

---

# Perceived barriers to early mobility in ICU: An observational cohort study

Initiative Type

Service Improvement

Status

Sustained

Added

17 August 2020

Last updated

01 March 2021

URL

<https://test.clinicalexcclence.qld.gov.au/improvement-exchange/perceived-barriers-early-mobility-icu-observational-cohort-study>

## Summary

Historically, critically ill patients in Intensive Care Unit (ICU) have been managed with high levels of sedating medications and bed rest. However recent research has highlighted the negative effects of

---

immobility on functional outcomes in ICU survivors with emerging evidence that early mobilisation of critically ill patients can be achieved safely with a low rate of adverse events. We assessed the mobility practice in our ICU with specific attention to barriers preventing mobilisation. The most frequent barriers identified were low Glasgow Coma Scale (GCS) or over-sedation, agitation or under-sedation and haemodynamic instability. This has allowed us to target interventions in our ICU patients to manage barriers and promote mobility.

## Key dates

Jul 2018

Dec 2018

## Implementation sites

Mater Hospital Brisbane, Salmon Building Intensive Care Unit

## Key Contacts

Felicity Prebble

2083

[william.vanheerden.ced](mailto:william.vanheerden.ced)

Physiotherapist

Mater Health

07 3163 1386

felicity.prebble@mater.org.au

---

## Aim

To describe mobilisation practice in critically ill patients in our Intensive Care Unit (ICU) with specific attention to barriers preventing mobilisation.

## Benefits

We have demonstrated that the most frequent barriers to early mobilisation in our ICU patients were:

- haemodynamic instability
- low conscious level/ over-sedation
- agitation/under-sedation

This is congruent with other published data.

Following this study we have reviewed the ICU sedation guidelines to address the problems with sedation.

## Background

Recent research has highlighted the negative effects of immobility on functional outcomes in ICU survivors. Adverse effects associated with immobility include decreased muscle strength, increased ventilation days, increased ICU and hospital length of stay, and decreased function and quality of life on discharge (1-4). Although there have been concerns about the safety of mobilising these critically ill patients, reported adverse events are remarkably rare (1, 4). However, substantial barriers to the delivery of these interventions continue to exist in many ICUs (4). We assessed the mobility practice in our ICU with specific attention to the barriers preventing mobilisation.

## Solutions Implemented

A convenience audit of ICU mobilisation episodes was performed to inform practice.

## Evaluation and Results

140 patients were admitted to ICU during the audit period. Mean age was 57 years (SD 19) and 52% (73) were female.

Patients were actively mobilised in off-bed tasks on 188 (69%) of 270 patient days. 22 of 140 (16%) of active mobilisations were in ventilated patients. Adverse events occurred in three of 270 (1.1%)

---

mobilisation days.

Most frequent reasons patients were unable to be mobilised included haemodynamic instability (31% of patient days), low conscious level/over-sedation (31% of patient days), and agitation/under sedation (28% of patient days).

## Lessons Learnt

From this project we realised that we could improve mobilisation in our critically ill patients if we improved sedation and delirium management.

We plan to re-audit after implementation of our new Analgesia Sedation and Delirium Management work instruction.

## References

1. Hodgson C, Stiller K, Needham D, Tipping C, Harrold M, Baldwin C, Bradley S, Berney S, Caruana L, Elliott D, Green M, Haines K, Higgins A, Kaukonen K, Leditschke I, Nickels M, Paratz J, Patman S, Skinner E, Young P, Zanni J, Denehy L & Webb S. Expert Consensus and recommendations on safety criteria for active mobilisation of mechanically ventilated critically ill adults. *Crit. Care*, 2014; 18: 658
2. Capell EL, Tipping C, Hodgson CL. Barriers to implementing expert safety recommendations for early mobilisation in intensive care unit during mechanical ventilation: A prospective observational study. *Aust Crit Care*, 2019; 32: 185-190
3. Green M, Marzano V, Leditschke I, Mitchell I, Bissett B. Mobilisation of Intensive Care Patients: A Multidisciplinary practical guide for clinicians. *Jour. Of. Multidisciplinary Healthcare*. 2016; 9: 247-256
4. Leditschke I, Green M, Irvine J, Bisset B, & Mitchell. What are the Barriers to Mobilising Intensive Care Patients? *Cardiopulm. Phys. Ther. Journal*. 2012; 23: 26-29
5. Needham DM, Mobilising patients in the intensive care unit: improving neuromuscular weakness and physical function. *JAMA*. 2008; 300: 1685-1690
6. Schweickert WD, Pohlman MC, Pohlman AS, et al. Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial. *Lancet*. 2009; 373: 1874-1882
7. Burtin C, Clercky B, Robbeets C, et al. Early exercise in critically ill patients enhances short-term functional recovery. *Crit Care Med*. 2009; 37: 2499-2505
8. Mackay MR, Ellis E, Johnston C. Randomised clinical trial of physiotherapy after open abdominal surgery in high risk patients. *Aust J Physiother*. 2005; 51(3) 151-159
9. Morris PE, Griffin L, Berry M, et al. Receiving early mobility during an intensive care unit admission is a predictor of improved outcomes in acute respiratory failure. *Am J Med Sci*. 2001; 34: 373-377.

