

EARLY MOBILITY: MINIMIZING HOSPITAL-ACQUIRED COMPLICATIONS

Recovering from a major illness or injury can be a slow and difficult process. But when patients are bed-bound, simply being in the hospital can add further complications. In the United States alone, 600,000 patients acquire healthcare-associated infections every year, resulting in nearly 100,000 preventable fatalities (Vaughn 2020). Further complications can include constipation, blood clots, bed sores, delirium, and ICU-acquired weakness, all of which increase the risk of readmission and death. However, early mobilization reduces these risks by activating the body's own defense mechanisms: improving circulation, decreasing fluid retention, and stimulating the lymphatic, digestive, and nervous systems. Early mobilization keeps patients safe, improves recovery times, and lowers healthcare costs for both the patient and the hospital.

KEY FACTS:

- The Veterans Health Administration is the largest integrated healthcare system in the United States, and they consider early mobilization to be an integral part of their long-term strategy for reducing healthcare-associated infection. Early mobilization serves as a benchmark for best-practice medical service among VA hospitals. (Vaughn 2020)
- A systematic review of medical studies found that early mobilization reduces both costs and the risk of secondary complications. On average, patients who achieved early mobilization experienced two fewer days of delirium, fewer central line and catheter infections, lowered risk of ventilator-assisted pneumonia, and reduced risk of readmission and death. (Hunter 2014)
- For patients who have undergone coronary artery bypass surgery grafting (CABG), mobilization within six hours after surgery significantly reduces the risk of secondary pneumonia. (Strobel 2020)
- An extensive study of patients with traumatic spine injuries revealed that patients who were immobilized for more than 72 hours after surgery were 14% more likely to acquire serious secondary complications (pneumonia, urinary tract infection, deep vein thrombosis, and/or pulmonary embolism). (MacCallum 2020)
- A survey of more than 23,000 lumbar surgery patients showed that mobilization on the day of surgery resulted in a shorter length of stay and significantly decreased risk of bowel obstruction, urinary tract infection, and readmission. (Zakaria 2019)
- For cancer patients who have had part of the lung surgically removed, standard early mobilization (within 24 hours) and physiotherapy is recommended to improve lung volume, clear excess fluid from the lungs, and reduce postoperative pulmonary complications. (Agostini 2020)

- Standardized early mobility protocols can improve outcomes for patients with deep vein thrombosis, decrease length of stay for patients with community-acquired pneumonia, and help elderly patients recovering from major surgery to achieve or maintain independent functionality. (Pashikanti 2012)
- For patients who have already contracted community-acquired pneumonia, early mobilization (at least 20 minutes out of bed within 24 hours) can significantly reduce hospitalization time by an average of 1.5 days without increasing the risk of re-hospitalization. (Melgaard 2018)

BIBLIOGRAPHY

Vaughn VM, Saint S, Greene MT, et al. Trends in health care-associated infection prevention practices in US Veterans Affairs hospitals from 2005 to 2017. *JAMA Netw Open*. 2020 Feb 5;3(2).

Hunter A, Johnson L, Coutasse A. Reduction of intensive care unit length of stay: the case of early mobilization. *Health Care Manag (Frederick)*. 2014 Apr-Jun;33(2):128-35.

Strobel RJ, Harrington SD, Thompason MP, et al. Evaluating the impact of pneumonia prevention recommendations following cardiac surgery. *Ann Thorac Surg*. 2020 Feb 6. (Advance epub)

MacCallum KP, Kalata S, Darcy D, et al. Prolonged use of spinal precautions is associated with increased morbidity in the trauma patient. *Injury*. 2020 Feb;51(2):317-321.

Zakaria HM, Bazydlo M, Schultz L, et al. Ambulation on postoperative day #0 associated with decreased morbidity and adverse events after elective lumbar spine surgery: analysis from the Michigan Spine Surgery Improvement Collaborative (MSSIC). *Neurosurgery*. 2019 Dec 12. (Advance epub)

Agostini P, Lugg ST, Adams K, et al. Video-assisted thoracoscopic lobectomy: which patients require postoperative physiotherapy? *Physiotherapy*. 2020 Mar;106:87-93.

Pashikanti L, Von Ah D. Impact of early mobilization protocol on the medical-surgical inpatient population: an integrated review of literature. *Clin Nurse Spec*. 2012 Mar-Apr;26(2):87-94.

Melgaard D, Baandrup U, Bøgsted M, et al. Early mobilisation of patients with community-acquired pneumonia reduce length of hospitalization—a pilot study. *J Phys Ther Sci*. 2018 Jul;30(7):926-932.