

Can early intervention for patients with frailty in a trauma ward reduce delirium rates?



Lara Kimmel^{1,2,3} Melissa Webb^{1,2,3} Katherine Muller^{1,2,3} Christine Jelavic¹ Lauren Balcombe¹ Margot Lodge^{1,2,3}

1. Alfred Health
2. Monash University
3. National Trauma Research Institute

On behalf of the 5West Frailty group

INTRODUCTION

Frailty in the trauma patient population is associated with elongated length of stay and poorer progression within the hospital setting. In a recent study in the Trauma Unit at The Alfred, 17.6% of patients were frail and this was associated with adverse discharge destination and mortality at 12 months (1).

A recent systematic review showed that 34% of hospitalised older adults were frail and 21% were diagnosed with delirium, with frailty being an independent risk factor for developing delirium (2).

AIM

The aim of this study was to determine if early and intensive therapy in the acute hospital for patients with frailty is associated with a reduction in delirium.

METHODOLOGY

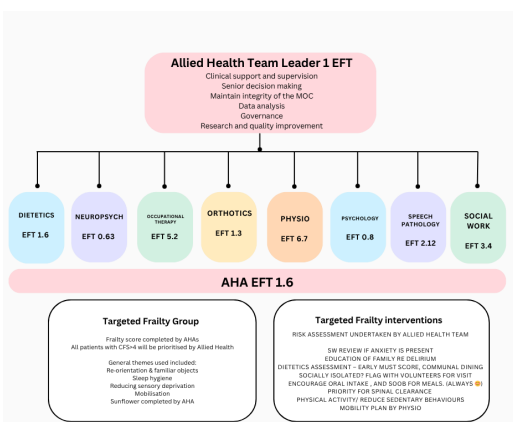
Methods: From April 1 2024, all patients on the trauma ward at The Alfred, Melbourne, with frailty (Clinical Frailty Scale >4) (1) were targeted to receive early intervention by the Allied Health team, including interventions for physical and psychological well-being.

Data were collected on all patients from June 1 2023 until March 30 2024 (control) and April 1 – Nov 30 2024 (intervention) with the primary outcome being the rates of delirium for patients pre and post intervention.

Secondary outcomes including occasions of service and time spent with patients were compared with the main outcome being rates of delirium for patients in the control and intervention phases.

Additionally, audits were undertaken for three separate weeks [Control: Jan 2024 and during intervention: Dec 2024 and June 2025] to assess the effect of the intervention on various aspects of patient care including sitting out of bed for lunch and completion of tasks such as Sunflower tools and orientation boards.

TARGETED THERAPY FOR FRAIL PATIENTS



3. KIMMEL ET AL 2025

RESULTS

There were 284 frail patients in the control group (10 months) and 249 in the intervention group (9 months).

The rate of delirium in the control period was 18.3 % which reduced to 16.4% following introduction of the targeted therapy.

There was a significant increase in the median occasions of service [13 (7, 22); 17 (9, 28) p<0.001] and median time spent [8.2 (4.1, 14) hrs; 10.9 (6, 17.5) hrs p<0.001] with the patients in the intervention time period compared to control.



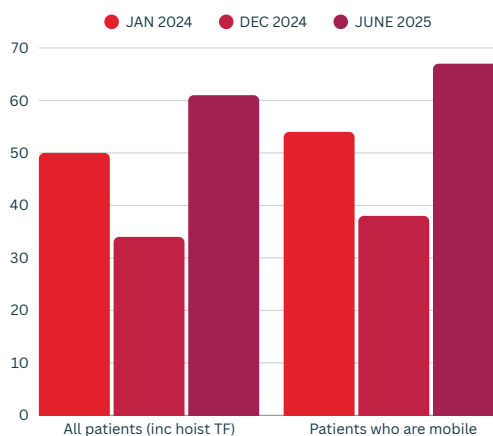
A JINGLE WAS PLAYED EVERY LUNCH TIME TO ALERT STAFF AND PATIENTS TO THE ARRIVAL OF LUNCH (COMMENCED IN MARCH 2025) - SEE QR CODE ABOVE

1. O'Rourke S, Tipping CJ, Lodge M, Mathew J, Kimmel L. Frailty across the adult age spectrum and its effects on outcomes: Experience from a level 1 trauma centre. *Injury* [Internet]. 2025 Feb 1 [cited 2025 Jul 7];56(2). <https://doi.org/10.1016/j.injury.2024.112037>

2. Cechinel C, Lenardt MH, Rodrigues JAM, Binotto MA, Aristides MM, Kraus R. Frailty and delirium in hospitalized older adults: A systematic review with meta-analysis. *Revista Latino-Americana de Enfermagem*. 2022;30. <https://doi.org/10.1590/1518-8345.6120.3687>

3. Kimmel L, Webb M, McCaskie D, Maric V, Fitzgerald M, Gabbe B. Outcomes following intensive allied health therapy in the acute hospital for trauma patients. *Injury* [Internet]. 2025 [cited 2024 Oct 28];56(1). Available from: <https://doi.org/10.1016/j.injury.2024.111942>

SIT OUT OF BED FOR LUNCH (IF CLEARED TO MOBILISE)



MEAL SUPPORT



CONCLUSION

Preliminary results show that the introduction of targeted, early, multidisciplinary intervention for patients with frailty in the acute hospital led to an increase in time spent with patients and a trend towards improved rates of in-hospital delirium.

Inclusion of a jingle to promote lunch time activities appears to have improved outcomes in terms of mobility and food consumed.

