

Does Frailty Lie in the Eyes of the Beholder?



R.E. Hubbard^a, D.A. Story^b

^aAssociate Professor of Geriatric Medicine, Centre for Research in Geriatric Medicine, The University of Queensland, Brisbane, Qld, Australia

^bProfessor and Chair of Anaesthesia, and Head: Anaesthesia, Perioperative and Pain Medicine Unit; Melbourne Medical School, The University of Melbourne, Vic., Australia

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All doctors need to know about frailty. Older patients make up the largest proportion of health and social care users: understanding frailty adds to understanding their health and social care needs. By providing a more accurate measure of health status than chronological age alone, frailty has the potential to inform risk stratification and help us understand which patients are likely to benefit from which interventions. Yet, like many innovations, it has potential pitfalls.

In this edition of *Heart, Lung and Circulation*, Hii et al. [1], assessed frailty in 47 patients (mean age 78 years) on an acute cardiology ward. One cardiology registrar and two consultants independently classified each patient as frail or not frail using a brief evaluation “based on general observation and brief discussions with the patients”. Patients were also dichotomised by collapsing categories of the Reported Edmonton Frail Scale (REFS) [2], which comprises a combination of performance-based tests and self-report across nine relevant domains. The authors found that none of the three clinicians showed satisfactory agreement with the REFS score, concluding that, “a quick foot-of-the-bed assessment is not a reliable way to determine frailty”.

Purists may argue that since neither frailty measure has been validated against adverse outcomes in this cohort it is unclear which is a more accurate measure of vulnerability. However, the REFS has been validated in older inpatients [2], correlating with increased length of stay for patients on an Australian general medical unit [3]. Hence although the clinical utility of the REFS as a predictive tool for complications, disability and death is yet to be fully established (including in the cath. lab and cardiac operating room) it remains preferable to the “quick clinical assessments” which seem here to be inaccurate and discordant frailty measures.

While the study of Hii et al. [1] suggests that opinions regarding a patient’s frailty status vary considerably between cardiologists, previous work has suggested that experienced

geriatricians show good inter-rater agreement in their global impressions of patients’ frailty [4]. This is not surprising. Frailty is the “core business” of geriatric medicine, where holistic assessment of functional status, comorbidities, mood, cognition and social support inform goal setting and discharge planning. Each of these domains affect the older person’s risk of adverse outcomes, yet their evaluation may not be intuitive to those trained to focus (albeit with considerable skill) on single system medicine, or even general medicine.

Brief bedside reviews often use cachexia (loss of body mass that cannot be reversed nutritionally) and sarcopenia (loss of skeletal muscle mass plus strength or function) to indicate frailty. Yet not all frail older people are underweight and not all underweight people are frail. The relationship between frailty and body mass index (BMI) shows a U-shaped curve, with obese older people also more likely to be frail [5]; low BMI is not associated with an increased risk for death in older people with high cardiorespiratory fitness [6]. Furthermore, isolated sarcopenia seems to be a weak predictor of adverse outcomes [7] particularly in comparison to gait speed [8]. An end-of-the-bed frailty assessment in which the patient stays in bed is like a cardiologist not listening to the chest: fated to miss vital and informative clinical signs.

While a fundamental feature of frailty is vulnerability to stressors including disease and medical procedures, it has been conceptualised in very different ways: as a syndrome or as a risk state [9]. In the former approach, frailty can be measured by a set of defined symptoms or signs. The most well-known criteria, developed by Fried et al. in 2001 [10], identify frailty as a phenotype on the basis of weight loss, exhaustion, weak grip strength, slow walking speed, and low physical activity. The Frailty Index approach, on the other hand, conceptualises frailty as a risk state which can occur due to a variety of accumulated health deficits which cross

cognitive and psychological domains and as well as co-morbidities (so dementia, depression and congestive cardiac failure would each be counted as a deficit) [11]. The Fried frailty phenotype has a trichotomous outcome: fit (no criteria), pre-frail (one or two criteria) or frail (three or more criteria) but, importantly, if patients become dependent, they are no longer considered frail but disabled. The frailty syndrome is a “pre-disability phase” [12]. The Frailty Index, in contrast, categorises all older people from the most robust, with no deficits at all, to those who are completely dependent in all activities of daily living and unable to attempt performance based tests. Hence the most frail patients by one definition are those living in the community and having some problems with muscle wasting yet by another definition might be bedbound and in institutional care.

Labelling a patient as “too frail” for an intervention following an end-of-the bed assessment is the new cloak of ageism, perpetuating a nihilistic paradigm before establishing the precise nature and implications of the patient’s health status. In clinical practice, fitness and frailty are not two sides of a coin. Clinical risk-benefit depends on context. One person may not have the physiological reserves to benefit from a high-risk procedure such as open abdominal aortic aneurysm repair, but may reap considerable functional gains from a transcatheter aortic valve implantation. Even the most vulnerable may gain from optimisation of anti-anginal medication.

Only by understanding more about frailty using a continuous variable can we estimate the risks and benefits of interventions in relation to distinct health states. Then, by involving older people and their families in more informed

discussions about management strategies, frailty will be one of the foundations for individualised care.

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