ADVOCATE FOR EARLY MOBILITY FOR YOUR ICU PATIENTS TO IMPROVE OUTCOMES.

Your guide to presenting the evidence
Starting an early mobility program represents a change in mindset in critical care. And because it’s a change, you may need to advocate for it in your institution. This guide to key evidence supporting early mobility will help you address multiple stakeholders.

Early mobility benefits patients and their families

Early mobility can prevent or reduce the risk of ICU-acquired weakness, neuropsychiatric disease, and other complications linked to immobility. A meta-analysis of 16 early-rehabilitation studies between 2004 and 2014 documented benefits for critically ill patients, including adults, children, and mechanically ventilated and unconscious patients. The results showed that benefits of early rehabilitation — whether passive, progressive, or a combination of both — include:

- Decreased ICU and hospital stays
- Shorter periods of delirium
- Fewer ventilator-dependent days
- Greater ambulation distance
- Better functional outcomes

In one randomized controlled trial, researchers studied 104 critically ill and mechanically ventilated patients across two university hospitals. Compared to the control group, patients who received early physical and occupational therapy:

- Achieved a higher rate of independent functional status at hospital discharge (59 versus 35 percent)
- Endured half the median duration of ICU-associated delirium
- Experienced more than two additional days without a ventilator

At the University of California San Francisco (UCSF) Medical Center, early mobility interventions in the ICU have reduced patient and family stress. A nine-month study of UCSF’s early mobility program found that the median:

- Number of days between ICU admission and initial physical therapy evaluation dropped from three to one
- Distances walked in the ICU more than tripled from 40 to 140 feet
- Length of stay in the ICU and hospital decreased by two days

Patients who undergo early interventions have also experienced:

- Short-term benefits such as improved muscle strength and earlier mobility out of bed
- Long-term benefits such as lower rates of hospital readmission

Early mobility is safe

Hospital staff can initiate properly implemented early mobilization as soon as day one in the ICU — even with mechanical ventilation or administration of vasopressors.

One review of journal literature on adult and pediatric early mobilization found that adverse events were rare and not serious:

- The rate of events ranged between 0 and 3 percent
- They consisted of nonserious cardiovascular events, falls, or tube extractions
- They rarely required additional treatment or resulted in additional cost or length of stay

Independent reviews of 15 studies on early rehabilitation programs showed:

- No serious adverse events resulted in death or near death
- The most common physiological change was transient oxygen desaturation

A review of 48 studies evaluating 7,546 patients found safety events occurring in 2.6 percent of a total 22,351 mobilization/rehabilitation sessions.

In a review of 498 progressive mobilization therapy sessions, researchers found only one serious adverse event. They concluded that progressive mobilization is as safe and effective as passive exercise.
Early mobility delivers significant returns on investment

Johns Hopkins University implemented one of the first early mobility programs in the country. It reported significant net cost savings. A financial analysis of the Johns Hopkins program revealed that:

- Investment in the program totaled $358,475
- The program reduced costs by $1,172,312, primarily due to shorter ICU and hospital stays
- Early mobility’s net savings added up to $817,836

Using the Johns Hopkins program as a model, researchers estimated what early mobility would cost other facilities. They found:

- At least 83 percent of ICUs with 200 to 2,000 annual admissions would generate net savings
- Hospitals could save up to $3.76 million in the best-case scenario

One study showed that patients receiving early mobility therapy moved out of bed about 54 percent sooner than those without therapy. Shorter bed stays can help reduce ICU and hospital length of stay, in turn reducing health care costs.

Average savings for hospitals implementing early mobility interventions was $3,160 per patient.

Despite perceived barriers, ICU medical staff widely support early mobility

Of 311 ICU physicians and physiotherapists surveyed about early mobility:

- 68.8 percent believed that early mobilization was “crucial or very important” in caring for critically ill patients
- Nearly 60 percent believed mobilization should begin as soon as possible following ICU admission
- More than 50 percent reported they did not have sufficient knowledge or training to mobilize patients on mechanical ventilation
- Researchers noted the true barrier may be a lack of training on how to implement early mobility safely

In another survey of ICU physicians, nurses, and physical therapy staff across multiple disciplines:

- Respondents expressed near-universal agreement to using early mobility for patients on mechanical ventilation
- About 80 percent of physicians indicated that early mobility should happen automatically, unless specified otherwise
- More than 90 percent of nurses agreed that it was possible to mobilize patients on mechanical ventilators
- The most frequently indicated barriers to early mobility were:
  - Staffing
  - Excessive sedation
  - Delirium
  - Patient safety

Many perceived barriers to early mobility can be addressed through advanced planning and interdisciplinary coordination. For example, LDS Hospital in Salt Lake City reported mobility activities on 88 percent of their ICU days without raising their patient-to-staff ratio.


