Archives of Anesthesiology and Critical Care (In Press); x(x): xx-xx.

Available online at http://aacc.tums.ac.ir

Letter to Editor

Advancing Out-of-Bed Mobilization for Mechanically Ventilated Patients: Overcoming Barriers to Improve Outcomes

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ARTICLE INFO

Article history:
Received 01 April 2025
Revised 22 April 2025
Accepted 04 May 2025

Early mobilization (EM) and out-of-bed mobilization (OBM) in mechanically ventilated patients are essential interventions in critical care. EM includes all forms of mobilization such as sitting on the bed's edge, standing, and walking while in the ICU. OBM is a specialized form of EM where patients are moved from a lying down position to sitting in a chair or standing up. When patients remain immobile for extended periods in the ICU, they face a range of serious complications. These can include ICU-acquired weakness, muscle atrophy, and a decline in functional abilities. To reduce these risks, the OBM protocol has been introduced in many care settings. OBM plays a crucial role in promoting physical recovery, helping to shorten ICU and hospital stays, and improving the quality of life for patients after discharge [1-2]. However, its consistent use with patients on mechanical ventilation continues to be a challenge. This inconsistency is often due to a mix of practical barriers and ongoing debates about its safety and effectiveness. Nevertheless, recent studies have shed light on both the obstacles to implementing OBM and its potential benefits, offering a clearer understanding of its impact on patient outcomes. Cooper et al. [3] conducted a cross-sectional study exploring nurses' mobility practices in mechanically ventilated patients, finding that even though patients were deemed ready for mobility within an average of 41.5 hours after intubation, two-thirds of nurses rarely or never mobilized these patients out of bed. The main barriers included patient's personal factors like lack of cooperation (21.9%) and existing medical conditions (15%), in addition to nurse's related barriers or concerns on patient safety, such as fear of falls (14.3%) and harm (9.5%). It is noteworthy that barriers of an environmental nature like absence of staff support (13.3%) or activity order by the clinician (5.7%) were rarely reported which indicates that attitude and cultural barriers present in ICU teams are major factors that constrain OBM practices. The results of a study by Taito et al. [4] in Japan revealed that the presence of dedicated rehabilitation teams and high intensity physician staffing was strongly and positively associated with the routine application of OBM for mechanically ventilated patients. The presence of Physical and Occupational and Speech Therapists significantly increase implementation OBM by almost seven fold (odds ratio [OR], 6.83) and high intensity physician staffing more than doubles the chances (OR, 2.37). Moreover, use of standardized written protocols for OBM as reported by 23% of respondents to the survey signals the need for better consistency of practice. While OBM holds considerable promise, a large randomized controlled trial [5] has shed light on its complexities, offering a more refined understanding of both its benefits and risks. This study explored the impact of enhanced early active mobilization—which included strategies like minimizing sedation and incorporating daily physiotherapy—compared to standard care in 750 patients on mechanical ventilation. The primary measure

The authors declare no conflicts of interest.

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of success, defined as the number of days patients were alive and out of the hospital at 180 days, revealed no meaningful difference between the two groups: the early-mobilization group had a median of 143 days, while the usual-care group reported 145 days. However, the early-mobilization group faced a notably higher frequency of adverse events potentially tied to mobilization efforts, including arrhythmias, fluctuations in blood pressure, and oxygen desaturation (9.2% versus 4.1%, P = 0.005). These results underscore the critical importance of striking a careful balance between the potential advantages of OBM and the associated risks, particularly when managing the delicate condition of critically ill patients. The implementation of EM and OBM is more difficult due to the absence of uniform definitions and standard procedures, as noted in a systematic review by Clarissa et al. [1]. The review pointed out that there was no agreement on the definition of early mobilization and pointed out the inconsistency of OBM implementation in different ICUs. It advocated for working towards designing unified definitions and clear actionable plans which are flexible to the case mix, ICU type, multidisciplinary team and patient involvement.

In conclusion, OBM is still emphasized as part of recovery care for patients on mechanical ventilation due to its promising outcomes concerning recovery and the patients' long-term wellbeing. OBM's effectiveness may be hindered by implementing cultural or organizational safety concerns. The literature highlights the importance of evaluating the pros and cons of applying OBM to critically ill patients. Enhancing OBM strategies while safeguarding the patient's welfare can be achieved through the cessation of barriers via education, defined institutional protocol frameworks, and proper specialized rehabilitation staffing allocation. Controlled evidence suggests better patient outcomes when multiple healthcare practitioners routinely adopt a set OBM strategy in the ICU.

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