

The Ethics of Unilateral Do-Not-Resuscitate Orders for COVID-19 Patients

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Keywords: COVID-19 Triage, CPR for COVID-19 Patients, Crisis Standards of Care, Futility, Medically Inappropriate CPR

Abstract: This paper examines several decision-making models that have been proposed to limit the use of CPR for COVID-19 patients. My main concern will be to assess proposals for the implementation of unilateral DNRs — i.e., orders to withhold CPR without the agreement of patients or their surrogates.

Response to the COVID-19 pandemic requires a careful balancing of the ethical principles that guide medical practice, particularly when clinicians and institutions consider adjustments to standards treatment protocols. In conventional circumstances, medical decisions are guided primarily by the welfare and autonomy of individual patients. Medically indicated treatments are typically administered when they accord with the duly considered wishes of consenting patients. In crisis circumstances, however, the individualistic focus of conventional decision-making must be supplemented by a utilitarian model, which aims to promote effective stewardship of resources and, ultimately, to treat and save the greatest number of patients. Interventions that would ordinarily be offered to an individual patient might

be withheld or withdrawn, despite the wishes of that patient or her/their surrogate, in order to provide care to those who are more likely to benefit. The most obvious example of a deviation from ordinary standards of care occurs when acute care facilities exceed functional capacity and triage decisions become necessary. Though triage decisions are clearly utilitarian in character, due consideration for the rights and dignity of all patients can be preserved so long as fair allocation criteria are adopted.

In the early days of the COVID-19 pandemic, crisis planners in the United States reflected on the triggers that would signal transitions from conventional to contingency to crisis operations at acute care facilities, and the adjustments to treatment protocols that might be warranted as supplies, space, and staff became more scarce. Understandably, much discussion focused on procedures that would be employed in the worst-case scenario, when demand severely outstrips capacity and crisis standards of care must be implemented. Discussions of resource allocation in the popular media were similarly focused on the specter of overwhelmed health care facilities and, in particular, on the dramatic zero-sum game that would result from allocating a potentially life-saving resource to one patient over another. Less dramatic though equally important were decisions to modify conventional treatment protocols to help conserve resources and hopefully prevent escalation to crisis operations. Examples of modifications to protocols that have been instituted to conserve resources include: reusing personal protective equipment (PPE), which has been in chronically short supply; accepting lower saturation levels before initiating use of oxygen, in order to conserve oxygen and oxygen administration supplies; and limiting the number of health care workers engaged in

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direct care of COVID-19 patients, in order to reduce the risk of contagion.¹

Measures to conserve both material and human resources are a key component of crisis management, but they are not without controversy, particularly when they involve significant deviations from established practices. Debates about the use of cardiopulmonary resuscitation (CPR) for COVID-19 patients are an important example of such controversy. In ordinary circumstances, CPR is provided by default to all patients who might be successfully resuscitated; exceptions are made when patients or their surrogates request or agree to a do-not-attempt-resuscitation (DNR) order. Some have argued that CPR is overused, because success rates are very low for many critically

In what follows I will examine several models that have been proposed to limit the use of CPR for COVID-19 patients. My main concern will be to assess proposals for the implementation of unilateral DNRs — i.e., orders to withhold CPR without the agreement of patients or their surrogates. Decision-making models include both patient-centered justifications for unilateral DNRs, grounded in appeals to futility, and utilitarian justifications, grounded in concerns about resource scarcity. I will argue that patient-centered rationales for unilateral DNRs appear to extend the concept of futility beyond its usual meaning and application, while utilitarian justifications sometimes fail to delineate the circumstances under which a shift from patient-focused care to maximization of pub-

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ill patients and the burdens associated with the intervention, which are not always understood by patients, often outweigh any possible benefits.² Nevertheless, CPR is almost always provided when requested by patients or their surrogates. This holds even for cases in which clinicians believe that CPR will not benefit the patient by prolonging life or serving any reasonable goal of care. Though physicians are not obligated to offer interventions that are medically ineffective, unilateral decisions by physicians to withhold CPR on grounds of futility are rare.

In order to effectively manage critical resources during the pandemic, some crisis planners have called for revisions to standard procedures governing the use of CPR, specifically as applies to COVID-19 patients. CPR is a resource intensive intervention, requiring significant expenditures of PPE and other medical equipment, as well as deployment of multiple health care workers who are exposed to increased risk of contagion. Moreover, some studies have shown high mortality rates among critically ill COVID-19 patients, despite use of aggressive intensive care interventions.³ In light of these factors, it is plausible to argue for a more judicious use of CPR for COVID-19 patients, both to safeguard human and material resources, and to avoid administering a burdensome intervention that is not likely to provide any meaningful benefit.

lic health outcomes is warranted. This lack of clarity can sow confusion and lead to clinical judgments that don't align with well-established principles of crisis management, such as consistency, transparency, the duty of care, and fairness. Though unilateral DNRs can be justified as an element of pandemic response, I will argue that their use should be carefully restricted. Rationales for withholding CPR based on futility judgments must be consistent with current practice, and rationales based on scarcity of human and material resources should only be used when crisis standards of care are in effect.

1. Proposals to Limit the Use of CPR for COVID-19 Patients

The most extreme proposal to alter CPR protocols in response to the pandemic was circulated for discussion in March of 2020 at several institutions, including Northwestern Memorial Hospital in Chicago.⁴ This proposal called for declaring a Universal No Code for COVID-19 patients. According to this policy, a DNR order would be written for all COVID-19 patients, irrespective of their wishes, and natural death would be allowed for any patient who went into cardiac arrest. The primary rationale for this proposal was to protect health care workers and to conserve personnel for the predicted surge of patients. Though the pan-

demical had yet to hit the United States with full force (only about 100 persons had died in New York state at the time the proposal was circulated), statistics from the raging pandemic in Italy were bleak, with health care workers accounting for about 1 out of 6 COVID-19 deaths, and a much larger number sidelined after contracting the virus. Obviously, loss of trained personnel severely undermines our ability to treat and save critically ill patients in a public health crisis, and the Universal No Code proposal reflected a legitimate desire to avoid the severe degradation of medical personnel witnessed in Italy. An additional rationale for this proposal centered on the fact that administering CPR to COVID-19 patients requires enhanced protective measures. The time it takes to don PPE before administering CPR to a COVID-19 patient in cardiac arrest significantly reduces the chance of a successful outcome. As one clinician noted, “By the time you get all gowned up and double gloved the patient is going to be dead ... We are going to be coding dead people.”⁵

Though motivated by legitimate public health concerns, the Universal No Code proposal proved controversial, and has not yet been adopted by any acute care institution in the United States. The most significant problem with the proposal is that it lacks sufficient nuance, failing to differentiate between COVID-19 patients who are unlikely to benefit from CPR and those who may well benefit, such as younger, otherwise healthy patients. Physicians are not obligated to provide futile interventions, as would occur when attempting to “code a dead person,” and scarcity may provide a basis for withholding CPR from patients who are unlikely to benefit during crisis operations, when triage decisions are necessary; but declaring a Universal No Code as a resource conserving measure prior to the implementation of triage procedures denies CPR to those who might benefit, and deviates too severely from the primary duty of care that must be maintained even during a pandemic. Adopting a Universal No Code policy for COVID-19 patients could also erode public trust in health care institutions and discourage patients with other illnesses from considering DNR orders that might align with their wishes and interests.⁶

While the Universal No Code proposal gained little traction, more nuanced proposals calling for selective use of CPR on COVID-19 patients have been widely endorsed as a component of pandemic response. These proposals call for providing CPR to COVID-19 patients who might benefit but withholding it from those for whom it is likely to be medically ineffective. A prominent example was produced by Mark Tonelli and colleagues at the University of Washington Medi-

cal Center, in a policy statement entitled “Code Status and Covid-19 Patients.”⁷ This statement begins by noting increased mortality among hospitalized COVID-19 patients based on advanced age and the presence of comorbidities such as hypertension, diabetes, and coronary artery disease. Patients requiring invasive mechanical ventilation also suffer higher mortality rates, as indicated in a study of patients in two hospitals in Wuhan, China, which confirmed only one survivor out of 32 COVID-19 patients who received such ventilation. In addition, the authors note that “survival to hospital discharge for [all] critically ill patients receiving CPR is very low (<15%), with already being on mechanical ventilation, older age, and comorbidities reducing that likelihood even further.” In light of these statistics, the authors state their central policy recommendation:

CPR may be medically inappropriate in a significant portion of elderly, critically ill patients with Covid-19 and underlying comorbidities ... Per [University of Washington Medical Center] and [Harborview Medical Center] policies, clinicians are not obligated to provide medically inappropriate treatment, even when requested by patients and/or designated surrogates. If treating clinicians, including more than one physician, determine that CPR is medically inappropriate, a Do Not Attempt Resuscitation Order (DNR) may be written without explicit patient or family consent.⁸

The document concludes by emphasizing the need for clear and sensitive communication aimed at securing “informed assent” from patients or surrogates of patients who will not receive CPR.⁹ But the salient element of the proposal is unmistakable: Clinicians should be prepared to write unilateral DNRs for COVID-19 patients when they determine that CPR is not medically appropriate due to poor prognosis.

“Code Status and Covid-19 Patients” was distributed for discussion among crisis planners across Washington state, and it also influenced pandemic response discussions elsewhere. Perhaps most notably, the document was adopted by the Catholic Health Association of the United States (CHA) and incorporated almost verbatim into its own guidelines for the use of CPR on COVID-19 patients at Catholic institutions.¹⁰ As is to be expected, the CHA guidelines are expanded to include language that reflects core principles of Catholic medical ethics, such as commitment to “the inherent dignity of all who seek care” and to compassionate “accompaniment” of those who face life-threatening

illness. The CHA emphasizes two additional points that are worth noting. First, it emphasizes that “the clinical indications for decision-making about any medical intervention are the same as they have always been”; in other words, the CPR guidelines for COVID-19 patients are “merely an application and implementation of best-practices applied to the current setting.”¹¹ Second, the CHA emphasizes that besides clinical benefit to individual patients, hospitals must consider the health and safety of staff and take steps to reduce their exposure to the virus when CPR is administered. By emphasizing that the “duty to care exists not only for the patient but also for the health care team,” the CHA guidelines appear to suggest that danger to health care workers might also factor in to code status decisions for COVID-19 patients, though there is no explicit guidance on when or how this should occur.¹²

This suggestion is made explicit in “Guidance for Decisions Regarding Cardiopulmonary Resuscitation during the Covid-19 Pandemic,” coauthored by Scott Halpern and Douglas White, and disseminated by the Palliative and Advanced Illness Research Center (PAIR) at Penn Medicine.¹³ According to the PAIR website, these guidelines aim “to promote a nationally standardized approach to these difficult decisions” and they have been “adopted by hundreds of hospitals around the world.”¹⁴ The guidelines identify three key considerations that should guide CPR decisions during the pandemic: (1) the potential for benefit to patients; (2) the risk of contagion to health care workers; and (3) the importance of individualized decision making, as opposed to blanket withholding of care to certain groups of patients based on illness, age, or comorbidity. In light of these considerations, the authors make three recommendations. The first recommendation is that CPR should not be offered when it is “medically inappropriate,” because it would not improve the patient’s prognosis or serve any reasonable goal of care. For COVID-19 patients, this may include “those with advanced age and comorbidities, and/or with progressive respiratory failure despite maximal levels of invasive mechanical ventilation.” Importantly, the authors add that “the risks to health-care providers of performing CPR may influence the determination that CPR is not medically appropriate, if coupled with considerations of individual patients’ prognoses”; the same would hold true if PPE “is already being rationed.” This suggests that risks to clinicians and/or shortage of PPE can justify concluding that CPR is medically inappropriate, even if there is a small chance of benefit to a patient. If crisis operations have been declared and triage procedures are in effect, CPR might also be judged inappropriate for a patient who might be saved if “the patient would not receive

high enough priority for subsequent critical care.” The second and third recommendations of the Pennsylvania guidelines pertain to fair process, emphasizing the need for independent review from a consulting physician before writing a DNR, and the need to inform the patient or surrogate of the rationale for the DNR. As in the Washington and CHA guidelines, assent from the patient or surrogate should be sought but is not required.

2. Assessing the Models: Patient-centered versus Utilitarian Justifications for Unilateral DNRs

The Washington, CHA, and Pennsylvania models each provide useful recommendations for physicians that are grounded in well-established ethical principles and clinical practices. Especially helpful are recommendations for increased advance care planning to promote patient understanding and alignment of care with their wishes and interests. At the same time, these models give rise to some significant ethical questions, particularly with respect to the conditions under which unilateral DNRs for Covid-19 patients might be justified. Two key areas that warrant critical attention are: (1) the use of futility judgments to justify unilateral DNRs and (2) the use of unilateral DNRs during conventional or contingency as opposed to crisis operations.

It should be clear from the preceding review that futility judgments provide a key rationale for the use of unilateral DNRs for Covid-19 patients. While the term “futility” is now largely avoided in favor of terms such as “medical ineffective” and “medically inappropriate,” these terms all point to scenarios in which an intervention is not expected to provide benefit to the patient. Each of the proposed guidelines note increased mortality rates among critically ill COVID-19 patients based on age, comorbidities, and the use of mechanical ventilation, and assert that CPR might therefore be medically inappropriate for these patients. In such cases, CPR may be withheld in accordance with a well-established principle of clinical ethics, which states that “Physicians are not required to offer or to provide interventions that, in their best medical judgment, cannot reasonably be expected to yield the intended clinical benefit or achieve agreed-on goals for care.”¹⁵

Though consistent with accepted ethical principles, invoking futility to justify unilateral DNRs for COVID-19 patients is potentially problematic for several reasons. First, determining what constitutes reasonable expectation of clinical benefit becomes controversial once we move beyond cases of “strict” or “physiologic futility,” i.e., cases in which an intervention has no chance whatsoever of achieving the intended physi-

ologic effect. CPR would be futile in the strict sense for a person exhibiting signs of “irreversible death,” such as dependent lividity or rigor mortis. In a hospital setting, CPR would be strictly futile for any patient whose disease is so advanced that it would not restore spontaneous circulation, as would be the case for “a patient whose cardiac arrest is terminal and occurs despite optimal treatment for progressive septic or cardiogenic shock.”¹⁶ Of course, in most cases, CPR will have at least some chance of achieving the intended physiologic effect of restoring spontaneous circulation. But when that chance approaches zero, CPR can be properly described as “quantitatively” futile, despite a very small chance of success. CPR would be futile in this sense for an elderly COVID-19 patient with comorbidities, who has been declining despite use of the most aggressive critical care measures, including mechanical ventilation and vasopressors. While CPR might succeed in restoring spontaneous circulation, this outcome is highly unlikely, and even so would only return the patient to a condition of “active clinical deterioration.”¹⁷ In such a case, there is no reasonable expectation that the patient will benefit by achieving either the minimal physiologic standard for success or the more demanding but commonly used standard of survival to discharge. For these reasons, few would dispute the claim that it would be futile to administer CPR.

Yet, as the probability of success increases, judgments of “quantitative futility” become more problematic, and this is where critical questions may be raised about the previously described guidelines. Of particular concern is the claim made in the WA and CHA guidelines that CPR may be futile in a “significant portion” of elderly, critically ill COVID-19 patients with underlying comorbidities. This language suggests something more than the narrow range of uncontroversial cases in which patients exhibit refractory deterioration despite maximal interventions. In a similar vein, the guidelines highlight data that exaggerate negative outcomes for COVID-19 patients. Especially problematic is the statistic from the Wuhan study, featured prominently in the guidelines, which identifies only a single survivor among 32 COVID-19 patients receiving mechanical ventilation. While a survival rate of just over 3% might arguably provide grounds for a judgment of quantitative futility, this statistic is not representative of outcomes for ventilated COVID-19 patients. Subsequent cohort studies with larger samples provide evidence of significantly higher survival rates for COVID-19 patients receiving invasive mechanical ventilation. In the US, a study of 165 patients at Atlanta hospitals found a mortality rate of 35.7% for these patients — which is comparable to that

of patients with acute respiratory disease syndrome and other infectious pneumonias — with 53.3% surviving to discharge.¹⁸ A second, much larger study of 4,287 patients in the UK showed a mortality rate of 58.8% for patients receiving invasive mechanical ventilation, with 41.2% surviving to discharge.¹⁹ Notably, the UK study showed a mortality rate of 73.4% for patients with “very severe comorbidities,” in comparison to 57.9% for those without.²⁰ While there is room for disagreement about the threshold for judgments of quantitative futility, the survival rate of 26.4% for this group of patients would not justify a futility judgment according to any accepted standard.

Although the Atlanta and UK studies both shed light on survival rates for critical ill COVID-19 patients, neither contain data on the most relevant demographic for the issue at hand — namely, COVID-19 patients who received CPR for in-hospital cardiac arrest. Studies for this group of patients are scarce, but they also do not support withholding CPR on grounds of futility. A single center study of 136 patients in Wuhan reported restoration of spontaneous circulation in 13.2% of patients, with a mere 2.9% surviving at least 30 days after the intervention. While this survival rate is very poor, the authors caution that the “results may not be generalizable to other settings and healthcare systems,” because their study was limited to a single center that experienced a shortage of medical resources and “uncertain quality of the CPR.”²¹ Studies of CPR for COVID-19 patients are currently lacking in the US, but researchers for the American Heart Association have argued that survival rates can be reasonably estimated from studies of CPR for patients with comparable disease severity, specifically, for “critically ill patients with pneumonia or sepsis who were receiving mechanical ventilation in an intensive care unit (ICU) at the time of arrest.”²² Data from a cohort of 5,690 patients at US hospitals from 2014–18 show an overall survival to discharge rate 12.5% for this group of patients, with variations among patient subgroups from a low of 3.9% to a high of 26.4% based on “age, presenting rhythm, and illness severity.” For patients aged 70 and above, survival rates ranged from 3.9% to 20.1% depending on cardiac arrest rhythm status and use of vasopressors.²³ At best, this would justify a judgment of futility for only the most seriously ill among this cohort of patients.

These studies provide context for assessing the claim that CPR might be medically inappropriate for a “significant portion” of elderly, critically ill COVID-19 patients with underlying comorbidities. If we interpret “elderly” as aged 70 and above and focus on patients receiving mechanical ventilation, it is reasonable to infer from the previously cited data that over-

all survival rates for this group of patients will be no better than 10%. A corresponding mortality rate of 90% would indeed show that CPR proved medically ineffective for a significant portion of patients in this demographic. But this does not justify withholding CPR from this group of patients on grounds of futility. The most commonly cited standard of quantitative futility, put forth by Schneiderman, sets a threshold at “less than 1% chance of success.”²⁴ Schneiderman describes this as a “conservative standard,” which is needed to account for prognostic uncertainty, and to acknowledge that the decision of what constitutes an acceptable risk to benefit ratio is inherently value-laden. In other words, it is not a strictly clinical decision, and thus requires due deference to the preferences of patients and surrogates. The American Heart Association echoes this judgment, asserting that

specifically deviate from the prevailing deference to patient autonomy.

A second problem with the Washington and CHA guidelines is that they do not differentiate between the use of unilateral DNRs during crisis versus non-crisis operations. Emergency preparedness plans typically delineate a continuum of three operational stages: a conventional stage, in which resources are not yet diminished and health care services are unaltered; a contingency stage, in which standards of care remain “functionally equivalent” despite some degradation of resources; and a crisis stage, “when demand acutely exceeds supply of resources and usual medical practices cannot be maintained.”²⁷ When crisis standards of care are in effect, unilateral DNRs for some critically ill patients, including those with COVID-19, are clearly justified as a function of triage protocols. But

In this review, I have emphasized several important points that are not always clear in guidelines that have been proposed for the use of CPR during the pandemic. First, the use of unilateral DNRs deviates significantly from standard practice and should be carefully restricted as a component of pandemic response. Second, unilateral DNRs based on futility judgments are justified only in a narrow range of cases in which survival is not expected due to refractory deterioration.

“resuscitation should be offered to all patients who want it unless there is clear evidence ... of quantitative futility ... [i.e.,] that survival is not expected after CPR under given circumstances.”²⁵ As noted previously, in conventional circumstances patient and surrogate preferences typically prevail even in cases where life-saving interventions are reasonably judged to be futile. In their discussion of CPR protocols for COVID-19 patients, Cheruku and colleagues articulate the ethical context for this practice as follows: “The ethics supporting the general provision of CPR in cardiac arrest are based on giving each patient the opportunity to survive. Among the competing ethical principles of autonomy, utility, and justice, autonomy is prioritized in the United States. The principle of autonomy has supported the use of CPR even in patients in whom medical professionals have deemed the procedure to be futile.”²⁶ These observations appear to undermine the claim that the Washington and CHA guidelines are merely applying existing standards to “the current setting.” To implement unilateral DNRs based solely on judgments of futility would in fact constitute a significant deviation from standard practice and would

this does not imply that the same practice is justified in conventional or even in contingency circumstances. In fact, crisis planning documents typically emphasize that allocation of scarce resources to patients who are more likely to benefit should take place only when crisis standards of care are in effect and all reasonable alternatives have been exhausted.²⁸ During contingency operations, adjustments to treatment protocols are justified to conserve diminishing resources, so long as these adjustments are consistent with the delivery of functionally equivalent care — i.e., care in which outcomes are substantially similar to those achieved during conventional operations. The use of unilateral DNRs in cases where CPR is judged to be quantitatively futile can be reasonably interpreted as an example of such an adjustment. While this deviates from standard practice, which defers to patient autonomy, it would not substantially alter outcomes for patients suffering from in-hospital cardiac arrest. In contrast, withholding CPR against the wishes of patients who might benefit is a more significant departure from patient-centered decision-making, and should be limited to crisis operations. In such cases, it should be

emphasized that the rationale for a unilateral DNR is one of scarcity, not futility. Limiting interventions based on the need to ration should not be confused with limiting interventions on grounds of futility.²⁹

The Pennsylvania guidelines, in contrast to those from Washington and the CHA, explicitly limit deviations from standard protocols for CPR and other life-sustaining interventions to crisis circumstances, when “the focus of medical care may shift from the individual patients to the thoughtful use of limited resources for the best possible health outcomes for the population as a whole.”³⁰ This provides helpful clarification of the conditions under which unilateral DNRs might be justified. Unfortunately, the Pennsylvania guidelines proceed to use the term “medically inappropriate” in a way that risks blurring the distinction between withholding interventions on utilitarian versus patient-centered grounds. As previously noted, this term is typically used interchangeably with “futile” and “medically ineffective” to identify treatments that cannot be expected to provide any benefit *to the patient*. But the Pennsylvania guidelines assert that risks to providers and shortages of PPE may “influence a determination that CPR is not medically appropriate.” This strikes me as an unfortunate expansion of prevailing usage. Concerns about human and material resources may well justify withholding CPR from some patients in crisis circumstances, but it does not follow that CPR becomes medically inappropriate, ineffective, or futile for those patients. It would be more accurate to acknowledge that *a potentially beneficial intervention* was withheld due to crisis circumstances, as we would say for any routine intervention that was not provided to a patient because of a public health emergency.

In this review, I have emphasized several important points that are not always clear in guidelines that have been proposed for the use of CPR during the pandemic. First, the use of unilateral DNRs deviates significantly from standard practice and should be carefully restricted as a component of pandemic response. Second, unilateral DNRs based on futility judgments are justified only in a narrow range of cases in which survival is not expected due to refractory deterioration. Futility based DNRs should not be implemented in conventional circumstances, where prevailing deference to patient autonomy remains appropriate, but they may be justified during contingency operations to conserve diminishing resources, since they do not substantially alter outcomes for critically ill patients. Third, expanded use of unilateral DNRs on utilitarian grounds is justified only when a surge of patients severely outstrips capacity and crisis standards of care are implemented. In crisis settings, the justification for

unilateral DNRs should be understood and explained in terms of scarcity and the need to ration, not futility.

Policies governing the use of CPR cannot be expected to address all variables and nuances that might arise when treating critically ill patients during a pandemic. But clarity on the points noted above is necessary to promote effective communication with patients and clinical decisions that align with ethical principles that are central to crisis management — most notably, transparency, consistency, fairness, and the duty of care. Expanding the use of unilateral DNRs during a pandemic, particularly based on appeals to futility, is inconsistent with current practice, risks creating distrust among patients and surrogates, and can adversely impact patients who are already vulnerable to socially influenced health disparities.³¹ These concerns are compounded if clinicians begin to liberalize criteria for futility, expanding the pool of patients who are deemed “too sick to benefit” or if they begin to write DNRs based on resource concerns prior to crisis operations, when decisions are typically made by triage teams based on clearly stated criteria that aim to promote fair treatment for all patients. Instead of pursuing an ethically hazardous expansion of unilateral DNRs, it would be better to redouble efforts at proactive communication concerning the benefits and burdens of CPR for critically ill patients, which are not well understood by the general public. DNRs that result from the duly considered wishes of patients or their surrogates avoid the aforementioned risks and allow us to achieve the best of both worlds, insofar as they preserve patient autonomy while conserving human and material resources that are needed to effectively address the COVID-19 pandemic.

Note

The author has no conflicts of interest to disclose.

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28. Minnesota emphasizes that "proactive" triage is justified only when resources remain critically limited despite maximum efforts to conserve and adapt ("Crisis Standards": 14-15). A key assumption reiterated throughout Washington's "Scarce Resource Management" is that triage algorithms should be used only when "Healthcare systems are overwhelmed despite maximizing all surge and mitigation strategies impacting the space and/or staff and/or supplies needed to deliver usual levels of care."
29. As Schneiderman notes, arguments for limiting treatment on grounds of resource allocation "should proceed by an entirely different route" from those based on futility. "Medical Futility," *supra* note 24.
30. Halpern and White, "Guidance for Decisions Regarding Cardiopulmonary Resuscitation."
31. For an example of the ethical pitfalls and disparities that can arise when potentially life-sustaining interventions are withheld without sufficient clarity and transparency, see A. Waldman and J. Kaplan, "Sent Home to Die," *ProPublica*, September 2, 2020, *available at* <<https://www.propublica.org/article/sent-home-to-die>> (last visited October 22, 2021). In this case, numerous patients (all of whom were African American) were discharged from or denied admission to Ochsner Medical Center in New Orleans, Louisiana after being told that nothing more could be done for them. While Ochsner denies any wrongdoing or deviation from standard protocols, confusion persists about whether these decisions were based on resource scarcity, and about whether some patients could have indeed benefited from continued care in the hospital. There was, in addition, a perception of discrimination among some families.