

Frailty Screening of Geriatric Patients in the Emergency Department

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Introduction or Purpose

Studies have shown that in-hospital mortality can be twice as high for inpatients over the age of 65, compared to those under 65 years. Frailty increases with age. Aging has been defined as "the passing of chronological time and frailty as "the increased risk of adverse outcomes over time". Framed in a trauma context, frailty can be thought of as a vulnerability to stressors. Frailty, disability, and comorbidity are not necessarily interchangeable terms, just as frailty and age do not always align within a person. Also, the increasingly frail may experience different clinical outcomes from those who are less frail, such as more significant injuries from less significant mechanisms of injury. Recent systematic reviews and meta-analyses have demonstrated the impact of frailty on outcomes within trauma patients. The presence of frailty is significantly associated with mortality, complications, and adverse discharge disposition after multisystem trauma. Additionally, non-trauma patients admitted to the ED have demonstrated poorer outcomes when frailty is present.

Design Setting

This project uses a prospective, evidence-based quality improvement (QI) design with a psychometric instrument validation component. Specifically, it incorporates:

- A systematic literature review to inform tool selection and bundle development.
- A pilot implementation of a frailty screening bundle.
- Instrument validation methodology, including inter-rater reliability testing using Cohen's Kappa.
- Pre-post implementation comparison to evaluate changes in frailty screening rates and staff compliance.
- Subgroup analysis to examine validity and reliability across age strata (55-64 years vs. ≥65 years).

Overall, the design aligns with a prospective observational validation study embedded within a QI framework.

Setting

The project is conducted in a hospital-based Emergency Department (ED) at an adult acute-care facility, in collaboration with:

- Emergency Department nursing staff and leadership
- ED nurse educators
- Trauma department staff
- ED and trauma physicians

The setting includes adult patients aged 55 years and older presenting to the ED, with frailty screening performed at the time of ED admission.

We formed a team comprising our nurse manager, staff nurses, educators, trauma department staff, emergency department (ED), and trauma physicians, and consulted our medical librarian and nurse researcher to conduct a systematic review of the literature on frailty screening for patients aged 55 years and older.

This is accomplished through an evidence-based approach to designing a bundle that increases the appropriate screening for frailty in geriatric patients in our Emergency Department.

P (Population): Patients presenting to the ED 55 years and >.

I (Intervention) Implementation of a Frailty Screening bundle, which includes:

Guidelines for assessment screening

Staff education on assessment screening guidelines, a 3- 10 day pilot assessment to observe and record adherence, and cue staff when guidelines are not followed

Validation of the tool before launch.

C (Comparison):

Pre-implementation frailty screening rates

O (Outcome):

Validity and reliability of the tool

Percentage of appropriate frailty screening rates

Pre and post-frailty screening bundle

I (implementation)

Measure of staff compliance with training (98% trained) over the implementation of the bundle

Comparison of the psychometric properties of the scale across subpopulations, including those aged 55 to 64 years.

*Key Stakeholders – Nurse Manager, ED staff RNs, ED RN educators, trauma department staff, and ED and trauma physicians

There were 8 participants (n=8 for pts > 55 yrs. and older, FOR INSTRUMENT VALIDATION. The inter-rater agreement, adjusted for chance agreement, was estimated using Cohen's Kappa, with a value of .667 (95% CI: .325; 1.008), indicating substantial agreement between the raters.

Implications/ Conclusions

The purpose of this project is to validate a frailty screening tool psychometrically, Rockwood CFS, within our ED adult population on admission to the ED, and to psychometrically validate it for use as a standardized screening tool for this population

Is the CFS a valid and reliable instrument for our ED population aged 55 years and older?

Is there variance in the validity and reliability between subgroups of patients?

Screening for frailty upon ED admission provides an opportunity to implement preventative care and appropriate referrals to improve patient outcomes. The Rockwood Clinical Frailty Scale is validated for use in emergency department populations.

We are in the process of educating our staff on the updated geriatric frailty screening criteria.

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