

Association of the Tilburg Frailty Indicator with mortality, readmission, and healthcare contacts in adult patients with multimorbidity

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Background

- Frailty is closely related to multimorbidity and adverse clinical outcomes
- The Tilburg Frailty Indicator (TFI) is a self-reported assessment used to identify frailty
- TFI comprise 15 questions across three domains; physical, psychological and social

Objectives

To examine the association of frailty, based on the TFI score, with mortality, readmission, and number of health care contacts within 180 days

Methods

A single-center prospective cohort study including adult patients with multimorbidity.

- Frailty was defined as TFI score > 5
- Survival curves/cumulative incidence used to illustrate absolute risk of outcomes
- Cox regression analysis adjusted for age and sex to estimate hazard ratios

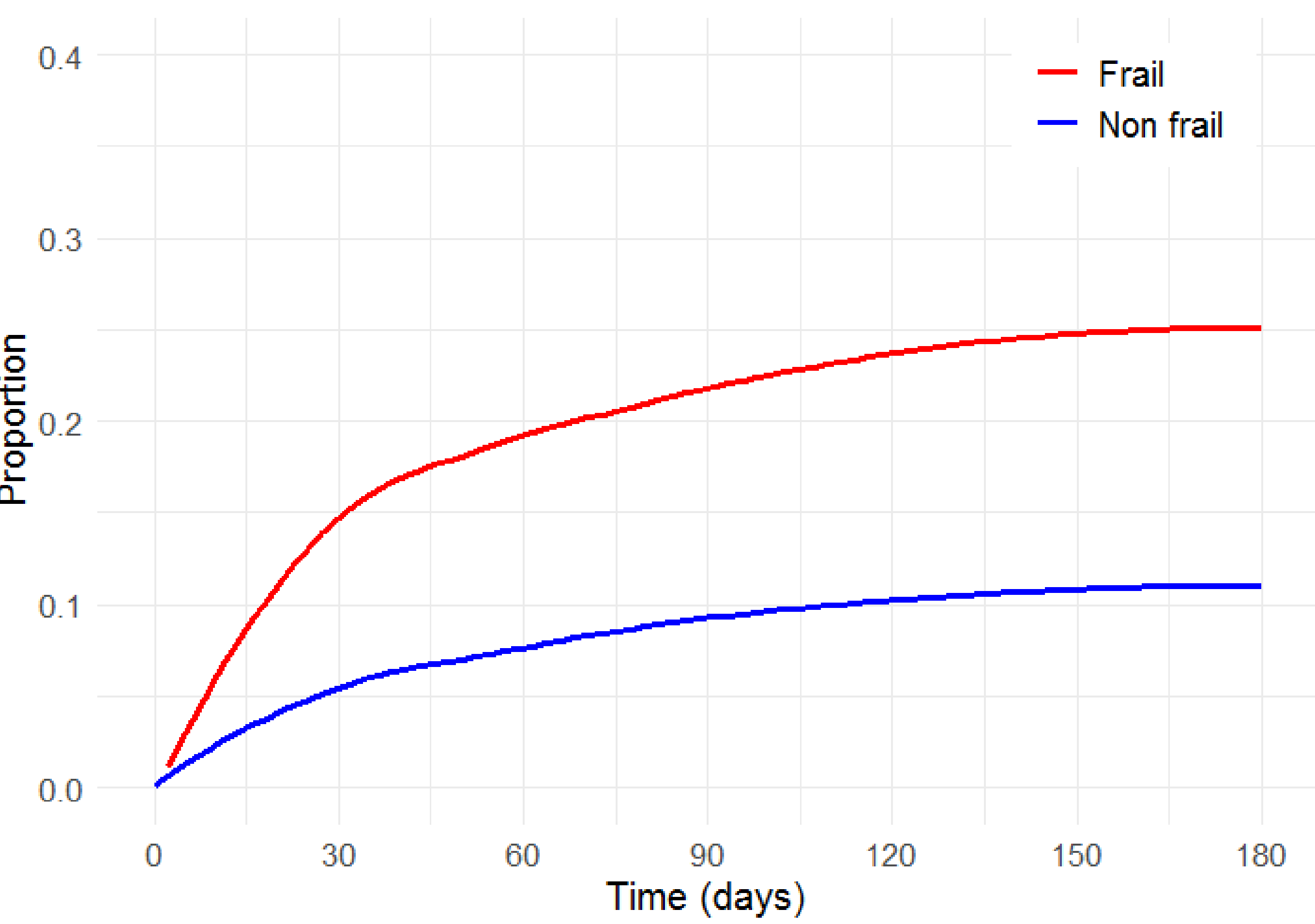
Conclusions

- TFI reliably assess the likelihood of adverse clinical outcomes in adult patients with multimorbidity
- Coexistence of multimorbidity and frailty increase the risk of mortality, readmission and health care utilization
- TFI represents a valid self-reported tool that can evaluate frailty without the need for clinical metrics or expert clinical evaluations

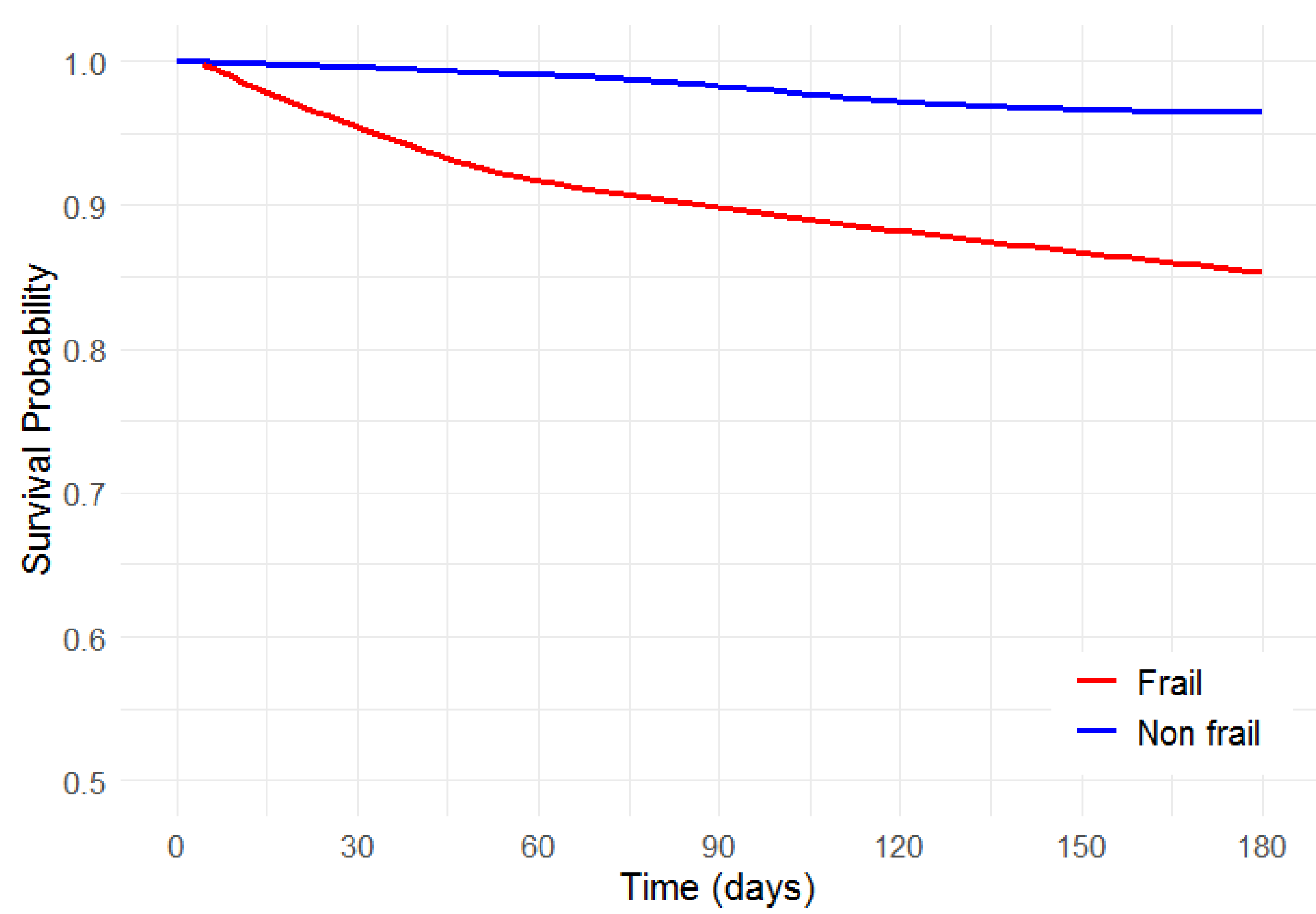
Baseline characteristics

	Overall	Frail (TFI >5)	Non-frail (TFI ≤5)
	n/%	n/%	n/%
Sex			
Male	310/65,82%	131/59,28%	179/71,60%
Age			
Mean (SD)	67.4 (12.5)	66.9 (13.2)	67.9 (11.9)
No of chronic diseases			
Mean (SD)	5,97 (2,29)	6,69 (2,57)	5,34(1,80)

Cumulated incidence curve; 180 days readmission



Kaplan-Maier curve; 180 days all-cause mortality



Cox regression analyses; Hazard ratios of outcomes [95% confidence intervals]

	Outcome 1: 180 days fatality		Outcome 2: 180 days readmission		Outcome 3: Any health care contact*			
					5-9 contacts		≥10 contacts	
Number of Events/ Number at risk	41/471		84/471		121/222		249/350	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Frailty TFI < 5 as reference	4.31 [2.06-9.03]	4.60 [2.18-9.70]	2.51 [1.60-3.96]	2.61 [1.65-4.13]	1.89 [1.32-2.71]	1.85 [1.29-2.67]	2.08 [1.62-2.68]	2.15 [1.66-2.79]
Frailty TFI continuous (0-15)	1.20 [1.09-1.33]	1.22 [1.11-1.34]	1.18 [1.10-1.26]	1.19 [1.10-1.28]	1.13 [1.07-1.20]	1.13 [1.06-1.20]	1.14 [1.09-1.19]	1.45 [1.10-1.20]

*Patients with less than 5 health care contacts used as reference
Any health care contact includes all physical and virtual contacts to both hospital and general practitioner, such as planned and unplanned readmissions, outpatient visits, telephone, video, and e-mail consultations,

