

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. to resources, there are key ethnic groups that would dissent in favor of prioritizing their elders, and there has been no consensus on dividing lines between age groups (how would we weight a difference of 10 years in age vs 20?). Given the difficulties coming to community consensus on fair ways to integrate age into decisions, we see very little potential for integrating social factors in a way that is operationally sound. The Office of Civil Rights has been clear that the best way to prevent discrimination is through an assessment of individual needs and risk.⁹ We agree, and we emphasize that the use of population-based tools to weight priority for interventions runs counter to this goal. In the end, broad community consensus is required for any nonmedical factors that may be used when weighting resource allocation, and these are likely to be few and far between.

The best way to ensure equity in critical care is to ensure that systems are in place to rapidly facilitate transfer of patients to an appropriate facility and load-balance hospitals that are disproportionately burdened by an event, *not* through the triage of specific critical care resources.

Absent clear evidence for differential outcomes for hospitalized patients and an operational means to fairly consider social factor impact on the individual, there is no justification for providers to include them when allocating scarce resources. At the bedside, the care and decision-making need to be based on the individual and their prognosis according to the best medical evidence available. Too much focus has been placed on strategies for restricting critical care resources and not enough on the maximal utilization of available resources though a systems approach. Preventing crisis standards of care through maximal use of contingency strategies should be the focus, and critical care physicians are a crucial part of this planning.

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Rebuttal From Drs Hick and Hanfling



John L. Hick, MD Minneapolis, MN Dan Hanfling, MD Washington, DC

We agree with White, Lo, and Peek on the need to address the deep inequities exposed during COVID-19. However, adjusting triage processes by using social indexes is not the way to do so.

AFFILIATIONS: From Hennepin Healthcare (J. L. Hick), University of Minnesota; and In-Q-Tel (D. Hanfling), George Washington University.

CORRESPONDENCE TO: John L. Hick, MD; email: John.hick@hcmed. org

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Translating ethical values into ethical operational frameworks is a difficult proposition. For example, despite general community consensus to prioritize younger individuals for access to scarce resources ("fair innings" principle),^{1,2} a legally and operationally defensible mechanism to include age has been elusive, because of the preference of some populations— including Native Americans—to prioritize their elders. Furthermore, equal protection issues surrounding age-based allocation have been legally contested.³ Issues are multiplied and consequences magnified when we try to address broader and less binary social constructs such as race and economics in allocation.

When we harm one individual by awarding treatment to another, we must match our values directly to our procedures and not "miss the target." Even assuring essential worker reciprocity (rewarding service) and instrumentality (maintaining society) can be challenging. Who is an essential worker? Which jobs can avoid direct contact with the public? Many essential workers contracted COVID-19 outside the job setting, and sometimes in defiance of community precautions.^{4,5}

The authors say that they do not intend to address historical inequity but they essentially propose to, because their correction is not aimed at the equivalent critical care outcomes but adjusts for undiagnosed and complex medical problems associated with social determinants of health such as socioeconomic deprivation and distrust of medical providers and treatments. Who exactly they intend to prioritize is unclear. Is it the poor in general? Is there differential priority between Black, Latinx, and Native American individuals? Do they intend to offer direct benefit to rural communities that score highly on Area Deprivation Index (ADI) but not Social Vulnerability Index indicators, knowing that these populations may be distrustful of medical care? Their table on outcomes relies on a series of nesting assumptions that we do not believe have validity. Assuming that all patients that do not receive an ICU bed will die is at odds with the successful higheracuity care provided in non-critical care units in addition to telemedicine and "care-in-place" support for critical care extension.

Even though race was specified as a factor to consider in the Emergency Use Authorization for monoclonal antibody treatments, several states are facing legal challenges for including race as a consideration.^{6,7} For example, Minnesota withdrew race as a factor in its allocation framework because of equal protection issues, despite clear evidence that race independently predicted increased hospitalization risk.⁸

Although we agree with the authors' goals, their proposal insufficiently identifies the beneficiaries, corrections, and correlation to the ADI as a solution. The ADI and other nonspecific population measures should not be used in critical care resource allocation. We must improve clinical prognostic tools, refine processes for determining nonbeneficial care, eliminate inappropriate decision schemes such as those reliant on SOFA scores, ensure implementation of load-balancing mechanisms to promote consistency of care,⁹ and work toward improving trust in, and access to, medical care.

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