Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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COVID-19: We All Have a Role

Thank you for publishing the article "How Should the Rehabilitation Community Prepare for 2019-nCoV?" in a recent issue.[1] The coronavirus disease 2019 (COVID-19) crisis has been daunting! For many of us, the pace at which we have been receiving, interpreting, and applying the most current clinical knowledge to our settings of practice has been unprecedented. Day by day and hour by hour, experts in the areas of infection prevention and control continue to adjust recommendations in an attempt to protect the public, patients, and providers. However, as social distancing and infection control measure have become our new normal,[2] rehabilitation professionals from all disciplines have been asked to reconsider the framework by which they deliver care and to adjust their modes of care, which previously relied on close personal and physical contact, in an attempt to maximize functioning and quality of life.

In August 2005, I was a postgraduate year 3 resident in Houston when Hurricane Katrina made landfall in New Orleans. I experienced first-hand the effect of a catastrophe on a community and its health care system. Approximately 250,000 people were relocated to Houston in a matter of days, with the Astrodome becoming one of many makeshift shelters for individuals and their families. The scene was overwhelming, and throughout the early stages there was anxiety, confusion, and fear from the entire public. However, as a community we found a way to persevere. One of the first actions to help ground me was watching several of my attending physicians volunteer to immediately assess the situation and provide care for evacuees in the locations where it was most needed.[3,4] This was a call to action, and our attending physicians showed us how we as rehabilitation professionals could still have a positive effect during the most dire of circumstances.

Now, COVID-19 has intimidated even the best of us. However, if the past is any indication, we will endure. I have been so impressed not only with our own teammates, who have risen to meet this challenge, but also with the rehabilitation providers across the country who are making contributions and recommendations to help our clinicians, educators, researchers, and administrators address the immediate and long-term needs of our communities and patients. We have been forced to think about the role of rehabilitation in a far different manner, whether it be the ability to integrate new virtual technologies to meet the needs of patients in the safety of their environments, development of protocols helping to convert inpatient postacute care settings to medical and surgical acute care units, or collaboration among multiple medical specialties, including physical medicine and rehabilitation, to provide truly interdisciplinary care to those who are currently most vulnerable.

I am so thankful to all of you who are have taken on the responsibility of addressing the needs of our patients and communities by meeting this crisis head on. The experiences we have today will put all of us, and everyone we encounter moving forward, in a better place tomorrow. We will make it through this together.

Until we can see each other again in person, stay safe, stay strong, and stay sanguine.

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Response to Letter Regarding "How Should the Rehabilitation Community Prepare for 2019-nCoV?"

We agree with Dr Rivera-Lillo[1] on the likely importance of rehabilitation for both the acute and postacute care of coronavirus disease 2019 (COVID-19) survivors.

Existing data on clinical outcomes after COVID-19 infection are limited. A recent cohort study of 5700 patients admitted to the hospital over a 1-month period with confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) reported on 2081 of those who were discharged alive by April 4, 2020. Among those persons, the vast majority were discharged home, but that differed substantially by age: 98.0% of those younger than 65 years were discharged home, compared to 86.1% of those older than 65 years.[2] While reassuring, it is likely that a substantial proportion of persons discharged home after hospitalization for COVID-19 will have rehabilitation needs. Moreover, it is likely that rehabilitation during hospitalization (despite the challenges of infection control and patient hypoxia) can mitigate some of the potential sequelae from COVID-19.

Other populations hospitalized with acute respiratory distress syndrome, particularly persons who spend time on a ventilator, have high rates of cognitive impairment and neuromuscular impairment—sometimes referred to as *postintensive care syndrome*. Indeed, among survivors of a stay in intensive care units (ICUs) for respiratory failure or shock, as many as 40% will have some cognitive impairment 3 months postdischarge.[3] Critical illness has also been linked to impaired physical function, with reductions in gait speed and timed chair stands, manifesting with difficulties with performance of activities of daily living.[4] Deficits can be prolonged, with 1 study showing 6-minute walk distance 76% of age- or sex-matched norms and Medical Outcomes Study 36-Item Short-Form Health Survey Physical Function Scores 1 standard deviation below age- or sex-matched comparators fully 5 years after the original hospitalization.[5] The etiology of post-intensive care syndrome is unknown but is thought to be related to the effects of inflammatory changes common with critical illness.[6] If this is true, similar outcomes may be anticipated with COVID-19.

Rehabilitation interventions to treat ICU-acquired weakness and cognitive impairment include early mobilization and cognitive training, as well as post-ICU discharge exercise and home-based therapies. Results from early mobilization during and after ICU stay are promising but inconclusive due to limitations in study methodology.[7,8] One study has shown benefit from cognitive training in the ICU, but another did not find benefit from combined cognitive training with early mobilization.[9,10] Data on post-ICU discharge interventions are limited. A Cochrane review found that, although several studies showed benefit from exercise, several others did not, and the overall quality of evidence was low.[7] However, 1 home-based study which combined exercise and cognitive training post-ICU discharge did show improvement in cognition and function.[11]

We also agree with Dr Raj[12]—coping with COVID-19 has been and will continue to be daunting. Mental health issues among health care workers arising from fighting COVID-19 is an emerging challenge. Psychological research from SARS epidemic in 2003 showed that doctors and nurses not only experienced elevated stress during the outbreak, they experienced even greater depressive, anxiety, and posttraumatic stress symptoms a year after the outbreak.[13] One could argue that the rapists are not frontline staff so should face less traumatic stress. However, a recent study of 234 frontline nurses and 292 non-frontline nurses sent to Wuhan city and Hubei province (China) to aid the COVID-19 fight found that traumatization scores of non-frontline nurses were ironically higher than frontline nurses.[14] Possible reasons for this unexpected finding are frontline nurses were voluntarily selected and provided with more education and psychological preparation than non-frontline nurses. Nevertheless, the same finding was found in another study on health care workers from two Singapore hospitals treating COVID-19 in which found *nonmedical* staff like therapists experienced more depressive, anxiety, and traumatic stress than *medical* staff like doctors and nurses.[15] Thus, we should not underestimate the psychological repercussions of COVID-19 on the rehabilitation workforce.

Despite the limitations in data, it is highly likely that rehabilitation professionals will be called on, during both the acute and the postacute care of COVID-19, to help mitigate the sequelae. As a profession, we need to join together to carry out research that will advance our knowledge of effective rehabilitation for critical illness in our patients and most especially to support one another. A year from now, we will know a lot more.

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