

Rehabilitation for Patients with COVID-19

Guidance for Occupational Therapists, Physical Therapists, Speech-Language Pathologists, and Assistants

PURPOSE: There is an urgent need to guide rehabilitation practice during the COVID-19 crisis. Informed by the best available evidence, including consultation with the clinical community, this living document consolidates findings from resources for frontline rehabilitation professionals.

STEP 1 – Determine risk: Prioritization should consider the risk of a patient not receiving immediate rehabilitation on critical outcomes (i.e., risk of hospitalization, extended hospital stay). If proceeding with a rehabilitation assessment or treatment session, point-of-care risk assessments should be conducted prior to each patient interaction.

STEP 2 – Do as much as possible without patient contact: Do not routinely enter an isolation area just to screen a patient with COVID-19. Gather information without direct patient contact for your subjective review: premorbid status, pre-treatment screening, and/or discharge planning. Consider telerehabilitation¹ tools to observe and communicate directly with patients and/or staff already in isolation areas (e.g., use of data-secure cameras, such as iPads and baby monitors). In some instances, these tools can assess dysphagia, communication², mobility, and cognition.

STEP 3 – Determine type of Personal Protective Equipment (PPE) needed for patient contact: Aerosol Generating Procedures (AGPs)³ require airborne precautions. Other procedures may require droplet and contact protection only.

Aerosol Generating Procedures (AGPs)

There are two considerations that determine whether a procedure is aerosol generating -- the type of oxygen therapy the patient is receiving, and the type of procedure being conducted.

The following therapies require airborne precautions:

- High flow nasal oxygen (e.g., Airvo, Optiflow)
- Non-invasive ventilation (e.g., BiPAP, CPAP)
- Nebulizer treatments
- Tracheostomy tubes with/without mechanical ventilation requiring open suctioning, trach mask trials, cuff inflation/deflation, and tube changes (**note:** In-line suctioning is *not* an aerosol-generating procedure)

Procedures that induce sputum require airborne precautions. Examples include:

- Respiratory physiotherapy (e.g., airway clearance techniques, “chest physiotherapy”, open suctioning, nasopharyngeal suctioning, mechanical in-exsufflation (cough-assist)).
- Swallowing and select speech assessments and treatments at bedside (e.g., oral mechanism exams, bolus trials, laryngectomees with/without mechanical ventilation, or tracheostomies with/without mechanical ventilation or speaking valves as part of a multidisciplinary team). Instrumental swallowing assessments should be avoided.
- Any activity that can result in expectoration of sputum, including moving from lying to sitting, walking, and/or bedside ADLs. Also, prone positioning (with or without mechanical ventilation), and/ or where a patient may be inadvertently disconnected from the ventilator.

Additional considerations before beginning direct contact treatment:

1. Ensure a step-by-step process for donning and doffing PPE to avoid contamination.
2. Identify the minimum number of people required to safely conduct a session.
3. Consider bundling care with other healthcare professionals (e.g., coordinating activities; grouping care for all patients with COVID-19).
4. Carefully consider equipment use and discuss with infection control services to ensure it can be properly decontaminated. Avoid moving equipment between infectious and non-infectious areas. Wherever possible, single patient use, disposable equipment is preferred (e.g., low-tech AAC equipment that can be discarded after use, theraband rather than hand weights).

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COVID-19 CONSIDERATIONS BY SPECIFIC REHABILITATION PROFESSIONS

Exact treatments may vary based on patient need, clinician experience and local protocols.

Acute Care: Rehabilitation & COVID-19

Occupational Therapy	<ul style="list-style-type: none"> - Prevention, detection, and monitoring of delirium⁴ - Assessment and management of impairments in physical and cognitive functioning⁵ - Optimize bed and seating positioning using pressure relief principles (e.g., mattress)⁶ - Assessment and management of ADLs to encourage early mobilization⁵ - Provision of assistive devices for ADLs, communication, seating and mobility⁶ - Consider and assess mental health and emotional coping strategies for patients⁷
Physical Therapy	<ul style="list-style-type: none"> - Detailed recommendations are available to guide physiotherapists in acute hospital Settings: Physiotherapy Management for COVID-19 in Acute Hospital Settings: English⁸
Speech-Language Pathology	<ul style="list-style-type: none"> - Assessment and management of dysphagia post-extubation⁹ - Assessment and management of dysphagia upon decompensation - Assessment and management of dysphagia upon respiratory compromise - Assessment of basic cognitive¹⁰ and communication¹¹ functions - Provision of primarily low-tech AAC¹² equipment that can be discarded after use

Post-Acute Care: Rehabilitation & COVID-19

Occupational Therapy^{13,14}	<ul style="list-style-type: none"> - Re-assess and address any cognitive changes to facilitate functional independence - Preparation and planning for discharge, including home safety and caregiver supports - Consider social determinants of health when discharge planning (e.g., income) - Re-assessment and management of ADLs, including adaptive strategies, such as assistive devices and energy conservation, that encourage functional independence - Address mental health and psychosocial needs of patients and/or caregivers
Physical Therapy	<p>Detailed recommendations from the European Respiratory Society¹⁵ include:</p> <ul style="list-style-type: none"> - Assessment of exercise and functional capacity - Monitoring of pre-existing comorbid conditions - Exercise training and/or physical activity coaching
Speech-Language Pathology	<ul style="list-style-type: none"> - Assessment and rehabilitation of dysphagia¹⁶ and voice due to prolonged intubation - Assessment and rehabilitation of cognitive communication due to brain hypoxia - Assessment and management of respiratory strength and coordination - Management of tracheostomies

Guiding principles within this document are based on: Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations: <https://doi.org/10.1016/j.jphys.2020.03.011> (English) or <https://www.wcpt.org/news/Novel-Coronavirus-2019-nCoV> (translated versions)

All practitioners are invited to visit <https://srs-mcmaster.ca/covid-19/> for updates. If you have any questions in regards to the above information, please contact rehab@mcmaster.ca.

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