



## Alleviating ICU survivors' burden - a consensus of 29



In a review paper, a team of international researchers highlights how critical illness and critical care affect longer-term outcomes. According to the authors, the severity of acute illness determines the degree of impairment (with age and length of ICU stay) and the chronic disease status determines the trajectory of recovery.

Over the past 25 years there has been a burgeoning critical care literature addressing the issue of longer-term outcomes, including survival, quality of life, morbidity, functional status, joblessness, and costs of care for ICU survivors.

In the article, longer-term outcomes are analysed as the result of both the acute illness (pneumonia, trauma, stroke, anoxic brain injury, myocardial infarction, spinal cord injury, burn, etc.) and the critical care experience and related burden. "It is likely that most of the deleterious effects of critical care also apply to acute care, with regard to both the prevalence and the mechanisms that lead to weakness, delirium, cognitive impairment, worsening of chronic organ dysfunction, or any other significant sequels," the authors write.

Specifically, the article seeks to underline the contribution of ICU delirium to cognitive dysfunction following ICU discharge. Delirium and its duration are associated with neurocognitive dysfunction and may be associated with mortality over the first year after critical illness. "One year after ICU discharge, up to one-third of patients have symptoms of depression, but pre-illness psychiatric history can be found in only 11-38% of patients. The link between pre-illness and post-ICU psychiatric disorders is not yet completely understood," the authors point out.

The article also provides new insights into ICU acquired weakness. Respiratory muscle weakness, and more particularly diaphragmatic dysfunction, has been reported in about half of patients at the time of ICU admission and are associated with increased mortality.

"Ventilation-induced diaphragmatic dysfunction occurs in half the patients after prolonged controlled mechanical ventilation or ventilation with high-level support, but can also be caused by sepsis alone (without prolonged mechanical ventilation)," the authors explain. "Diaphragmatic weakness follows muscle fibre injury, atrophy, and remodelling and is associated with asynchrony, weaning failure, prolonged ventilation, and ICU and hospital readmission."

Although weakness may not be documented at clinical examination a long time after ICU discharge, the authors note that all patients report varying levels of perceived weakness that prevents them from performing vigorous exercise. They say that further studies focused on early physical therapy are needed to determine the most

appropriate target population who are most likely to benefit.

The authors emphasise the need to develop effective interventions – i.e., tested and implemented at various levels – to improve patients' and caregivers' abilities to cope with critical illness and its sequelae (prevent tissue impairment, rehabilitate activity limitations, compensate limitations, or adapt with reduction in quality of life). Some evidence exists that rehabilitation should start early during critical illness, but modalities of rehabilitation remain to be tested and clarified. Also, long-term chronic pain, addiction, and dependencies need to be studied in ICU survivors using valid tools that help us understand predictors of ICU-related opioid dependency.

"Furthermore, patients' and family members' experiences should be used to guide effective interventions to provide the best comfort and holistic care, to better address the needs of patients and their families, and improve our ability to alleviate the post-ICU burden for surviving patients and their loved ones, as well as the grief symptoms of bereaved family members," the authors write.

Source: [Critical Care](#)

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