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Evidence on COVID-19 and rehabilitation needs

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This report aims to summarise the evidence on COVID-19 and Post-ICU rehabilitation needs. The specific objective of this work is to identify evidence on the i) the rehabilitation and care needs after COVID-19, and ii) how the health systems may deliver services to these needs.

Key findings

- There are no studies reporting empirical data on rehabilitation and care needs after COVID-19
- A few reports set out several recommendations to provide rehabilitation services
- Some studies focus on post intensive care syndrome may report useful information (they may not be specifically related to COVID-19)

Background (non-empirical studies)

The COVID-19 outbreak has led to scientific community to focus research on how to deal with the pandemic at different levels. The rehabilitation needs of patients after COVID-19, and how health systems can provide these, is a question that still needs to be answered.

Some studies have described the main areas of rehabilitation after COVID-19. Simpson and Robinson (2020) have broken down the rehabilitation needs and strategies following critical illness into: physical function, cognitive function, psychosocial wellbeing, acute care rehabilitation, inpatient rehabilitation, virtual rehabilitation and prehabilitation. The authors assumed that COVID-19 patients will suffer acute respiratory distress syndrome (ARDS) and provided recommendations for rehabilitation accordingly.

In Italy, a paper describing the shared experiences of professional (Kiekens et al., 2020) in a seminar organized by the Italian Society of Physical and Rehabilitation Medicine, suggests that there is a need to be prepared for the post-acute phase. Given the length of stay, there are some common problems such as: severe muscle weakness and fatigue, joint stiffness, dysphagia, (neuro)psychological problems, impaired functioning concerning mobility, activities of daily life and work. In terms of the health services, many hospitals have created separate wards for patients with COVID-19 and usual rehabilitation activities and admissions have been stopped or reduced.

An issue published in the Journal of Rehabilitation Medicine in mid-April, presented the views of different health professionals providing rehabilitation services. Health professionals in a rehabilitation department in a hospital in Milan, have stated that ‘rehabilitation of COVID-19 patients cannot be separated from the medical assistance, for respiratory, infective or neurological issues which, together with bedsores, peripheral muscle weakness, muscular retractions, articular limitations, balance/postural disorders, and physical deconditioning caused by prolonged bed rest,

could dramatically reduce the chances of returning to a pre-infection functional status' (Brugliera et al., 2020). In the same journal issue, Stam, Stucki, and Bickenbach (2020) have made a call for action to coordinate the response to post intensive care syndrome in regard to rehabilitation services. Additionally, the editors of the journal have made a call for empirical studies post-COVID-19 rehabilitation (Borg & Stam, 2020).

Post intensive care syndrome (non-COVID-19 related)

There are studies analyzing the post intensive care syndrome that provided useful information, although they were not necessarily related to COVID-19. Rawal, Yadav, and Kumar (2017) defined the post intensive care syndrome (PICS) as 'new or worsening impairment in physical (ICU-acquired neuromuscular weakness), cognitive (thinking and judgment), or mental health status arising after critical illness and persisting beyond discharge from the acute care setting'. The authors reported that cognitive and physical impairment may occur in around 25% of ICU survivors, as well as the presence of psychiatric illnesses such as depression, anxiety and post-traumatic stress disorder. Smith et al. (2020) in a paper still in press, informed that there was no evidence of PICS on post-COVID-19 survivors so far. However, it is expected that these patients may experience some complications like impairments in skeletal muscle strength, pulmonary function, pain, walking ability, activities of daily living. These complications may last months or years after illness.

Conclusions

There is a lack of evidence on what the rehabilitation needs are and how to deliver rehabilitation services to patients after COVID-19. Most of the paper aimed at providing a list of recommendation for rehabilitation based on previous experiences. As the pandemic is at its peak in many countries, it may be too early to have evidence on the long-term consequences of COVID-19. However, some studies aimed at assessing patients with post intensive care syndrome may provide useful information, as they may have similar clinical complications to COVID-19 survivors. In addition, studies on COVID-19 are being rapidly published, so there may be new available evidence on rehabilitation in the coming weeks.

References

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