

Mechanical ventilation associated with long-term disability

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Critically ill patients who have been mechanically ventilated for more than seven days are at greatly increased risk for functional impairment and mortality at one year following discharge from the intensive care unit (ICU), according to a new study presented at the 2015 American Thoracic Society International Conference.

"Prolonged [mechanical ventilation](#) has a significant impact on the long-term well-being of [patients](#)," said lead author Margaret Herridge, MD, MPH, of the University of Toronto. "In our study of nearly 400 ICU patients, we were able to identify a number of characteristics that predicted subsequent disability. Knowing these risk factors can help guide their rehabilitation needs." The study involved 391 patients who had undergone at least one week of mechanical ventilation. Median ventilation time was 16 days, mean length of stay in the ICU was 22 days, and mean length of stay in the hospital was 29 days. Assessment included the Functional Independence Measure (FIM), an indicator of disability level, along with measures of physical capacity, neuropsychological status, quality of life, healthcare utilization, and mortality. FIM score at seven days post-ICU discharge was associated with patient age and length of stay in the ICU. The oldest patients with the longest ICU stays had the worst outcomes, with 40% of those patients aged 46-66 years with an ICU length of stay of 14 days or more dying within the first year of follow-up, 29% being readmitted to ICU, and most exhibiting severe impairments in daily activities, including bathing, dressing and climbing stairs. In contrast, patients younger than 42 years of age with an ICU length of stay of less than two weeks had the best functional outcomes.

The rate of hospital readmission was high for all patients, ranging from 36% to 43% for different age and length of stay patient groups. FIM score, Charlson score (a measure of comorbidities), and age independently predicted mortality at one

year. "A combination of FIM score at 7 days after ICU discharge, length of stay in the ICU, and patient age can be used to predict subsequent impairment in mechanically ventilated patients," said Dr. Herridge. "Earlier intervention based on these predictions may improve outcomes for these high-risk patients."

More information: Abstract 68191: The RECOVER Program: One-Year Disability in Critically Ill Patients Mechanically Ventilated (MV) for 7 Days

Provided by American Thoracic Society

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