

# GRIP STRENGTH AS A PREDICTOR OF FRAILITY IN GERIATRIC TRAUMA PATIENTS

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## Introduction

- Frailty is a predominant risk factor for poor outcomes in geriatric patients
- Level of frailty correlates with discharge disposition
- Geriatric trauma patients are affected by frailty
- Quicker frailty assessments are needed
- Grip strength could be the solution
- Hypothesis: grip strength is non-inferior to JHFAS

## Methods

- Prospective study of geriatric trauma patients admitted to Level 1 trauma center from November 2019 – March 2020

### Inclusion:

Age  $\geq 65$  and admission to trauma service

### Exclusion:

GCS  $<15$ , any neurologic deficit or injury to dominant upper extremity

- Evaluated at admission using the Johns Hopkins Frailty Assessment Score (JHFAS) and grip strength gauge

Sex	Mean Admission Grip Strength (kg)	Mean ISS	Mean Frailty Score
Male (n=14)	28.62 (10.21)	7.64 (4.83)	1.36 (1.01)
Female (n=16)	13.87 (3.48)	9.94 (3.43)	2 (1.21)

Table 1. Mean admission grip strength, mean ISS, and mean frailty score by patient sex. ()=std dev

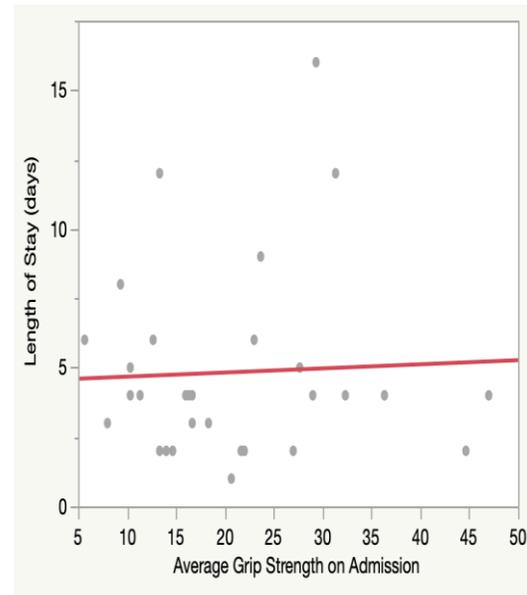


Figure 1. Bivariate fit of length of stay (days) by average grip strength on admission.

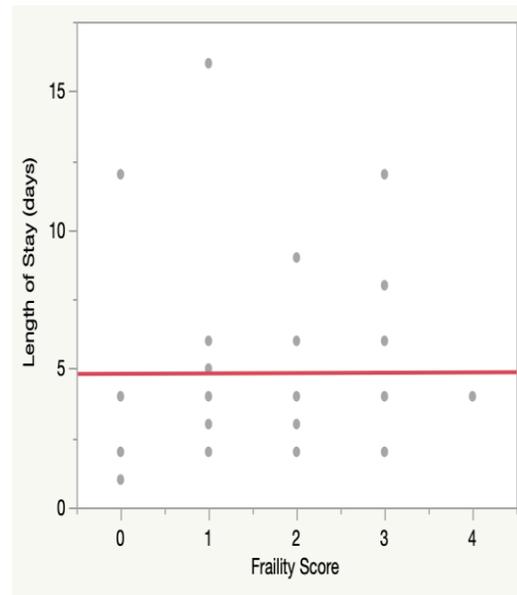


Figure 2. Bivariate fit of length of stay (days) by frailty score.

## Results

- No association between average grip strength and length of stay (p=0.8132)
- No association was found between frailty score and length of stay (p=0.9818)
- No association between ISS and length of stay (p=0.5882)
- No association between disposition and length of stay (p=0.1190)

## Conclusions

- Insufficient data was gathered to accept the hypothesis that grip strength is non-inferior to JHFAS due to COVID-19 pause.
- Currently, it is unclear whether grip strength alone is a viable frailty assessment tool.