

**The Benefits of Early Mobilization of Patients in the Intensive Care Unit: A Literature
Review**

Ashley Shields

Lakeview College of Nursing

N434: Evidence-Based Practice

Travis Whisman

July 19, 2025

The Benefits of Early Mobilization of Patients in the Intensive Care Unit: A Literature Review

Evidence-based practice, quality improvement, and research are a detrimental part of the healthcare system. These are used congruently to set standards of healthcare to improve patient outcomes and establish best practices. There is ongoing research to address the issue among intensive care unit (ICU) patients who endure extended immobility, especially with intubated patients. These patients often have a higher mortality rate, and the ones who survive are left to deal with extreme muscle loss (ICU-AW) and long-term ailments associated with extended immobilization (The TEAM Study Investigators & the ANZICS Clinical Trials Group, 2022). In the last several years, there has been more research being conducted regarding the benefits and improved patient outcomes for early ambulation in the ICU. It has been noted that early ambulation greatly reduces the loss of muscle, provides for a decreased ICU admission, decreased hospital admission, reduced the rate of ventilator-associated pneumonia, and reduced the incidence of deep vein thrombosis (DVT) (Zang et al., 2020). The purpose of a literature review is to gather data on a specific topic through research, analyze the data, and reach a conclusion based on the results while identifying gaps within the problem (Luft et al., 2022). This literature review will explore the benefits of early ambulation in the ICU among critically ill patients, and what can be done to further improve patient outcomes by making this the standard in healthcare.

“The effect of early mobilization in critically ill patients: A meta-analysis”

The purpose of this article was to combine many different sources for data to reach a more precise conclusion regarding the benefits of early mobilization in ICU and critically ill patients, especially regarding ICU-AW (ICU acquired weakness) (Zang et al, 2020). One of the most difficult and common problems of extended immobility is ICU-AW. Due to the body not moving or using muscles, this causes them to wither very quickly, making recovery far more difficult with long-term struggles. This research was conducted using meta-analysis to conclude patients in the ICU who can ambulate sooner fare better than those who experience delayed mobilization (Zang et al., 2020).

Key Points

By using fifteen randomized controlled trials to ensure accurate data and a total of 1941 patient information, this allowed for a reasonably accurate overall depiction of the benefits of early ambulation (Zang et al., 2020). Using a meta-analysis method, this research was able to combine multiple individual trials to gain insight and numerical data to conclude that early mobilization among critically ill patients experienced reduced ICU-AW, shortened time in the hospital, and improved overall patient outcomes (Zang et al., 2020).

It is reported that 40% of adult ICU patients develop ICU-AW (Norena-Buitron et al., 2023). With ICU-AW occurring so frequently with critically ill patients, this study was able to not only highlight the importance of early mobilization, but to predict adverse outcomes among patients. This research was conducted using a risk ratio (RR), confidence intervals (CI), and weight mean difference (WMD). By focusing on ICU-AW alone, it indicated a high probability of improved functional recovery by helping patients regain lost abilities, shortened ICU days (WMD= -1.82 days, 95% CI= -2.88), hospital days (WMD= -3.90 days, 95% CI= -5.94) and reduced mortality

rates (RR= 1.31, 95% CI= -0.68) when facilities implemented early mobilization practices (Zang et al., 2020).

Assumptions

The assumption of this study by the author was that by taking a meta-analysis approach, this cast a broad net to gain a clear understanding of average ICU patients and conduct a comparative analysis of the patients who were mobilized early and those who were not (Zang et al., 2020). With a total of 1941 patients reviewed from different facilities, it provides a large demographic to view the overall outcomes. The patients who were ambulated earlier fared better and exhibited fewer long-term problems with muscle loss upon release from the ICU and hospital (Zang et al., 2020).

Deficit/Conclusion

While primarily focusing on ICU-AW, the researchers of this study concluded that early ambulation not only decreased ICU-AW, but also decreased ICU and hospital admission days, improved functional mobility, decreased ventilator-associated pneumonia and decreased DVT rates (Zang et al., 2020). Although this study indicated no substantial improvement on mortality rates and ventilator-free days, the outcome of the patients who survived and were mobilized early when they were extubated was greatly improved. By ambulating as early as possible, patients experience decreased ICU-AW, which can also reduce the amount of time and costs associated with recovery and physical therapy (Singam, 2024).

By using meta-analysis for such a large study group, the authors' conclusions appear to be accurate. Using evidence-based practice and current research regarding early ambulation in the

ICU, this improves patient outcomes substantially. The healthcare field utilizing this knowledge within the ICU setting will continue to improve and possibly even prevent many ailments for ICU patients (Zang et al., 2020). If the healthcare system chose to regress back to waiting or delayed mobilization, it would have similar results as forty years ago. Patients would remain sick longer, suffer more DVTs and ventilator-associated pneumonia, suffer more severe ICU-AW, and longer admittance in the ICU and hospital (Zang et al., 2020). It would likely be the exact reversal of the benefits observed with early mobilization.

“Nurse-involved early mobilization in intensive care unit: A systematic review and meta-analysis”

The purpose of this article was to highlight the role nurses play in early mobilization programs for ICU patients. By using a meta-analysis approach, this study focused on four ICU nursing teams and five multidisciplinary teams, which included rehabilitation nurses, bedside nurses, physiotherapist nurses all working directly with providers, physical therapists, and nursing assistants (Lee et al., 2025). The study concluded that nurse involvement in early mobilization plays a critical role in initiating, coordinating, and implementing early mobilization with the patients and there was a decrease in the length of ICU stay due to nursing involvement (Lee et al., 2025). ICU nurses often have a 1:1 ratio with the patients, so they maintain constant contact and are more aware of the holistic needs of each patient. By taking a step-by-step approach with nursing staff, there was notable improved mobility and decreased length of admission in the ICU (Lee et al., 2025).

Key Points

The data collected from this article was a quantitative study based on population, interventions, comparisons, outcomes, and design. The focus was on adult patients, nurse-involved early mobilization, and outcomes such as length of stay and muscle strength. Gathering data from 943 sources, making this a highly diverse group, there was an indication of improvement in 75% of the cases with nurse-involved early mobilization (Lee et al., 2025). With a 75% improvement rate in decreasing hospital stay and patient muscle weakness, early mobilization in the ICU shows great promise towards improved patient outcomes (Lee et al., 2025).

Assumptions

The assumption of this article was that by taking a meta-analysis approach, this provided a diverse group to reach an overall conclusion about the benefits of early mobilization and the importance of nurses in the progress of this program (Lee et al., 2025). By examining 943 cases with specific criteria, this allowed for a more conclusive result. The nurse-involved early mobilization program proved to be beneficial for patients both with muscle strength and shortened ICU and hospital admission (Lee et al., 2025).

Deficit/Conclusion

The authors of this study have a valid line of reasoning. By focusing on the primary caregivers of the patients in the ICU with the most interaction with the patients, utilizing them to help rehabilitate the patients more frequently and sooner, this proved to be highly beneficial for the patients by 75% (Lee et al., 2025). Incorporating teams who specialize in rehabilitation and different aspects of patient care and utilizing their expertise to develop a program for nursing

staff to assist patients with early mobilization, the patient's in the intervention group were mobilized out-of-bed at 3.8 +/- 1.2 days, compared to the controlled group who were mobilized at the standard rate of 14.9 +/- 4.7 days, the intervention group showed a significantly decreased ICU stay and ICU-AW (Lee et al., 2025).

The researchers concluded the nurse-involved early mobilization produced positive results toward improved mobility and decreased days in the ICU. Nurses who fail to implement early mobilization in the ICU will continue to see less progress for the patients, longer hospital admissions, more cases of ICU-AW, unnecessary complications for patients with extended stays, and few positive patient outcomes (Lee et al., 2025).

“Early mobilization for critically ill patients”

The purpose of this article was to examine safety of early mobilization and the different therapies performed by and for ICU patients to highlight the decrease in long-term improved functional status regarding early mobilization in the ICU. This study focused on passive exercises and active exercises in critically ill patients, noting the benefits in mobility and functional status (Yang et al., 2023). Utilizing intensive care physicians, rehabilitation physicians, physical therapists, occupational therapists, respiratory therapists, and nurses, they were able to implement safe early ambulation protocols based around each patient's tolerance and abilities to the exercises performed. The lack of early mobilization practices in the ICU leads to weaning difficulty with mechanical ventilation, ICU-AW, extended ICU and hospital admissions, and a reduced quality of life following discharge (Yang et al., 2023). However, this study did note an increase in adverse events of 2.6%, indicating some negative outcomes. This study also noted a difficulty in determining what classifies as an adverse event because there is

not a consistent standard set to define an adverse safety event (Yang et al., 2023). By using multidisciplinary teamwork, these patients were given holistic care and therapy, leading to improved patient outcomes and a more positive quality of life after they were discharged from the ICU and hospital due to early mobilization practices (Yang et al., 2023).

Key Points

This study focused on the safety and benefits of not only active exercises (exercises performed by the patient), but it also examined the benefits of passive exercises (exercises performed by someone else or by mechanical means) as well (Yang et al., 2023). This study focused on five key steps for implementation protocols: functional diagnoses of critically ill patients, selection of mobilization strategies, implementation of mobilization with multidisciplinary teamwork, functional reassessment, and functional outcome assessment (Yang et al., 2023). Due to critically ill patients having extreme physiological instability, all of these factors have to be examined and evaluated for each patient to maintain safety for the patient. Out of 22,000 patients, a rate of 2.6% was noted to have adverse events. However, by using multidisciplinary teamwork, the occurrence of serious adverse events, such as cardiac arrest, falls, line dislodgement, changes in hemodynamic status, and other physiological parameters, indicated it was a technique issue leading to adverse events, and the benefits of early mobilization outweigh the risks in most cases (Yang et al., 2023).

Assumptions

The assumption this author was making in this article was that the benefits of early mobilization greatly improve patient outcomes, but caution should be taken with critically ill

patients. The researchers make it clear there are some risks associated with early mobilization, but it is difficult to clarify adverse events due to a lack of consistency in defining what an adverse event is (Yang et al., 2023). It can be concluded that these authors believe there are extensive benefits of early mobilization in the ICU, when the exercises are performed correctly under the guidance of many healthcare professionals and the patient's tolerance is closely monitored to ensure safety, even with passive exercises (Yang et al., 2023).

Deficit/Conclusion

When considering lives are at stake, the authors of this study have a solid line of reasoning. There are proven benefits to early ambulation in the ICU, however, safety of the patient always needs to be of the utmost consideration and concern (Yang et al., 2023). Oftentimes in the ICU, when early mobilization is being performed for the first time, there are multiple healthcare professionals present to monitor the patient and technique, especially in Children's Hospitals. Upon extubation or when the patient is deemed capable, the attending physician, nurse, physical therapist, and any other specialty necessary will all be present to ensure safety of the patient and to evaluate the patient's abilities. This will often be initiated within the first 48-72 hours of admission to the ICU and following an evaluation of the patient's tolerance to exercise (Norena-Buitron et al., 2023). By ensuring the patient is monitored so closely and continuously being evaluated, this will help decrease adverse safety events during early mobilization and greatly improve patient outcomes. If nursing fails to implement early mobilization while keeping safety at the forefront, adverse events will likely increase as early mobilization protocols and practices are increasing in their utilization in facilities, positive patient outcomes will decrease and potentially be fatal.

Conclusion

Although there are some negative patient outcomes to early mobilization in the ICU, the benefits appear to outweigh the adverse events. There is an overall increase in positive patient outcomes, fewer days admitted to the ICU and hospital, and fewer complications associated with immobility in the ICU. With 40% of patients reporting ICU-AW, reducing their quality of life upon discharge, and requiring weeks to years of physical therapy, not always gaining all of their strength and function back, the benefits of early mobilization are evident (Zang et al., 2020) (The TEAM Study Investigators & the ANZICS Clinical Trials Group, 2022). Nurses are the first line and maintain consistent contact with the patients, so implementing them in the early mobilization protocols would be highly beneficial. They know the patient's baselines, labs, medications, and status. If the patient starts to exhibit a change in their status, the nurse will likely be the first to notice, which can help decrease the number of adverse safety events. They also know their patients' abilities to help determine a rough idea of their tolerance level, which would also promote safety for the patients. By recognizing the benefits of early ambulation and acknowledging the short-falls and negative outcomes, this is exactly what evidence-based practice and quality improvement are. With multidisciplinary teamwork, safe techniques, and proven benefits decreasing so many of the negative outcomes of extended immobility, healthcare as a whole is working towards establishing a standard for safe early mobilization in the ICU nationwide and world-wide. It has become a well-established practice in many facilities, but it is not always followed through as it should be. Hopefully, by highlighting the benefits and using caution, this will become the standard for all hospitals with an ICU.

References

- Lee, J., Kim, Y., & Lee, H. J. (2025). Nurse-involved early mobilization in the intensive care unit: A systematic review and meta-analysis. *Nursing in Critical Care*, 30(2), e13278. <https://doi.org/10.1111/nicc.13278>
- Luft, J. A., Jeong, S., Idsardi, R., & Gardner, G. (2022). Literature reviews, theoretical frameworks, and conceptual frameworks: An introduction for new biology education researchers. *CBE—Life Sciences Education*, 21(3), rm33. <https://doi.org/10.1187/cbe.21-05-0134>
- Noreña-Buitrón, L. D., Sanclemente-Cardoza, V., Espinosa-Cifuentes, M. A., Payán-Salcedo, H. A., & Estela-Zape, J. L. (2023). Early mobilization protocols in critically ill pediatric patients: A scoping review of strategies, tools and perceived barriers. *Children*, 12(5), 633. <https://doi.org/10.3390/children12050633>
- Singam, A. (2024). Mobilizing progress: A comprehensive review of the efficacy of early mobilization therapy in the intensive care unit. *Cureus*, 16(4), e57595. <https://doi.org/10.7759/cureus.57595>
- The TEAM Study Investigators & the ANZICS Clinical Trials Group. (2022). Early active mobilization during mechanical ventilation in the ICU. *The New England Journal of Medicine*, 387(19), 1747–1758. <https://doi.org/10.1056/NEJMoa2209083>

Yang, X., Zhang, T., Cao, L., Ye, L., & Song, W. (2023). Early mobilization for critically ill patients. *Respiratory Care*, 68(6), 781–795. <https://doi.org/10.4187/respcare.10481>

Zang, K., Chen, B., Wang, M., Chen, D., Hui, L., Guo, S., Ji, T., & Shang, F. (2020). The effect of early mobilization in critically ill patients: A meta-analysis. *Nursing in Critical Care*, 25(6), 360–367. <https://doi.org/10.1111/nicc.12455>

