PRIMARY CARE HEALTH WORKER DESK GUIDE IN THE CONTEXT OF COVID-19

Brief introduction to COVID-19

COVID-19 is a respiratory infection caused by the new Sars-CoV-2 virus, which is similar to the SARS virus of the 2003 epidemic. The COVID-19 virus can spread rapidly from the initial few cases and their contacts, with cases doubling every 3 days and rapid transmission occurring within the community. Everyone is susceptible to the infection.

Symptoms of COVID-19 include fever, cough, and difficulty breathing, which are also symptoms of other common infections. Since a COVID-19 test could take days or may not be readily available, patients with these symptoms should be treated for the likely common infection and also managed as possibly infected with COVID-19 .

Symptoms in at least half of cases are very mild, especially in children and young adults. As such, they might continue their activities and unknowingly spread the infection, unless they practice social distancing (i.e. staying at home or keeping 2 meters or 6 feet apart from others). Patients who are ill can infect other household members and caretakers, who can also consequently pass it on to others, unless the whole household isolates at home for 14 days. Patients, especially the elderly and/or those with chronic diseases, may get very ill (around the end of the first week of symptoms) and require oxygen or ventilator support.

Within a few weeks of the COVID-19 epidemic, there is often a steep climb in cases and deaths. After a few months the numbers peak and start to decline. Additional epidemics with peaks are likely to follow until herd immunity is established with COVID-19 vaccine administration. Meanwhile, it is important to continue with your normal care and prevention activities. Rearrange your facility to screen for patients with COVID-19 symptoms in a well-ventilated area and separate them from other patients. (See section ‘primary care facility management’ for more details.)

Diagnosis and management

Assess sick adults, 'walk-in' outpatient in the context of possible COVID-19 in the following steps:

1. **Ask** the patient's age, symptoms and travel /contact history

   PPE precautions should be implemented for persons under investigation

Patient Screening Risk Assessment Checklist

Age <50 yrs. 50-70 > 70	1.Has come from abroad (ANY COUNTRY) within 14 days prior to onset of symptoms 2. Had close contacts* with a confirmed or suspected case of COVID19	**Co-morbidities** • COPD • Hypertension • IHD • DM • Chronic renal failure • Chronic Liver Diseases • Pregnancy • Other _____

Presenting complaints		**Clinical Assessment**			
Symptoms	Duration		Mild	Moderate	Severe
Fever Cough Sore throat Shortness of Breath Nasal Congestion Loss of Taste/Smell Hemoptysis	Fatigue Nausea Vomiting Diarrhea Myalgia Arthralgia Headache	Pulse rate	< 100	100-120	>120
		Resp. rate	12-20	20-30	>30
Other Sx:		O2 saturation	>94	90-94	<90

2. **Assess** the severity of their disease;

CRB65: scoring tool to determine urgency of response or referral (or if you have a pulse oximeter, also see Annex 1 for NEWS Score)

Give 1 point for each of:

- raised respiratory rate (RR, 25 breaths per minute or more)
- low blood pressure (diastolic 60 or less, or systolic less than 90 mmHg)
- age 65 years or more.

- confusion (a new disorientation in person, place or time)

Feature	Measure	Score	*Confusion* mental state 1-8:*
Confusion	Abbreviated mental test* score ≤ 8	1	*name -1, age-1*
Respiratory Rate	>30/minute	1	*recognition of two persons (e.g. doctor, nurse) -1*
Blood Pressure	Systolic < 90 or Diastolic ≤ 60 mmHg	1	*date of birth-1*
65	Or older	1	*address recall- 1*
			Date of National Independence
			name of a National Hero -1.
			count backwards 20 to 1- 1

Decide the severity of the disease using the CRB65 Total Score

Severity	Standard	Actions
Severe	CRB65 total score = 2-4, or simply have raised RR>25/min	Urgently transfer to designated isolation ward with critical care facilities
Moderate	CRB65 total score = 1	Transfer to isolation area with resuscitation facilities
Mild	CRB65 total score = 0	Transfer to isolation area

3. **Identify** a COVID-19 suspect

If the COVID-19 suspect has a fever, cough or other symptoms listed in Step 1 AND also meets any one of the three conditions listed below (also see details for case definition in Annex 2):

1) Assessed as severe in Step 2.
2) Traveled or has residence in areas with known local transmission or has contact history (i.e.: *close contact** with a confirmed/probable COVID-19)
3) Patients have **high risk**, including any of the below:
   - Aged 60 years and above
   - With a chronic disease *comorbidity***
   - High-risk pregnancy
   - Health worker.

**Definition of close contact with a possible or confirmed COVID-19 case: if any of the following are met*

- Providing direct care to a possible or confirmed COVID-19 patient without personal protective equipment
- Having stayed close in an environment (incl. workplace, classroom, household, gatherings) with a possible or confirmed COVID-19 case
- Has traveled in close contact, within 1 meter (3 feet), in any vehicle for more than 15 minutes with a possible or confirmed COVID-19 case.

**A *comorbidity* includes chronic lung, kidney, liver disease, cardio-vascular, hypertension, diabetes, HIV, using steroid tablets or chemotherapy, or morbid obesity (BMI>40).

4. Management suspected or confirmed COVID-19 patients

Only patients with a positive COVID-19 test will be admitted to appropriate isolation facilities. Manage confirmed COVID-19 patients according to their severity of disease, determined in Step:

- Patients who are asymptomatic or have mild symptoms: sent to local quarantine facilities
- Patient with moderate or severe symptoms: referred to the hospital for advanced care

In the event that patient volumes exceed available health capacity, please see Annex 3 for contingency management of COVID-19 patients.

*Symptomatic treatment:

Advise extra fluids, and especially if dehydrated, oral rehydration solution.

If fever or head/ muscle aches, give Paracetamol max 8 a day in adults (not Ibuprofen and other NSAIDS during COVID-19).

**Differential diagnosis: Follow your regular standard treatment guidelines for more information on diagnosis and treatment of likely disease. Do this as well as advise for possible COVID-19, as symptoms and signs overlap with the usual common diseases. Anyone with fever or a cough may actually have some other febrile illness.

With cough or difficulty breathing, ask and look for signs and symptoms of the common causes and treat accordingly:

- Upper respiratory infection (cold symptoms etc.) - symptomatic treatment
- Pneumonia, if having difficulty breathing/rate is raised (more than 20/minor more in an adult), and has a raised pulse and fever, also consider an X-ray, and give an antibiotic, e.g. Amoxicillin
- If existing asthma and/or wheeze has worsened, step up inhaler treatment
- If has had a cough for more than two weeks, or night sweats, also send two sputum for a tuberculosis test.

With fever, ask and look for signs and symptoms of other common fever-inducing diseases including:

- Malaria (in affected areas/ seasons) do a rapid diagnostic test (RDT) and if positive give antimalarial ACT treatment
- Dengue (in affected areas/seasons) do a Dengue NS1 RDT and if positive, initiate early patient management according to symptom severity
- Urinary tract infection if frequency or burning passing urine, do a urine test, if positive (or clear-cut symptoms) start antibiotic e.g. Trimethoprim.
- Diarrhoea – advise extra fluids, best as rice water or oral rehydration salts (ORS).

Nursing care

A nurse or health staff trained in COVID-19 management in the heath facility should carry out the doctor/ clinician assessment and are responsible for the below tasks:

1. Report and Collect specimen

Inform the Regional Epidemiology Unit of all the COVID-19 suspect cases and **fill out** a Case Investigation Form 2019 Novel Corona Virus (2019 n-CoV) for all Hospital Admissions (see Annex 4)

- **Do nasopharyngeal and oropharyngeal swabs** for all COVID-19 suspects
  - Current methods of respiratory sample collection include:
    - Nasopharyngeal and oropharyngeal swab
    - Endotracheal aspirate, nasopharyngeal aspirate
    - Bronchoalveolar lavage
    - Tissue biopsy or autopsy including from the lung (not in formalin or alcohol)
  - Note: Lower respiratory samples are strongly recommended in severe cases
- Use virus transport medium tubes for collection and store at (at 2℃ to 8℃.) if ≥ 48hr -70℃. Dispatch in triple package system within 48 hours. Inform the lab before sending.

2. Educate patients when home quarantine is needed

- **Key messages of COVID-19**
  - Incubation period/ infection to symptoms: usually 4-6 days (may be 2, or up to 14 days)
  - There is no cure for COVID-19 virus, we treat the symptoms, take plenty of fluids.
  - Home quarantining requires 14 days.
  - COVID-19 vaccination campaigns are currently underway, with the COVISHIELD vaccine recently approved for emergency use in individuals 18 years and older.

- **Hygiene and protection during home quarantine**
  - Do not leave the house, contact local PHI/MOH for any emergency
  - Patients and their family members are strongly recommended to wear masks if available. Cover the mouth and nose with your bent elbow or tissue when you cough or sneeze if mask is not available. Dispose of the used tissue immediately and perform hand hygiene.
  - Wash hands with soap under running water frequently; or by use of alcohol-based hand rub/sanitizer if water is not available. However, if hands are visibly soiled you need to wash hands rather than use a sanitizer.
  - Avoiding touching your eyes, nose, and mouth (especially with unwashed hands).
  - Use separate cutlery, plates, and towels.
  - Double bag waste and leave aside 3 days then put in the waste bin.
  - Independent living area with frequent ventilation and disinfection;
  - Avoid contacting with infants, pregnant women, the elderly and people with weak

immune functions at home;
  - Keep 2 meters (6 feet) distance from each other.
  - Do not have visitors at home whether family or friends

- **Monitoring and communication during home quarantine**
  - Call 1999 or 1399 if very breathless/ difficult breathing (breathing rate > 25/ min) or if heart rate > 120, or temp > 38°C, or mentally confused. Tell patient how to measure these and to pay close attention to any changes of physical condition. Say the difficult breathing may start about 7 - 9 days after illness started and occurs in 1 in 5 people. Seek help urgently as you may need oxygen and intensive care e.g. a ventilator.

3. Communicate with Epidemiology Unit and MOH team

- Share health information of suspected COVID-19 patients electronically with the Epidemiology Unit as coordinated by the Infection Prevention & Control taskforce in the hospital.
  - Use patient information collected at the time of triage and/or admission as collected using the **Patient Screening Risk Assessment Checklist**
- Positive COVID-19 RT-PCR results are directly reported to the Epidemiology Unit, who will arrange for patient transfer to designated COVID-19 hospitals and/or facilities.
- MOH team will be contacted to arrange for contact tracing, home care / quarantine and follow up on COVID-19 patients and their close contacts in the event of symptom development
- Use patient information collected at the time of admission (Annex I) for communication

Advice for mental health

The COVID-19 pandemic poses unique challenges for health-care providers, who may be feeling higher than normal stress and anxiety levels from trying to balance the challenges at work and life at home. These challenges may negatively impact your overall mental health and how you interact with substances like alcohol and cannabis.

Strategies to help you cope

- **Accept and validate your feelings**, understanding that stress and anxiety are normal during challenging times.
- **Recognize what is within your control,** and focus on those factors to try to mitigate the stress.
- **Remember that this is temporary** and will pass.
- **Take care of your health** by eating and sleeping well, exercising, and meditating.
- **Make time for yourself** with activities you enjoy that are free from COVID-19-related topics.
- **Stay connected** with family, friends, and colleagues while still practising physical distancing.
- **Reach out for help** by talking to your supervisor or seeking professional support.
- **Monitor your substance use** and pay attention to what triggers it.

Protect yourself and others

Remember COVID-19 spreads by:

i) Droplets from the nose, cough, talking therefore staying more than 2 m (6 ft) apart may help reduce transmission.

ii) By hands, through touching surfaces contaminated with droplets of the virus and then touching the eyes, nose, or mouth. Therefore, regular hand washing is essential.

Caring for patients with NO COVID-19 symptoms:

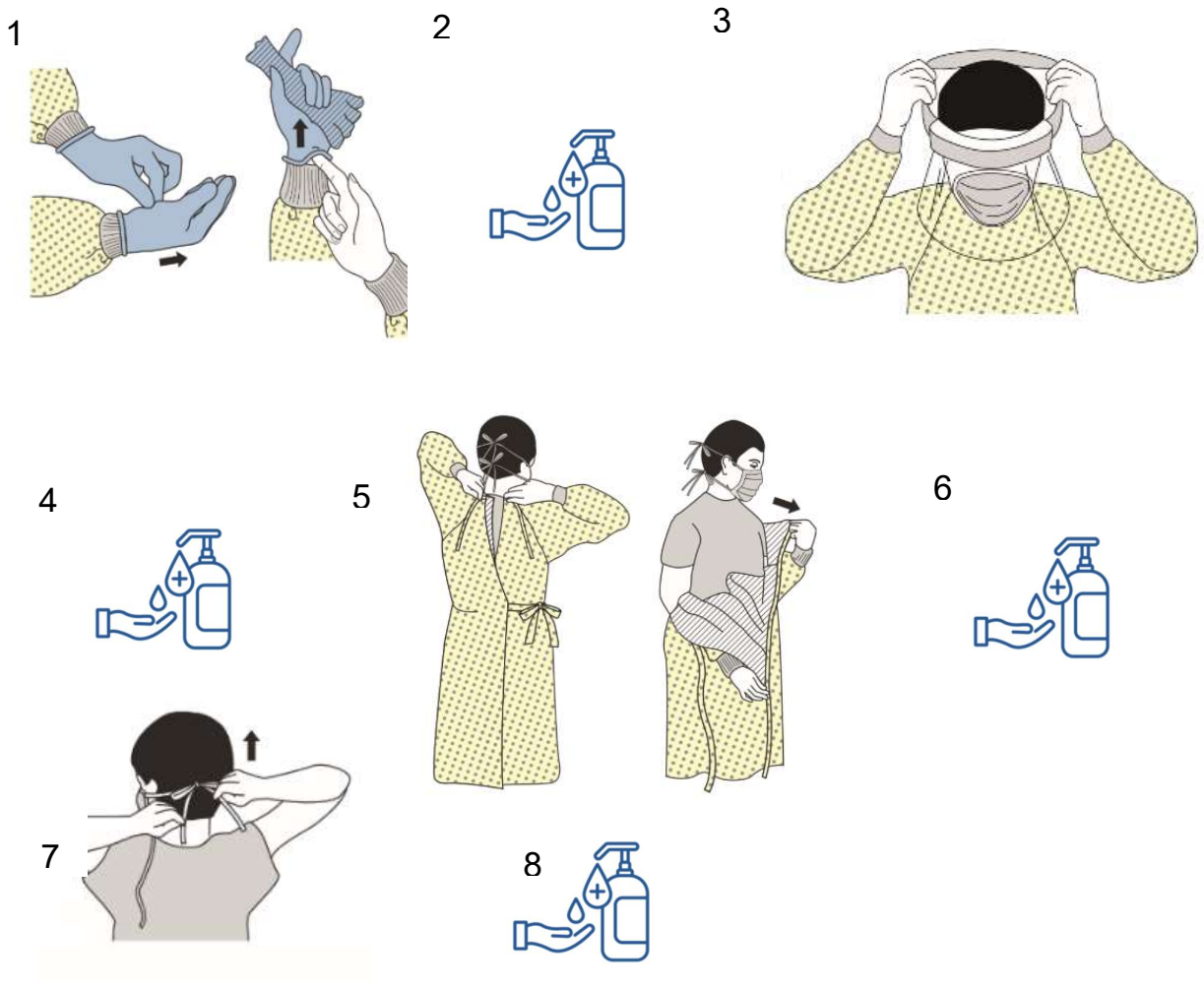
Standard precautions are sufficient. This includes regular hand washing before and after each patient and encouraging cough hygiene. Open windows to help ventilation.

Put on PPE when caring for patients suspected of COVID-19

No physical contact with patients e.g. screening, talking	**Physical contact with patients** E.g. examination, taking a COVID-19 swab
• Medical mask • Eye/Face Shield	• Medical mask • Eye/Face Shield • Gloves • Gown/apron

Removing PPE:

Perform hand hygiene as indicated during doffing and after removal of PPE. Remove in the following order. Avoid touching potentially contaminated areas. Only touch the straps and string of the mask and eye shield. Only touch the inside of the gown and gloves with bare hands.



- Masks can be used for up to 6 hours if needed
- Remove mask if wet, damaged, soiled or if it becomes difficult to breathe
- If you touch front of your mask/eye protection immediately wash hands
- Goggles/face shield can be worn for whole shift, decontaminated, and re-used
- Change gloves between each patient. Double gloving not required.
- Do not reuse medical masks or gloves
- Cotton clothes/gowns can be washed and re-used

Primary care facility management

Layout of primary care facility

Incoming patients with fever, cough, difficulty breathing or any other possible COVID-19 symptoms or persons with a high risk of exposure even with a different clinical presentation should be kept separate from those with non-COVID-19 symptoms at all points of care. The facility may use a different screening check list if developed by local physicians depending on COVID-19 spread in the area. All those with suspected COVID-19 symptoms should be directed either to a separate designated isolation area or a tent set up outside the health facility. The entire isolation area should include a reception and waiting area separate and disconnected to areas treating patients who are not suspected of having COVID-19. Isolation areas should be well ventilated and be strictly limited in access to designated and trained personnel. Signs and posters should be clearly posted inside and outside the health facility to distinguish COVID-19 from non-COVID-19 areas. Set up an independent tent or room with an exclusive one-way entry passage with visible and clear signs for patients with suspected COVID-19 symptoms, separating them from the no-fever/cough (clean zone) patients.

Put signs outside and in the reception area (a covered but open or well ventilated area). Have signs ask patients "Do you have fever, cough or difficulty breathing? If 'no' go to desk A (e.g. to the Left); if 'yes' go to desk B (e.g. to the Right)." These desks should be in separate locations, e.g. desk B for fever or cough patients could be a tent outside of the health facility.

Instruct the registration staff to ask and confirm the presence of fever, cough, difficulty breathing, or other possible COVID-19 symptoms. Direct patients with non-COVID-19 symptoms to Waiting Area A and direct suspected COVID-19 patients to Waiting Area B.

Facility cleaning and disinfection plan

- **What to use**: 1% sodium hypochlorite solution is recommended. For surfaces that do not tolerate bleach 70% ethanol can be used (phones, computer keyboards etc.)
- **Instructions for disinfection:**
  - Spray 1% sodium hypochlorite working solution on all the surfaces (protecting electrical points/appliances).
  - Then clean with a neutral detergent to remove traces of hypochlorite solution.
  - While cleaning, windows need to be open.
  - All frequently touched areas, such as all accessible surfaces of walls and windows, the toilet bowl and bathroom surfaces need to be carefully cleaned.
  - All textiles (e.g. pillow linens, curtains, etc.) should first be treated with 1% hypochlorite spray, and then packed and sent to get washed in laundry using a hot-water cycle (90°C) and adding laundry detergent.
  - Mattresses and pillows after spraying with 1% hypochlorite should be dried (both

sides) in bright sunlight for up to 3 hours each.

- Site of collection of biomedical waste should be regularly disinfected with freshly prepared 1% hypochlorite solution.

- **Preparing 1% hypochlorite solution**

  Most commonly used is bleaching powder, which usually has 70% available chlorine. To prepare 1% hypochlorite solution, add 7g (roughly 2 teaspoons) in 1 liter of water. Prepare in an open area, and always prepare immediately before use.

- **Routine disinfection plan**: Ensure twice a day disinfection of all common areas and frequently touched surfaces such as tables, rails, the arms of chairs, sinks, call bells, door handles and push plates, and any area/piece of equipment that may potentially be contaminated. This plan can be further revised depending on patient load and categorization of risk of cases.

Annex 1 Optional tool for severity assessment

NEWS UK national early warning score. If you have an oximeter, use this tool to calculate the score. Rates given for adults (non-pregnant).

NEWS sign	Score			
	0	1	2	3
Respiratory rate	12-20	9 – 11	21-24	⩾25 or ⩽8
Pulse (per minute)	51-90	91-110 or 41-50	> 110	⩾131 or ⩽40
Temperature (°C)	36.1-38.0	38.1-39.0 or 35.1-36.0	⩾39.1	⩽35.0
Systolic blood pressure (mmHg)	111 - 219	101-110	91-100	⩽90 or ⩾220
SpO_2 (not on oxygen) by oximeter	⩾96	94-95	92-93 or on oxygen	⩽91
Level of consciousness	Alert			Unresponsive to voice or pain

Or use a similar sepsis/severe illness identification tool. For example, for children under 5, use the Integrated Maternal, Newborn and Child Health Strategy- "Danger signs".

Decide the severity of the disease

Severity	**Standard**
Severe	NEWS with any single 3 or total of 5 and above
Moderate	NEWS total score is 2-4
Mild	NEWS total score is <2

Annex 2 Definition of COVID-19 suspect or case

Definitions may change over the coming weeks, as COVID-19 epidemic spreads, and more by community transmission (i.e. where transmission by travel or contact is less likely). As of mid-April, the definitions are:

Suspect case: A person who is presenting with any of the conditions below:

- All *severe acute respiratory infection** cases where NO other etiology that fully explains the clinical presentation.
- *Influenza-like illness** cases with any one of the following
  - With no other etiology that fully explains the clinical presentation AND a history of travel to or residence in an area that reported local transmission of COVID-19 during the 14 days prior to symptom onset.
  - With contact to a confirmed or probable case of COVID-19 in the two days prior to onset of illness of the probable/confirmed COVID-19 case until the time the probable/confirmed COVID-19 case became negative on repeat testing.
- Individuals with fever or cough or shortness of breath or other respiratory signs or symptoms fulfilling any one of the following conditions:
  - Aged 60 years and above
  - With a comorbidity
  - Assessed as having a high-risk pregnancy
  - Health worker

Probable COVID-19 case: A suspect case who fulfills any of the following conditions:

- Whom tested for COVID-19 is inconclusive; or
- Whom tested positive for COVID-19 but whose test was not conducted in a national or subnational reference laboratory or officially accredited laboratory for COVID-19 confirmatory testing
- Suspect case who died without undergoing any confirmatory testing

Confirmed COVID-19 case: Any individual, irrespective of presence or absence of clinical signs and symptoms, who was laboratory confirmed for COVID-19 in a test conducted at the national reference laboratory, a subnational reference laboratory, and/or DOH-certified laboratory facility.

Severe acute respiratory infection (SARI):

An acute respiratory illness with onset during the previous 7 days requiring overnight hospitalization. A SARI case should meet the ILI case definition AND any one of the following:

- Shortness of breath or difficulty of breathing

- Severe pneumonia of unknown etiology, acute respiratory distress, or severe respiratory disease possibly due to novel respiratory pathogens (such as COVID-19).

Influenza-like illness (ILI):

A condition with sudden onset (within 3 days of presentation and fever should be measured at the time of presentation) of fever of ≥38℃ and cough or sore throat in the absence of other diagnoses.

Annex 3: Contingency Management of COVID-19 Patients

This section is only relevant if a country develops in to a situation of exceeding health capacity

Health officials may change the strategy in to triaging and admitting moderate to severe patients only. Patients with mild symptoms may be quarantined at home and reassess* by MOH. In such situation following triaging can be used.

- **Triage strategies**

Classification	Severity	Triage strategies	Reporting	COVID-19 specific test
Not a suspect	Mild	Refer to emergency room or other clinic for appropriate work-up and management	No need	No need
	Moderate			
	Severe	Admit in general wards or send to intensive care ward		
Suspect	Mild	Consider home quarantine and reassess* by MOH team	Inform Epid. unit and if confirmed after RT- PCR Coordinate with MOH	*Prioritized suspects**: Collect serum, NPS+OPS for RT-PCR and a lower respiratory tract specimen if possible
	Moderate	Send to designated COVID-19 isolation area for *reassessment** and *general treatment** or Be quarantined at home or quarantine center for *general treatment** where COVID-19 isolation area is not available and make an appointment for *reassessment**		
	Severe	Admit to Designated isolation ward with critical care facilities or transfer to designated hospital after stabilization		

Note: Epid –Epidemiology Unit; MOH-Medical Officer of Health; NPS – nasopharyngeal swab; OPS – oropharyngeal swab

***Reassessment**

Actions	Conditions
Admit	If CRP > 100 or lymphocytes < 1,100 micro g/L If more breathless or any vital sign getting worse If ill with a chronic (co-morbid) disease or frailty
Home care and *general treatment**	If improved, not breathless, RR < 20 and RBC 65 is 0-1 or NEWS total score is <2

If case load increases beyond the testing capacity of a given country:

Test prioritized COVID-19 suspects as listed below while donning **full PPE:**

- Suspect cases who are assessed as severe;
- Suspect cases meeting any of the following:
  - Aged 60 years and above
  - With a comorbidity
  - Assessed as a high-risk pregnancy
  - Health workers.

Annex 4: 2019-nCoV Case Investigation Form

EPID/400/FORM/2019 n-CoV

Case Investigation Form
2019 Novel Corona Virus (2019 n-CoV)
Epidemiology Unit/Ministry of Health /Sri Lanka

Part I [illegible]Should be filled for both local & foreign patients

1) Name with Initials *(In Block Capitals)*: …………………….……
……………………………….……………………………………

2) Name of the Hospital:
…………………………………

3) Date of Admission:
…………………….

4) Date of Onset:
…………………….

5) Reason for Admission:
………………………………………………
………………………………………………
……………………………………...….

6) BHT : ……………………..

7) Ward No: …………………

8) Date of birth:…./……/………
(dd/mm/yyyy)

9) Age: …………………………

10) Pregnancy: Yes ☐
No ☐

11[illegible] Male ☐
Female ☐

12) Nationality:
Local ☐ Foreign ☐
(**if nationality is foreign**, please fill the 2nd part as well on next page)

13) Airport of arrival in Sri Lanka [illegible]BIA ☐ MRIA ☐ JAF ☐

14) Flight No (*Arrived to Sri Lanka*) :
……………………………………...

15) Countries visited during 14 days: ………………………………………………………………………..……..

16) Date of arrival in Sri Lanka:
…………………………………………

17) Countries of transit: …………..……………………………..
………………….………………….……………………….…………….

18) Permanent address:
…………………………………………..………..……………
………………………………………………………..….

19) District: …………………………..

20) MOH area: ………………………………

21) Contact Details: Telephone (Foreign):………,………………………………………………………..…
Telephone (Sri Lanka):……………….………............…. Email……………..……………………………..……

22) Any close contact with persons hav[illegible] Yes ☐ No ☐
If yes, specify: ……………….…………………….………………………………………………………...……

23) Present [illegible]

Fever ☐ Sore throat ☐ Cough ☐ Runny nose ☐ Difficulty in breathing ☐
Headache ☐ Diarrhoea ☐ Vomiting ☐ Fatigue ☐ Muscle/Joint pain ☐
Temperature ………………..ºC / ºF

Co-morbidities: DM ☐ HPT ☐ CKD ☐ etc……………………….…………………….

Any other symptoms:………………………………………………..…………………………………….………..

1

24) Outcome: Recovered ☐ Still in ward ☐ Died ☐ Transferred to ☐ ……	**25) Investigations:** Virology Sample Yes ☐ No ☐ Results ……

Part II – Foreign Patient

1) County of Origin: ……..…	**3) Duration of stay in Sri Lanka:** ……..……..…
2) Reasons for travel: Visit ☐ Education ☐ Official ☐ Other ☐ If other, specify: ……	**4) Address in Sri Lanka:** ……..……..…… …..……..….. ……..……..…… …..……..……..……

5) Places Stayed:

Place	Duration

Name:……

Designation:……..

Signature: ……..

Date: ……..

Please complete this form for each patient from relevant institute and return to the Epidemiology Unit.
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