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.

Intensive & Critical Care Nursing 65 (2021) 103050

Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.elsevier.com/iccn

Current Insights in Intensive & Critical Care Nursing

Wellbeing of ICU patients with COVID-19

Gregor Alexander Schittek *, Helmar Bornemann-Cimenti, Andreas Sandner-Kiesling

Department of Anesthesiology and Intensive Care Medicine, Medical University of Graz, Graz, Austria

The ongoing COVID-19 pandemic is stressful for everyone, including health care workers and patients.

The Centers for Disease Control and Prevention (CDC) identified in a web-based survey of 5412 adults in the United States (US), that approximately 41% experience mental or behavioural health problems directly related to the coronavirus pandemic. Over 50% experience symptoms of anxiety, depression, trauma and stress-related disorder; with 11% reporting suicidal thoughts (Czeisler et al., 2020). Studies showed that during the COVID-19 pandemic, well-being decreases in the general population, especially in younger people (Kwong et al., 2020).

Frontline health care workers engaged in direct diagnosis and treatment of patients with COVID-19 are associated with a higher risk of symptoms of depression, insomnia and distress (Lai et al., 2020). In a study completed after the first wave of the pandemic in the United Kingdom (UK), nearly 50% of intensive care unit (ICU) staff reported symptoms including post-traumatic stress disorders, severe depression, anxiety or problem drinking (Mahase, 2021).

Little focus, however, has been given to the well-being and thoughts of COVID-19 patients and ICU patients or their relatives in general during this pandemic. When taken into consideration, that prior to the pandemic, patients' wellbeing in Post Anaesthesia Care Units (PACU) was 40% and in ICU even lower, with up to 40% reporting significant anxiety levels, one can reasonably assume, that these unsatisfactory levels have decreased even further (Rose et al., 2014, Schittek et al., 2020, Schittek et al., 2021). Pain in the PACU was shown to correlate with pre-operative anxiety and depression (Bradshaw et al., 2016). Depression has also been linked to an increased risk of post-operative cognitive impairment and delirium (Ghoneim and Block, 2012).

The media coverage highlighting the shortage of ICU beds and the massive burden on the staff have created fear of not receiving adequate treatment. This further increases the burden and stress on individual patients, whether they are being treated for COVID-19 or for another condition. In COVID-positive ICU patients, there is an awareness of the high mortality of this disease; in negative patients, the fear of acquiring the virus within the hospital may be an additional stressor.

Patients with COVID-19 require prolonged mechanical ventilation; previous study has highlighted thirst, loss of control and noise as the most frequently recalled negative experiences from ICU (Rose et al., 2014). Despite such investigations for mechanically ventilated COVID-19 patients not yet being available, we can reasonably assume, that the results would be similar.

In conscious patients, restrictions on visitation also aggravates symptoms such as loneliness, anxiety, depression and disorientation. In many hospitals, adequate psychological care or counseling cannot be provided due to the commonly limited availability of such services. Nursing staff can only partially compensate for their patients' additional need for psychosocial support and comfort, not least due to their own professional and psychological stress. Those who do, are at risk of exhaustion, burnout or similar negative consequences (González-Gil et al., 2021).

An additional factor are the relatives. For them, we already know, that while their loved ones are being treated in ICU, they are in emotional turmoil having to deal with intense as well as feelings alternating between hope and despair (Koukouli et al., 2018). It has further been described, that during this emotional process, it is of utmost importance for the relatives to protect the patient's dignity and well-being (Koukouli et al., 2018). Family support was shown to influence patients' anxiety and pain during an ICU treatment (Liang et al., 2020). Video conferences for facilitating family visitations have been proposed as possible tool for increasing patients'(and relatives') well-being, but of course have their limitations (Life Lines Team, 2020).

To better cope with the stress during this pandemic, the World Health Organization (WHO) has published recommendations on its homepage. These recommendations can be summed up as "maintain a healthy lifestyle" (i.e. proper diet, sleep, exercise, stay in contact with family and friends), gather information from credible sources and draw on skills that have helped in previously stressful situations. While not part of the recommendations, it is a self-evident part of health care workers' daily routine to care for their patients. Long before this current pandemic, the implementation of these recommendations has been part of the discussion on how the ICU-environment should be developed. These recommendations translate into the implementation of measures such as reducing patient noise exposure as well as staff presence in their room, supporting patients' circadian rhythms through daylight and cyclical lighting, individualised nutritional therapy, daily physical therapy and, if requested, the possibility of liberal visiting hours for family and friends. An overview of the threats to

* Corresponding author at: Department of Anaesthesiology and Intensive Care Medicine, Auenbruggerplatz 5, 8036 Graz, Austria.

E-mail address: gregor.schittek@medunigraz.at (G.A. Schittek).

https://doi.org/10.1016/j.iccn.2021.103050

Table 1
Well-being threats for COVID-19 patients in ICU and treatment options.

Well-being threats for critically ill COVID-19 patients	Treatment option
Noise by equipment especially during night-time (e.g. monitor alarm or respiratory machine)	Optimise alarm settings, consider implementing technical noise reduction measures.
Noise by staff especially during night-time (e.g.loud conversation)	Optimise workflow and tasks to swiftly perform all necessary steps. Consider which steps have to be completed in the patient room and which can be completed outside.
Isolation	Liberate visiting rules and consider providing the patient with the opportunity to digitally communicate with their relatives/family.
Thirst/Hunger	Implement fast track concepts and evaluate whether your treatment is up to date with current international feeding guidelines.
Inability to communicate	Consider using paper-based or digital media (e.g., pictogram) as well as integrating logotherapy in the ICU treatment options.
Lack of physical exercise	Consider using physiotherapy and suitable equipment (e.g., bed bicycle) in the treatment options.
Pain	Implementing standard treatment pathways and regular assessment of pain with VAS or NRS, regular evaluation of "standard treatment".
Delirium and Hallucinations	Regular screening for delirium with suitable tools e.g., CAM and treatment according to guidelines.
Hypoxia/Air distress	Sufficient oxygen therapy! This includes ergonomic management of breathing mechanics and individual application of ventilation strategies e.g., some patients tolerate nasal high flow better than NIV with a mask.
Newly acquired physical or cognitive disabilities due to an acute illness	Remember mental aspects of critical disease on the patients, listen and consider integrating psychology, pastoral care and/or support religious beliefs should the patient desire these.
Sedation/Anxiety	Optimise sedation with non-pharmacological options but do not hesitate to also use medication if necessary.
Sleep hygiene	Supporting patients' circadian rhythms through daylight, cyclical lighting and if necessary medication.

COVID-19 patient well-being and treatment options for ICU staff is shown in Table 1.

In conclusion, COVID-19 has created various burdens for the caregivers as well as for the patient and their relatives which make the work more difficult and exhausting. It has threatened the family and patient-centred model of care integral to ICU settings and resulted in a reduction in quality of life and satisfaction (Ning and Slatyer, 2021). We can only encourage keeping in mind the importance and support of well-being, as well as the mental health of patients, their relatives, colleagues and oneself.

References

Bradshaw, P., Hariharan, S., Chen, D., 2016. Does preoperative psychological status of patients affect postoperative pain? A prospective study from the Caribbean. Br. J. Pain 10 (2), 108–115. https://doi.org/10.1177/2049463716635680.

Czeisler, M.É., Lane, R.I., Petrosky, E., et al., 2020. Mental health, substance use, and suicidal ideation during the COVID-19 pandemic — United States, June 24–30, 2020. MMWR Morb. Mortal Wkly. Rep. 69, 1049–1057. https://doi.org/10.15585/mmwr.mm6932a1.

Ghoneim, M., Block, R., 2012. Clinical, methodological and theoretical issues in the assessment of cognition after anaesthesia and surgery: a review. Eur. J. Anaesthesiol. 29 (9), 409–422. https://doi.org/10.1097/EJA.0b013e328356bd6e.

González-Gil, M.T., González-Blázquez, C., Parro-Moreno, A.I., et al., 2021. Nurses' perceptions and demands regarding COVID-19 care delivery in critical care units and hospital emergency services. Intensive Crit. Care Nurs. 62. https://doi.org/10.1016/j.iccn.2020.102966.

Koukouli, S., Lambraki, M., Sigala, E., et al., 2018. The experience of Greek families of critically ill patients: exploring their needs and coping strategies. Intensive Crit. Care Nurs. 45, 44–51. https://doi.org/10.1016/j.iccn.2017.12.001. Epub 2017 Dec 29. PMID: 29291921.

Kwong, A., Pearson, R., Adams, M., et al., 2020. Mental health before and during the COVID-19 pandemic in two longitudinal UK population cohorts. Br. J. Psychiatry, 1–10. https://doi.org/10.1192/bjp.2020.242.

Lai, J., Ma, S., Wang, Y., Cai, Z., et al., 2020. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA Netw. Open 3 (3). https://doi.org/10.1001/jamanetworkopen.2020.3976. PMID: 32202646; PMCID: PMC7090843.

Liang, Y., Li, J., Pan, W., 2020. Family satisfaction in the intensive care unit: the influence of disease severity, care relationship, patient anxiety and patient pain. Intensive Crit. Care Nurs., 102995 https://doi.org/10.1016/j.iccn.2020.102995. Advance online publication.

Life Lines Team, 2020. Restricted family visiting in intensive care during COVID-19. Intensive crit. care nurs. 60, 102896. https://doi.org/10.1016/j.iccn.2020.102896.

Mahase, E., 2021. Covid-19: Many ICU staff in England report symptoms of PTSD, severe depression, or anxiety, study reports. BMJ 372 (n108).

Ning, J., Slatyer, S., 2021. When 'open visitation in intensive care units' meets the Covid-19 pandemic. Intensive Crit. Care Nurs. 62, 102969. https://doi.org/10.1016/j.iccn.2020.102969.

Rose, L., Nonoyama, M., Rezaie, S., Fraser, I., 2014. Psychological wellbeing, health related quality of life and memories of intensive care and a specialised weaning centre reported by survivors of prolonged mechanical ventilation. Intensive Crit. Care Nurs. 30 (3), 145–151. https://doi.org/10.1016/j.iccn.2013.11.002. Epub 2013 Dec 3. PMID: 24308899.

Schittek, G.A., Michaeli, K., Labmayr, V., et al., 2021. Influence of personalised music and ice-tea options on post-operative well-being in the post anaesthesia care unit after general or regional anaesthesia. A pre-post-analysis by means of a questionnaire. Intensive Crit Care Nurs., 102998 https://doi.org/10.1016/j.iccn.2020.102998. Epub ahead of print. PMID: 33358520.

Schittek, G.A., Schwantzer, G., Zoidl, P., et al., 2020. Adult patients' wellbeing and disturbances during early recovery in the post anaesthesia care unit. A cross-sectional study. Intensive Crit Care Nurs. 61, 102912. https://doi.org/10.1016/j.iccn.2020.102912. Epub 2020 Aug 14. PMID: 32800752.