

# Physical therapy and the challenges of Covid-19

The coronavirus pandemic (Covid-19) decreed by the World Health Organization (WHO) about a year ago caused significant interruptions in the lives and work of all people. The disease's natural history or mechanisms were unknown to us, as were the forms of vulnerability. These characteristics were partially identified and certainly contributed to generate better results for the treatment of patients, in addition to more protection and safety to health professionals, including physical therapists, who were linked to the care for those affected by the Sars-CoV-2 virus from the start.

At first, respiratory involvement became known to us, including symptoms such as cough and fever, evolving towards the impairment of other organs and systems. The sequelae left are also known by now, already named by the WHO as post-Covid-19 condition. However, there is still no specific treatment available. Different degrees of respiratory distress occur depending on the aggression of the virus to the respiratory epithelium, inflammatory response intensity, accumulation of fluid in alveoli and presence of thrombi in the pulmonary microcirculation.

Health professionals had to relearn oxygen therapy strategies and application of noninvasive ventilation, known to be effective to avoid intubation and, therefore, recommended as a first option, although at risk of aerosol dispersion in the environment and great potential for contamination. Thus, a recent recommendation suggests “balancing risks and benefits.”

To improve oxygenation levels, we learned to frequently use the primary position, not only in patients on invasive mechanical ventilation, but also in patients on spontaneous breathing or noninvasive ventilation, and even in the most difficult patients or with higher body mass indexes (BMI).

However, the work of physical therapists in Intensive Care Units (ICU) is not limited only to respiratory care: they must treat ICU-acquired muscle weakness, a condition that is associated with worse outcomes and that may lead to respiratory failure and the development of acute respiratory distress syndrome (ARDS).

As in many other critical diseases, post-Covid-19 patients may present dyspnea and fatigue at rest and while performing activities of daily living (ADL), peripheral muscle dysfunction and exercise intolerance, in addition to increased risk of post-traumatic disorder, anxiety, and depression. The available data show that the sequelae also affect those who did not have the disease in its severe form, with restriction of lung volumes, impairment of resistance and diffusion, in addition to a decrease in the distance covered in the six-minute walk test.

The most common post-Covid-19 symptoms are cough, low fever, and fatigue, but may also include dyspnea, chest pain, headache, neurocognitive difficulties, and thromboembolism. Many patients may recover in the first six weeks spontaneously or with minimal support, preferably remote, whereas those with the most severe form and need for prolonged hospitalization are referred to perform gradual and individual pulmonary rehabilitation procedures, since the ideal protocol for these patients is not yet fully known.

The overload of health services with patients victim of Covid-19 and the need for social isolation to contain the circulation of the virus restricted the care for other types of outpatients. Although remote modalities have been implemented to minimize the losses of outpatients – thus respecting the social distancing guidelines –, a general and understandable sentiment of hesitation about the competence of physical therapists to perform their work safely for patients.

Since the beginning of the pandemic, recommendations state that each member of the ICU teams should not perform shifts for more than 6 to 8 hours and should receive psychological support. However, we know that “frontline” professionals work under very different conditions. The care of Covid-19 patients required rapid incorporation of knowledge produced by science, training of personnel and cooperation between different sectors. In such an intense multidisciplinary performance context, physical therapy has stood out in the provision of qualified respiratory care. Physical therapists thus deserve full recognition for their competence and dedication,

attributes that made them indispensable to ICU teams. Challenges remain in this struggle, including the need to achieve better remuneration for the shifts of physical therapists, so it is at least comparable to that of other health professionals.

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