Intensive Care Unit

Prolonged immobilization in an Intensive Care Unit (ICU) puts patients at risk for complications such as deconditioning, ICU-related weakness, myopathy and neuropathy, respiratory infections, and contractures.[1] Physiotherapy treatment in the ICU is focused on early mobilization of critically ill patients and respiratory management of patients who are ventilator dependent. Early intervention by a physiotherapist leads to improvements in quality of care.[2]

Role of Physiotherapy in the ICU

The ICU is a dynamic inter-professional environment where physiotherapists assess, treat and manage respiratory conditions and mobility issues and rehabilitate critically ill patients.

The most common use of physiotherapy in the ICU is to improve the function of critically ill patients, including those receiving mechanical ventilation. Physiotherapists assess and manage neurological, musculoskeletal and cardiorespiratory complications of critically ill patients. The physiotherapist is involved in specific patient positioning, suctioning, mobilization, including ambulation, strengthening and balance exercises, passive range of motion exercises and airway clearance techniques.[3,4] Early mobility in the ICU by a physiotherapist is safe, reduces length of stay (LOS) and improves quality of life (QOL).[5]

Physiotherapy in the ICU also aids in service integration through collaboration with multiple providers and plays an essential role in the continuum of care when transitioning patients from the ICU.

Impact on Patient Experience

Physiotherapy in the ICU improves patients' physical wellbeing and QOL.[2]

- Early mobilization results in decreased LOS in ICU and decreased overall hospital stay.[5]
- Consistency of the physiotherapist treating patients in the ICU promotes relationship building and has a significant impact on patient and provider satisfaction.[2]
- Physiotherapy in the ICU prevents ICU-related complications, improving function and QOL.[2,3]

Impact on Population Health

Physiotherapy initiated in the ICU improves functional status up to one year after discharge from the ICU and can reduce mortality by 25%.[6,7]

- Complications associated with a stay in the ICU, such as infections, pneumonia, delirium, and myopathy and deconditioning, can be prevented by early physiotherapy intervention.[2,3]
- Improvements in function gained by providing physiotherapy in the ICU impacts discharge location; patients are more likely to be discharged home than to a care facility.[2]
- Early mobilization of ventilated patients by a physiotherapist reduces mortality, and results in improved physical function and mobility.[6]

Impact on Health Care Costs

The cost of implementing a mobility protocol led by a physiotherapist in the ICU is offset by the savings resulting from a reduced LOS in the ICU; a decrease in ICU LOS by 1.7 days results in cost savings of around $4,500.[4]

- Physiotherapy has a significant impact on two key areas that impact LOS in the ICU: 1) early mobility of critically ill patients, and 2) ventilator weaning.[2-8]
- Physiotherapy has an effect on ventilator dependency which reduces ICU LOS.[5]
- Physiotherapy reduces ICU LOS by 1.4-1.7 days and hospital LOS by 1. 6 to 3.3 days, improves function, and reduces the number of complications making the service highly cost effective.[4,7]

Summary

Strong evidence exists to support physiotherapy in the ICU, especially with critically ill patients who are ventilator dependent. Physiotherapy services in the ICU result in shorter LOS, increased mobility and reduced mortality.

Physiotherapy treatment in the ICU is highly cost effective and reduces both the burden on acute care services and future health care service use. This service delivery model clearly demonstrates that access to physiotherapy in the ICU should be standard across the country.

Key References:

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The value of a health care service is more than its proven cost-effectiveness. Quality of life, access, and continuity of care and integration of services are equally important criteria when looking at the broader concept of value.