they should immediately self-isolate (separate themselves from others) and</li> <li>• notify liaison officer and healthcare facility promptly so that they can be referred for further evaluation..</li> </ul>
<b>No Identifiable risk</b>	<ul style="list-style-type: none"> <li>• do not require monitoring or work restriction</li> </ul>

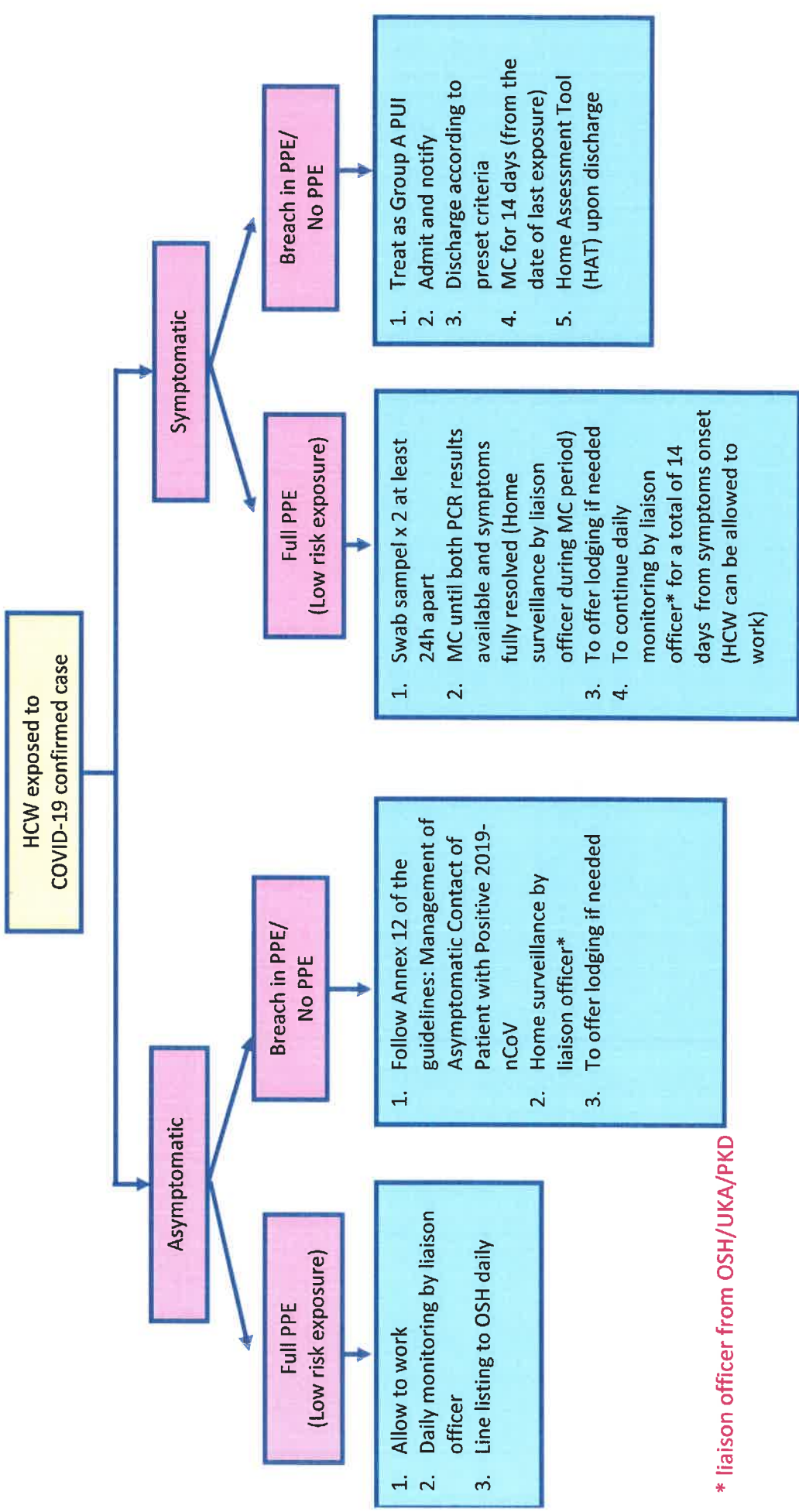


### Summary of Management of MOH Health Care Workers During COVID-19 Outbreak



Unit Kesehatan Pekerjaan,  
Sektor Kesehatan Pekerjaan dan Alam Sekitar (KPAS),  
Bahagian Kawalan Penyakit, KKM  
Februari 2020

## FLOW CHART 1: MANAGEMENT OF HEALTHCARE WORKERS EXPOSED TO COVID-19 CONFIRMED CASE



\* liaison officer from OSH/UKA/PKD

## **GUIDELINES ON MANAGEMENT OF CORONAVIRUS DISEASE 2019 (COVID-19) IN SURGERY**

### **A. SCREENING**

This is based on MOH recommendations of screening for COVID-19 which is generic across all disciplines

#### **a) How to screen (refer Annex 1)**

Ask 3 questions to all patients

- i. Do you have any fever or acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)?
- ii. Do you have any history of travelling to or residing in affected countries in the past 14 days?
- iii. Do you have any contact with a confirmed COVID-19 case within the past 14 days?

#### **b) Where to screen**

At all possible entry points

- i. Clinic
- ii. Patient Admission Centre

#### **c) Who to screen?**

Every patient

#### **d) If tested positive**

Kindly refer to the ID team as per MOH protocol

### **B. INFORMATION FOR SURGICAL UNITS**

#### **a) Surgical Team**

- i. Each Surgical unit should ideally have a core team to manage COVID-19 and the team should comprise of at least:
  - One Specialist
  - Two Medical Officers
  - Two Staff Nurses

- ii. This identified team should be on standby for all suspected patients and should ideally be optimally trained in handling the personal protective equipment (PPE), sample-taking and packaging apart from the management COVID-19 patients

#### **b) Universal precautions**

- i. The number of staffs managing a suspected or confirmed patient should be kept to a minimum
- ii. These patients should wear a properly fitted N95 mask
- iii. If a patient is in distress, the medical personnel should be able to provide care but would have to wear PPE during treatment as long as they are in contact with the person
- iv. In cases requiring surgical intervention, a Medical Officer or a specialist should be involved and all staffs must use PPE
- v. It is of good clinical practice to treat the body fluids, tissues, mask and other apparatus in contact with the patient as having potential biohazard and should be disposed as per current available recommendations (as for RVD patients)
- vi. The operating theatre should be cleaned as per biohazard based on current available protocols.

<b>Steps to wear PPE</b>	<b>Steps to remove PPE</b>
Hand rub	Remove gloves
Wear N95 mask (Should be fit checked)	Hand rub and hygiene
Wear face shield / goggle	Remove gown
Wear disposable gown (Ensure back is covered)	Hand rub and hygiene
Wear double gloves	Remove mask
	Hand rub and hygiene

#### **c) Transfer and documentation**

- i. Any suspect patient under investigation (PUI) must first be given a mask.

- ii. All staffs managing a suspected or confirmed patient should wear PPE and these patients should be transferred based on the identified pathway.
- iii. The staffs involved in the screening and investigations performed should clearly be documented as per MOH standards.
- iv. It is important to shield patients and minimize exposure to others wards to avoid lockdown.

**d) Designated suite for suspected and confirmed patients**

- i. All Surgical units should have a fully equipped and a designated site within a specific ward for the management of patients with COVID-19.  
*\*Although a negative pressure environment is ideal for management of such patients, this should be reserved for those confirmed to be infected.*
- ii. The location of such wards should ideally be nearest to the point of entry which is either at the patient admission centre or the isolation ward but this should depend on the resources of the individual hospitals.
- iii. Each Surgical unit is recommended to have their own management pathways based on their own logistics and resources.

**e) Dedicated operation theatre**

- i. All tertiary hospitals should have a dedicated operating theatre for patients suspected with COVID-19. This theatre should ideally be fully equipped and although a negative pressure ventilation is recommended, it is more essential for patients requiring general anaesthesia and hence this will depend on the resources and each individual hospital. Most operation theatres have its own air handling units.
- ii. The location of this theatre should ideally be easily accessible from the point of contact but this once again should depend on the individual logistics and resources of each hospital. The benefits of having this theatre nearby to the point of entry will also facilitate emergency surgery if required.

**f) Family and Visitors**

- i. If the patients are suspected or confirmed to have coronavirus, there should be minimal risk of exposure to others and hence the exposure to family in such exceptional circumstances are minimized.

**g) Elective surgeries**

- i. All elective surgeries should continue for now. In the event of a national crisis, then perhaps these elective procedures should be postponed as to divert our available resources for those suspected or confirmed to have COVID-19.
- ii. If the patient is suspected to have COVID-19 and is due for an elective surgery, it is recommended that such procedures be deferred for at least 14 days. This is applicable for full paying patients and day care surgeries as well.

**C. EMERGENCY SURGERY****a) The evidence on how best to manage a surgical patient is still limited****b) Minimizing exposure to staff**

The recommended number of staff to manage these patients during surgery is 6:

- One Specialist
- One Medical Officer
- One Anaesthetist
- One Anaesthetist Medical Officer
- One Scrub Nurse
- One Circulating Nurse

**c) Anaesthesia**

- i. If a patient requires a surgical intervention, regional anaesthesia is highly recommended as this will be a safer option as compared to general anaesthesia.

- ii. However, if the only possible option is general anaesthesia, this should ideally be performed in a negative pressure setting with the routine biohazard measures implemented during and post procedure. The patient can then be transferred via a portable ventilator. This however should be based on the individual logistics of each hospitals.
- iii. Intubation and extubation should be done wearing a full PPE which include PAPR or its equivalent (N95 well fitted and face shield/ goggle) when PAPR is not available.
- iv. The extubation of such patients should also be done in a negative pressure setting as to minimize the risk of aerosol transmission.
- v. Post-operatively, these patients should be managed in the isolation ward as per protocol. Consider thromboprophylaxis throughout the hospital stay.

## GUIDELINE ON MANAGEMENT OF CORONAVIRUS DISEASE 2019 (COVID-19) IN PREGNANCY

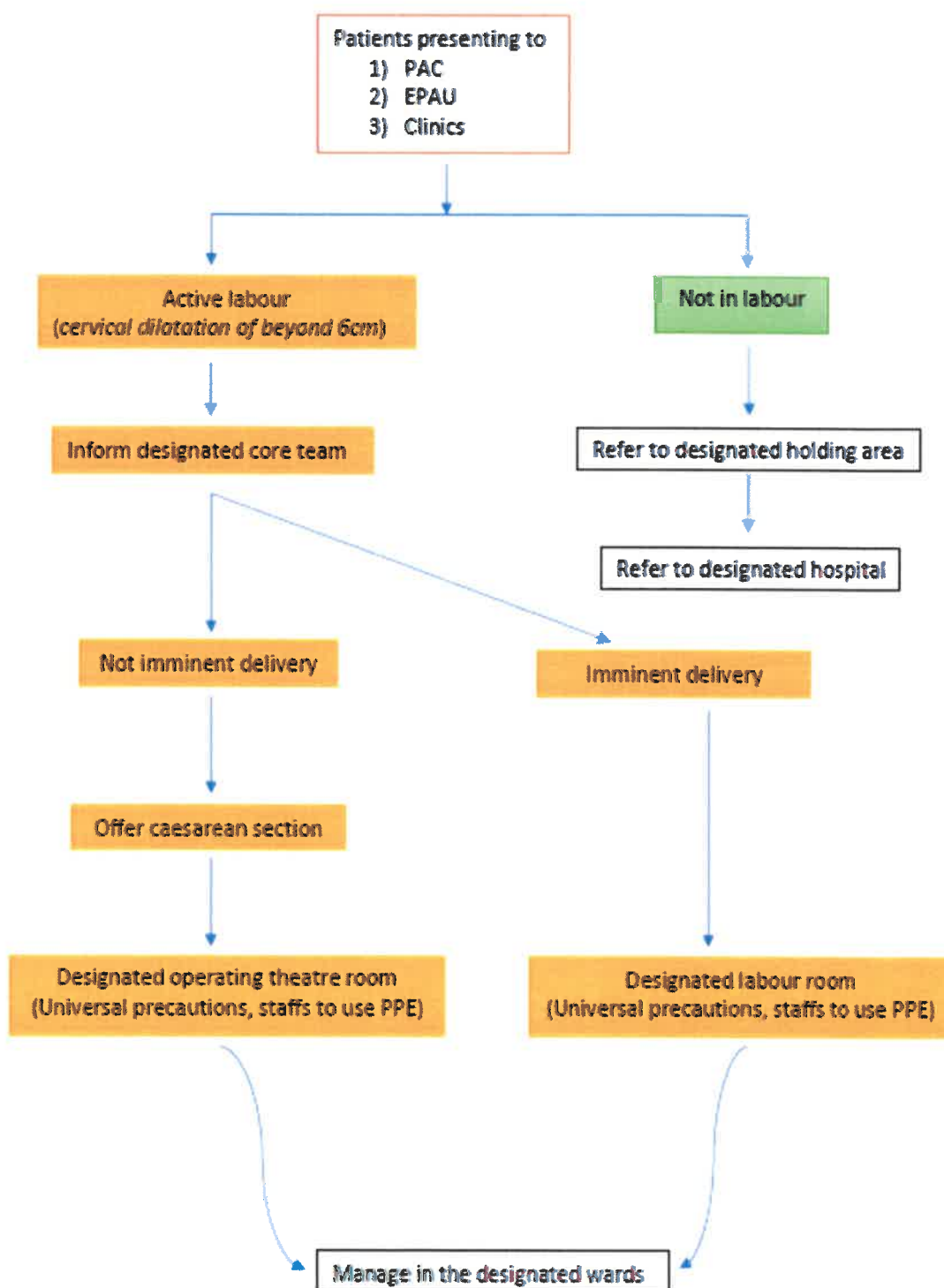
### Key Recommendations

- 1) **All frontline O&G staffs should be trained** in “donning and doffing” of PPE which should be used at all times. This training initiative should be extended to the **concessionaire workers** as well.
- 2) Screening of PUI should be done as **per MOH guidelines**
- 3) All designated O&G hospitals should establish a dedicated **core team who are** responsible for the management of COVID-19 in pregnancy.
- 4) **Mother and baby friendly policies** for PUI at designated hospitals are **suspended** to reduce the risk of exposure.
- 5) Designated hospitals should have an **identified labour room (preferable negative pressure ventilation)** to manage PUI and confirmed patients. Designated hospitals should also have an **identified operating theatre** to manage PUI.
- 6) **Non-designated hospitals** should identify a **specific labour suite and operating theatre** to manage PUI who presents with **imminent delivery**. Pathways should be developed based on individual logistics and resources.
- 7) In the event of requiring a surgical intervention, **regional anaesthesia** is preferred. If **general anaesthesia** is required, induction and reversal should preferably be done in **negative pressure room**.
- 8) Patients in labour should be offered a **caesarean section as mode of delivery** until more evidence on safety of vaginal deliveries is established.
- 9) Handling of bodily fluids, specimens including **placentas and patient apparels** should be handled based on standard **universal precautions**.
- 10) **Breastfeeding** should ideally be **deferred until confirmatory diagnosis** excludes COVID-19 infection in the mother.



## Workflow for Management of COVID-19 in Pregnancy

### Workflow for Management of COVID-19 in Pregnancy



**A. SCREENING**

This is based on MOH recommendations of screening for Coronavirus which is generic across all disciplines

**a) How to screen (refer Annex 1)**

Ask 3 questions to all patients

- i. Do you have any fever or acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)?
- ii. Do you have any history of travelling to or residing in affected countries in the past 14 days?
- iii. Do you have any contact with a confirmed COVID-19 case within the past 14 days?

**b) Where to screen**

At all possible entry points

- i. O&G Clinic
- ii. Patient Admission Centre (PAC)
- iii. Early Pregnancy Assessment Unit (EPAU)

**c) Who to screen?**

Every patient

**d) If tested positive**

Kindly refer to the ID team as per MOH protocol

**B. INFORMATION FOR O&G UNITS****a) O&G Team**

- i. Each O&G unit should establish have a core team to manage PUI and the team should comprise of at least
  - Two O&G Specialist
  - Two O&G Registrars
  - Two Midwives
- ii. This identified team should be on-standby for all suspected patients and should be optimally trained in management of COVID-19 patients apart from handling the personal protective equipment (PPE).

- iii. Training on “donning and doffing” of PPE is compulsory and they should also manage specimen collections and exercise universal precautions at all times.

#### b) Universal precautions

- i. The number of staffs managing a PUI should be kept to minimum.
- ii. The PUI should wear an appropriate mask (3-ply face mask) at all times.
- iii. The intrapartum management of PUI should be by the core team, both incorporating vaginal or caesarean deliveries.
- iv. Despite no evidence of vertical transmission, it is good clinical practice to treat the body fluids, tissues (placenta) and apparels as potentially biohazards.
- v. The labour suite and the operating theatre should be cleaned based on universal recommendations following a biohazard exposure.

Steps to wear PPE	Steps to remove PPE
Hand rub	Remove gloves
Wear N95 mask (Should be fit checked)	Hand rub and hygiene
Wear face shield / goggle	Remove gown
Wear disposable gown (Ensure back is covered)	Hand rub and hygiene
Wear double gloves	Remove mask
	Hand rub and hygiene

#### c) Transfer and documentation

- i. All PUI must first be given a 3-ply face mask to use at all times.
- ii. All staffs managing a PUI should wear a complete PPE and these patients should be transferred to the holding area (via passage of minimal exposure) where appropriate screening and investigations can be performed.
- iii. It is important to minimize exposure for patients and health care workers.
- iv. Documentation of all health care workers involved in managing PUI is essential.

#### d) Designated labour suite

- i. The location of such labour suites should ideally be nearest to the point of entry which is either at the Patient Admission Centre or the

isolation ward but this should depend on the resources of the individual hospitals.

- ii. Each O&G unit is recommended to have their own logistics based on their own resources.
- iii. Labour rooms should preferably have negative pressure ventilation.
- iv. Disposable equipments are preferred. Cleansing of the labour room should adhere to biohazard decontamination protocols.

#### **e) Non-designated labour suites**

- i. All non-designated O&G units should be prepared to manage PUI who presents in imminent labour.
- ii. A core team should be identified and the delivery should be conducted by HCW with PPE.
- iii. The location of this labour suite should ideally be located nearby the Patient Admission Centre or at a location with minimal exposure to other patients.
- iv. Each unit should ideally have their own written protocols in the event of having such patients presenting with imminent delivery.
- v. Post-delivery, the patient and the baby should be transferred to the designated admitting hospital.
- vi. Cleansing of the labour room should adhere to the biohazard decontamination protocol.

#### **f) Designated operation theatre**

- i. All tertiary hospitals should have a dedicated operating theatre for patients suspected with COVID-19.
- ii. This theatre should ideally be fully equipped and although a negative pressure ventilation is recommended, it is more essential for patients requiring general anaesthesia and hence this will depend on the resources and each individual hospital.
- iii. Most operation theatres have its own air handling units.
- iv. The location of this theatre should ideally be easily accessible from the point of contact but this should depend on the individual logistics and resources of each hospital.
- v. The benefits of having this theatre nearby to the point of entry will also facilitate crash caesarean sections if required.

#### **g) Non-designated operating theatre**

- i. Non-designated O&G hospitals should also have contingency plans in place to manage PUI who presents in active labour and requires a caesarean section.

- ii. A specific theatre with defined pathways should be created based on the local logistics to facilitate PUI requiring unscheduled surgical interventions

#### **h) Husband and baby friendly policies to be suspended for PUI**

- i. For PUI or confirmed patients, there should be minimal risk of exposure to others
- ii. Husband and baby friendly policies are suspended for these patients.

#### **i) Elective surgeries**

- i. Elective surgeries will be suspended if the COVID-19 situation warrants it.
- ii. If the patient is suspected to have COVID-19 and is due for an elective surgery, it is recommended that such procedures be deferred for at least 14 days.
- iii. This is applicable for full paying patients and day care surgeries as well.

### **C. INTRAPARTUM MANAGEMENT OF PATIENTS SUSPECTED OR CONFIRMED TO HAVE COVID-19**

#### **a) Mode of delivery**

- i. The evidence on how best to manage a pregnant mother is still limited.  
*(The only available evidence with regards to intrapartum care comes from the recent Lancet paper of 9 patients where all of them had a caesarean section. This paper showed no evidence of vertical transmission)*
- ii. There are also concerns of prolonged exposure of staff during the entire intrapartum period and the risk of aerosol exposure is significant, especially in the second stage of labour when the patient strains or pushes.
- iii. Hence, in view of the above concerns coupled by the fact that almost all centres do not have negative pressure equipped labour suite, PUI should be offered a caesarean section as a mode of delivery unless delivery is imminent. This is at least until we have more concrete evidence with regards to the intrapartum management of patients with COVID-19.
- iv. If a PUI refuses a caesarean section despite counseling, the refusal of treatment forms should be filled and this should be documented in

the clinical notes.

**b) Foetal monitoring**

- i. The monitoring of such patients should follow standard obstetric care and most do not require continuous CTG monitoring.

**c) Analgesia**

- i. The use of Entonox is not to be used for PUI.
- ii. Other modalities of analgesia are not contraindicated.

**d) Anaesthesia**

- i. If a patient requires a surgical intervention, regional anaesthesia is highly recommended as this will be a safer option as compared to general anaesthesia.
- ii. However, if the only possible option is general anaesthesia, this should ideally be performed in a negative pressure setting with the routine biohazard measures implemented during and post procedure. The patient can then be transferred via a portable ventilator. This however should be based on the individual logistics of each hospitals.
- iii. The extubation of such patients should also be done in a negative pressure setting as to minimize the risk of aerosol transmission.

**e) Breastfeeding**

- i. Breastfeeding is not recommended until maternal status has been confirmed to be negative of COVID-19.
- ii. Despite counselling, if the mother is still keen for breastfeeding prior to confirmation, she is required to sign the refusal of treatment form.

**f) Vaccinations**

- i. No contraindications for routine neonatal vaccinations.

**g) Postnatal care**

- i. Following delivery, the PUI should be transferred to the dedicated wards for monitoring as per MOH guidelines.

**h) Minimizing exposure to staff**

- i. The management of PUI should be by the core team but the number of staffs should be kept to a minimum.
- ii. The recommended number of staffs during an imminent vaginal delivery are two midwives who are part of the core team.
- iii. The recommended number of staff to manage a patient during caesarean section is seven:
  - One Obstetrician
  - One Assistant
  - One Anaesthetist
  - One GA Nurse
  - One Scrub Nurse
  - One Circulating Nurse
  - One Floating Nurse
- iv. Additional staff may be required, for example the paediatric team for resuscitation of baby.
- v. Routine neonatal examination and care can be performed outside the operating theatre to minimize exposure unless the neonate warrants urgent resuscitation.

#### i) Concessionaire workers

- i. The concessionaire workers should also be trained on appropriate “donning and doffing” of PPE as they may also be exposed to PUI.

### D. SCREENING QUESTIONNAIRE

#### History taking / 病历

Bil.	Questions
1.	Date of departure 出航日期
2.	Place of departure 出发地点
3.	Date of arrival to Malaysia 抵达马来西亚日期
4.	Airline / Flight number 航空公司/ 航班号码
5.	Flight transit
6.	Duration of visit in China

7.	Purpose of visit in China	
8.	Date of onset of symptoms 症状发作日期	
9.	Fever? 发烧?	Yes / No 有 / 没有
		How many days? _____ 天
10.	Cough? 咳嗽?	Yes / No 有 / 没有
		How many days? _____ 天
	Any phlegm? 有痰液?	Yes / No 有 / 没有
	Colour of phlegm? 痰液的颜色?	White / yellow / green 白 / 黄 / 青色?
	Blood stain in phlegm? 痰液里有血迹?	Yes / No 有 / 没有
11.	Difficulty breathing? 呼吸困难 / 气喘?	Yes / No 有 / 没有
		On movement or at rest? 走动时 / 休息时?
12.	Chest pain? 胸口痛?	Yes / No 有 / 没有
		Left / Right / Central 左边 / 右边 / 正中?
		On movement or at rest? 走动时 / 休息时?
13.	Vomiting? 呕吐?	Yes / No 有 / 没有
		How many days? _____ 天
		How many times per day? 一天_____次?
	Any blood stains? 呕吐里有血迹?	Yes / No 有 / 没有
14.	Other symptoms	



**E. EQUIPMENTS****a) Equipment list for vaginal deliveries**

<b>BIL</b>	<b>LIST</b>	<b>QUANTITY</b>	<b>DISPOSABLE</b>	<b>REUSEABLE</b>
1.	VE SET		√	
2.	AMNIOTIC HOOK	1	√	
3.	BABY TOILET	1	√	
4.	DELIVERY FORCEPS:			√
5.	ARTERY FORCEPS	2		√
6.	SPONGE FORCEP	1		√
7.	EPISIOTOMY SCISSORS	1	√	
8.	CORD SCISSORS	1	√	
9.	DELIVERY SETS		√	
10.	CORD CLAMP		√	
	EPISIOTOMY SET:		√	
11.	STITCH SCISSORS		√	
12.	NEEDLE HOLDER			√
13.	DISSECTING FORCEPS - TOOTH			√
14.	DISSECTING FORCEPS - NON-TOOTH		√	
15.	SPONGE HOLDER	1		√
16.	TRAY		√	

## b) Equipment list for caesarean sections

BIL	LIST	QUANTITY	DISPOSABLE	REUSEABLE
1.	LSCS SET	1		√
2.	WRIGGLE'S FROCEPS	1		√
3.	GA STERILE GOWN	2	√	
4.	REINFORCE GOWN	4	√	
5.	3 METRE CONNECTING TUBBING	2	√	
6.	YAUNKER SUCKER	3	√	
7.	CORD CLAMP		√	
	GA SET:			√
8.	CLEANING SET (USE DRESSING SET)	1	√	
9.	ETT TUBE		√	
10.	LARYNGOSCOPE (SHORT BLADE & LONG BLADE)	1	√	
11.	LARYNGOSCOPE (SHORT & LONG HANDLE)	1	√	
12.	ISLAND DRESSING	1	√	
13.	KIDNEY DISH	1	√	

## WORKFLOW AND WORK PROCESS FOR RADIOLOGICAL EXAMINATION DURING COVID-19 OUTBREAK

### 1. Mobile X-ray

- Request made manually or online
- The ward staff shall call and inform the radiology personnel of the examination to be performed.
- An appropriate time is determined for the examination to be carried out.

#### 1.1.Registration

All request for radiological exam shall be pre-registered prior to receiving the patient.

#### 1.2.The Radiographer

- The radiographer has to abide by the precautions given in the Infection Prevention and Control measures (**Annex 8**) on the necessary steps to limit COVID-19 transmission.
- Recommended to have just a core number of radiographers trained for this exercise.

#### 1.3.Lead gown

- Clean on both sides (front and back).
- Lead gown to be worn before the radiographers donned the PPE for infection control.

#### 1.4.Mobile x-ray Machine

- Clean the mobile x-ray machine especially the wheels.
- Drape the machine with plastic wrap if available. Alternatively, use non-alcohol germicidal disposable wipes when resources are low.

#### 1.5.X-Ray cassettes

- Clean on both sides (front and back)
- Placed in two layers of disposable plastic bags.

#### 1.6.Anatomical Markers

- Clean on both sides
- Places in two layers of disposable biohazard plastic bags.

#### 1.7.Performing the examination

The radiographer shall be assisted by a ward staff namely a nurse in:

- opening of doors to the cubicles if patient is in cubicle/room

- positioning the patient for the x-ray examination

### 1.8. Post X-Ray exposure

The radiographers shall be assisted by a ward staff in: -

- Removal of the imaging cassette from under the patient
- Removal of the imaging cassette from the contaminated plastic bags. *(These bags are disposed in the yellow clinical waste bin)*
- Opening of the doors of the cubicle/room if patient is in the cubicle/room.
- This is followed by decontamination of the mobile X-ray machine and the radiographers as per recommendation.

## 2. Mobile Ultrasound

The hospital authorities shall assign one machine for mobile ultrasound examination purposes.

- The cleaning of the ultrasound machine before and after the procedure and the draping is similar to that of the mobile x-ray machine.
- The ultrasound probes must be cleaned and properly covered with disposable probe covers.
- Alternatively, when resources are low disposable sterile gloves and sterile green paper can be used to cover the probes and wrap the cables.

### 2.1. Assistance

The Radiologist performing shall be assisted in a similar manner as the radiographer performing the Mobile X-Ray.

### 2.2. PPE

The radiologist shall take all necessary infection control precaution in accordance to Infection Prevention and Control measures.

## 3. Special Examinations

The case needs to be discussed with the Radiologist in charge of the modality.

### 3.1. Scheduling

Cases requiring special examination shall be scheduled at a later part of day preferably after completion of elective list

**4. Workflow to the Radiology Department/ Unit**

- Wherever possible, access through a separate entrance.
- The ward staff has to wait for the call from radiology staff before sending the patient in order to minimize contact time in Imaging Department.
- The case shall be pre-registered before being called.
- The hospital authorities to recommend the flow of the patient from the ward to the Radiology Department.
- The security guards may be involved to manage the patient flow.
- The radiology personnel shall take all necessary infection control precaution in accordance to Infection Prevention and Control measures.
- The radiology personnel in charge of modality (CT/MRI/IR) shall allow adequate "time off" for disinfection of equipment in between the case.