Ventilator withdrawal for reallocation during a COVID-19 surge needs a deeper discussion

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Abstract

Many jurisdictions around the world have developed ventilator triage protocols in the event that demand for ventilation during the COVID-19 pandemic overwhelms the available supply. These protocols would be used to determine which patients get priority access to potentially life-saving ventilation. One particularly controversial element of these protocols is what we refer to as "withdrawal for reallocation" – that is, the practice of withdrawing a ventilator from one patient in order to provide it to another patient with a comparatively higher likelihood of benefit. This element raises several ethical issues that have not been given due consideration in the protocols themselves and the literature on the topic. In this paper we highlight these issues and provide recommendations for addressing them.

Introduction

During the early stages of the worldwide COVID-19 pandemic, acute care hospitals in some countries were overwhelmed by a demand for mechanical ventilation. As a result, hospitals and health systems across the world developed protocols for ventilator triage to prepare for a similar surge.[1-3] These protocols identify criteria and processes for determining which patients will get priority access to ventilators during a major critical care surge. Some of these documents also address the issue of what we will refer to as ventilator "withdrawal for reallocation" – that is to say, withdrawal of a ventilator from one patient in order to provide it to a second patient with a higher likelihood of benefit. Protocols and literature on COVID-19 ventilator triage tend to focus on the criteria and processes for initial allocation of ventilator resources, and withholding of ventilation from those who might benefit, while the issue of withdrawal for reallocation has received comparatively little attention. For example, withdrawal for reallocation is not mentioned at all in the Swiss and Belgian protocols.[2,3] A review of state ventilator allocation guidelines in the US found that withdrawal for reallocation is not mentioned in 15% of state protocols.[4] In the literature, the moral permissibility of withdrawal for reallocation is typically stated as an ethical truism with virtually no justification and little recognition of the underlying ethical complexity of the issue. Statements like the following, with little or no corresponding discussion, are common in the literature: "When faced with overwhelming resource restrictions, it may be justified to limit life support therapy or discharge a patient with very poor survival prognosis after admission to ICU to allow queuing patients with a much higher probability of benefit to be admitted".[5] We believe the issue of ventilator withdrawal for reallocation during a COVID-19 surge is a much more complex issue than one might glean from the protocols and literature, and warrants a deeper discussion for three main reasons.

1. A seismic shift in ethical and legal practice of medicine

For many decades now physicians in Canada and the U.S. have practiced under an ethical and legal obligation to obtain consent prior to withdrawal of life-sustaining treatment. This obligation was recently reaffirmed by the Supreme Court of Canada in the 2013 *Cuthbertson v. Rasouli* case.[6] In the few exceptions where consent is not required for withdrawal in North America, there are due process requirements that constrain a physician's authority to withdraw on the basis of a unilateral decision. For example, the *Texas Advance Directives Act* requires physicians to engage in multiple due process steps, including an ethics consultation (to which the family of the patient must be invited to participate), a 10-day period during which the hospital must try to find another institution willing to accept the patient, and the family's right to appeal to state court for an extension.[7]

In the reviewed COVID-19 ventilator triage protocols, withdrawal for reallocation decisions are made unilaterally by physicians (or others appointed to the task, as we will discuss later) and both the patient's involvement through consent and due process are absent. Many protocols do include an appeals mechanism as a way to provide some due process; their inclusion, however, seems to be little more than a symbolic gesture as their fair implementation in the midst of a major surge – during which physicians (and members of the appeals committees) will be required to make withdrawal decisions quickly and under conditions of extreme stress and fatigue – is difficult to imagine.[1] Moreover, surge conditions may require appeals committees to be made up of members internal to the organization, raising further serious questions about the independence and objectivity of the appeals process. This means that physicians will be put in a position of being required to practice in direct conflict with decades of ethical consensus and legal standards related to consent – and to do so in a way that lacks genuine due process for the patient.

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Moreover, protocols that *require* (and not just permit) clinicians to withdraw ventilation from one patient to give to another put those clinicians in the position of practicing in direct conflict with their deeply entrenched ethical code to prioritize the interests of the particular, individual patient under their care. There is a long history of literature highlighting the ethical conflict associated with the physician's role in bedside rationing.[8,9] We can think of no other analogous situation in which a physician would be required (let alone permitted) to withdraw treatment from one patient in order to give that treatment to another patient who might have a better likelihood of benefit.

Given the above it is to be expected that withdrawal for reallocation will be emotionally difficult and morally distressing for clinicians, a point which is generally recognized in the literature. However, this point is often glossed over, and the ethical justification in the form of the equivalence thesis provided as simple answer to the problem. "Undoubtedly, withdrawing ventilators or ICU support from patients who arrived earlier to save those with better prognoses will be extremely psychologically traumatic for clinicians – and some clinicians might refuse to do so. However, many guidelines agree that the decision to withdraw a scarce resource to save others is not an act of killing and does not require the patient's consent".[10] These statements simply don't do justice to the nature of the moral distress caused by withdrawal for reallocation. It cannot be understated how drastic a shift in the ethics of medical practice is being proposed in these protocols.

2. The equivalence thesis

The equivalence thesis, widely accepted as a truism by ethicists, states that other things being equal, there is no moral difference between withholding life-sustaining treatment and withdrawing it.[11] James Rachels was heavily influential in developing this thesis in his 1975 paper, "Active and Passive Euthanasia," in which he criticized the *American Medical Association* policy at the time.[12] He described two men, Smith and Jones, who both stand to gain financially from the deaths of their nephews. In one case Smith drowns his nephew in the bathtub, while in the other case Jones' nephew slips and hits his head, falling face down in the bathtub, and Jones stands by and allows him to drown. Given all the other relevant factors are the same (the intention of the two men and the outcome), Rachels argued, the fact that Smith actively killed his nephew while Jones allowed his nephew to die is not a morally relevant difference. Both men are equally morally blameworthy. Applying this principle to the context of COVID-19 ventilator triage leads to the conclusion that if we accept that unilateral *withholding* of ventilation in a major surge is ethically acceptable, then unilaterally *withdrawing* ventilation should also be acceptable, provided there are no other substantial differences: a claim that might be used to assuage clinicians who might feel conflicted about engaging in withdrawal for reallocation.[13] However, the equivalence thesis doesn't hold generally in the context of COVID-19 triage because other things are not equal between withholding and withdrawal for reallocation – specifically the differing prognoses, and the differing threats to bodily integrity.

First, a patient who has ventilator support withheld and a patient who has ventilator support withdrawn may have different prognoses due to the fact that the second patient is already receiving ventilation and other supportive critical care. We must assume (barring poor clinical judgment or other failings in process) that at some point prior to intubation a clinician must have determined that this patient had the potential to benefit from treatment. Of course, any patient on ventilator support could deteriorate quickly and unexpectedly at any time despite their prognosis, but the vast majority of patients currently receiving ventilator support will have an improved prognosis compared to their prognosis prior to initiation.[14] The equivalence thesis only holds in the case of withdrawal for reallocation if the prognosis of the patient on ventilation is sufficiently similar to what it was before ventilation was initiated – which is obviously not the case here.

Second, there is a relevant difference between withdrawing and withholding life-sustaining ventilation that is often overlooked: withdrawal, especially when coupled with the provision of palliation (which it generally should be), requires active intervention with the patient's person and, therefore, represents a potential violation of bodily integrity in a way that withholding doesn't. In other words, physicians are required to touch a patient's body in order to withdraw, but not to withhold. Some might argue that this particular point simply reflects the omission bias, but in the context of withdrawing treatment it might also capture something important about the value of bodily integrity.[15] In fact, this was part of the reasoning of the Court in *Cuthbertson vs. Rasouli* that led to the judgment that consent is required to withdraw life-sustaining ventilation.[6] An analogy might help to explain the point. Solid organs are a very scarce resource, like ventilators would be during a COVID-19 major surge. Organs are withheld from some patients who need them because of a very unfavourable risk/benefit profile. And yet one can imagine the horror if protocols were introduced that required transplanted organs be removed from patients who suffered complications or engaged in behaviour that would put the viability of the organ at risk, so those organs could be re-transplanted into someone who would be more likely to benefit. The revulsion towards such a proposal is likely due to the fact that it represents an extreme case of violating a person's bodily integrity. While withdrawal of ventilation may not be so extreme, the underlying value of bodily integrity does highlight a relevant difference between withholding and withdrawing ventilation, again undermining the equivalence thesis.

Given that the equivalence thesis seems inapplicable to ventilator reallocation for the reasons just provided, we think it is unlikely to provide much solace to physicians who may experience moral distress from participating in withdrawal for reallocation. Additionally, there has long been a divergence between the views of clinicians and ethicists regarding the equivalence thesis. While it is broadly accepted by ethicists, studies have consistently shown that it is not widely accepted by clinicians. Some authors argue that clinicians are simply mistaken, operating under a cognitive bias, and that this represents an opportunity to educate clinicians rather than serving as the basis for policy.[15,16] But the bottom line is that there is not broad-based consensus regarding the equivalence thesis in any situation; the two reasons we have just provided show that it is not applicable in the particular situation of withdrawal for reallocation.

Giving due attention to this moral distress might actually undermine the ethical justification offered for reallocation in a pandemic surge, which is strictly utilitarian in nature: "The ethical justification for ventilator withdrawal is that in a public health emergency the goal of maximizing population outcomes would be jeopardized if patients unlikely to survive were allowed indefinite use of ventilators".[14] Yet this is a very narrow utilitarian justification,

in which maximizing lives saved is the only outcome considered in the analysis. Even if we limit the analysis to a utilitarian one, a fuller ethical analysis should consider *all* the consequences that result from a particular policy – and extreme levels of moral distress and psychological trauma among critical care clinicians (not to mention potential loss of the public's trust and suffering by patients and families who are subject to withdrawal for reallocation) would have to be considered along with the number of lives saved. The moral distress associated with the decision to require withdrawal for reallocation must be considered alongside the benefit of saving lives; and because the equivalence thesis is inapplicable in this situation (and not widely accepted by clinicians in any case), we should expect this distress to be largely unmitigated.

3. Are occupied ventilators available? And whose decision is it to reallocate them?

The analogy to organ donation mentioned in the previous section highlights a third potential concern with withdrawal for reallocation; one that examines the assumptions underlying the description of what is happening. One can make a resource allocation decision only if there are resources available to allocate; if there are no resources, there are no decisions to be made about how allocation will take place. If there are resources to be allocated, resource allocation decisions also require a person or organization to be in a position to allocate just those resources. It's not clear that either of these two requirements have been satisfied in the case of withdrawal for reallocation.

As was pointed out with the analogy to organ donation, we generally don't think of resources that are in use by a patient as also being among the currently available resources. Once a patient is utilizing a resource there are only three reasons that typically justify withdrawing it: either the patient no longer needs the resource, the patient can no longer benefit from it, or the patient (or legal surrogate) wants it withdrawn. Otherwise, the patient continues to occupy the resource and that resource is not considered part of the eligible pool. In the case of ventilator withdrawal for reallocation, none of these three justifications for withdrawal are present. Withdrawal for reallocation decisions are made despite each patients' absolute (viz. non-relative) ability to benefit from the ventilator, and are made by someone other than each patient him or herself. Given that the ventilator is currently in use in combination with the fact that none of the usual moral criteria for withdrawal have been satisfied, there is good reason to question whether ventilators already in use should be considered among those resources that are eligible for reallocation. In other words, if all ventilators are in use there may simply be none available to be "reallocated".

Even if we put aside the argument just given, and provisionally allow that ventilators already in use are up for reallocation, we can then ask if physicians have the moral authority to carry out this redistribution. The fact that a patient is now on a ventilator may give that patient a moral claim to continued ventilation, unless there is a compelling reason to override that moral claim (i.e. either the patient doesn't need the ventilation, can't benefit from it anymore, or doesn't want it anymore).[17] A proponent of withdrawal for reallocation will say that a public health crisis like the COVID-19 pandemic provides an additional compelling reason to override a patient's moral claim to continued ventilation, but that has to be argued for and not simply stated. In cases where the patient either doesn't need or can't benefit from continued ventilation, that argument would be easy to make. But it is much more difficult to defend the view that a public health crisis justifies taking a ventilator away from someone who has the potential to benefit from it to give it to someone else who might have a greater potential to benefit.

Suggestions to address the above issues

Two suggestions have been provided in protocols and the literature to help address some of the issues raised above, but these suggestions are not sufficient. One suggestion is the introduction of triage officers who would be responsible for making the treatment decisions, to remove the bedside clinicians from the stress of the decisions.[9] There are two reasons why this will have limited impact. First, the bedside clinicians will still be responsible for implementing the decisions of the triage officer, so it may not go very far in reducing the moral distress of the beside clinicians.[18] Second, many hospitals (especially smaller ones) won't have the luxury of being able to appoint a triage officer who doesn't have bedside duties, so these triage officers will experience all the moral distress associated with the decisions in addition to that of having to carry out withdrawals during their clinical shifts.

The second suggestion is to educate physicians about the equivalence thesis and cognitive biases so they cease believing that withdrawing ventilation for reallocation is ethically different from withholding it in a COVID-19 surge. Despite the fact that we have questioned the applicability of the equivalence thesis in this context, the divergence between the views of clinicians and ethicists towards the equivalence thesis is a phenomenon that has persisted for decades. It is highly unlikely that any education done in preparation for an impending crisis will have any impact on this divergence. Besides, since physicians are the ones who have to make and implement these difficult decisions, and do so in a time of crisis, perhaps their feelings about the equivalence thesis deserve more respect and should not simply be dismissed as the result of flawed thinking that warrants corrective education.

One way to effectively address the issues outlined above and navigate the competing values at stake would be to follow the lead of MedStar Georgetown University Hospital. To our knowledge, they are the only hospital with published guidelines that explicitly forbid withdrawing ventilation "based solely on the judgment that another patient has a better chance of recovery".[19] Ventilation can only be unilaterally discontinued if it is judged that the patient will not survive to hospital discharge. These guidelines make an important distinction between withdrawing ventilation because another patient has a comparatively better prognosis, and withdrawing ventilation because that patient's prognosis is so poor. In doing so, the guidelines avoid the uncomfortable competition between patients that gives rise to many of the issues outlined above. While physicians would still experience moral distress associated with making and implementing withdrawal decisions, the moral distress would be mitigated somewhat because physicians will not be put in the position of having to withdraw ventilation from someone who might still benefit just to give it to someone else with a better chance of benefiting. It also avoids the challenges associated with the equivalence thesis because ventilation would only be withdrawn from patients whose prognosis has become so poor that they likely wouldn't have received ventilation in the first place. At the same time, allowing unilateral withdrawal of ventilation from such patients would still enable scarce

ventilators to enter circulation more frequently than under standard practice that requires consent, and would therefore contribute to the utilitarian goal of saving more lives.

At the time of publication the world is already deep into the second wave of the COVID-19 pandemic, so it may be too late to revisit the topic of withdrawal for reallocation in the current protocols. At this point, a physician's participation in withdrawal for reallocation would be voluntary, as we are unaware of any protocol that includes measures that would force physician cooperation. To assist with the efficient implementation of the protocols that include withdrawal for reallocation, organizations might consider asking physicians to identify their willingness to participate, much as many organizations did when Medical Assistance in Dying (MAID) became legal in Canada. Such a discussion could reveal that some physicians' willingness to participate in withdrawal for reallocation might vary depending on the circumstance; for example, some might be willing to participate if there is a great disparity in potential to benefit between two patients, but not if there is only slight difference. These discussions might also reveal, proactively, what information willing physicians consider important, or what conditions they prefer to be met, before participating in withdrawal for reallocation; organizations can then support their willing physicians by ensuring that information is available, and (where possible) conditions are met.

When there is time for reflection and refinement, there are steps that can and should be taken to prepare physicians for the possible need to implement such protocols. For example, there should be an abundance of opportunities for physicians to reflect upon and discuss this issue with colleagues, and this should happen at multiple levels within the profession. Medical associations and professional colleges should provide such opportunities for physicians, but these discussions also need to take place at the institutional level. This would allow physicians to share any ethical concerns they may have with the protocols and allow medical departments, especially intensive care units, to develop strategies should there be any physicians who are uncomfortable implementing the protocols.

Withdrawal for reallocation, as we have argued here, raises a number of ethical issues that need further discussion; the fact that there are unanswered questions, however, should not be taken to suggest that the practice cannot be justified. There will inevitably be other pandemics in the future and there is an opportunity between now and then to give this topic the attention it deserves. There must be a significant deepening of the discussions around the topic, and the ethical appropriateness of withdrawal for reallocation must be argued for and not just asserted.

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