“Age Alone is not Adequate to Determine Healthcare Resource Allocation during the COVID-19 Pandemic”

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Age Alone is not Adequate to Determine Healthcare Resource Allocation during the COVID-19 Pandemic

Running title: Age alone not adequate for resource allocation in COVID-19 Pandemic

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Competing interests of authors

MMO is a member of the Board of directors, Secretary-Treasurer, and co-Chair of the COVID-19 Working Group of the Canadian Geriatrics Society.

FM is Past President and co-Chair of the COVID-19 Working Group of the Canadian Geriatrics Society.

KM is Editor in Chief of the Canadian Geriatrics Journal.

KR has asserted copyright of the Clinical Frailty Scale. Use of the scale is free for research, educational, and not-for-profit health care use.

CGS Covid19 Working Group members who provided input in this article are Drs Nathan Stall, Olga Theou, and Camilla Wong.
Abstract

Background: The Canadian Geriatrics Society (CGS) fosters the health and well-being of older Canadians and older adults worldwide. Although severe COVID-19 illness and significant mortality occur across the lifespan, the fatality rate increases with age especially for people over 65 years of age. The dichotomization of COVID-19 patients by age has been proposed as a way to decide who will receive intensive care admission when critical care unit beds or ventilators are limited. We provide perspectives and evidence why alternatives approaches should be used.

Methods: Geriatric medicine and gerontology have fostered research and ethical discussion supporting that alternative approaches to using chronological age should be used in making medical resources utilization decisions. Evidence and ethical based recommendations are provided.

Results: Age alone should not drive decisions for healthcare resource allocation during the COVID-19 pandemic. Decisions on healthcare resource allocation should take into consideration the preferences of the patient and their goals of care, as well as the patient’s Clinical Frailty Scale score from two weeks before the onset of symptoms.

Conclusions: A Clinical Frailty Scale score of 5 or greater should be used when making decisions about access to limited health care resources such as admission to a critical care unit and/or intubation during the COVID-19 pandemic.

Key words: Aged, Frailty, COVID-19, Health Care Resources, Mechanical Ventilation
Rashness belongs to youth; prudence to old age.

Marcus Tullius Cicero

in “De Senectute”, 44 BC

As encapsulated by Cicero’s quote from “De Senectute”, aging comes with wisdom and prudence. Here we argue that in times of extreme turmoil and difficulty, prudence and wisdom should prevail while making critical decisions.

One goal of the Canadian Geriatrics Society (CGS) is to foster the health and well-being of older Canadians and older adults worldwide. Although severe COVID-19 illness and significant mortality occur across the lifespan, the fatality rate increases with age especially for people over 70 years of age.(1)

During the last few weeks, the emerging discussion about the rationing of healthcare resource utilization has been tainted with ageism.(2, 3) The dichotomization of COVID-19 patients by age has been brought up as a way to decide who will get mechanical ventilation when critical care unit beds and ventilators are limited. In geriatrics and gerontology alternative approaches to using chronological age have long been advocated in making these decisions. There is a need to look at the treatment choices and prognosis of the individual whatever their age. In Italy, where the healthcare system has faced incredible strain from the COVID-19, age has been proposed as a criteria for making these decisions.(4) Other countries have promoted using frailty. For example in the UK, the updated NICE guidelines for the allocation of critical care interventions
suggests using the 9-point Clinical Frailty Scale (CFS) to assess frailty status and use this information to help make these decisions.(5, 6)

At the CGS, we strongly believe that rationing critical care admission and or life-saving ventilation solely on the basis of age is not acceptable. While an established body of evidence support that mechanical ventilation would likely be futile in some ill frail older adults with multiple morbidities, there is a critical ethical difference between decisions made on the basis of futility versus those based on rationing.(7)

CGS healthcare resource utilization recommendations

1. Age alone should not drive decisions for healthcare resource allocation. Instead, the wishes of the person (including as expressed in an advance directive if the person is unable to speak for themselves at the time), the presence and degree of frailty, and other aspects of their health before the onset of the acute illness should be considered. The British Medical Association guidance on ethical issues with COVID-19,(8) notes an association between older age and mortality, but it is still unknown whether this reflects an actual effect of age or a correlation between age and co-morbidities that in themselves effect survival rates. We strongly believe that decisions must not solely be based on chronological age. Ethical triage requires identification of clinically relevant facts about individual patients and their likelihood of benefiting from possible medical interventions. Younger patients should not be automatically prioritized over older ones.
2. Decisions on healthcare resource allocation should take into consideration the preferences of the patient and their goals of care.

Resource allocation protocols should treat older persons in a similar fashion to younger persons. Patients’ wishes to guide their care ought to be clarified in advance of a critical illness. Older adults have higher prevalence of mild cognitive impairment and comorbidities that can transitory exacerbate when they are ill, and consequently, they may not be able to state their goals of care while being very sick. Available data show that less than a fifth of Canadians have an advance care plan.(9, 10) These can be challenging conversations but older adults as well as younger ones should be encouraged to express their wishes to their family and document their goal of care prior to becoming severely ill (https://www.advancecareplanning.ca/).(11)

3. Decisions on access to critical care or mechanical ventilation for older adults should be individualized.

Older adults’ capability and functionality are not tightly tied to their chronological age. Frailty has helped geriatricians and researchers on aging to understand and grasp the variability seen in older patients, including the critical care setting.(12) Evidence shows that frailty status determined by a simple instrument such as the CFS is useful in identifying older adults at increased risk of adverse events, morbidity and mortality in critical care units.(13) The identification of frailty and its severity could improve prognostication and identify those more likely to benefit and respond to invasive treatments. We advocate for an approach similar to the NICE rapid guideline for deciding on the appropriateness of critical care with a COVID-19
4. If used to help make decisions about access to limited health care resources, the CFS score should be based on the person’s status two weeks before the onset of COVID symptoms and not how they present at the moment.

The use of the CFS by untrained or minimally trained clinicians can lead to inaccurate scoring especially if the assigned score is based on the person’s status the day of their presentation. Online training modules on how to administer the CFS are available at the following link: https://rise.articulate.com/share/deb4rT021vONbq4AfcmNRUudcd6QMts3#/ 

Where available a consultation with a geriatrician or health care worker who specializes in the care of older patients should be procured for required assistance on how to appropriately employ the CFS.

5. If used to help make decisions about access to limited health care resources such as admission to a critical care unit and/or intubation during the COVID-19 pandemic, a CFS score of 5 or greater should be used.

A critical care study done in Canada that involved over 1200 older adults where the CFS was utilized found that the risk of mortality rose with increasing frailty severity. As shown in figure 1 though, older adults with CFS ≥ 5 still have 1-year survivals of ~50%. This provides a rationale for using a score of 5 or greater to help inform these decisions but underscores the need to
consider other factors as well. Please note that decisions about the need for hospitalization should be considered separately.

**Concluding remarks**

We recognize that for many of us, the COVID-19 pandemics is our first public health emergency. In these circumstances, instead of ethics optimized for autonomy, as is the usual case, ethical decisions must now optimize for benefit. In general, these calculations will favor younger people over older people. Even so, the potential for benefit does not automatically map to age. Understanding this potential benefit will be crucial for older adults, where heterogeneity of outcomes is the greatest. Being able to recognize in this group those who have potential for benefit is a reasonable requirement, which will benefit vulnerable patients that with oath to care.
Figure legends

Figure 1: Probability of survival of critically ill older adults with different Clinical Frailty Scale scores, since admission to an Intensive Care Unit. Reproduced with permission from Bagshaw et al. 2014\textsuperscript{13}
KEY POINTS

1. Age alone should not drive decisions for healthcare resource allocation.

2. Decisions on healthcare resource allocation should take into consideration the preferences of the patient and their goals of care.

3. Decisions on access to critical care or mechanical ventilation for older adults should be individualized.

4. If used to help make decisions about access to limited health care resources, the CFS score should be based on the person’s status two weeks before the onset of COVID symptoms and not how they present at the moment.

5. If used to help make decisions about access to limited health care resources such as admission to a critical care unit and/or intubation during the COVID-19 pandemic, a CFS score of 5 or greater should be used.
References


