NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

Coronavirus disease 2019 (COVID-19)
Quick Reference for Health Workers

25 March 2020

National Institute for Communicable Diseases (NICD)
24-hour hotline number: 0800 11 1131|066 562 4021

Background

On the 31st December 2019, the World Health Organization (WHO) China country office reported a cluster of pneumonia cases in Wuhan City, Hubei Province of China now known to be caused by a novel virus. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been confirmed as the causative virus of coronavirus disease 2019 (COVID-19). Cases have now been identified in over 100 countries including South Africa and WHO has declared a global pandemic.

Clinical presentation and management of suspected cases

The main clinical signs and symptoms are fever and cough with a few patients presenting with difficulty in breathing and bilateral infiltrates on chest X-rays. Lymphopenia may be present. Treatment is supportive. The differential diagnosis for this syndrome is broad. Consider the possibility of influenza (Southern Hemisphere influenza season will begin in May or June), bacterial pneumonia, tuberculosis, *Pneumocystis jirovecii* (PCP) if immunosuppressed, and manage accordingly.

Criteria for person under investigation (PUI), i.e. a person to be tested for COVID-19

A **hospitalised** patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath) AND the absence of an alternative diagnosis that fully explains the clinical presentation

OR

Any person with acute respiratory illness with sudden onset of at least one of the following: cough, sore throat, shortness of breath or fever [≥ 38°C (measured) or history of fever (subjective)] irrespective of admission status **AND**

In the 14 days prior to onset of symptoms, met at least one of the following epidemiological criteria:

Were in close contact[1] with a confirmed[2] or probable[3] case of COVID-19;
OR
Had a history of travel outside of South Africa;
OR
Worked in[4] or attended a health care facility where patients with SARS-CoV-2 infections were being treated.

[1]Close contact: A person having had face-to-face contact (≤1 metre) or in a closed space with a COVID-19 case for at least 15 minutes. This includes, amongst others, all persons living in the same household as a COVID-19 case and, people working closely in the same environment as a case. A healthcare worker or other person providing direct care for a COVID-19 case, while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection). A contact in an aircraft sitting within two seats (in any direction) of the case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the case was seated.
[2]Confirmed case: A person with laboratory confirmation of SARS-CoV-2 infection (using an RT-PCR assay), irrespective of clinical signs and symptoms. Symptomatic cases are considered infectious from 2 days before symptom onset to 14 days after symptom onset.
[3]Probable case: A PUI for whom testing for SARS-CoV-2 is inconclusive (the result of the test reported by the laboratory) or who tested positive on a pan-coronavirus assay.
[4]Working in a health care facility includes healthcare workers as well as administrative and support staff such as cleaning staff

Infection prevention and control (IPC)

1. Early detection is key - health care workers should maintain a high level of clinical suspicion
2. Patients should be asked to wear a surgical mask once identified and be evaluated in a private room
3. Isolate PUI
4. Use appropriate infection control for PUI
    a. Standard precautions for all patients
    b. Add contact and droplet precautions for all PUI
    c. Airborne precautions (e.g., N95 mask) and eye protection must be used when performing aerosol-generating procedures
    d. If available, airborne precautions can be used at all times
    e. Limit patient movement (e.g., portable X-ray)

Specimen collection for SARS-CoV-2 testing

Collect appropriate samples. **Lower respiratory tract samples are preferred because the lower respiratory tract is the primary site of infection.**

- Combined nasopharyngeal and oropharyngeal swabs in ambulatory patients and sputum (if produced) and/or tracheal aspirate or bronchoalveolar lavage in patients with more severe respiratory disease.
- Use universal/viral transport medium for swabs, if available; sterile container for sputum and aspirates; see page 2 for sample collection instructions.

A single negative test result, especially if from upper respiratory tract specimen, does not exclude infection. Repeat sampling and testing of lower respiratory tract samples is recommended for case with severe disease or in whom COVID-19 is strongly suspected.

Case notification

COVID-19 is classified as a Class 1 notifiable medical condition. Therefore, notification should be made immediately to the district or provincial communicable disease co-ordinators (CDCCs) on identification of a person meeting the definition for person under investigation (PUI) for COVID-19, a cluster of cases with severe respiratory illness with evidence of common exposure or epidemiologic link, or on receipt of a laboratory diagnosis of COVID-19. More details can be found here. District or provincial CDCCs are to notify the NICD. Contact tracing will be initiated for confirmed COVID-19 cases.