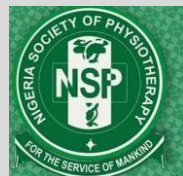
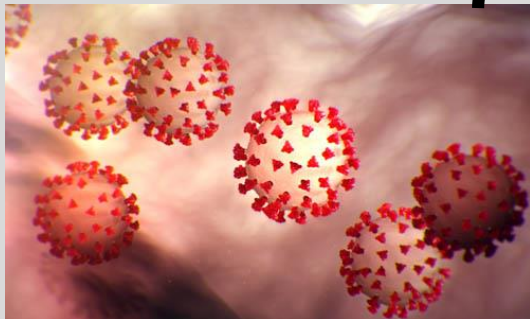
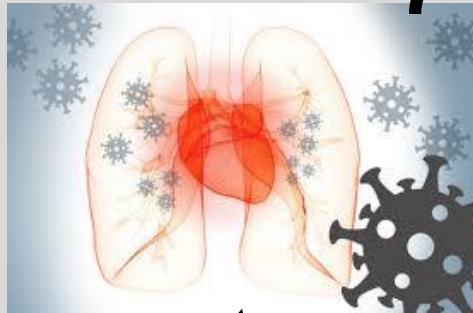
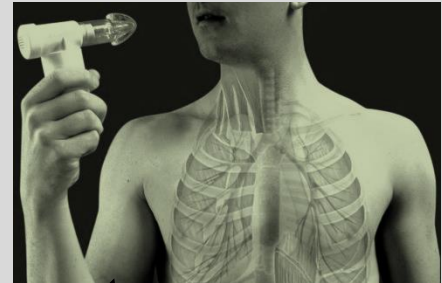


# Physiotherapy in the Management of Patients with COVID-19: Recommendations to Guide Practice



Nigeria Society of Physiotherapy  
(Oyo State Chapter)

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## 1. Executive Summary

The world is currently battling the Corona Virus Disease (COVID-19) pandemic and Nigeria is not left out. It is envisaged that there will be an increase in the number of cases that will be recorded in the coming weeks. Hence, the Oyo State Government, through the state COVID-19 Task Force is leaving no stone unturned by setting up a well-equipped infectious disease centre and mobilizing the necessary health professionals to work there. It is against this background that the Nigeria Society of Physiotherapy (Oyo State Chapter) was invited to assist in sourcing for volunteer Physiotherapists to join other frontline healthcare providers to fight the scourge of COVID-19.

Physiotherapy is a healthcare profession that is concerned with the promotion, prevention, and rehabilitation of movement dysfunction throughout the lifespan. This document has been prepared to provide information about the potential role of physiotherapy in the management of hospital admitted patients with confirmed and/or suspected COVID-19. COVID-19 is a disease caused by a new coronavirus, primarily impacting the respiratory system. Symptoms of COVID-19 can range from mild illness to severe pneumonia. Some people will have mild symptoms and recover easily, while others may develop respiratory failure and/or become critically ill and require admission to Intensive Care Unit (ICU).

## 2. SERVICE PROVISION

Physiotherapy is beneficial in the treatment of respiratory complications and physical rehabilitation of patients with COVID-19. The role of Physiotherapy spans the asymptomatic and mild cases to the severe cases with Acute Respiratory Disease Syndrome (ARDS) with/without co-morbidities. Patients will be evaluated on a case-by-case basis and interventions will be applied based on clinical indicators.

- a. **Physical Assessment:** Patients will be evaluated on a case-by-case basis and interventions will be applied based on clinical indicators. An assessment form is being developed in this regard.
- b. **Service Categories:** The role of Physiotherapy spans through asymptomatic and mild cases to severe cases with Acute Respiratory Disease Syndrome (ARDS) with/without co-morbidities. Physiotherapists **are expected** to use airborne precautions during all physiotherapy procedures (e.g. N95 facemasks). If not ventilated, where possible, the patient too should wear surgical mask

during any physiotherapy. Outline of physiotherapy intervention based on case presentation is as presented in table 1:

- c. **Standard Safety Measures:** Physiotherapists are expected to be trained on Infection Prevention and Control (IPC), use of Personal Protective Equipment (PPE) and other precautionary and safety policies/measure including safe access to and exit from treatment and isolation building/facility.
  
- d. **Instrumentation and Skills:** Physiotherapists with expertise in Cardiopulmonary Physiotherapy will train other volunteer Physiotherapists on handling of various equipment and required interventions for patients at centres.

**Table 1: Outline of Physiotherapy Intervention in Patients with COVID-19**

Service Category	COVID-19 patient presentation (confirmed or suspected)	Physiotherapy Intervention
<b>A</b>	Asymptomatic cases	i. Assess for Physical fitness ii. Low - moderate intensity aerobic exercises recommended
<b>B</b>	Mild respiratory symptoms without significant respiratory compromise (e.g. fever, dry cough, no chest x-ray changes)	i. Assess for fatigue and Physical fitness ii. Teach breathing exercises, relaxation techniques iii. Low - moderate intensity aerobic exercises recommended
<b>C</b>	Pneumonia presenting with: a. Low-level oxygen requirement (eg. oxygen flow $\leq 5$ l/min for $SpO_2 \geq 90\%$ ) b. non-productive cough or patient coughing and able to clear secretions independently	i. Teach effective cough techniques/ ii. Active Cycle of Breathing Technique (ACBT) iii. Include others as outlined for category 'B'
<b>D</b>	Mild symptoms and/or pneumonia co-existing with: a. respiratory or neuromuscular comorbidity (e.g. COPDs neuromuscular disease, spinal cord injury, bronchiectasis) b. current or anticipated difficulties with secretion clearance	i. Airway clearance ii. Mobilisation as tolerable iii. Plan care in line with present comorbidity e.g. Neuro-rehabilitation
<b>E</b>	Moderate symptoms and/or pneumonia <b>AND</b> a. evidence of exudative consolidation with difficulty clearing or inability to clear secretions independently (e.g. weak, ineffective and moist sounding cough, tactile fremitus on chest wall, wet sounding voice, audible transmitted sounds)	i. Teach effective cough techniques ii. Stimulate effective cough iii. Others as in Category 'C'
<b>F</b>	Severe symptoms suggestive of pneumonia/lower respiratory tract infection (eg.: increasing oxygen requirements, fever, difficulty breathing, frequent, severe or productive coughing episodes; chest x-ray, CT or lung ultrasound changes consistent with consolidation)	i. Airway clearance ii. Teach Effective Cough techniques if cough is weak iii. Mobilisation
<b>G</b>	Any patient at significant risk of developing or with evidence of significant functional limitations e.g. patients who are frail or have multiple comorbidities impacting their independence ICU patients with significant functional decline and/or (at risk for) ICU acquired weakness	i. Chest Physiotherapy techniques ii. Airway clearance techniques iii. Mobilisation iv. Rehabilitation
<b>H</b>	All initially positive patients with COVID-19, who now tests negative but with reduced cardio-pulmonary function at the point of discharge	Follow-up Pulmonary Rehabilitation shall be recommended

**STANDARD OPERATING PROCEDURES FOR PHYSIOTHERAPISTS IN THE  
MANAGEMENT OF PATIENTS WITH COVID-19 AT THE OYO STATE INFECTIOUS  
DISEASE CENTRE, OLODO.**

1. During a health care interaction with a patient with COVID-19, the Physiotherapist **MUST ALWAYS** wear Personal Protective Equipment (PPE) [Single-Use gloves, Medical masks, Face shield or goggles/ protective glasses and disposable gowns]
2. When a medical mask becomes wet, the Physiotherapist **MUST ALWAYS** dispose the wet PPE in the waste bin with lid and perform hand hygiene as recommended.
3. During a health care interaction with a patient with COVID-19, the Physiotherapist **MUST ALWAYS** perform hand hygiene before and after touching the COVID-19 patient (whether or not you were wearing gloves) as recommended.
4. During a health care interaction with a patient with COVID-19, the Physiotherapist **MUST ALWAYS** perform hand hygiene after touching the patient's surroundings (bed, door handle, etc.), regardless of whether you were wearing gloves.
5. When performing CHEST PHYSIOTHERAPY, NEBULISATION, SUCTIONING or any other procedure regarded as aerosol generating procedure on a patient with COVID-19, the Physiotherapist **MUST ALWAYS** wear respirators in addition to the PPE outline in (1) above namely: Single-Use gloves, **N95 Medical masks**, Face shield or goggles/ protective glasses and disposable gowns and waterproof aprons.
6. The use of nebulizing agents (e.g. salbutamol, saline) for the treatment of non-intubated patients with COVID-19 is **NOT** recommended as it increases the risk of aerosolization and transmission of infection to health care workers in the immediate vicinity. Metered dose devices could be used instead.
7. In order to reduce the risk of infection, **spirometry** will only be done for an initially positive patient who has tested negative prior to discharge. This is in order to determine those that will require a pulmonary rehabilitation programme.
8. At the end of every service shift, the Physiotherapist **SHOULD** fill the WHO Risk assessment and management of exposure of health care workers in the context of COVID-19 questionnaire to determine risk exposure. (Available at: [WHO/2019-nCov/HCW\\_risk\\_assessment/2020.2](https://www.who.int/publications/m/item/who-2019-nCoV-HCW-risk-assessment-2020.2)).
9. We recommend that Physiotherapists should maintain constant hand hygiene using soap and water other than chlorine solution

10. Physiotherapy staff should **NOT** be routinely entering isolation rooms where patients with confirmed or suspected COVID-19 are isolated or cohorted just to screen for referrals. Options for conducting a subjective assessment for mobility information and/or providing education on airway clearance techniques via telephone or public address system should be considered.

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