

The Association between frailty and health service utilisation

INTRODUCTION

- Frailty is well known global health issue, which has placed a heavy burden on health care systems₁ and is linked to increased health care costs and increased use of health care services₂.
- Investigating the impact of frailty on health care utilisation is important to better understand the needs of the frail.
- However, previous research is largely international and there is a lack of literature on frailty and health service use in Australia.
- Thus, this project aimed to investigate the patterns of association between frailty and health service utilisation of men and women in an Australian context.

RESULTS

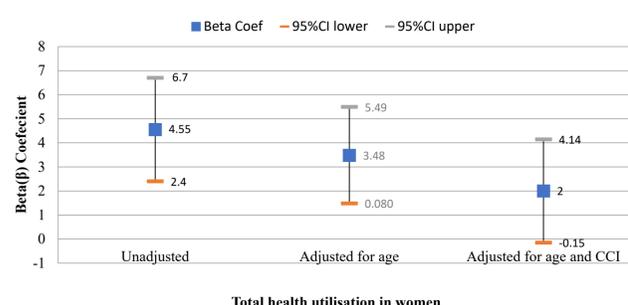


Fig 1. Forests Plot presenting the association between frailty and total health services utilisation in women. Data is presented as β coefficient (95% confidence interval (CI)).

- In men, a similar trend was found, however after adjusting for comorbidities no significance was found between frailty and some health services used. In men a positive correlation was found between frailty and General practice(GP) services after adjusting for age (β coefficient 1.636(95%CI 0.518-2.754, $p < 0.05$)), however this significance was lost after adjusting for comorbidities (Fig 2).

- In women, an overall positive association was found between frailty and health service utilisation (β coefficient 2.735(95%CI 1.143-4.327, $p < 0.05$)), where the frail participants used more health services (median no. of services used 9.00[IQR 5.00-10.00]) compared to the prefrail (median number of services uses 6.00[IQR 2.00-4.00]) and robust (median no. of services used 4.50[IQR 2.00-7.25]) groups (Fig 1). Although in women there were some health services utilised that were not associated to frailty.

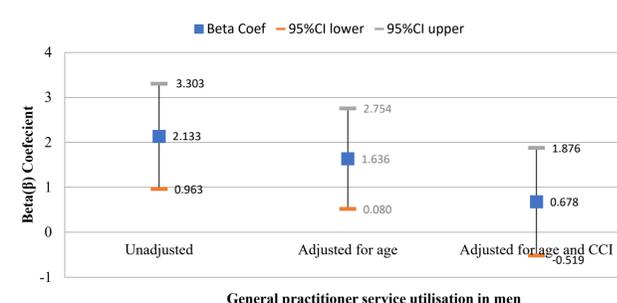


Fig 2. Forests Plot presenting the association between frailty and total health services utilisation in men. Data is presented as β coefficient (95% confidence interval (CI)).

Aims

- To investigate the association between frailty and health utilisation of older men and women in Australia.
- Compare total health service use between the three frailty groups (non-frail, pre-frail, and frail) in terms of the overall frequency.
- Compare subcategories of health service utilisation across frailty groups.
- Explore contributing factors (age and comorbidities) to the association between frailty and health service utilisation.

METHOD

- This is a cross-sectional study, which utilised data from the Geelong Osteoporosis study (GOS).
- This study investigated 268 women and 305 men aged 60 years and older, including participants that gave consent to access Medicare data.
- Frailty was defined based on the modified Fried frailty phenotype₃.
- Health service utilisation was obtained via Medicare data linkage, where eight health care categories were analysed.
- Multivariable linear regression models were run to investigate the relationship between frailty and health service utilisation, while adjusting for age and comorbidities.

DISCUSSION

- Findings confirm that frailty was associated to health service utilisation.
- The positive associations between frailty and health service utilisation are consistent with findings from previous literature, indicating that frail individuals are more likely to use more health services compared to the prefrail or non-frail groups_{1,4}.
- The results in men could suggest that these individuals had increased comorbid conditions leading to greater negative outcomes, and hence making them too frail to attend some of the health care services.
- GP services were also not used much among the frail, as expected based on previous studies. This could have been due to other external factors associated to frailty and health service use, such as socioeconomic status, lifestyle factors, or health literacy.

CONCLUSION

- This study has identified health services used more frequently by frail individuals in an Australian context.
- These findings could inform public health systems to better understand and cater to the specific needs of frail people.
- Based on some of the patterns found in health service utilisation, comorbid conditions of frail participants may need to be better managed.
- Furthermore, other confounding factors may need to be explored further, so that health care use is not impacted.
- It might also be useful to look at other health care services that were not covered in this study to provide a better representation of health service use among frail participants.

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