Self-rated health as a proxy for frailty in older adults at emergency departments

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1.Background

- Frailty is associated with functional dependency post discharge, mortality, readmissions and longer hospital stay.
- There are many screening tools to measure risk and level of frailty.
- However in the busy ED environment clinicians are restricted to measure objectively the parameters of existing frailty tools.
- A practical instrument is required for use in the ED which can be applied rapidly, does not rely on complex indicators and is easily administered.

Self-rated health question

Compared with people of the same age would you say your health is:

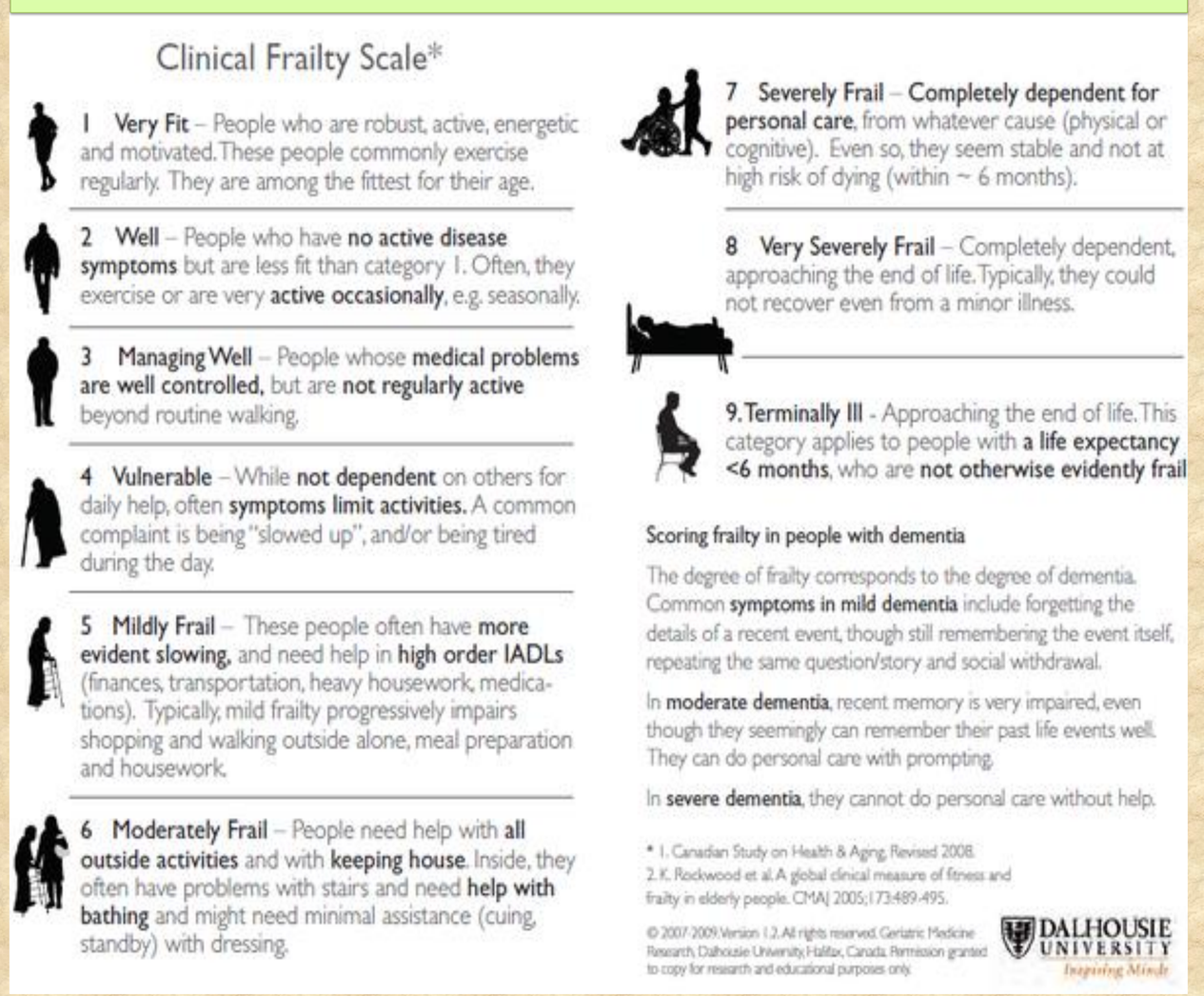
Poor, Fair, Good, Very Good or Excellent

2.Objectives

- To determine if self-rated health could be used as a proxy for frailty on admission to hospital and as a high risk flag for people who will need community support post hospital discharge.

3.Methods

- Nested cohort study of consecutive older adults ≥65 years admitted via ED in four large Sydney teaching hospitals during business with nurse-measured Clinical Frailty Scale and Self-reported health applied on admission and repeated frailty assessment applied over the phone at three months post hospital discharge.
- SPSS was used to determine associations adjusting for age, sex, socio-economic status (SES) and the presence of ≥1 comorbidities. SES was removed from final model as it was not statistically significant.



4.Results

Within the cohort, 899 (88%) of patients (51.4% female) with mean and median age 80 years had data at baseline and follow-up. A total of 383 (42.6%) reported a FairPoor self-rated health on admission, 416 (46.3%) were recorded as having at least one chronic condition and 304 (33.8%) of patients required the need for community support at three-months post hospital discharge.

Univariate association of Self-Rated Health and Frailty on admission

	Odds Ratio	95% CI	P Value
FairPoorSRH	3.82	2.89-5.06	<0·0001

*FairPoor self-rated health was significantly associated with frailty on admission (OR 3.82, 94%CI 2.89-5.06)

Multivariate analysis of Self-Rated Health and Frailty on admission

	Odds Ratio	95% CI	P Value
85+yrs	5.75	3.81-8.69	<0·0001
75-84yrs	2.05	1.39-3.01	<0·0001
Female	2.02	1.48-2.75	<0·0001
FairPoorSRH	4.02	2.92-5.52	<0·0001
≥1 Chronic Disease	2.39	1.75-3.28	<0·0001

*FairPoor self-rated health had a strong and statistically significant association with baseline frailty (OR 4.02, 95%CI 2.92-5.52 p<0·0001) after adjusting for age group, sex and the presence of 1 or more chronic conditions.

Multivariate analysis of self-rated health on admission and community services at follow-up

	Odds Ratio	95% CI	P Value
85+yrs	2.76	1.89-4.03	<0·0001
75-84yrs	1.42	0.98-2.06	<0·067
Female	1.71	1.27-2.29	<0·0001
FairPoorSRH	1.79	1.33-2.42	<0·0001
≥1 Chronic Disease	1.00	0.74-1.36	<0·981

*Self-rated health on admission was also an independent predictor of needing community services at follow-up (OR 1.79, 95%CI 1.33-2.42 p<0·0001)

5.Conclusions

- Poor-fair self-rated health on admission to hospital is significantly associated with poor outcome. The global question may be useful as a proxy for frailty where comprehensive frailty measures cannot be fully administered due to the very environment of the emergency department.
- Poor-fair self rated health could be used as a red flag for clinicians to anticipate the need for further screening/referrals to community support services and the primary health care team for older adults who present to the emergency department.
- Further research on the external validity of self-reported health is needed

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