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Title: Early unplanned hospital readmissions in frail older people receiving a community rehabilitation service – Causes and precipitants

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Introduction

Early unplanned hospital readmissions are an important issue for the wellbeing of frail older people and for development, planning and funding of health services. Recent New Zealand data shows high rates of readmissions for this patient group and are often referred to as “failed discharges”. Early unplanned hospital admissions are associated with poorer outcomes including functional decline, worse quality of life and discharge to Aged Residential Care (ARC). Initial data from the Canterbury Community Rehabilitation Enablement and Support Team (CREST) evaluation project has found a 28.1% readmission rate within the first 6 weeks. This raises the question of why readmissions are occurring and whether they are potentially avoidable.

CREST is an established service within Canterbury District Health Board (CDHB). Introduced in 2011, CREST has the goal of keeping frail older people as independent as possible in their own homes. Older people undergo multidisciplinary assessment and use an individualised goal-directed ladder. As part of an existing evaluation of CREST, a cohort of 230 older people have been recruited and given their consent to participate in the research and evaluation project. This summer project forms a subproject of the larger evaluation.

As unexpected readmissions to hospital are seen as a negative outcome for both individuals and the health service, this project aims to assess reasons for readmissions in a group of frail older people.

Aim

The primary aim of this study is to determine reasons for early readmission, defined as within 3-months of discharge, to hospital in a cohort of frail older adults who have recently undergone a hospital admission and discharge with CREST. Secondary aims of the study looked at further exploring the necessity of readmissions, these included:

Classifying readmission as “avoidable” or “unavoidable”

Time from discharge to readmission

Length of stay in hospital if readmitted within 3-months

Discharge destination after readmission

Impact

Readmissions to hospital are seen as a negative outcome for both individuals and the health service. This project will assess reasons for readmissions in a group of frail older people. These findings have the potential to guide development of services such as CREST for these people.

Method

This study was a retrospective cohort study. It used an existing cohort of 230 older people who had been discharged from hospital with CREST during the period of February 2015 to July 2016. Consent was obtained to review both written and electronic hospital records to ascertain which participants have had a further early readmission.

Electronic discharge summaries were evaluated by clinically trained researchers and reasons for readmission determined. These were classified as:

New acute diagnosis requiring inpatient care

Exacerbation of active existing medical condition

Readmission with same condition which was treated during index admission

Geriatric syndrome such as falls, decreased mobility or delirium with or without underlying medical condition
Planned readmissions

Other data relating to the readmission previously mentioned under secondary aims were also collected.

Results

Of the original 230 participants, 6 did not ultimately receive CREST, reducing the final number of participants to 224. 93 participants out of 224 (41.5%) were readmitted within 3-months of index discharge from hospital. Of these, 6 were planned readmissions, 49 (52.7%) due to a new acute problem, 22 (23.7%) due to same condition as index discharge, 15 (16.1%) exacerbation of active problem and 1 due to geriatric syndrome. Of the 87 early unplanned readmissions within 3-months of discharge, 83 (95.4%) were classified as unavoidable.

On average, unplanned early readmissions occurred at 31.2 days (median of 20 days) from index discharge and their length of stay in hospital averaged at 11 days but ranged from 1 to 51 days with median of 7 days.

Discharge destinations of those readmitted within a 3-month period were as follows: 41 participants discharged home with alternative supports (formal or informal), 28 discharged home with further CREST, 12 discharged to other facilities (eg. convalescence, hospice, or ARC) and 6 deceased during readmission. 20 participants required a period of inpatient rehabilitation before being discharged to a permanent location.

Conclusion

Our study found that 41% of frail older adults who have discharged from hospital with CREST are readmitted within 3-months of their index discharge. Despite this high emergency readmission rate, over half (49/87) were due to new acute problems while only a quarter (22/87) were due to the same condition as index discharge. 95.4% of readmissions were considered unavoidable and necessary. Most of whom were readmitted needed further active medical intervention and investigation. The majority were able to return home (69/87) again after an early unplanned hospital admission.

In conclusion, our study disputes the claim that readmissions are “failed discharges”, but were necessary due to the complexity of supports needed and the comorbidities and frailty in this older cohort.