

Hearing the voices of COVID-19 survivors

We have for many years been aware of the psychological stress in survivors of critical illness, especially in those admitted to the intensive care unit (ICU).^[1-3] Anxiety, depression and post-traumatic stress disorder (PTSD) are a few of the well-documented psychological conditions that arise. In systematic reviews, PTSD can occur in up to 19 - 22% of ICU patients and, similarly, clinically important depressive symptoms occur in approximately one-third, both of which are persistent through 12-month follow-up.^[4,5]

There are not only psychological illnesses that occur post ICU stay; cognitive decline is also frequent. In a large study of 821 adults who were admitted to ICU for respiratory failure or shock, global cognition and executive function were assessed at 3 and 12 months after discharge. The authors found that, at one year, 34% of all patients had scores similar to patients with moderate brain injury, and 24% had scores similar to those with mild Alzheimer's disease.^[6] Added to this finding, we know that prolonged ventilation, excessive use of sedation, paralysis and minimal family interaction increase the risk of physical disability as well as post-ICU psychological illnesses. All of these practices have been used extensively during the pandemic in the management of mechanically ventilated COVID-19 patients. The consequences of such a large number of patients having been admitted and hopefully discharged from ICUs are obviously significant. We are already inundated with patients seeking psychological assistance following what has for them been an extremely traumatic experience. In fact, along with fatigue, breathlessness, psychiatric and psychological distress are among the most common of the 'long COVID syndrome'.^[7]

With regard to the latter, studies are emerging that evaluate the psychological wellbeing of ICU survivors post COVID-19 illness. A team from IRCCS San Raffaele Hospital in Milan, Italy, screened 402 patients for psychiatric symptoms post COVID at 1 month after discharge.^[8] Twenty-eight percent suffered from PTSD, 31% from depression, 20% from obsessive compulsive symptoms, and 40% from insomnia; and, of these, 56% scored in the pathological range for at least one of these manifestations. These figures were worse among females and those with previous psychiatric illness, despite similar inflammatory parameters at baseline. The latter did, however, correlate with anxiety and depression.

Another Italian study, performed at a post-acute care service at a hospital in Rome, from April until October 2020, using the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5), showed that PTSD occurred in 30.2% of the 115 participants.^[9]

Halpin *et al.*^[10] in the UK utilised the validated EQ-5D-5L questionnaire by telephonic interview among 100 survivors discharged 1 - 2 months previously. A multidisciplinary team also developed a telephonic screening tool specifically designed for COVID-19 survivors to capture subsequent symptoms and the impact on daily life.^[10] They found PTSD to be present in a higher proportion of women ($n=10/13$; 76.9%) than men ($n=5/19$; 38.5%) in the ICU, whereas gender differences were not apparent (22.9% males and 24.2% females) in those who had been in the general wards. Interestingly, in both groups, those who reported PTSD symptoms were younger.

The study by Hodkinson *et al.*^[11] in this issue of the *AJTCCM* is the first in a South African setting which has examined the impact of hospitalisation for severe COVID-19 on mental health.^[12] The

study patients had survived high care or ICU admission and were interviewed in the general wards pre discharge. While the study was small, consisting of 21 participants, the investigators concentrated on those who had had severe respiratory compromise, 18 of whom required high-flow nasal oxygenation (HFNO) and 5 needing mechanical ventilation for a mean of 15 (range 5 - 27) days. The fatality rate for this category of patients with severe SARS-CoV2 is extremely high, and more so in constrained-resource settings where intubation is delayed owing to a shortage of ICU beds. In Groote Schuur Hospital in Cape Town, where this study was performed, of 293 patients offered HFNO, 156 (53%) failed and 82.7% of these subsequently died.^[12] This study was performed during the first wave in South Africa, and it is possible that patients who were admitted were not as aware of the low chances of survival. However, the fear that all patients would feel when witnessing others die around them, would have made a significant impact. Despite the fact that these patients were about to be discharged and would have felt relatively confident of survival, the psychological scars persisted and would probably do so for some time to come.

The authors did not use a previously validated questionnaire; instead, they developed a topic guide for a 20-minute interview which allowed them to explore perceptions of being ill, the experience of HFNO and/or ICU, including near-death experiences and coping mechanisms. Whereas this technique does not allow easy comparison with previous or future studies using established questionnaires, it does portray vividly the very graphic and humanistic responses, such as 'It felt like I was drowning,' and 'I was seeing people dying too, people die around me. Tomorrow morning you see them, then the brother is not there anymore ... It's scary.'

The major themes they identified were: the distressing experience of COVID illness; the support offered by faith-based beliefs; gratitude to healthcare workers; better understanding of COVID and how dangerous it is; and, interestingly, optimism for the future and resolutions to implement lifestyle changes in the future.

The study does not record their results in a tabulated form with complicated statistical calculations. Instead, it portrays a very poignant and touching record of patient responses that make the emotional trauma that they have endured more tangible. As ICU staff, we treat patients according to their clinical manifestations and, correctly, congratulate ourselves when patients survive. We are, however, seldom aware of, or explore, the ongoing emotional trauma experienced by our patients, which was so well illustrated by the study under discussion. It should be mandatory reading for all healthcare workers and specifically those who work with the critically ill.

Erica J Shaddock, XXXXXXXX; Guy A Richards

Division of Pulmonology and Critical Care, Charlotte Maxeke Johannesburg Academic Hospital, University of the Witwatersrand, Johannesburg, South Africa
ericashaddock@gmail.com

Afr J Thoracic Crit Care Med 2021;27(4):134-135. <https://doi.org/10.7196/AJTCCM.2021.v27i4.196>

1. Myhren H, Toien K, Ekeberg O, Karlsson S, Sandvik L, Stokland O. Patients' memory and psychological distress after ICU stay compared with expectations of the relatives. *Intensive Care Med* 2009;35(12):2078-2086. <https://doi.org/10.1007/s00134-009-1614-1>
2. Scragg P, Jones A, Fauvel N. Psychological problems following ICU treatment. *Anaesthesia* 2001;56(1):9-14. <https://doi.org/10.1046/j.1365-2044.2001.01714.x>
3. Samuelson KA, Lundberg D, Fridlund B. Stressful memories and psychological distress in adult mechanically ventilated intensive care patients - a 2-month follow-up study. *Acta Anaesthesiol Scand* 2007;51(6):671-678. <https://doi.org/10.1111/j.1399-6576.2007.01292>
4. Davydow DS, Gifford JM, Desai SV, Needham DM, Bienvenu OJ. Posttraumatic stress disorder in general intensive care unit survivors: A systematic review. *Gen Hosp Psychiatry* 2008;30(5):421-434. <https://doi.org/10.1016/j.genhosppsych.2008.05.006>
5. Rabiee A, Nikayin S, Hashem MD, et al. Depressive symptoms after critical illness: A systematic review and meta-analysis. *Crit Care Med* 2016;44(9):1744-1753. <https://doi.org/10.1097/CCM.0000000000001811>
6. Pandharipande PP, Girard TD, Jackson JC, et al. Long-term cognitive impairment after critical illness. *N Engl J Med* 2013;369(14):1306-1316. <https://doi.org/10.1056/NEJMoa1301372>
7. Richards GA, Wentzel A, Miller R, van Zyl-Smit R. Post-acute COVID-19 sequelae - 'COVID long hauler'. *Wits J Clin Med* 2021;3(2):117-124. <http://doi.org/10.18772/26180197.2021.v3n2a4>
8. Mazza MG, De Lorenzo R, Conte C, et al. Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. *Brain Behav Immun* 2020;89:594-600. <https://doi.org/10.1016/j.bbi.2020.07.037>
9. Janiri D, Carfi A, Kotzalidis GD, Bernabei R, Landi F, Sani G. Posttraumatic stress disorder in patients after severe COVID-19 infection. *JAMA Psychiatry* 2021;78(5):567-569. <https://doi.org/10.1001/jamapsychiatry.2021.0109>
10. Halpin SJ, McIvor C, Whyatt G, et al. Postdischarge symptoms and rehabilitation needs in survivors of COVID-19 infection: A cross-sectional evaluation. *J Med Virol* 2021;93(2):1013-1022. <https://doi.org/10.1002/jmv.26368>
11. Hodkinson B, Gina P, Schneider M. New life after near death: Surviving critical COVID-19 infection. *Afr J Thoracic Crit Care Med* 2021;27(4):151-155. <https://doi.org/10.7196/AJTCCM.2021.v27i4.184>
12. Calligaro GL, Lalla U, Audley G, et al. The utility of high-flow nasal oxygen for severe COVID-19 pneumonia in a resource-constrained setting: A multi-centre prospective observational study. *EClinicalMedicine* 2020;28:100570. <https://doi.org/10.1016/j.eclinm.2020.100570>