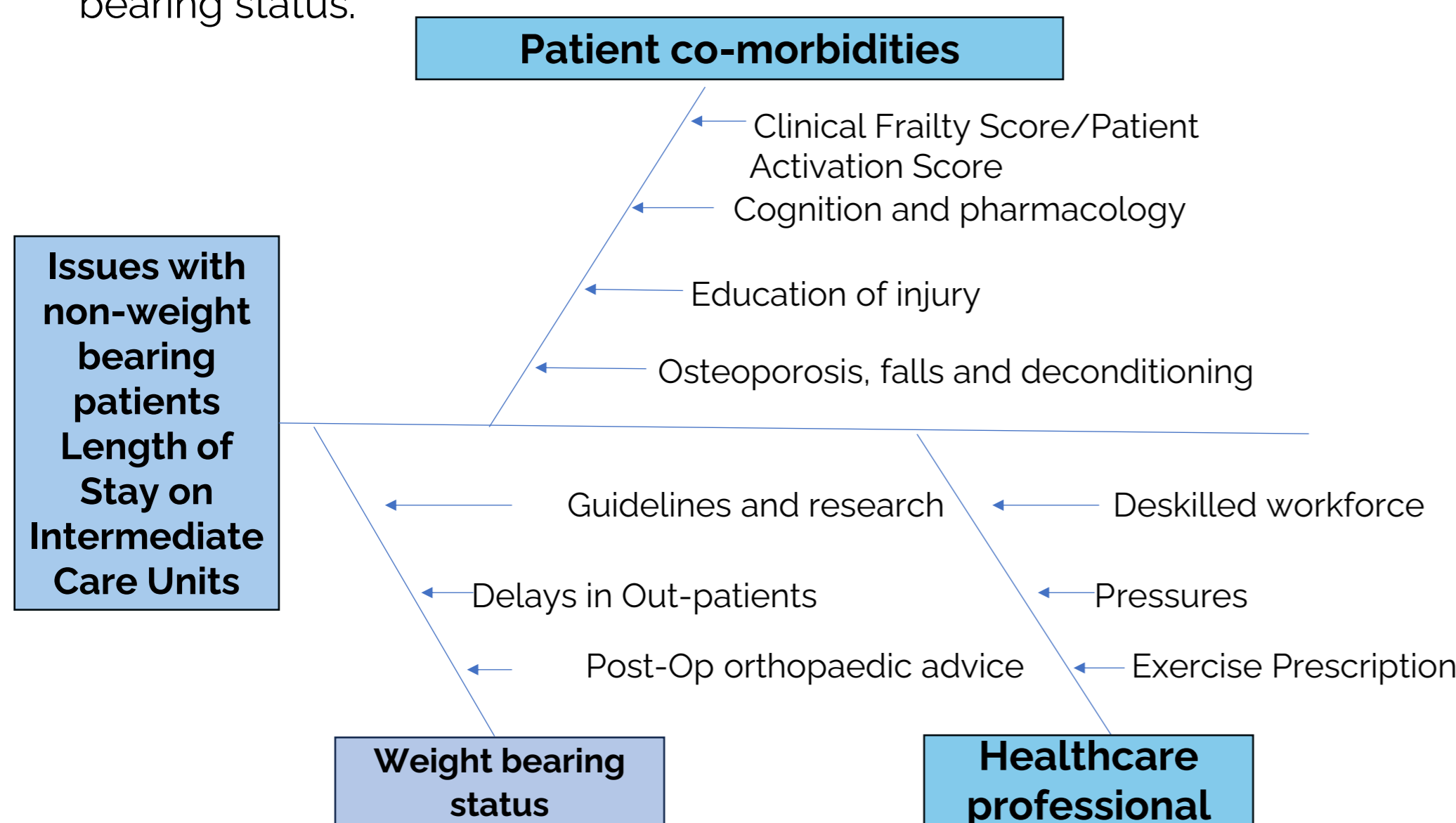


# Can the length of stay on Intermediate Care Units (ICUs) be reduced for non-weight bearing patients?

by Sarah Pannell

## Introduction:

- Fractures in patients aged  $\geq 65$  years are a burden on the health and social care system (Court-Brown et al, 2014).
- Fragility fractures cost the UK £4.4 billion which includes £1.1 billion for social care (Office for Health Improvement & Disparities, 2022).
- Fractures can lead to immediate complications, longer-term decline in health status, increase in hospital admissions, increased care needs and reduction in the quality of life (Ravindrarajah et al, 2012).
- However, in 2017 the National Osteoporosis Society reported 80% of non-hip fractures were not offered strength or balance exercises.
- NHS Frailty (2018) recommends practitioners should provide interventions for strength, balance and falls prevention.
- NICE (2022) recommends the start of rehabilitation is influenced by bone and soft tissue healing, weight bearing and removal of weight bearing status.



- At Sussex Community NHS Foundation Trust, non-weight bearing patients have a prolonged stay compared to generic patients including those post hip surgery.
- At present, complex patients aged  $\geq 65$  years who require care, cannot be discharged home from a hospital setting when non-weight bearing due to no supporting social care pathway.
- Finally, due to the patients awaiting weight-bearing status reviews these patients are seen as low priority for rehabilitation.

## Aim:

The aim of the project was to compare the length of stay for both non-weight bearing orthopaedic patients and non-orthopaedic patients by providing resistance strength and balance exercises.

## Method:

- Data of 18 inpatients from the Sussex Community NHS Foundation trust Intermediate Care Units discharged in April and June 2024.
- Participants were split into two groups:
  - Control group of those discharged in April 2024 with generic physiotherapy intervention.
  - Intervention group of those discharged in June 2024 with resistance strengthening and balance exercises.
- Intervention group were given leg ankle weights and dumbbells to carry out chair and standing exercises (when appropriate).
- Both non-orthopaedic and non-weight bearing orthopaedic patients received generic physiotherapy led sessions.
- All patients were seen 2-3 times a week.

## Data:

**Table 1: Pre-Intervention figures across two wards in April 2024**

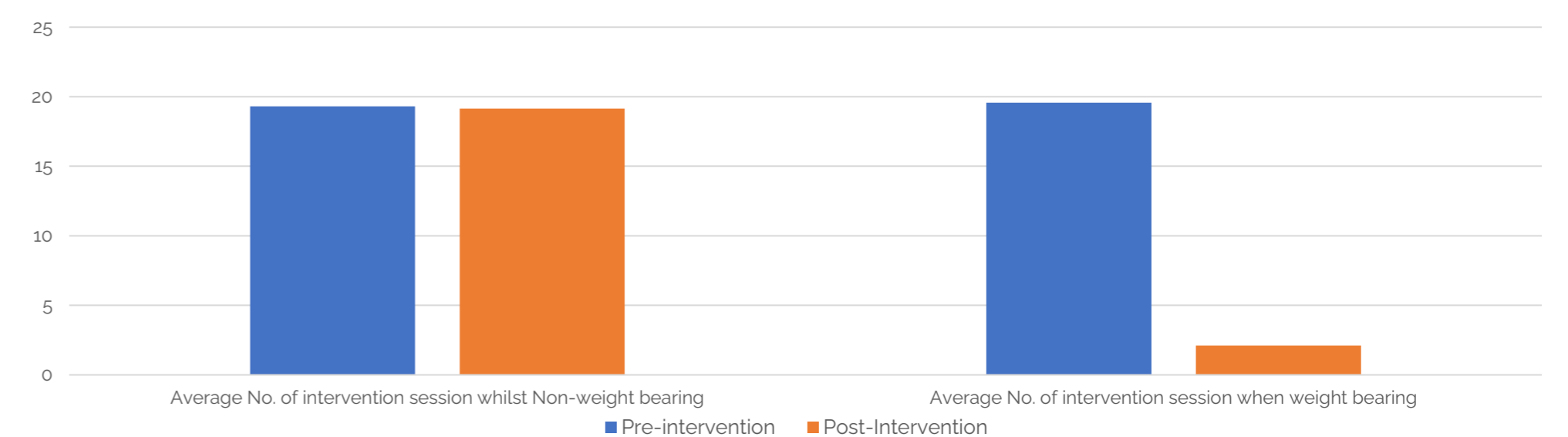
Ward	Average Non-MRD days for non-orthopaedic patients	Average Non-MRD days for Non-weight bearing patients	Average MRD days for non-orthopaedic patients	Average MRD days for non-weight bearing patients	Length of stay for non-orthopaedic patients	Length of stay of non-weight bearing patients
Unit A	13.3	44.3	7	14	24	58.3
Unit B	12.5	16.6	12.5	35.8	35.8	52

\*MRD – Medical Ready for Discharge.

**Table 2: Post- Intervention figures across two wards in June 2024**

Ward	Average Non-MRD days for non-orthopaedic patients	Average Non-MRD days for Non-weight bearing patients	Average MRD days for non-orthopaedic patients	Average MRD days for non-weight bearing patients	Length of stay for non-orthopaedic patients	Length of stay of non-weight bearing patients
Unit A	13.5	36	8.2	0.3	21.7	36.3
Unit B	15.8	32	10.8	14.5	26.7	46.5

A chart to show the impact of an exercise intervention on Intermediate Care Units in non-weight bearing patients.



## Results:

- The average length of stay for non-weight bearing patients reduced by 14 days.
- The number of therapy contact sessions reduced to 2.1 post orthopaedic review and weight bearing status change.
- Non-weight bearing patients still require double the length of stay when compared to non-orthopaedic patients on the intermediate care units.

## Conclusion:

- Overall, the results showed that providing a strengthening exercise programme that focuses on the non-weight bearing phase of the patient's orthopaedic rehabilitation journey reduced their length of stay on the intermediate care unit.
- At present, the length of stay outcome is affected by current lack of social care availability and therefore places pressure on health and social system when discharging patients' home.
- Those who completed the intervention were discharged with a small or no package of care compared to control group who were discharged home with a large package of care.
- There is limited research into the impact of non-weight bearing status in those aged  $\geq 65$  years. However, the research that is available shows that non-weight bearing is detrimental and limits the recovery and bone healing response (Berg, 2021, Kadam, 2024).
- Currently, there are no guidelines to early post-operation strengthening exercises for non-weight bearing patients aged  $\geq 65$  years.
- Further research is required to explore why the United Kingdom still uses weight bearing status in patients aged  $\geq 65$  years.

References: Scan QR code



This research was presented as part of the Healthy Ageing Module: Winchester University 18<sup>th</sup> July 2024