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Caring for the Unvaccinated

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Daniel Wilkinson, a 46-year-old veteran who survived two deployments to Afghanistan, died a preventable death during Texas's summer delta wave (1). But unlike thousands of his fellow Texans, Wilkinson was fully vaccinated and did not die of coronavirus disease (COVID-19) pneumonia. Instead, "a gallstone took him out" as he went into pancreatitis-induced multisystem organ failure waiting for an accepting facility that could treat him.

Mr. Wilkinson and countless others forced to defer medical care were victims of the delta wave. When the pandemic shifts hospitals from conventional to contingency standards of care (2, 3), they must delay medically necessary and time-sensitive procedures for vaccinated adults with serious illnesses (4). These delays are directly harmful; these vaccinated patients are directly harmed when hospitals use all their resources to care for the many unvaccinated patients with COVID-19. For example, delaying breast cancer surgery by just 4 weeks increases the relative risk of death from the disease by 8% (5). Should vaccinated patients pay the price for the refusal of the unvaccinated to accept a freely available life-saving therapy?

Simply rejecting the use of vaccination in prioritization for medical resources without analysis ignores the very real tradeoffs at play during a pandemic. The pain and suffering in the vaccinated from deferred medical care require a deeper defense of caring for the unvaccinated. I argue that in surge conditions, a contingency care standard that prioritizes emergency life support, regardless of vaccination status, saves the most lives. The principle of reciprocity supports a possible tiebreaker role for vaccination status when two patients have equivalent survival benefit from a scarce healthcare resource. However, a universal exclusion of the unvaccinated from life support during a pandemic surge fails the test of proportionality for reciprocity. Finally, healthcare systems have an ethical obligation to expand capacity to meet the demands of a pandemic surge, even when the vast majority of the patients are unvaccinated.

Saving the Most Lives Means Prioritizing Care for the Unvaccinated

A leaked memo from the North Texas Mass Critical Care Task Force laid out an apparent life-saving rationale for prioritizing the vaccinated. The task force argued that because "COVID-19 vaccination decreases severe infection and death . . . vaccine status therefore may be considered when making triage decisions as part of the physician's assessment of each individual's likelihood of survival" (6). Patients who undergo mechanical ventilation for elective procedures have a dramatically higher survival rate than patients with COVID-19 acute respiratory distress syndrome. Shouldn't we prioritize the former?

However, this approach fails to consider the risk of death without treatment. Without immediate and ongoing intensive care treatment, patients with acute respiratory failure have mortality near 100%. On the other hand, a stable outpatient has a higher short-term probability of death with major cardiac or abdominal surgery than with waiting. Even if the analysis extends to total quality-adjusted life-years, surgical procedures have a substantially lower survival benefit than mechanical ventilation for severe COVID-19. For example, in the landmark STITCHES (Surgical Treatment for Ischemic Heart Failure Extension Study) trial, a coronary artery bypass decreased mortality in patients with ischemic cardiomyopathy from 66.1% to 58.9%, an impressive number needed to treat of just 14 patients (7). But mechanical ventilation for COVID-19 pneumonia confers dramatically more survival benefit than a coronary artery bypass graft (CABG) surgery, improving survival from 0% to 50% with a number needed to treat of just two. Likewise, although the 8% increased relative risk of death from deferring breast cancer surgery for a month is awful, the absolute increase in risk is only 1 per 100, and perhaps only 1 per 200 for a 2-week deferral. After the surge is over, the hospital can catch up on deferred elective surgeries. The harm from a CABG or cancer surgery delayed 2 weeks is real but tiny in comparison with certain death from denving life support for respiratory failure.

So, in general, the ethical principle of maximizing objective benefits of treatment will favor prioritizing emergency respiratory

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failure care for the unvaccinated over other therapies (8). However, this is not invariably true. When an entire region is completely overwhelmed by a pandemic surge and life support becomes scarce even for emergency conditions, standards shift from contingency to crisis standards of care (3, 9). Crisis standards of care are allocation guidelines for the triage of absolutely scarce healthcare resources, which can only be activated when all hospitals within several hours are completely full of patients with acute conditions on life support. In this scenario, physicians could use the diagnosis of COVID-19 acute respiratory distress syndrome as prognostic information, which is permitted in standard triage ethics (10). For example, a vaccinated patient with respiratory failure from respiratory syncytial virus-induced status asthmaticus has a much higher probability of survival than an unvaccinated patient with COVID-19 pneumonia (11, 12). However, although vaccination is incredibly protective against respiratory failure from COVID-19, it is unclear that vaccination affects the prognosis of patients with COVID-19 pneumonia that has progressed to the point of requiring mechanical ventilation. In fact, severe breakthrough COVID-19 in an immunocompromised person may have a worse prognosis than severe COVID-19 in an unvaccinated patient with a normal immune system.

Denying Unvaccinated Persons Access to Life Support during a Surge Fails the Test of Proportionality

An alternative rationale for deprioritizing the unvaccinated is the principle of reciprocity. Vaccinated people are contributing directly to society by literally protecting their community from a deadly disease. Therefore, taking the time to get vaccinated should buy you "payback" in the form of priority access to health care. In contrast, by acquiring and spreading COVID-19, the unvaccinated are directly harming others. For proponents of deprioritizing the unvaccinated, this negative spillover effect to others is what distinguishes vaccination from other behaviors associated with disease. They claim the unvaccinated, by disregarding

the safety of others, have literally "forfeited" their claim to equal medical treatment and must face the consequences (13).

However, these arguments fail the test of proportionality for reciprocal obligation. In the United States, the first 270 million vaccine doses saved an estimated 279,000 lives (14). Proportional reciprocity (payback) for vaccination would be about 0.001 lives worth of medical care, orders of magnitude lower than what would be required to justify denying life-saving treatment to the unvaccinated so the vaccinated can get elective procedures. To adopt the position of total exclusion from healthcare resources during a surge, one must assert that the unvaccinated have broken the social contract so irrevocably that their lives have almost no value in comparison with the lives of the good, vaccinated citizens. In other words, the magnitude of the harm done by the unvaccinated does not justify prioritizing nonemergent care over life-saving care.

Vaccine mandates for the workplace, in contrast, pass the test of proportionality. An unvaccinated person can at any point take on the minor inconvenience of vaccination to regain their job. An unvaccinated person near death from respiratory failure no longer has that option. Even if announcing a policy barring unvaccinated persons from medical care leads to increased vaccination, the benefits would be seen far too late to help deal with a current surge.

In addition, if we are in the business of quantifying contributions to society, people are far more than their vaccination status. Who is more socially useful, the 35-year-old father of three in reversible respiratory failure or the 70-year-old with pancreatic cancer who is waiting for a Whipple? Arguably, society would be much worse off with the loss of the former. Prioritizing people with greater social worth could be used to construct trickle-down justifications for special treatment of athletes, politicians, or chief executive officers—or the friends and family of those getting to judge social worth.

Proponents of discrimination by vaccination status are quick to carve out exceptions for cases they find sympathetic. The North Texas memo lays out a short list of "accommodations" for when the decision to get vaccinated is "beyond the patient's control." But what if the unvaccinated person hesitated to get the vaccine because of years of racist treatment in the healthcare system? How about if they were exposed to a media environment dominated by misinformation? What if their pastor offers them a religious exemption and forbids church members from receiving the vaccine? Adjudicating this list of possible exceptions at the beside will be subjective, arbitrary, and biased.

Finally, although refusing vaccination may violate the informal social contract, it is certainly not illegal. Indeed, proponents of deprioritizing the unvaccinated suspect that legal challenges would prevent their ideas from being implemented explicitly as hospital policy but nevertheless call on physicians to step in and covertly "put a finger on the scale in favor of the vaccinated" (13). It would be blatantly unethical for physicians to operate a secret healthcare allocation system based on vaccination status without the expressed oversight of the state government.

Health Systems Have an Ethical Obligation to Expand Capacity for Life Support during a Pandemic Surge, Even When the Vast Majority of the Patients Are Unvaccinated

Although it often goes unsaid in the debate on caring for the unvaccinated, it is no secret that hospitals lose money on COVID-19 care and work to minimize it (15). The situation got so bad in Los Angeles county during the winter surge that the public health department had to issue an order forcing elite hospitals to stop doing elective procedures and accept transfers from overwhelmed community hospitals (16). Patients from racialized minority groups are less likely to have private insurance (17) and are therefore less likely to have access to the low-benefit but lucrative procedures hospitals prefer to prioritize over COVID-19 treatment. If tertiary care centers turn inward and stop taking transfers of patients with COVID-19 from overwhelmed community hospitals, this will result in *de facto* triage in favor of lower-benefit care and cause systematic harm to both the vaccinated and unvaccinated in vulnerable communities (18, 19). Hospitals must justify their nonprofit

status by accepting transfers and prioritizing life-saving care during a pandemic surge.

A Possible Tiebreaker Role for Vaccine Status in Triage under Crisis Standards of Care

There is a limited role for vaccine reciprocity as a tiebreaker under overt crisis standards of care when every hospital in a region is overwhelmed and critical resources have run out. Although inappropriate to use as the sole principle, recognizing positive contributions to society in the form of increased priority for scarce resources is an established part of multiprinciple allocation frameworks. In vaccine allocation, reciprocity pushed healthcare workers to the front of the line ahead of their high-risk patients (20). In kidney allocation, reciprocity rewards prior living donors with a priority bump equivalent to 4 years of waiting on dialysis (21). Therefore, if two patients have a similar prognosis (e.g., a younger vaccinated solid organ transplant recipient with a severe breakthrough case and an unvaccinated patient with exactly the same predicted survival), prioritizing the vaccinated patient is ethically defensible. This triage rule recognizes vaccination as a narrow contribution and grants a limited and specific reciprocal priority (tiebreaker for respiratory life support). However, this scenario is an exceedingly narrow case. Any policy of discrimination against the unvaccinated would have to be written down transparently and communicated broadly, ideally coming from state and local public health departments instead of individual hospitals. Financial incentives must be explicitly identified and disentangled from the process.

Conclusions

The case of Mr. Wilkinson, the veteran who died of gallstone pancreatitis, was truly tragic. Withholding or withdrawing life support from an unvaccinated person with COVID-19 pneumonia and a similar or worse prognosis to accommodate Mr. Wilkinson could have been acceptable, but only if Texas had declared crisis standards of care and had an explicit, transparent allocation protocol in place. Without this formal structure, *ad hoc* bedside rationing would have been unethical.

Ultimately, the much-maligned North Texas memo got it right by emphasizing the principle of saving lives in scarce healthcare resource allocation. The overlooked third point states, "many are understandably angry and frustrated with the unvaccinated, but triage must remain grounded on likelihood of survival." Deferring lower-benefit procedures to prioritize high benefit COVID-19 care will harm some patients with serious medical conditions who did their part and got vaccinated. But during a surge when resources are limited, uniformly denying care to the unvaccinated would lead to many more preventable deaths. There is a defensible role for vaccination status in triage as a limited tiebreaker, not as a categorical exclusion, but only in the context of a well-defined and transparent triage algorithm. Finally, despite the enormous financial pressure to do otherwise, elite academic centers are obligated to prioritize life support for emergency conditions to save as many lives as possible during COVID-19 surges.

<u>Author disclosures</u> are available with the text of this article at www.atsjournals.org.

References

- 1 Prieb N. Veteran dies of treatable illness after waiting hours for ICU bed. Washington, DC: The Hill; 2021 [created 2021 Aug 28; accessed 2021 Dec 15]. Available from: https://thehill.com/ homenews/state-watch/569834-veteran-dies-of-treatable-illnessafter-waiting-hours-for-icu-bed.
- 2 Committee on Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations, Institute of Medicine. Crisis standards of care: a systems framework for catastrophic disaster response. Washington, DC: National Academies Press; 2012 [created 2012 Mar 21; accessed 2021 Dec 15]. Available from: https://www.ncbi. nlm.nih.gov/books/NBK201063/.
- 3 National organizations call for action to implement crisis standards of care during COVID-19 surge. Washington, DC: National Academy of Medicine; 2020 [created 2020 Dec 18; accessed 2022 Jan 11]. Available from: https://nam.edu/national-organizations-call-for-action-toimplement-crisis-standards-of-care-during-covid-19-surge/.
- 4 Prachand VN, Milner R, Angelos P, Posner MC, Fung JJ, Agrawal N, et al. Medically necessary, time-sensitive procedures: scoring system to ethically and efficiently manage resource scarcity and provider risk during the COVID-19 pandemic. J Am Coll Surg 2020;231:281–288.
- 5 Hanna TP, King WD, Thibodeau S, Jalink M, Paulin GA, Harvey-Jones E, et al. Mortality due to cancer treatment delay: systematic review and meta-analysis. BMJ 2020;371:m4087.
- 6 North Texas doctor's group retreats on policy saying vaccination status to be part of care decisions. Dallas, TX: Dallas News: 2021 [created 2021 Aug 19; accessed 2022 Jan 1]. Available from: https://www.dallasnews. com/news/watchdog/2021/08/19/if-north-texas-runs-out-of-icu-hospitalbeds-doctors-can-consider-a-patients-vaccination-status/.

- 7 Velazquez EJ, Lee KL, Jones RH, Al-Khalidi HR, Hill JA, Panza JA, et al.; STICHES Investigators. Coronary-artery bypass surgery in patients with ischemic cardiomyopathy. N Engl J Med 2016;374:1511–1520.
- 8 Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. *Lancet* 2009;373:423–431.
- 9 Piscitello GM, Kapania EM, Miller WD, Rojas JC, Siegler M, Parker WF. Variation in ventilator allocation guidelines by US state during the coronavirus disease 2019 pandemic: a systematic review. JAMA Netw Open 2020;3:e2012606.
- 10 Emanuel EJ, Persad G, Upshur R, Thome B, Parker M, Glickman A, et al. Fair allocation of scarce medical resources in the time of COVID-19. N Engl J Med 2020;382:2049–2055.
- 11 Strid JMC, Gammelager H, Johansen MB, Tønnesen E, Christiansen CF. Hospitalization rate and 30-day mortality among patients with status asthmaticus in Denmark: a 16-year nationwide population-based cohort study. *Clin Epidemiol* 2013;5:345–355.
- 12 Binachon A, Grateau A, Allou N, Ferdynus C, Allyn J, Dangers L, et al. Acute severe asthma requiring invasive mechanical ventilation in the era of modern resuscitation techniques: a 10-year bicentric retrospective study. PLoS One 2020;15:e0240063.
- 13 Marcus R. Opinion: doctors should be allowed to give priority to vaccinated patients when resources are scarce. Washington, DC: Washington Post; 2021 [created 2021 Sep 3; accessed 2021 Dec 15]. Available from: https://www.washingtonpost.com/opinions/2021/09/03/ doctors-should-be-allowed-give-priority-vaccinated-patients-whenresources-are-scarce/.
- 14 Galvani A, Moghadas SM, Schneider EC. Deaths & hospitalizations averted by rapid US vaccination rollout. New York, NY: Commonwealth Fund; 2021 [created 2021 Jul 7; accessed 2021 Dec 15]. Available from: https://www.commonwealthfund.org/

publications/issue-briefs/2021/jul/deaths-and-hospitalizations-averted-rapid-us-vaccination-rollout.

- 15 Evans M, Berzon A, Hernandez D. Some California hospitals refused COVID-19 transfers for financial reasons, state emails show. New York, NY: Wall Street Journal; 2020 [updated 2020 Oct 19; accessed 2021 Dec 15]. Available from: https://www.wsj.com/articles/some-californiahospitals-refused-covid-19-transfers-for-financial-reasons-state-emailsshow-11603108814.
- 16 Aragón TJ; California Department of Public Health. Amendment to the Order of the State Public Health Officer: hospital surge 1/15/2020. Sacramento, CA: California Department of Public Health; 2021 [created 2021 Jan 15; accessed 2021 Dec 15]. Available from: https://www. cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Amendment-tothe-Order-of-the-State-Public-Health-Officer-Hospital-Surge-1-15-2020. aspx.
- 17 Artiga S, Hill L, Orgera K, Damico A. Health coverage by race and ethnicity, 2010–2019. San Francisco, CA: Kaiser Family Foundation; 2021 [created 2021 Jul 16; accessed 2021 Dec 15]. Available from: https://www.kff.org/racial-equity-and-health-policy/issuebrief/health-coverage-by-race-and-ethnicity/.

- 18 Kelly C, Parker WF, Pollack HA. Low-income COVID-19 patients die needlessly because they are stuck in the wrong hospitals—while the right hospitals too often shut them out. Washington, DC: Health Affairs; 2021 [created 2021 Apr 2; accessed 2021 Dec 15]. Available from: https://www.healthaffairs.org/do/10.1377/hblog20210401.95800/full/.
- 19 Iwashyna TJ. Do hospitals value everyone? this winter, they have a chance to prove it. New York, NY: New York Times; 2020 [created 2020 Oct 30; accessed 2021 Dec 15]. Available from: https:// www.nytimes.com/2020/10/30/opinion/coronavirus-treatmenthospitals.html.
- 20 Dooling K, McClung N, Chamberland M, Marin M, Wallace M, Bell BP, et al. The Advisory Committee on Immunization Practices' interim recommendation for allocating initial supplies of COVID-19 vaccine: United States, 2020. MMWR Morb Mortal Wkly Rep 2020;69: 1857–1859.
- 21 OPTN policy 8: allocation of kidneys. Richmond, VA: Organ Procurement and Transplantation Network; 2021 [updated 2021 Sep 1; accessed 2021 Dec 15]. Available from: https://optn.transplant.hrsa.gov/media/ 1200/optn_policies.pdf#nameddest=Policy_08.