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

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%Cl 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)

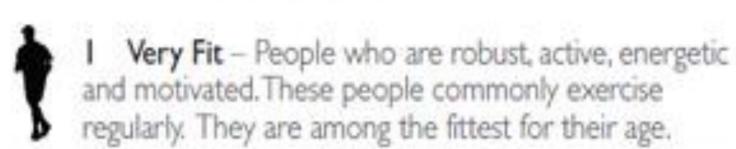
2.Objectives

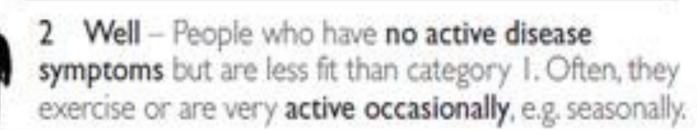
 To determine if self-rated health could be used as a proxy for frailty on admission to hospital and as a high risk flag for people who will need community support post hospital discharge.

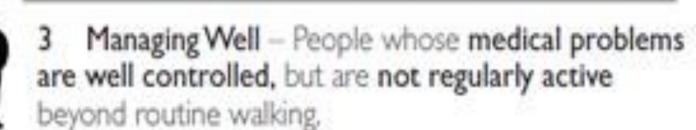
3.Methods

- 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, socioeconomic status (SES) and the presence of ≥1 comorbidities. SES was removed from final model as it was not statistically significant.

Clinical Frailty Scale*







4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired during the day.

5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.



7 Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9. Terminally III - Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail</p>

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia.

Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

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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

