

COVID-19 Ventilator Allocation Protocols are Poised to Disadvantage African Americans

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INTRODUCTION

The social determinants of health—including race and socioeconomic status—continue to propagate health disparities at unprecedented levels. These negative health outcomes, including high prevalence of chronic diseases, are most pronounced in communities of color. Since the first African slave arrived in Virginia over four centuries ago, systemic racism, discrimination, and prejudice have permeated society to the point where African Americans can expect to live, on average, five years fewer than their white counterparts. History demonstrates that these disparities are most pronounced during pandemics. During the height of the HIV epidemic in the United States, infection rates in black communities outpaced those in non-minority communities by a factor of ten.¹

ANALYSIS

Unsurprisingly, data emerging from the ongoing coronavirus pandemic suggests these longstanding disparities persist. In Michigan, African Americans constitute only 14 percent of the state's population but account for 40 percent² of coronavirus-related deaths. Such a grim empirical reality raises crucial ethical questions about fair, unbiased allocation of healthcare resources. Specifically, ventilator allocation protocols—institutional policies intended to maximize the therapeutic value of scarce life-saving resources such as ventilators—require examination through a social justice lens. Currently, there is no federal guidance on ventilator allocation protocols, and state-level guidance, where it exists, varies considerably.³ In the absence of universal, transparent policy, we must question how—and to what degree—race and ethnicity enter into the ventilator allocation process, a process that ultimately determines who lives and who dies.

In response to concerns of potential bias in ventilator allocation, hospitals have touted the sequential organ failure assessment (SOFA) scale as the gold standard of clinical objectivity. On its surface, the SOFA scale

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represents a utilitarian exercise of triage—a practice first employed on 18th century battlefields. Each patient is assigned a mortality risk score based on a set of clinical criteria, thus determining who is most likely to benefit from ventilation therapy. However, a closer analysis of the SOFA scale reveals significant disadvantages for African American patients. The SOFA scale measures six different clinical indicators, using basic blood-based lab tests to assess heart, lung, liver, kidney, and neurological function. African Americans are about 30 percent more likely to suffer from chronic conditions including diabetes, obesity, and heart disease.⁴ All of these have been shown to exacerbate the symptomology of the novel coronavirus. In turn, patients with these conditions perform worse on the SOFA and are therefore more likely to engender a higher mortality risk score. This all but ensures African Americans will be excluded from ventilator therapy at disproportionately higher rates in the context of rationing.

In the event two patients receive identical SOFA scores, African Americans continue to be disadvantaged. If two patients hold identical mortality risk scores and only one ventilator is available, priorities shift to maximizing the number of life-years saved.⁵ In this instance, clinicians will provide ventilation therapy to the patient poised to live the longest in the event of a full recovery, or at least a partial recovery that results in eventual withdrawal of the ventilator therapy. While this protocol will broadly favor younger patients, the unfortunate reality is that African Americans are expected to lead the shortest lives of any ethnic group in the country. Suppose an Asian patient and a black patient of the same age hold identical SOFA scores. Determining who is likely to live the longest in the event of recovery (the number of life-years saved) is tragically simple. With black life expectancy at 75 and Asian life expectancy at 87, there appears no room for interpretation—the black patient loses again.

It is also plausible that hospitals lack ventilator allocation policies altogether. This circumstance is more likely in rural and underserved communities, where many hospitals operate independently of high-resource academic health systems. In this case, it's business as usual—ventilators are distributed on a first-come, first-serve basis. Decades of racial bias and discrimination within the US healthcare system have deeply damaged African American perception of the healthcare system, resulting in pervasive mistrust of the healthcare enterprise. This mistrust is justified—during non-crisis circumstances, black patients wait 20 minutes longer for care in clinics and emergency rooms. They are also allotted less face-to-face time with clinicians who, by a factor of ten to one, are unlikely to be persons of color.⁶ Such systemic inequities result in African Americans often delaying care until symptoms are severe—leading to devastating health outcomes.⁷ Thus, the first-come first-serve model is poised to disproportionately benefit non-minority populations, as they are more likely to seek care upon early onset of symptoms, and, once in the clinic or emergency room, are less likely to wait for care.

The unfortunate reality is that a lottery—a completely random process of ventilator allocation—may be the only *fair* solution in a society plagued by such pervasive health inequities. While this strategy has been previously employed in organ transplantation, it is fraught with ethical complications. First, lotteries engender a reckless disregard for resource optimization—an 85-year-old may be selected for ventilatory therapy over a 16-year-old, without any consideration of social or clinical factors. Second, lotteries suffer from a crisis of transparency. In the absence of an established allocation procedure, it is impossible to prove to patients and/or families that the process was in fact random. For the African American community, it may be particularly difficult to accept a clinician's assurance of a truly random process. The Tuskegee Syphilis Study was terminated only fifty years ago following decades of deceit and exploitation of African American men in rural Alabama.

CONCLUSION

Utilitarianism is often proclaimed as the predominant philosophical paradigm during public health crises. Unfortunately, while government officials and healthcare administrators claim to prioritize the greatest benefit for the greatest number in their defense of clinically based ventilator allocation policies, attention to social justice remains woefully absent. Current clinical and non-clinical frameworks of resource allocation do not account for the pervasive health disparities currently plaguing society, particularly those observed in underserved communities. Regardless of how objective various triage frameworks claim to be, they fail to account for the pervasive social injustices that disproportionately burden black communities. Until federal, state, and local governments and our communities begin to seriously address the social determinants of health, African Americans will continue to unjustly bear the burden of resource rationing. The life-or-death context of ventilator allocation is no exception.

¹ US Centers for Disease Control and Prevention. "Health Disparities in HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis in the United States." (2007).

<https://www.cdc.gov/nchhstp/healthdisparities/docs/nchhstphealthdisparitiesreport1107.pdf>.

² State of Michigan. "Michigan Coronavirus Data." (2020). https://www.michigan.gov/coronavirus/0,9753,7-406-98163_98173--00.html.

³ New York State Department of Health and New York State Task Force on Life and the Law. "Updated Ventilator Allocation Guidelines." (2020). https://www.health.ny.gov/press/releases/2015/2015-11-25_ventilator_allocation_guidelines.htm.

⁴ McKinsey & Company. "COVID-19: Investing in black lives and livelihoods." (2020).

<https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-investing-in-black-lives-and-livelihoods>.

⁵ Truog, Robert D., Christine Mitchell, and George Q. Daley. "The Toughest Triage — Allocating Ventilators in a Pandemic." *New England Journal of Medicine* 382, no. 21 (March 23, 2020): 1973–75. <https://doi.org/10.1056/NEJMp2005689>.

⁶ Johnson, Carolyn. "Racial inequality even affects how long we wait for the doctor." *The Washington Post*. (October 15, 2015). <https://www.washingtonpost.com/news/wonk/wp/2015/10/05/medicines-racial-divide-measured-in-minutes-spent-waiting-to-see-a-doctor/>.

⁷ Chen, Jie, Arturo Vargas-Bustamante, Karoline Mortensen, and Alexander N Ortega. "Racial and Ethnic Disparities in Health Care Access and Utilization Under the Affordable Care Act." *Medical Care* 54, no. 2 (February 2016): 140–46.

<https://doi.org/10.1097/MLR.0000000000000467>.