

Referral Patterns and Health Outcomes Associated with Physiotherapy on a Regional Australian Medical Ward

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Introduction

An acute hospital stay is associated with large amounts of sedentary time (Brown, et al. 2009) resulting in reduce aerobic capacity and physical strength (Tasheva, et al. 2020). Up to one third of hospitalised older adults experience a decrease in physical function (Lloyd, et al. 2020).

Exercise prescription on the acute inpatient medical ward can prevent decline, or at least maintain, physical outcomes in the adult population (Valenzuela, et al. 2020).

It is unknown if and how clinical trial evidence for exercise therapy in acute wards is implemented and this needs investigation to improve care pathways.

Purpose

The purpose of this research was to examine the characteristics of patients referred to physiotherapy (as an indicator of exercise therapy) on the acute medical ward and investigate the relationships between referral to physiotherapy and physical and health parameters.

Methods

A cross-sectional analysis of retrospective clinical records from a regional Australian hospitals acute medical wards was conducted.

Inclusion Criteria:

- Adults admitted to acute medical wards
- Admissions from home or private residence
- Initial admission between January and June 2022

Exclusion Criteria:

- Non-medical cases
- Admission for acute stroke
- Overnight stay less than two nights
- Subsequent admissions within the data capture period

Data Extraction

The data extracted from each case and entered into a REDCap® survey form included:

- Age & Sex
- Admission source
- Admission diagnosis
- Mobility status
- Length of stay
- Discharge destination
- 30-day readmission

Data Analysis

Outcomes were compared between groups using descriptive statistics and appropriate inferential tests (t-tests, Mann–Whitney U, and chi-squared tests).

Multivariable regression analyses examined associations between physiotherapy referral and length of stay (negative binomial regression), and mobility (ordinal logistic regression).

Statistical significance was set at $p < 0.05$. Analyses were conducted using Stata (v19).

Results

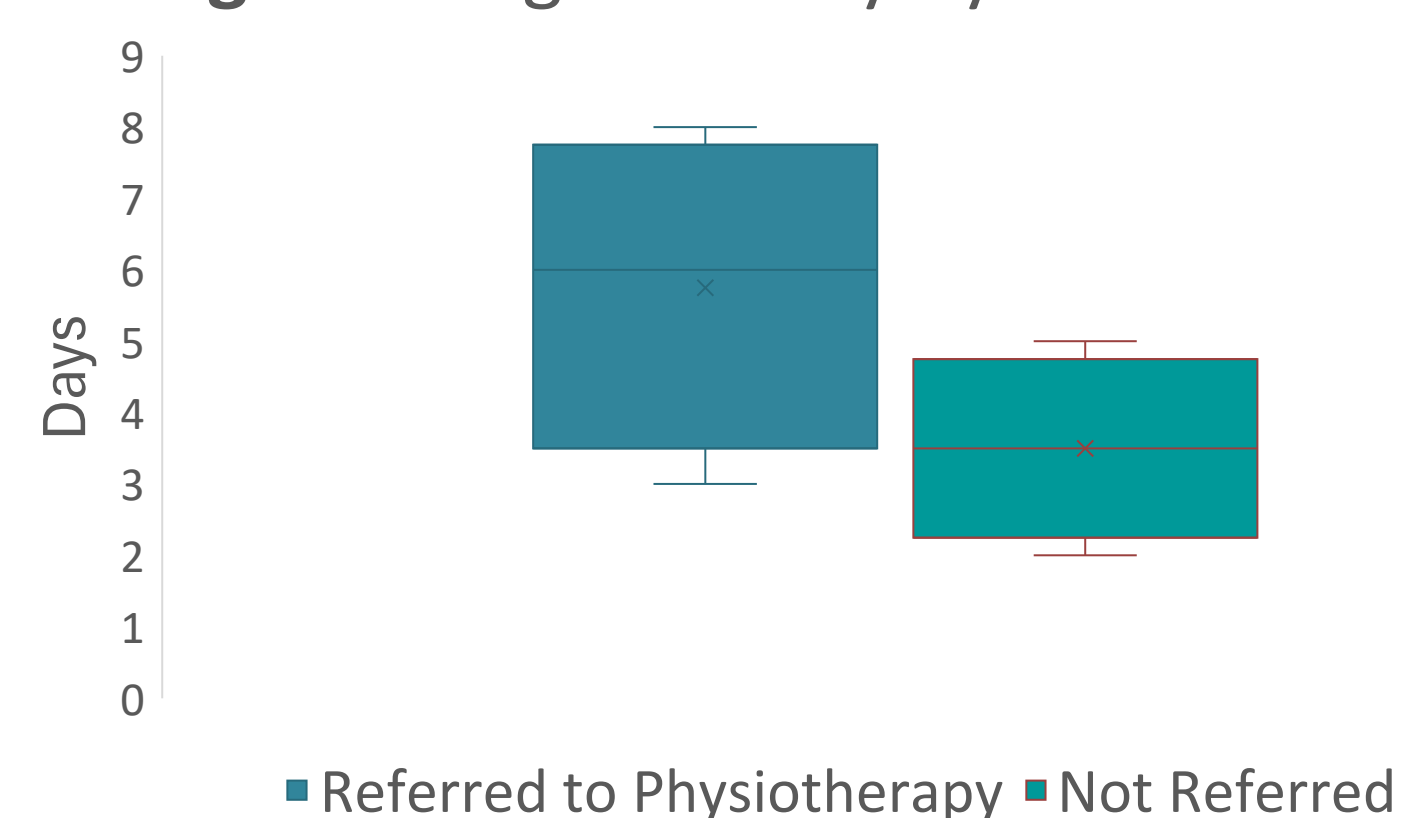
Between January and June 2022, 1,167 cases were eligible for inclusion.

- 67.5% (788) were referred to physiotherapy
- Cases referred to physiotherapy were older (74.7 vs 59.9 years, $p < 0.001$) (Fig 1a) and had a longer length of stay (6.6 vs 4.4 days, $p < 0.001$) (Fig 1b).

Fig 1a: Age Differences by Referral Status

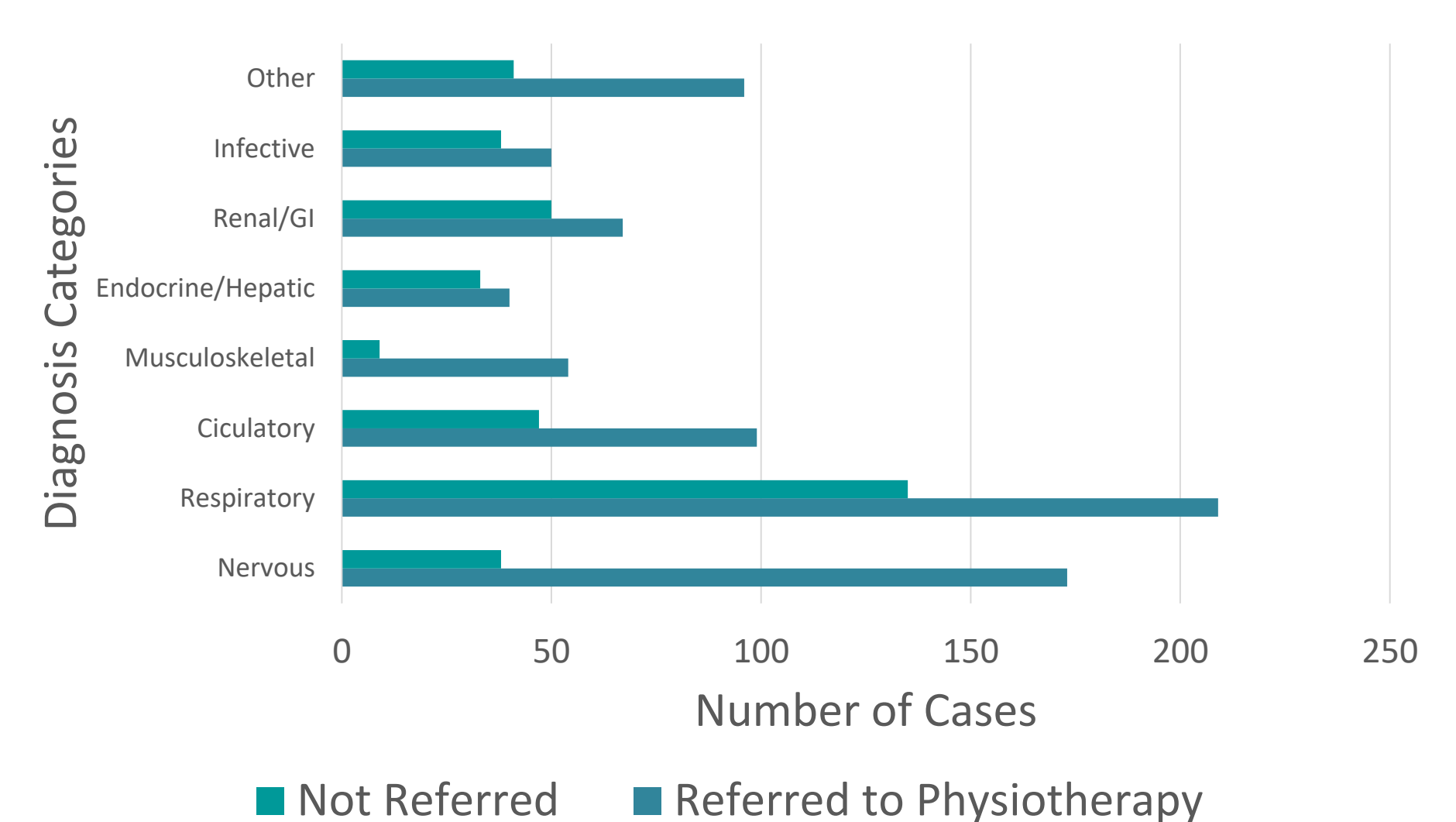


Fig 1b: Length of Stay by Referral Status



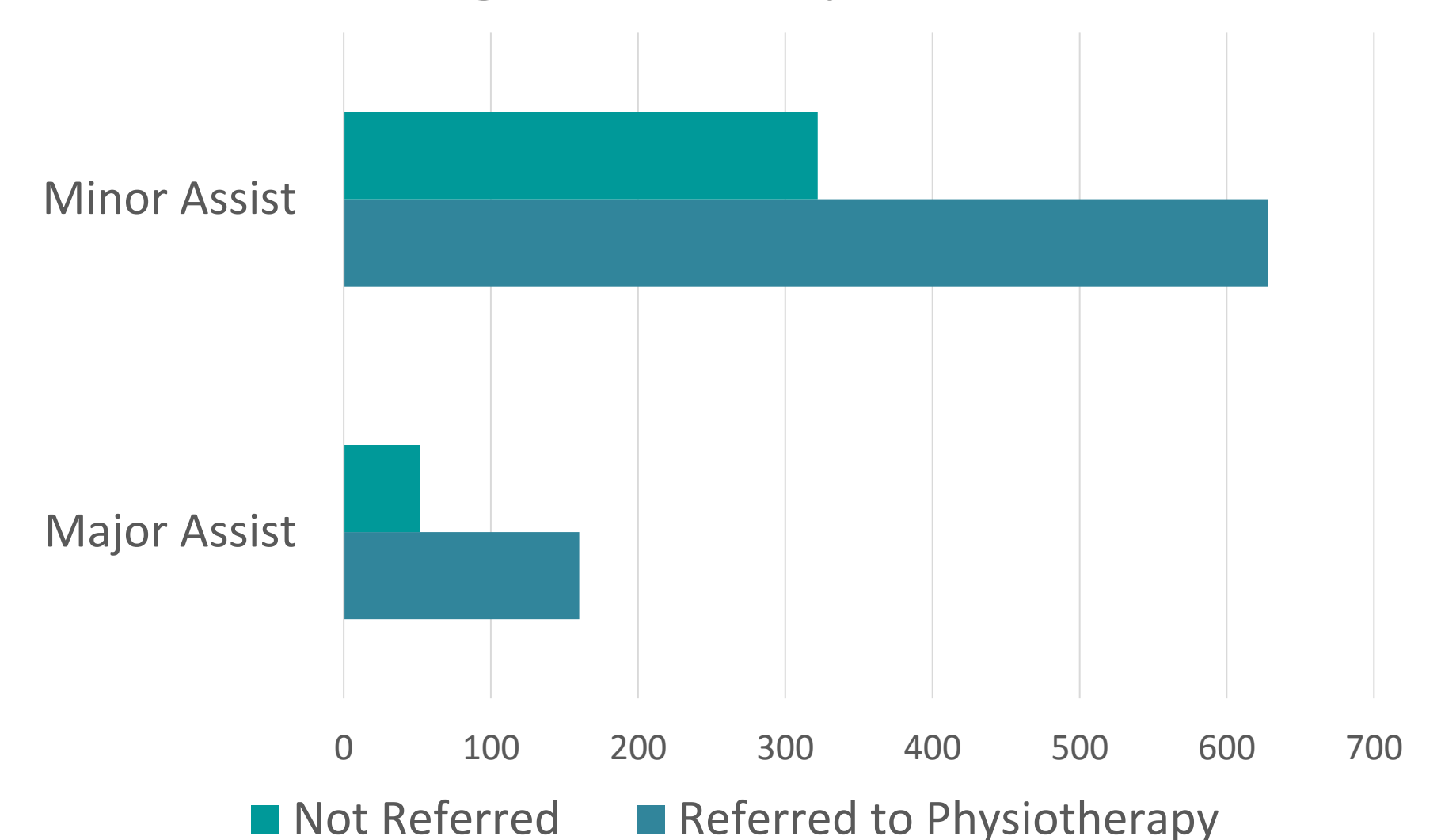
Results (cont)

Fig 1c: Diagnosis Categories by Referral Status



Diagnosis categories of nervous system disorders (2.52 (1.74-3.67), $p < 0.001$) and musculoskeletal disorders/trauma (1.13 (1.04-1.22), $p < 0.001$) (Fig 1c) and individuals requiring assisted mobility (1.4 (1.03-2.00), $p = 0.031$) (Fig 1d) were more likely to receive a referral to physiotherapy.

Fig 1d: Mobility Status



Conclusions

- Cases are more likely to be referred to physiotherapy on the acute medical ward if they are older, have reduced mobility and have either a nervous or musculoskeletal disorder.
- Cases referred to physiotherapy will likely have a longer length of stay.
- Cases referred to physiotherapy, and therefore more likely to receive exercise therapy, will likely have more complex clinical needs.
- Further research is needed on how evidence from clinical exercise therapy trials can be implemented on acute wards to prevent a decrease in physical function.

Contact

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