

දුරකථන ) 011 2669192 , 011 2675011  
தொலைபேசி ) 011 2698507 , 011 2694033  
Telephone ) 011 2675449 , 011 2675280

ෆැක්ස් ) 011 2693866  
பெக்ஸ் ) 011 2693869  
Fax ) 011 2692913

විද්‍යුත් තැපෑ, ) postmaster@health.gov.lk  
மின்னஞ்சல் முகவரி )  
e-mail )

වෙබ් අඩවිය ) www.health.gov.lk  
இணையத்தளம் )  
website )



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சுகாதார மற்றும் சுதேச வைத்திய சேவைகள் அமைச்சு  
**Ministry of Health and Indigenous Medical Services**

Provincial Directors of Health Services,  
Regional Directors of Health Services,  
Heads/Directors of Health Institutions,  
Directors of National Hospital/Teaching Hospitals/Provincial &  
District General Hospitals, Base Hospitals,  
All Medical Superintends of other Hospitals,  
All Regional Epidemiologists,

**Interim Summary Guidelines for Clinical Management of patients with  
novel coronavirus (2019- nCoV)**

2019 Novel Coronavirus (2019-nCoV) is a virus (more specifically, a coronavirus) identified as the cause of an outbreak of respiratory illness first detected in Wuhan, China. Early on, many of the patients in the outbreak in Wuhan, China reportedly had some link to a large seafood and animal market, suggesting animal-to-person spread. However, a growing number of patients reportedly have not had exposure to animal markets, suggesting person-to-person spread is occurring. There is growing evidence that 2019-nCoV can spread from person to person in the community and in health care settings. At this time, it is unclear how easily or sustainably this virus is spreading between people.

**Current disease situation**

An increased number of cases infected with 2019-nCoV are reporting from the Hubei Province, number of other provinces and cities in China and also several other countries. As of 25<sup>th</sup> January, 2020, the World Health Organization has reported 1320 confirmed novel coronavirus cases of which 1297 cases are from China (including Taipei, Macau and Hong Kong). Out of 23 confirmed cases reported from other countries 21 had a travel history to Wuhan City. Four cases were reported from Thailand while Japan, Republic of Singapore, Australia and French Republic reported three cases in each country. United State of America, Republic of Korea and Viet Nam reported two cases in each country. One confirmed novel coronavirus case was reported in Nepal. Forty one deaths have been reported, all of them are from China.

## **The infectious agent**

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). Novel corona virus is a new coronavirus affecting people who have recently been in the area of Wuhan, Hubei Province China. At the moment, this coronavirus is called 'novel coronavirus' or '2019-nCoV'. A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans.

Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans.

## **Mode of transmission**

Early reports indicated that most of the cases had prior contact with a seafood and live animal market, suggesting an animal source of the outbreak. However, more recently, some human to human transmission has been reported, in family clusters and in health care workers.

Human to human transmission is most likely to be through direct contact with case-patients, by respiratory droplets and by fomites (contaminated objects and surfaces), as is seen with other coronavirus infections including SARS and MERS.

People who are living or travelling to affected areas or who have had contact with other cases may be at risk of catching the disease. People with underlying illnesses that make them more vulnerable to respiratory disease, including those with diabetes, chronic lung disease, pre-existing kidney failure, or those who have suppressed immune systems, may be at a higher risk.

## **Clinical Presentation**

Common signs of infection include respiratory symptoms, fever, cough, sore throat, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death. Chest radiographs showing invasive pneumonic infiltrates in both lungs.

## **Incubation period - 2-14 days**

## **The following people should be investigated, tested and notified for nCoV(2019) infection**

### **Case definitions for surveillance**

1. Severe Acute Respiratory Infection (SARI) in a person, with history of fever and cough requiring admission to hospital, with no other aetiology that fully explains the clinical presentation (clinicians should also be alert to the possibility of atypical presentations in patients who are immunocompromised); AND any of the following:
  - a) A history of travel to Wuhan, Hubei Province China in the 14 days prior to symptom onset; **or**
  - b) the disease occurs in a health care worker who has been working in an environment where patients with severe acute respiratory infections are being cared for, without regard to place of residence or history of travel; **or**
  - c) the person develops an unusual or unexpected clinical course, especially sudden deterioration despite appropriate treatment, without regard to place of residence or history of travel, even if another aetiology has been identified that fully explains the clinical presentation.
2. A person with acute respiratory illness of any degree of severity who presents , within 14 days before onset of illness, had any of the following exposures:
  - a) close physical contact with a confirmed case of nCoV infection, while that patient was symptomatic; **or**
  - b) a healthcare facility in a country where hospital-associated nCoV infections have been reported;

All suspected patients with 2019-nCoV need to be notify to Epidemiology Unit immediately by the treating physician by phone (0112695112, 0114740490, 0114740491, 0114740492, 0112681548)

### **Treatment**

There is no specific antiviral treatment recommended for 2019-nCoV infection. People infected with 2019-nCoV should receive supportive care to help relieve symptoms. There is no vaccine available to protect against 2019-nCoV.

## Sample collection guideline for Novel Coronavirus (nCoV) testing

### Criteria for testing

- 1) Patients with severe acute respiratory infection (fever, cough, and requiring admission to hospital), AND with no other aetiology that fully explains the clinical presentation AND at least one of the following:
  - a. history of travel to or residence in the city of Wuhan, Hubei Province, China in the 14 days prior to symptom onset, or
  - b. Patient is a health care worker who has been working in an environment where severe acute respiratory infections of unknown aetiology are being cared for.
- 2) Patients with any acute respiratory illness AND at least one of the following:
  - a. close contact with a confirmed or probable case of 2019-nCoV in the 14 days prior to illness onset, or
  - b. visiting or working in a live animal market in Wuhan, Hubei Province, China in the 14 days prior to symptom onset, or
  - c. Worked or attended a health care facility in the 14 days prior to onset of symptoms where patients with hospital-associated 2019-nCov infections have been reported.

### Information needed in the Lab Request Form

Brief history of the illness is **mandatory**.

- a. Patient information (Name, Age, Sex)
- b. Clinical features / duration / treatment
- c. Presence of co-morbidities
- d. Travel history with specific dates
- e. Date and time of sample collection
- f. Sample type/s
- g. Other laboratory investigations

### Sample collection procedure

#### Type of respiratory samples

- a. Nasopharyngeal and oropharyngeal swab
- b. Endotracheal aspirate, nasopharyngeal aspirate
- c. Bronchoalveolar lavage
- d. Tissue from biopsy or autopsy including from lung (not in formalin or alcohol)

**Lower respiratory sample is strongly recommended in severe cases**

Time of sample collection - On admission

Use VTM (viral transport medium) tubes

### **Sample storage**

Store at +4°C (2-8°C) If any delay  $\geq$  48 hours store at -70°C

### **Sample transport**

Transport in triple package system to laboratory within 48 hours

Before sending sample inform Department of Virology, MRI.

All specimens should be regarded as potentially infectious. Health Care Workers who collect, or transport clinical specimens should adhere to infection prevention and control guidelines and national regulations for the transport of dangerous goods (infectious substances) to minimize the possibility of exposure to pathogens.

**For further information on sample collection and transport contact Dr. J. Jayamaha, Consultant Virologist, NIC, MRI**

### **Infection Control and Waste Management**

Droplet precautions should be added to standard precautions for any patients with suspected infection with 2019– nCoV infection. These infection prevention and control measures should be started when the patient enters triage with symptoms of acute febrile respiratory illness. Give suspect patient a surgical mask and direct patient to separate area, an isolation room if available. Organize the space and process to allow at least one meter distance between each patient with acute respiratory infections and other patients or other individuals not wearing Personal Protective Equipment (PPE). Ensure that triage and waiting areas are adequately ventilated. Instruct all patients to cover nose and mouth during coughing or sneezing with tissue or flexed elbow. Perform hand hygiene after contact with respiratory secretions. Airborne precautions should be used for aerosol – generating procedures.

### **Standard precautions**

- ❖ Hand hygiene (i.e. wash hands well with soap and water before and after attending to the patient)
- ❖ Respiratory hygiene and cough etiquette (i.e. covering the mouth and nose during coughing or sneezing with a surgical mask, cloth mask, tissue, sleeve or flexed elbow)
- ❖ Use appropriate PPE.
- ❖ Prevention of needle sticks/sharps injuries.
- ❖ Cleaning and disinfection of the environment and equipment with routine disinfectants.

### **Droplet precautions**

Droplet precautions prevent large droplet transmission of respiratory viruses.

- ❖ Use a surgical mask of working within 1-2 metres of the patient.
- ❖ Place patients in single rooms, or group together those with the same aetiological diagnosis. If an etiological diagnosis is not possible, group patients with similar clinical diagnosis and based on epidemiological risk factors, with a spatial separation.

- ❖ When providing care in close contact with a patient with respiratory symptoms (e.g. coughing or sneezing), use eye protection (goggles), because sprays of secretions may occur.
- ❖ Limit patient movement within the institution and ensure that patients wear surgical masks when outside their rooms.

### **Contact precautions**

Droplet and contact precautions prevent direct or indirect transmission from contact with contaminated surfaces or equipment (i.e. contact with contaminated oxygen tubing/interfaces).

- ❖ Use PPE (medical mask, eye protection, gloves and gown) when entering into the isolation room and remove PPE when leaving the room.
- ❖ If possible, use dedicated equipment (e.g. stethoscopes, blood pressure cuffs and thermometers).
- ❖ If equipment needs to be shared among patients, clean and disinfect between each patient use.
- ❖ Ensure that health care workers refrain from touching their eyes, nose, and mouth with potentially contaminated gloved or ungloved hands.
- ❖ Avoid contaminating environmental surfaces that are not directly related to patient care (e.g. door handles and light switches).
- ❖ Ensure adequate room ventilation.
- ❖ Minimize movement of patients or transport.
- ❖ Perform hand hygiene.

### **Airborne precautions**

Apply airborne precautions when performing an aerosol generating procedure.

- ❖ Ensure that healthcare workers performing aerosol-generating procedures (i.e. open suctioning of respiratory tract, intubation, bronchoscopy, cardiopulmonary resuscitation) use PPE, including gloves, long-sleeved gowns, eye protection, and particulate respirators (N95 or equivalent, or higher level of protection).
- ❖ Use adequately ventilated rooms when performing aerosol – generating procedures
- ❖ Avoid the presence of unnecessary individuals in the room.

### **Use of N95 masks are recommended only during the aerosol generating procedures.**

In addition to standard precautions, all individuals, including visitors, when in close contact (within 1 meter) or upon entering the room/cubicle of patients with nCoV infection should;

- ❖ Wear a surgical mask wear eye protection (i.e. goggles or a face shield)
- ❖ Wear a clean, long-sleeved gown /apron and gloves
- ❖ Perform hand hygiene before and after contact with the patient and his/her surroundings and immediately after removal of PPE

## **Transportation of patients with 2019- nCoV infection**

- ❖ Minimize the movement of patients out of the isolation room or area unless medically necessary. If transport is required, use routes of transport that minimize exposures of staff, other patients and visitors
- ❖ Inform the receiving area of the patient's diagnosis and necessary precautions to take, as soon as possible before the patient's arrival
- ❖ Clean and disinfect patient –contact surfaces (e.g. bed) with routine disinfectants after use Ensure that healthcare workers who transport patients wear appropriate PPE and perform hand hygiene afterwards

## **Duration of infection control precautions for 2019– nCoV infection**

The duration of infectivity for 2019 – nCoV infection is still unknown. While standard precaution should continue to be applied throughout, additional precautions should be taken during the duration of symptomatic illness and continued for 24 hours after the resolution of symptoms.

**Microbiologist of the Hospital is responsible to train all categories of health workers regarding the appropriate/rational use PPE and infection control measures in accordance with the National guidelines.**

## **In the event of a death from nCoV infection**

1. Standard, droplet and airborne precautions should be used as relevant when handling deceased individuals from nCoV infection and when preparing bodies for autopsy or transfer to mortuary services.
2. It is advised that proper hand washing with soap and water is done when direct contact with the body occur during funeral proceedings.

## **Prevention**

It is likely that general prevention measures used for other coronavirus infections will also prevent infection with 2019-nCoV.

The World Health Organization (WHO) recommends measures to reduce the general risk of acute respiratory infections while travelling in or from affected areas by:

- ❖ avoiding close contact with people suffering from acute respiratory infections;
- ❖ frequent hand-washing, especially after direct contact with ill people or their environment;
- ❖ avoiding close contact with live or dead farm or wild animals;
- ❖ travellers with symptoms of acute respiratory infection should practice cough etiquette (maintain distance, cover coughs and sneezes with disposable tissues or clothing, and wash hands).

Specific recommendations on managing a diseased patient with nCoV , further information could be obtained from Clinical management of severe acute respiratory infection when Novel coronavirus (nCoV) infection is suspected: Interim Guidance ([https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-ov.pdf?sfvrsn=bc7da517\\_2&download=true](https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-ov.pdf?sfvrsn=bc7da517_2&download=true))

### **Managing suspected traveller with Novel Corona Virus Infection at the Bandaranayake International Airport**

#### **Temperature screening**

All passengers from flights originating from China need to screen.

If a passenger with elevated temperature is detected, he/she should be given a surgical mask to wear and taken to the health office. The person handling the suspected patient should wear surgical mask and gloves

#### **Notification from the aircraft**

APHO (airport health office) Medical Officer should visit the aircraft and the ill traveller should be taken from the aircraft to an area suitable for further assessment/treatment by a medical escort with the assistance of the relevant staff of the AASL and Sri Lankan Airlines.

After a prompt assessment, APHO is responsible to communicate immediately about the suspected 2019 - nCoV case to the IHR Co-NFPs (Director- Quarantine Unit and the Chief Epidemiologist/Epidemiology Unit of MoH) as soon as possible.

Health measures will be initiated under the leadership of the APHO. Medical Officer/AASL at BIA is requested to take part fully in close collaboration with the APHO.

Traveller who may be affected or suspected of carrying 2019-nCoV infection shall be transferred immediately to the Infectious Disease Hospital (IDH)/designated hospitals.

#### **Medical screening by APHO Medical Officer**

All suspected 2019-nCoV patients need to be screen by APHO medical officers.

Consent for examination and further assessment should be obtained from the traveller or parent or guardian. If consent is not given, the traveller/s will be managed under the authority given by the Quarantine and Prevention of Diseases Ordinance.

If the traveller has a contact history and fever/ signs and symptoms, the traveller should be transferred to IDH/designated hospitals



Following hospitals are identified as designated hospitals for immediate admission / transferring of suspected patients and hospitals are advised to identify a mechanism for the isolation of patients, implement infection control measures and adhering to guidelines given for the maximum precautions in preventing transmission.

IDH	T.H.Anuradhapura
North Colombo Teaching Hospital	T.H.Jaffna
DGH Gampaha	T.H.Kurunegala
DGH Negambo	P.G.H.Ratnapura
National Hospital Kandy	T.H.Baticaloa
T.H.Karapitiya	P.G.H.Badulla

Director or a designated officer from these hospitals should immediately contact the Chief Epidemiologist and the /D Quarantine and should immediately provide relevant patient information for required surveillance, prevention and further actions.

Details of travels including scanned copies of the patient detail checklist/s should be emailed to the Epidemiology Unit.

### **Contact tracing**

Passenger Locator Form should be filled for those travellers with suspected nCoV seated in the same row and two rows in front and behind the index suspected case. The details should be communicated to the Epidemiology Unit. Epidemiology unit will carry out the community level contact tracing and house quarantine of asymptomatic contacts with the help of Regional Epidemiologist and MOOH.

### **Cleaning and disinfection**


All surfaces and the Aircraft potentially contaminated by the ill traveller should be cleaned and disinfected by the relevant staff of the AASL under the guidance and supervision of the APHO.

## Risk Communication

Health Promotion Bureau identified as the risk communication focal point. Risk communication working group with the representation of DGHS, DDGPHSI, EPID unit, HPB Quarantine unit, DPRD, IDH will be established to strengthen the Risk communication system. Quick communication channel to be established within the working group to strengthen risk communication system

Timely updates to be sent from Epidemiology unit and Quarantine unit to HPB for real time public communication. Clearance chain for messages for public communication need to be defined. Identification and agree on spoke persons to media at each phase of risk communication (preparation phase, initial response phase, crisis phase, recovery phase, evaluation phase) and the details of spoke persons to be published. Public communication will be done through mass media, Health Promotion Bureau official facebook page and 24/7 suwasariya call center (0710107107) based on the technical inputs from epidemiology unit and quarantine unit. Rumor monitoring will be conducted by HPB on 24/7 basis and reported to DDG PHS I and communication working group for verification. Rumors will be managed based on the verification and guidance from DGHS/DDGPHS/Chief Epidemiologist. Communication engagement with affected communities will be planned with Epidemiology unit and DPRD accordingly.

Please bring the contents of this guidelines to the notice of all relevant staff at your institution / district / province and immediately arrange to implement required actions.

  
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**Dr Anil Jasinghe**  
**Director General of Health Services**

  
**Dr. Anil Jasinghe**  
Director General of Health Services  
Ministry of Health & Indigenous Medicine Sr. 7003  
"Suwasiripaya"  
385, Rev. Baddegama Wimalawansa Thero Mawatha,  
Colombo 10.

**Cc:**  
Secretary Health  
DDG/PHS I and II  
DDG/MS I and II  
DDG/LS  
Chief Epidemiologist  
Director/MRI  
Director/Quarantine  
Director/HPB