Novel Coronavirus 2019 (2019-nCoV)

Identification and initial management of cases

Clinical guidance

Interim Guidance **Published 28 January 2020**

Version **1.2**

Version	Major Changes	Implementation date
1.1	Removal of definition for fever	25/01/2020
1.2	Change to epidemiological criteria for case definition and additional testing considerations for mainland China	28/01/20

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Background

Since early January 2020, the national authorities in China have reported an increasing number of confirmed cases of infection with a novel coronavirus (called 2019-nCoV), including fatal cases, in an outbreak centred in Wuhan City, Hubei Province.

Confirmed cases with links to Wuhan have been reported elsewhere in China and in other countries, including (as of late January 2020) the United States, Thailand, Japan, Taiwan and also Australia. The situation continues to rapidly evolve as these management guidelines are being published.

Initial reports indicate that most of the initial patients had reported exposure to the Wuhan South China Seafood City (a seafood and live animal market), suggesting a zoonotic source for the outbreak. Subsequent investigations have identified cases with no links to the market.

Patients initially reported in this outbreak were reported to have had fever, dyspnoea, and bilateral lung infiltrates on chest X-ray. Broader surveillance and testing has also identified more cases including patients with mild symptoms.

Further investigation is required to assess the mode of transmission, the risk of human-to-human transmission, common animal or environmental exposure sources, and whether there are undetected asymptomatic or mildly symptomatic cases.

This guidance will be updated as further information becomes available.

For further current information, refer to the Centres for Disease Control and Prevention https://www.cdc.gov/coronavirus/2019-ncov/index.html.

1 Identify, Isolate, Inform – Emergency Department triage guidance

1.1 Identify exposure history

Has the patient lived in or visited Hubei Province, China in the 14 days prior to symptom onset?

Has the patient been in contact with a person diagnosed with 2019-nCoV infection within the last 14 days?

➔ If NO, continue with usual triage and assessment.

➔ If YES, continue with the 2019-nCoV assessment.

1.2 Identify signs and symptoms

Does the patient have fever or history of fever AND acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)?

In addition, consider testing patients with these symptoms from mainland China if they clinically require admission or have evidence of pneumonia. Seek advice from the infectious disease specialist. Consider also testing these patients for other respiratory agents where clinically indicated.

➔ If NO, continue with usual triage and assessment. Advise to monitor for fever and symptoms for 14 days after last exposure in Hubei Province and to contact public health (**1300 066 055**) if symptoms develop.

➔ If YES, manage as a suspect 2019-nCoV case, as follows.

1.3 Isolate and apply standard, contact and airborne precautions

NSW Health recommends a cautious approach to the initial management of suspect 2019-nCoV cases until more is known about the transmissibility of this novel virus.

- Ask the patient to wear a surgical mask and move them to a single room with the door closed (preferably a negative pressure isolation room, if available).
- Staff entering the room should use standard, contact and airborne precautions – including wearing a fit-checked P2 respiratory (or a N95) mask, disposable gown, gloves and eye protection – in addition to standard precautions.
- Ensure that the patient, potentially contaminated areas, and waste are managed appropriately.

These precautions should continue if the patient is admitted and moved (maintaining infection control) to another hospital area, and should continue until advised by the senior clinician or infection prevention and control team.

1.4 Inform a senior clinician and infection prevention and control staff for assessment

Urgently contact a senior clinician, ID Physician (if available) and local infection prevention and control staff, and notify the local public health unit (**1300 066 055**) to arrange for an expert assessment.

2 Expert assessment and consultation

Prior to commencing the assessment, the senior clinician and/or ID Physician conducting the assessment must:

- Confirm that the infection control measures described above have been implemented.
- Confirm that the person taking the patient history is wearing appropriate personal protective equipment (PPE) – fit-checked P2 respiratory (or a N95) mask, disposable gown, gloves and eye protection.

2.1 Clinical and epidemiological assessment

The assessment of the patient should consider the surveillance case definitions for a suspect 2019-nCoV case (see Surveillance case definitions section) and, if met, arrange for laboratory testing of appropriate clinical specimens (see Laboratory testing section).

Staff conducting the assessment should also be aware of any updated information on the illness, including any updates on particular locations or exposures associated with an increased risk of transmission. Additional support is available from the PHEOC-Operations on 9391 9542 (after hours to CD-on-call number 0419 230 683).

2.2 Reporting of suspect cases

Any cases assessed as meeting the criteria for a suspect case of 2019-nCoV infection should be immediately notified by the senior clinician or ID Physician who conducted the assessment to the following:

- Hospital Executive and LHD HSFAC (if there are multiple suspect cases)
- The Public Health Unit (**1300 066 055**)
- Laboratory – a clinical microbiologist at the local and reference laboratories to arrange for testing.

2.3 Transfer of suspect cases

Transfer of all suspect 2019-nCoV cases to Westmead Hospital (or another tertiary hospital if transfer to Westmead is contraindicated for clinical or other reasons) should be considered if there is insufficient capacity to safely care for the patient in airborne isolation, particularly for patients requiring critical care support.

If hospital transfer is recommended following the expert assessment, this must first be discussed by teleconference (arranged by the local PHU in conjunction with Health Protection NSW) with representatives from the following:

- ID Team and Executive from the receiving tertiary hospital and the relevant PHU
- Hospital Executive of the hospital sending the patient
- The Local LHD Executive
- The NSW Ambulance Controller
- Any other relevant agencies.

3 Case definitions

Case definitions are subject to change due to the evolving situation. Additional support is available from the PHEOC-Operations on 9391 9542 (after hours to CD-on-call number 0419 230 683).

3.1 Suspect case

If the patient satisfies epidemiological AND clinical criteria, they are classified as a suspect case.

Epidemiological criteria

- Travel from Hubei Province, China in the 14 days before the onset of illness

OR

- Travel to agreed areas of human-to-human transmission[1], or a declared outbreak, within 14 days before onset of illness

[1] https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-2019-nCoV-areas.htm

OR

- Close contact (see Contact definition below) with a confirmed case of 2019-nCoV within the last 14 days.

Clinical criteria

- Fever or history of fever and acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat).

OR

- Severe acute respiratory infection requiring admission to hospital with clinical or radiological evidence of pneumonia or acute respiratory distress syndrome (i.e. even if no evidence of fever).

3.2 Confirmed case

A person who tests positive to a specific 2019-nCoV PCR test at a reference laboratory.

3.3 Contact

Refer to the Public Health Management Guidelines.

4 Laboratory testing for suspect cases

4.1 Sampling and testing

Arrange urgent diagnostic sampling for all patients who meet the suspect 2019-nCoV case definition. Collection of duplicate samples are recommended to enable parallel testing if required.

The recommended minimum diagnostic sample set is:

- Combined nose and throat viral swabs, or nasopharyngeal viral swabs.
- A lower respiratory tract sample [2] (if obtainable) - such as an endotracheal tube aspirate from intubated cases. Avoid any aerosol-generating procedures.
- EDTA whole blood and serum (red top tube) for storage for pancoronavirus serology, when available.

Local testing for common respiratory pathogens should be undertaken with PC2 conditions, and should include testing for influenza, rhinovirus, other coronaviruses and other community acquired pneumonia pathogens.

- Testing should be undertaken using multiplex PCR if available.
- Results of local hospital testing should be provided to the local public health unit.

In parallel, send samples (including whole blood and serum) to CIDMLS (NSW Pathology West) [3] . The local public health unit should contact the clinical microbiologist on-call to inform them of the case for testing. Other laboratories may also be able to provided testing in the future; this guidance will be updated then.

Do not wait for local results before sending these samples. Depending upon the clinical and epidemiological features, the samples may be tested for the presence of 2019-nCoV immediately, or alternatively testing may be delayed until the results of local testing are known.

[2] A lower respiratory tract sample is encouraged to increase the chances of detecting the virus. However, avoid induction of sputum or bronchoscopy because of the risk of aerosol generation which increase the risk of transmission.

[3] CIDMLS Laboratory phone – (02) 8890 6255. Ask for the Clinical Microbiologist on call.

Patients whose samples will be tested for 2019-nCoV and who are identified as having another respiratory illness should be continue to be isolated with the above precautions until the 2019-nCoV testing is confirmed as negative.

5 Management of confirmed cases

Patient who test positive for 2019-nCoV infection require on-going management under the same infection control precautions as described above, that is, standard, contact and airborne precautions, in a respiratory isolation room, ideally with negative pressure air handling.

Westmead Hospital staff from the Infectious Diseases Department or the Infection and Prevention Control team can provide technical support to facilities to assist them in managing patients, if required.

Transfer of suspect 2019-nCoV cases to another facility, such as Westmead Hospital (or another tertiary hospital if transfer to Westmead is contraindicated for clinical or other reasons), should be considered if there is insufficient capacity to safely care for the patient in airborne isolation, particularly for patients requiring critical care support.

If hospital transfer is recommended, this must first be discussed by teleconference (arranged by the local PHU in conjunction with Health Protection NSW) with representatives from the following:

- ID Team and Executive from the receiving tertiary hospital and the relevant PHU
- Hospital Executive of the hospital sending the patient
- The Local LHD Executive
- The NSW Ambulance Controller
- Any other relevant agencies.

Patients that fit the criteria for testing and who are identified as having another Influenza-like-illness should be isolated with the appropriate precautions until the coronavirus testing is confirmed as negative.

Decisions about discharge should be made on a case by case basis, in collaboration with the local public health unit and Health Protection NSW. Guidance is subject to change as information emerges.

Guidelines are being developed to address the conditions under which clinically well patients can be discharged home.

6 Special situations – management of suspect cases in other settings

6.1 General Practice

NSW general practitioners (GPs) have been provided with guidance on the initial investigation and management of suspect cases of 2019-nCoV. GPs have been advised to contact their local public health unit (PHU) when assessing patients with fever and respiratory symptoms who have been to Wuhan in the 14 days prior to illness onset.

Unless there is no alternative, patients should be referred to emergency departments for sampling. Collection of respiratory specimens requires adherence to transmission-based contact and airborne precautions. This includes: wearing a fit- checked P2 respiratory (or a N95) mask, disposable gown, gloves and eye protection.

The PHU, together with an ID Physician from the LHD and the attending GP will jointly assess the risk. In those areas where an ID Physician is not available contact the PHEOC-Operations (9391 9542, after hours 0419230683) who will liaise with Westmead ID physician to arrange. If the patient is assessed as meeting the suspect case definition they will generally be advised to attend the nearest appropriate Emergency Department in the LHD to arrange for further clinical assessment and testing in an isolation room.

This should be managed as follows:

- The ED should be contacted in advance to allow for appropriate infection control procedures to be put in place to manage the case, as described above (Section 1)
- The patient should be wearing a surgical face mask
- Transport to the ED can be provided by the patient's family if the family member has already been in contact with the suspect case
- Suspect cases should not travel by public transport
- If ambulance transfer is required, the ambulance service must be made aware of the circumstances so that the attending ambulance officers can implement appropriate infection prevention and control procedures.

If referral to another hospital outside of the LHD is recommended, this should first be discussed with PHEOC-Operations (9391 9542, after hours 0419 230 683) and the receiving hospital.

6.2 International Airports and Seaports

Biosecurity officers conduct routine health screening of in-coming international flights. Biosecurity officers may contact HPNSW Human Biosecurity officers to help assess passengers with fever and new respiratory symptoms, and a history of recent travel to China.

HPNSW will assess the risk. If the passenger is assessed as meeting the suspect case definition they will generally advise that the passenger be referred to Westmead Hospital, unless clinically unstable in which case they would be referred to St George Hospital, to arrange for further clinical assessment and testing in an isolation room.

This should be managed as follows:

- The ED should be contacted in advance to allow for appropriate infection control procedures are put in place to manage the case, as described above (Section 1)
- The passenger should be wearing a surgical face mask
- If ambulance transfer is required, the ambulance service must be made aware of the circumstances so that the attending ambulance officers can implement appropriate infection control procedures.

7 Additional resources

1. WHO – Coronavirus information (including 2019-nCoV technical guidance) https://www.who.int/health-topics/coronavirus
2. WHO Clinical management for suspected novel coronavirus – https://www.who.int/internal-publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected
3. US CDC – Novel coronavirus - https://www.cdc.gov/coronavirus/2019-nCoV/index.html