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Frailty and mortality in patients with COVID-19

Jonathan Hewitt and colleagues¹ found, in a multicentre cohort study, that frailty strongly predicts mortality in patients with COVID-19. We would like to further comment on their study.

There are many reasons as to why frailty should be considered during the current pandemic. First, frailty is associated with atypical clinical presentations; in the context of COVID-19, this might lead to diagnostic delays and increases in community transmission.² Second, frailty is related to sarcopenia, a poor nutritional status, and underlying inflammation, all which predispose an individual to a poorer immune response to severe acute respiratory syndrome coronavirus 2.³ This deficient immune response can lead to higher short-term mortality, a slower recovery, and a functional decline in patients who survive who are frail. Third, because of a weakened immune response in frail patients, a vaccine for COVID-19 might be less effective for them.

Although this study shows the important prognostic information that frailty assessments can bring, we do not recommend using it as the overriding deciding component to rationing access to health care, for three main reasons. First, frailty assessment grades a patient's vulnerability, but does not consider a patient's resilience; for example, of two equally frail patients infected with COVID-19, one might only have mild symptoms, and the other might suffer from a critical illness. Second, frailty is a continuum rather than being dichotomous; it can be difficult to decide an appropriate cutoff of frailty status to decide access to interventions, such as intubation and ventilation. Third, the presence of frailty does not necessarily suggest a poor prognosis. A study of 210 older adult patients that were admitted to hospital suggests that mild frailty

(Clinical Frailty Scale 5) is associated with a low 1 year mortality rate (8%).⁴

Because of these reasons, withholding and rationing potentially life-saving treatment, mainly on the basis of a patient's frailty status, is not justified. Frailty assessments should form part of a patient-centred approach. Other factors such as comorbidities, disease severity, and the likelihood of medical interventions being successful should also be considered.

Finally, although frailty might be associated with poor short-term outcomes in patients admitted to hospital with COVID-19, this population only represents a small proportion of those infected; most COVID cases are mild and are managed within the community. Frail patients have reduced reserve to respond to stressors; it is therefore necessary to also prevent these patients from exposure to the virus.⁵ Further research is required to understand the value of frailty assessments in the community and their role in triaging patients and preventing unnecessary admissions to hospital.

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- 1 Hewitt J, Carter B, Vilches-Moraga A, et al. The effect of frailty on survival in patients with COVID-19 (COPE): a multicentre, European, observational cohort study. *Lancet Public Health* 2020; **5**: e444–51.
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4 Chong E, Chan M, Tan HN, Lim WS. COVID-19: use of the Clinical Frailty Scale for critical care decisions. *J Am Geriatr Soc* 2020; **68**: e30–32.

5 British Geriatrics Society. BGS statement on the COVID-19 pandemic. 2020. <https://www.bgs.org.uk/bgs-statement-on-the-covid-19-pandemic> (accessed Oct 5, 2020).