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# Optimising patient outcomes through an evidence-based rehabilitation programme in older patients following a conservatively managed ankle fracture: a service-based improvement project proposal

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University of Plymouth

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#400WORDS: KNOWLEDGE + ACTION

## Optimising patient outcomes through an evidence-based rehabilitation programme in older patients following a conservatively managed ankle fracture: a service-based improvement project proposal

Daniella L. Griffiths<sup>1</sup>

<sup>1</sup>Physiotherapist, Somerset NHS Foundation Trust, Yeovil District Hospital, Yeovil, BA21 4AT, UK.

Email: [daniella.griffiths@somersetft.nhs.uk](mailto:daniella.griffiths@somersetft.nhs.uk)

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### Background

Ankle fractures contribute 10% of hospital admissions in the UK and the majority are sustained from falls in frail elderly people (Kyriacou *et al.*, 2021). Ankle fractures in the frail older population are often managed conservatively with prolonged non-weight-bearing (NWB). Older patients are often unable to comply with NWB, leading to extended time in bed. This causes increased dependency and deconditioning. Once NWB has ended, their reduced health reserves limit their ability to physically improve.

Physiotherapists can help reduce levels of deconditioning to maintain pre-fracture physical function. Current guidelines recommend an orthogeriatric management model with resistance strengthening exercises to improve physical function (Lee *et al.*, 2017). However, these exercises are difficult to perform in NWB patients. There is emerging evidence supporting early weight bearing in improving physical function (Lorente *et al.*, 2020). An evidence-based exercise programme may help to improve physical function, quality-of-life, and discharge destination.

### Aim

The aim of this quality improvement project is to design and implement an exercise programme to improve physical function in older patients following conservatively managed ankle fractures who are NWB.

### Methods

This project includes two stages: 1) developing an evidence-based exercise programme, and 2) implement the novel programme.

## Setting and population

Patients over 65 years admitted to orthopaedic and outlier wards in Yeovil District Hospital following a conservatively managed ankle fracture who are NWB. Annually, the hospital admits around 40 patients over 65 treated for ankle fracture NWB.

## Evidence-based exercise programme

A literature review will be conducted to develop an exercise prescription for elderly patients. Following this, a stakeholders consensus meeting will be organised to agree on a coordinated care agreement to weight bearing and exercise prescription.

## Implementation

Training will be provided to physiotherapists and rehabilitation assistants on the novel programme.

## Outcome measures

Four-months data pre- and post-implementation will be generated. See Table 1.

## **Discussion and impact**

The objective is to address the deconditioning that can come with enforced NWB, reduce the change of physical function between pre- and post-fracture, maintain quality-of-life, and to increase the proportion of patients discharged home through the design and implementation of an evidenced-based exercise programme. Many of these patients (60%) are discharged to nursing care facilities (Kadokia *et al.*, 2015). By reducing the change in physical function, patient quality-of-life could be improved. It could also reduce NHS and social care costs through reduced manual handling equipment, package of care costs, and acute and intermediate care lengths-of-stay.

**Table 1: Outcome and process measures**

<b>Outcome measures</b>	<b>Process measures</b>
Changes in mobility measures: Elderly Mobility Scale (EMS) and Barthel Index	Therapy input
Overall discharge destination at three-months post-fracture	Package of care needs
Quality of life: SF12	Length of inpatient stay
	Length of intermediate care stay

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