

Who will receive the last ventilator: why COVID-19 policies should not prioritise healthcare workers

Donna T Chen, Lois Shepherd, Jordan Taylor, Mary Faith Marshall

Center for Health Humanities and Ethics, University of Virginia School of Medicine, Charlottesville, Virginia, USA

Correspondence to

Professor Lois Shepherd, Center for Health Humanities and Ethics, University of Virginia School of Medicine, Charlottesville, USA; lls4b@virginia.edu

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ABSTRACT

Policies promoted and adopted for allocating ventilators during the COVID-19 pandemic have often prioritised healthcare workers or other essential workers. While the need for such policies has so far been largely averted, renewed stress on health systems from continuing surges, as well as the experience of allocating another scarce resource—vaccination—counsel revisiting the justifications for such prioritisation. Prioritising healthcare workers may have intuitive appeal, but the ethical justifications for doing so and the potential harms that could follow require careful analysis. Ethical justifications commonly offered for healthcare worker prioritisation for ventilators rest on two social value criteria: (1) instrumental value, also known as the ‘multiplier effect’, which may preserve the ability of healthcare workers to help others, and (2) reciprocity, which rewards past usefulness or sacrifice. We argue that these justifications are insufficient to over-ride the common moral commitment to value each person’s life equally. Institutional policies prioritising healthcare workers over other patients also violate other ethical norms of the healthcare professions, including the commitment to put patients first. Furthermore, policy decisions to prioritise healthcare workers for ventilators could engender or deepen existing distrust of the clinicians, hospitals and health systems where those policies exist, even if they are never invoked.

When the WHO declared COVID-19 a pandemic in March 2020, health systems worldwide began preparing in earnest for potential shortages of critical care resources. The question of how to ration ventilators, long debated in the international ethics literature, suddenly became real and pressing, rather than theoretical and remote. In the spring and early summer, governments and health systems developed policies for allocating ventilators in the event of scarcity; many prioritised healthcare workers.

So far, few, if any, of these policies have been implemented, since prior to the recent surges, the need for rationing critical care resources had been narrowly averted in most localities. Meanwhile, international vaccine roll-outs have shifted attention away from discussions about ventilator allocation. However, the scarcity of critical care resources whenever localities experience a surge and the continued anticipation of surges due to novel virus variants throughout the world illustrate that the potential need for triage remains real.¹ In addition, the recent vaccination effort shows that decisions to prioritise one group over another for scarce healthcare resources—especially decisions made by health systems—will—and we think, should—face public

scrutiny and require careful and transparent justification.² It is important to get this right.

Policies adopted in the earliest stages of the pandemic that prioritise healthcare workers for ventilators require revisiting. Much has been learnt about the virus’s spread and the potential for severe outcomes for people in different work and living environments. Cheung and Parent³ have called attention to the discordance between prioritising healthcare workers and the ethical frameworks that the policies themselves espouse. These reasons alone counsel revisiting the prioritisation.

We go further: the arguments that have been advanced for prioritising healthcare workers for ventilators in the COVID-19 pandemic were never sufficient to justify abandoning the common moral commitment to value each person’s life equally. Even if the policies are never invoked, they set bad precedent and carry the potential for real harm.

ALLOCATING CRITICAL CARE RESOURCES

This analysis focuses on the ‘toughest triage’: when a hospital operates under crisis standards of care, only one ventilator is available and two or more patients need it, or when no ventilators are available and a decision must be made whether to reallocate a ventilator in use with one patient to someone else.⁴

When moving from a first-come first-served strategy, ventilator allocation guidelines adopted worldwide generally aim to save the most lives, employing clinically based scoring systems to determine potential benefit, defined as relative likelihood to survive hospitalisation or for a period of time postdischarge (eg, 1 year).^{5–7} Some guidelines give heightened priority to non-clinical criteria, for example, life cycle and pregnancy (or pregnancy with a viable foetus). Some—including a prominent policy on which others were modelled⁸—prioritise healthcare workers. This is usually done as a tie-breaker when selection criteria cannot distinguish between two patients, although some subtract points in a scoring system in which lower scores result in higher priority.

As localities and institutions began developing these guidelines, arguments in favour of prioritising healthcare workers for ventilators appeared in prominent journals such as the *New England Journal of Medicine*, *JAMA*, the *American Journal of Bioethics* and in the popular press.^{9–12} Some articles and guidelines prioritising healthcare workers include other essential workers, that is, those ‘who keep critical infrastructure operating’ or ‘perform tasks vital to the public health’.^{9 10 13} In this analysis, we focus on healthcare workers because, even when advocates include other workers, healthcare



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workers are most prominently mentioned. Much of this analysis also applies to prioritising other essential workers.

SOCIAL VALUE

Arguments for prioritising healthcare workers when rationing scarce resources generally rest on their instrumental value and/or on reciprocity, both forms of ‘social value’.^{5 14} The first, preserving the ability of healthcare workers to help others, is forward looking; the second ‘reward[s] past usefulness or sacrifice’.¹⁴

INSTRUMENTAL VALUE AND THE MULTIPLIER EFFECT OF CERTAIN WORKERS

Healthcare workers and first responders are often designated for prioritisation in public health crises because of the ‘multiplier effect’—saving them may be key to saving others, particularly if these workers themselves could be considered a scarce resource, highly trained and difficult to replace.¹¹ This might, in theory, align with the primary aim of allocation guidelines to save the most lives. However, the strength of the justification depends on the nature of the crisis, the resource being allocated and the purpose that prioritisation serves. During this pandemic, a strong—though not incontrovertible—instrumental value argument can be made for prioritising healthcare workers to receive preventive measures (eg, personal protective equipment (PPE) and vaccines) earlier than some others to enable them to continue working and limit disease spread.

Ventilators are different. First, when prioritising for a *life-saving* resource, justifications resting on notions of irreplaceability carry a very heavy burden of proof; the rationale for its use must be negative, not positive (ie, not because of someone’s potential contributions, but because their ‘immediate loss would possibly (even probably) be disastrous’).¹⁵ Furthermore, quick recovery and return to work are not the trajectory for patients with COVID-19 requiring ventilation; it may take months or longer for healthcare workers to return to the frontlines. Though the long-lasting nature of this pandemic may give healthcare workers time to recover and return to work, time should also allow for proper planning and preparation to prevent scarcity in supplies and personnel.

RECIPROCITY AND SERIOUS SACRIFICE

Justifications based on reciprocity fall flat as well. Reciprocity is ‘the act or practice of making an appropriate (often proportional) return—i.e., returning benefit with proportional benefit, countering harm-causing activities with proportional criminal sentencing, and reciprocating friendly and generous actions with gratitude’.¹⁶

Reciprocity can justify prioritising scarce medical resources for someone who makes a serious and uncommon sacrifice. The response to this sacrifice should be fitting, such as assigning United Network for Organ Sharing (UNOS) priority points to kidney donors should they later need a kidney transplant.¹⁷ However, this instantiation of reciprocity differs from the situation posed by a ventilator shortage; healthcare workers are not being considered for a scarce resource they have given up for others. Even if no requirement exists for such a tight link between the allocated resource and the sacrifice, evidence is clear that healthcare workers’ sacrifices are not unique.

COMBINING SOCIAL VALUE ARGUMENTS

We have noticed in discussions with colleagues advocating for instrumental value that when the justification appears to come up short, some then turn to or add reciprocity.

Indeed, a variant of the instrumental value argument combined with elements of reciprocity holds that prioritisation expresses gratitude and appreciation ahead of time and may signal to healthcare workers that they are cared for and may help prevent their absenteeism or a mass exit from the workforce that could imperil patient care.^{9 18} This form of the argument does not rely on an actual multiplier effect because it is largely symbolic; since the workforce overall is relatively young and healthy, actual use of worker status as a tie-breaker, if adopted, would likely be rare.

Nevertheless, it is worth considering how deep a worker shortage could become and whether prioritisation for a last resort medical treatment, even a largely symbolic one, would avert it. In an early 2021 poll, 3 in 10 US healthcare workers indicated they had considered no longer working in healthcare because of the COVID-19 pandemic.¹⁹ However, their reported frustrations focused on hospitals’ inadequate staffing levels and lack of preparation for caring for both them and patients during the pandemic as well as the public’s continued failure to take sufficient precautions to prevent the spread of infection. Burn-out rates, already high before the pandemic, have become even more unacceptably so, and the mental health needs of the healthcare workforce have been inadequately addressed.^{19 20} However, there is no evidence that the largely symbolic measure of prioritising healthcare workers for scarce critical care resources over other patients would address their concerns, and there may be real harms to the healthcare professions from a decision to do so, as discussed further.

Moreover, combining these various and distinct markers of social value to justify prioritisation edges into an unacceptably broad social worth criterion ‘based on a judgment of people’s lives viewed as a whole’.²¹

PRACTICAL CHALLENGES

Even if we could ethically justify prioritising healthcare workers for ventilators because of their essential and/or sacrificial work, the practical challenges of determining whether someone is a healthcare worker and whether they were infected at work would be enormous. While healthcare workers might be recognised as such if they present as patients to their own workplace, when critically ill, people generally go to the nearest hospital. The admitting facility may not be where the healthcare worker works. Additionally, Centers for Disease Control and Prevention (CDC) data show that among COVID-19 positive healthcare workers reporting ‘contact with a laboratory-confirmed COVID-19 patient in health care, household, or community settings’ in the 14 days prior to the onset of their illness, 40% reported contact occurring only in a household or community setting.²² As a practical matter, allocation decisions based on instrumental value and reciprocity ‘might potentially require time-consuming, intrusive, and demeaning inquiries’.¹⁴ It is hard to imagine getting this right given the exigencies surrounding ventilator triage in a pandemic.²³

THOSE LEFT BEHIND

To avoid the unfairness of singling out healthcare workers from others doing essential work, ventilator allocation policies might instead prioritise all essential workers, full stop. Many people put themselves at risk to help others or to keep society going.

At various points in this pandemic, workers like bus drivers, grocery clerks and workers in meat and poultry processing plants appeared to be at especially high risk.^{24,25} Compared with healthcare workers, these other workers are less likely to have adequate PPE or work conditions to exercise social distancing and frequent hand washing. Some live paycheck to paycheck and continue to work under risky conditions—in part *because they are* considered replaceable—at least as ‘workers’. According to one study looking at healthcare workers in particular, housekeepers appear to be at higher risk of SARS-CoV-2 infection than bedside clinicians, of whom intensive care unit staff carry the least risk.²⁶ Of all staff, those who are black, Asian or minority ethnic appear at greater risk for becoming infected.²⁶

Many people have lost their jobs during the pandemic; even if someone provided an essential service through the first wave, they may no longer be a worker, let alone an ‘essential worker’ in subsequent ones. Furthermore, some people, such as volunteers at food banks and homeless shelters, provide unpaid yet critically important services.

COVID-19 disproportionately affects and harms certain racial, ethnic, socioeconomically disadvantaged and vulnerable populations such as persons with disabilities and those living in congregate residential facilities with higher burden of illness and risk for death.²⁷ Many from these groups have never had equal opportunity, including opportunity for employment, whether as essential or non-essential workers. These groups also have long histories as targets of outright discrimination or implicit bias in healthcare and other spheres of life, including biases built into the clinical algorithms commonly used for prioritising patients for ventilators, which further disadvantage persons already disadvantaged by social determinants of health.²⁸ This is the context in which we must imagine implementing a policy prioritising a physician who has many privileges over an equally sick patient who has had none.

DO NO HARM

Decisions to differentiate (read discriminate) on the basis of social value, whether forward or backward looking, tear at our social fabric.¹⁸ Well before the COVID-19 pandemic, several statewide projects in the USA developed ventilator triage guidelines in preparation for such a crisis and involved extensive community participation. They considered, but ultimately did not recommend, prioritising healthcare workers for ventilators.^{29–31}

In contrast, these projects recommended prioritising healthcare workers for vaccines in public health crises, as did many high-profile think tanks and public health authorities more recently for COVID-19 vaccines.^{32–34} That healthcare workers should be prioritised for vaccines appeared to be a truism, one that we, too, did not question in a prior publication about resource allocation,³⁵ and yet, our social fabric has shown signs of unravelling as vaccine roll-outs have pulled on loose threads. Who qualifies for the earliest vaccines and why has not been sufficiently clear or monitored, resulting in unanticipated frustration, mistrust and strife, both within healthcare communities and between health systems and the general public.^{2,36} The practice of prioritising, even for vaccines, was less straightforward than the theory suggested, and even the theory began to show signs of weakness.^{37,38}

Ventilator prioritisation must meet even more stringent tests to pass muster. As compared with vaccines, it is not a matter of *when* one might secure access but *if at all*, and it is not a matter of reducing risk but receiving rescue care for an already endangered life.

When planning for ventilator triage decisions, health systems may shift to ‘saving the most lives’ rather than ‘first-come, first-served’. However, they should not forgo other core ethical principles: fidelity and non-abandonment, equity, the duty to care, trustworthiness and respect for all persons. Nor should they forsake those values inherent in community: mutual support and security.

In many ways, this crisis has fostered community, tapping into wells of generosity, gratitude and solidarity. Globally, people and businesses have crafted and donated protective equipment to keep workers safe. Others have collaborated in unprecedented ways to develop vaccines or therapeutics. However, a sense of community can be fragile, requiring assurance that each of us is given equal consideration because of our common humanity. Our sense of community is easily crushed when people discover this is not the case.

Institutional policies prioritising healthcare workers over other patients, even as a tie-breaker, could have lasting effects. They violate one of the healthcare professions’ most powerful ethical norms: to put patients first. Unlike vaccine allocation prioritisation policies, many institutional ventilator triage policies have not been subjected to widespread publicity. Once exposed—and transparency is ethically indispensable—policy decisions to prioritise healthcare workers for ventilators could engender or deepen existing distrust of the clinicians, hospitals and health systems where those policies exist, even if they are never invoked.

Some healthcare workers who were not involved in crafting allocation policies may feel betrayed by those entrusted to honour important *prima facie* ethical commitments on their behalf. For the healthcare professions themselves, there may be residual harm as society reflects on how they responded to this crisis in a way that privileged their own.

CONCLUSION

As surge after surge of COVID-19 cases bring healthcare systems and communities around the globe to their brink, we are reminded that the conversation regarding ventilator allocation must continue. While it may be ethically justifiable for healthcare workers to receive priority for some scarce healthcare resources, at the end of the day, policies should not give the last ventilator to one person in lieu of another who would benefit equally simply because that person is a healthcare worker. Nor should a ventilated patient who is not a healthcare worker have to surrender their ventilator to someone who is.

This does not diminish our gratitude towards healthcare workers for the service they provide to others as this COVID-19 pandemic circles the globe. Many are exhausted, responding courageously to a seemingly endless nightmare. They rightly fear bringing the virus home to loved ones or succumbing to it themselves. We are hopeful that vaccine and other efforts will stem the tide and truly flatten the curve.

Healthcare and other essential workers deserve better preparation for times of crisis: sincere and sustained strategies to flatten the curve, sufficient PPE, adequate testing and appropriate emotional support.³⁹ This is especially true in a pandemic when the reality of these needs is clearly foreseeable, particularly for surges two, three and beyond. Perhaps this is what has driven the desire to prioritise healthcare workers for ventilators: an attempt to make up for not being able to adequately protect and support them in the first place.

Twitter Lois Shepherd @loislshepherd

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