

# LIFE-YEARS & RATIONING

## in the Covid-19 Pandemic: A CRITICAL ANALYSIS

by MARYKATHERINE GAURKE, BERNARD PRUSAK, KYEONG YUN JEONG,  
EMILY SCIRE, and DANIEL P. SULMASY

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Early in the pandemic, prominent bioethicists endorsed the maximization of life-years as a strategy in rationing scarce medical resources, yet claims used to justify this recommendation are often incorrect, and philosophical arguments for it fail. Even in a public health emergency, the fundamental principles of bioethics should remain our guides, and these principles support an aim to save the most lives while rejecting an aim to save the most life-years.

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**T**he Covid-19 pandemic has reignited a number of old ethical questions regarding the just allocation of scarce medical resources. With the looming possibility of an overwhelming surge of Covid-19 cases, several bioethicists were quick to promote frameworks for rationing intensive care unit beds, ventilators, and other resources according to what they deemed rational, ethical, and widely accepted principles.<sup>1</sup> Introducing one such framework in the *New England Journal of Medicine*, Ezekiel Emanuel and colleagues asserted that “saving more lives and *more years of life* is a consensus value across expert reports.”<sup>2</sup> Language about saving more life-years (or its various congeners) and criteria operationalizing this concept were quickly incorporated into numerous state-level pandemic resource alloca-

tion plans for dealing with Covid-19.<sup>3</sup> Yet the term “life-years” is not univocal, and the ethical justification for using a principle of maximizing life-years as a means of rationing medical resources has not been adequately investigated.

We take up the tasks of clarification and critique by first providing a brief history of various age-related criteria employed in allocation policies, carefully distinguishing “life-years” from similar terms often conflated with it and one another in the literature. We then dispute two claims sometimes made in support of a life-years approach by showing that evidence of public support for this life-years approach was always thin<sup>4</sup> and that organ transplantation protocols do not provide a precedent for seeking to save the most life-years. Next, we highlight the fact that state emergency response plans ultimately rejected or severely attenuated the meaning of saving the most life-years, and we go on to argue that philosophical arguments in support of rationing by life-years

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(or its various congeners) ultimately fail. We conclude by introducing a reasonable and just alternative and defending that alternative against potential counterarguments.

### Definitions and Origins of Life-Years and Related Concepts

The concept of life-years must be distinguished from other, related concepts employed in literature defending allocation priorities. These concepts are shaped by distinct ethical priorities and may lead to different consequences in practice.

The term “life-years” was introduced in the late 1940s as an epidemiological and economic indicator of disease burden—for example, retrospectively comparing “life-years lost” to tuberculosis versus the “life-years lost” to hepatitis.<sup>5</sup> Initially, the metric of life-years was used as a statistical tool for recording medical progress and comparing causes of death between different populations. The metric began to be used in prospective thinking about resource allocation with the introduction of dialysis, as a way of showing the benefit of treatment.<sup>6</sup> Medical ethicists, particularly utilitarians, then picked up the term as a way of thinking about just resource allocation,<sup>7</sup> although they were heavily criticized at the time.<sup>8</sup>

Maximizing life-years was subsequently considered and rejected in allocation decisions about kidney and lung transplants.<sup>9</sup> The concept was, however, successfully introduced into pandemic rationing plans by Douglas White and colleagues in 2009.<sup>10</sup> In this context, it concerns allocating resources between individuals by determining who can be expected to live the longest after a resource is deployed, thus measuring an intervention’s value. Underlying this approach is the assumption that having more years of life left to live is of greater value than having fewer; thus, an individual who is expected to live more years of life should be given priority for a medical intervention over someone with fewer years left to live.

In other words, the goal is to save as much of the good in question—years of life—as possible.

Life-years should not be confused with three related concepts: fair innings, life cycles, and age cutoffs. “Fair innings,” a term originating in the game of cricket, refers to the idea that when people have lived a certain number of years, they have presumably had all the opportunities available to anyone who has lived up to that point and that fairness dictates that resources be directed toward younger people who have not yet had such opportunities. The concept appears to have been first comprehen-

those above it, an equally discounted priority.

A related concept has been dubbed the “life-cycles approach,” according to which “the goal is to give each individual equal opportunity to live through the various phases of life.”<sup>14</sup> Operationally, priority is assigned to different stages of life or different age ranges in descending order. For example, children (say, those twelve years old and younger) are assigned a higher priority than adolescents (say, those thirteen to seventeen), adolescents a higher priority than young adults (say, those eighteen to thirty-five), and so forth. One might

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sively described in medical ethics and public health literature by John Harris,<sup>11</sup> elaborated upon in discussions of medical resource allocation by economist Alan Williams,<sup>12</sup> and incorporated into pandemic resource allocation by key figures such as Emanuel, Alan Wertheimer, and White.<sup>13</sup> Operationally, it differs from “life-years” in that it suggests an explicit age cutoff instead of being used in comparisons that give preference to younger and healthier patients across the whole life span. Under a life-years approach, someone expected to live two more years has priority over someone expected to live only one more year, someone expected to live three more years has priority over someone who is expected to live only two more years, and so on. By contrast, under a fair-innings protocol, someone younger than  $x$  years has priority over someone of at least  $x$  years if both are in need of the resource and there is not enough for both. Those below the “fair” cutoff are assigned an equal priority; and

consider it either a parceled life-years approach or an iterative fair-innings approach. The idea is that each stage or cycle of life brings different opportunities that each person should be afforded, to the greatest extent possible, by a system that allocates health care resources justly. In other words, unlike an approach that aims to maximize life-years, the life-cycles approach emphasizes that it is the ability to experience the goods of certain stages of life, not increasing the number of years lived, that should be prioritized.<sup>15</sup>

Another variation of language is the use of explicit age cutoffs for apportioning resources, not on the basis of judgments about the effectiveness of treatment (that, for example, no patients over eighty-five years of age survive this treatment and therefore will not be offered it), but on the basis of considering age itself as a criterion of justice in apportioning resources. While not always explicitly named as such, this approach is a variation on the fair-innings concept and has for

years been invoked by ethicists and policy-makers, arguing, for instance, that no patients sixty-five years of age and older should receive dialysis or that no patients eighty and over should receive CPR.<sup>16</sup> Some protocols for rationing scarce resources in a pandemic have specified age cutoffs without explicit reference to life-years, fair innings, or life cycles.<sup>17</sup>

As noted above, these various concepts are often used interchangeably in resource allocation protocols and related literature, but each is deserving of attention. For the purposes of this paper, we focus on the use of life-years in allocation protocols to challenge the claim that maximizing life-years is a widely shared public value.<sup>18</sup>

### Public Support for Maximizing Life-Years

While moral arguments cannot be settled by polls,<sup>19</sup> advocates of the life-years approach have tried to buttress their claims by asserting empirical evidence of public support. Such assertions, however, rest on scant and faulty data.

For example, Maryland based its judgment about the acceptability of this approach on data collected from focus groups of healthy and non-elderly persons who were given a limited set of ethical principles to choose from with respect to how ventilators should be allocated.<sup>20</sup> New York (inaccurately cited by Emanuel et al. as evidence of consensus in support of saving the most life-years<sup>21</sup>) revisited its rejection of age-based rationing in response to “significant public comment,” but this feedback is not cited or specified, and the state ultimately affirmed its initial position against rationing based on maximizing life-years.<sup>22</sup> Research cited by White et al.<sup>23</sup> or by Emanuel and Wertheimer<sup>24</sup> as evidence of public support for a life-years approach to pandemic rationing consisted of surveys, largely conducted by economists, that posed questions regarding hypothetical scenarios only tangentially related

to pandemic rationing (such as liver transplantation), queried able-bodied and young populations, and reported the views of subjects mostly residing outside the United States.<sup>25</sup>

Taken as a whole, these studies do not justify the claim that there is a broad American public consensus in favor of the life-years approach to pandemic rationing.<sup>26</sup>

### Previous Uses of Life-Years in Rationing Decisions

Articles and protocols supporting the use of life-years in rationing during the coronavirus pandemic often cite the use of the concept in allocating organs for transplantation as a justification.<sup>27</sup> On close inspection, however, claims that organs have been apportioned according to a principle of maximizing life-years are unsupported. For example, the lung allocation score for pulmonary transplantation is based, in part, on the ratio between how long the patient would be expected to live without the transplant (that is, how much the patient needs the transplant) and the chance that the patient will survive for one year after the transplant (that is, how effective the operation will be).<sup>28</sup> Therefore, the lung allocation score is not based on the maximization of expected life-years, as claimed by White and Lo,<sup>29</sup> but is instead concerned with balancing the expected success of the transplant with how critical the transplant is to patient survival.

Similarly, the Organ Procurement and Transplant Network considered and explicitly rejected the use of expected life-years as a criterion of allocation for kidneys.<sup>30</sup> Rather, the allocation of kidneys is based, in part, on attempts to match the expected life of the organ to the expected life of the patient, so that, for example, an older patient will not die of a stroke in three years with a transplanted kidney that might have been functional for fifteen years.<sup>31</sup> That is radically different from giving the organ to the younger patient and denying it to the

older patient simply on the basis of age. The point of this kidney allocation protocol is not to deny a kidney to an older person on the grounds of a shorter life expectancy but to match that kidney’s life expectancy with the life expectancy of the recipient.

Moreover, age cutoffs for transplantation that were common early in the history of organ transplantation were based not on maximizing life-years as a principle of just rationing but on the expectation that older patients were not likely to survive the grueling surgery and antirejection treatment. Experience has proven that view of short-term effectiveness wrong, however, and older patients are now frequent transplant recipients.<sup>32</sup>

### Previous Uses of Life-Years in Emergency and Pandemic Preparedness Protocols

In 2006, in response to the H5N1 avian influenza pandemic, an Ontario plan to triage resources such as ventilators and antiviral medications excluded patients over eighty-five.<sup>33</sup> In 2008, New York promulgated a ventilator allocation guideline that, although modeled after the Ontario plan, removed the age cutoff, arguing that age already factors into any clinical assessment of health.<sup>34</sup> In 2015, in the face of feedback arguing for maximizing life-years rather than lives and prioritizing children at the expense of older adults,<sup>35</sup> New York released an updated version that maintains its stance against the use of age as an exclusion criterion, but uses age as a “tie-breaker” when children are involved so that, if two patients have the same priority score and one is a child, the resource should go to the child.<sup>36</sup> In 2010, the Veteran’s Health Administration developed guidelines based on studies of veterans’ attitudes and specifically rejected a fair-innings approach in favor of (near-term) survivability as its overriding criterion.<sup>37</sup>

In 2009, White and colleagues observed that, while an approach based

on saving the most lives balanced utilitarian with egalitarian concerns, it was deficient in that it would not accomplish “the greatest good for the greatest number.”<sup>38</sup> They proposed adding a criterion of saving the most life-years to meet that goal. This argument, however, begs the question by assuming that a utilitarian standard of promoting the greatest good for the greatest number is the standard by which to judge the correctness of any given rationing scheme. White and colleagues cite Harris to justify the life-years approach,<sup>39</sup> but it is far from clear that the 1985 quotation they pull from Harris is either a view he endorses or that it applies to pandemic rationing; indeed, since the late 1980s, Harris has argued against age-based rationing and has advocated a lottery as the only way of allocating limited health care resources, including ventilators for Covid-19, without unjust discrimination.<sup>40</sup> Despite these significant conceptual discrepancies, the approach White et al. promoted was codified into (though quickly removed from) a University of Pittsburgh protocol for pandemic rationing that was released early in the Covid-19 pandemic in the United States and later used as a model by several states.<sup>41</sup>

### Initial Invocations of Life-Years in Covid-19 Rationing Protocols

As the Covid-19 pandemic escalated and it became apparent that critical care resources available in the United States could be overwhelmed, at least thirty-seven states began either developing guidelines or “crisis standards of care” plans de novo or updating preexisting versions of such documents.<sup>42</sup> Following the publication of Emanuel et al.’s and White and Lo’s prominent allocation frameworks for responding to Covid-19,<sup>43</sup> many states incorporated the maximization of life-years into their initial criteria for the allocation of scarce resources.<sup>44</sup>

The use of life-years and its congeners, however, raised deep concerns among some ethicists,<sup>45</sup> the elderly,<sup>46</sup> and the disabled.<sup>47</sup> These parties argued that such guidelines would exclude elderly and disabled persons as being unworthy of equal access to ventilators because they would not be expected to live long lives even though they might survive acute Covid-19 infection. Some guidelines appeared to be incorporating judgments of social worth as well, by, for example, excluding those with intellectual disabilities from access

we examine several formulated by prominent figures in bioethics.

Frances Kamm, for example, submits that rationing of resources should be based on “fairness.” She elaborates, “[G]ive to those who, if not helped, will have had less of the good (e.g., [.] life) that our resource can provide (at least if they are equal on other health dimensions) before giving to those who will have had more of it even if they are not helped.”<sup>53</sup>

The question at hand is whether people are wronged when limited resources that could extend their lives

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to intensive care.<sup>48</sup> The U.S. Office for Civil Rights stepped in to reaffirm the right of all individuals to be considered for health care resources, regardless of age, disability status, or other status.<sup>49</sup> In response to such pressure, state guidelines were rapidly revised, at least in appearance. As of this writing, many still retain the language of life-years, and some still include attenuated versions of life-years rationing schemes, in the form of a five-year survival criterion,<sup>50</sup> though even these shorter-term survival considerations are, like longer-term estimates, notoriously inaccurate and subject to bias.<sup>51</sup>

### Assessing the Arguments

Given these considerations, the claim that “[s]aving more lives and more years of life is a consensus value across expert reports” seems overstated. There is not, in any event, a consensus proven by valid data or supported by solid argument. Nonetheless, a number of arguments have been advanced in the bioethics literature outside the pandemic rationing context in support of taking into account expected life-years in allocating life-saving resources.<sup>52</sup> Here,

are used instead to extend the lives of those who have already lived longer. Other things being equal,<sup>54</sup> it is not unfair for one person to live longer than another—a person who has a long life does not thereby wrong others whose lives are shorter—but might it be unfair to use the resources for the older person’s benefit? If life were like a pie that could be divided fairly, then it might seem intuitive: obviously, it would be unfair to give someone more of it when she already has had more than others! But because life is not like a pie and, other things being equal, it is not unfair for someone to live longer than others, appeals to our intuitions risk misleading us. Instead, we need an argument focused on the question, are people wronged when limited resources that could extend their lives are used instead to extend the life of someone who already has lived longer than they have?

Imagine, then, two people drowning in a pool. Both urgently need to be saved. Person A is much younger than person Z. Other things being equal, Kamm would call person A needier.<sup>55</sup> That means that A needs our help more than Z because A needs more time (more life-years) in order to experience the goods that Z already has had the time and presump-

ably opportunity to experience. A is not needier because A has greater medical needs or the like.

Would it be unfair to A for us to save Z? Again, if life were like a pie and if it were unfair for someone to live longer than others, then we would have to say, yes, it would be unfair to A for us to save Z, but both of those presumptions are false. Grant that, if we save Z, A's life will have gone worse than Z's life because A will not have had as many years as Z has had. Is the result that we are under a moral obligation to prefer A over Z? If that is the case, is it because justice requires us to try to see to it that people have the opportunity to experience more-or-less-equal sums of life and the goods it affords? That seems peculiar and unrealistic. In any event, Kamm does not speak to this question.

While Harris ultimately distances himself from the view, he gives perhaps the best exposition of the reasons one might adduce in support of the so-called fair-innings argument. Briefly, the fair-innings view is that we are indeed obligated to try to see to it that “everyone be given an equal chance to fair innings.”<sup>56</sup> By “fair innings,” Harris means “a reasonable life,” ideally including “all the ages of man,” though he notes that “there is also value in living through as many ages as possible” should a full life be precluded.<sup>57</sup> On this account, should we be unable to save both A and Z, A is to be prioritized on the grounds that Z already has had more of life and its goods than A has. Depending on just how old Z is and on what we determine a fair share of life to be, we might even say, as Harris does, that Z has received her “entitlement” and is now enjoying a “bonus” subject to cancellation “when this is necessary to help others reach the threshold” or at least come closer to it.<sup>58</sup>

It should strike us as strange, however, to think that a person has an “entitlement” to life such that an “injustice” is done to her if she does not reach her “fair share.”<sup>59</sup> It is also strange to think that a person could

take or receive more than her fair share of life. Other things being equal, it is unfortunate—not unfair—to die young. It is fortunate—not fair or unfair—to live long. Harris casts his argument, at least in *The Value of Life*, in terms that obscure these facts. (Again, Harris does not himself hold the fair-innings argument, although some of his discussions of the fair-innings argument are so fair-minded that one needs to read across a spectrum of his work to be clear that he rejects it.<sup>60</sup>)

Dan Brock's position is much like Harris's in *The Value of Life*, though Brock does not speak of “fair innings.” For Brock, fairness is concerned with seeing to it that people have as close to a normal life span as society can provide. In other words, fairness is about correcting fortune to the extent within the society's power. By way of illustration, he asks the reader to “[s]uppose a liver becomes available, but there are two patients each of whom urgently needs it or he or she will die. The first patient is 20 years old and because of an unrelated health problem would have a life expectancy of 10 years with the transplant, whereas the other patient is 50 years old and would have a life expectancy of 15 years with the transplant.”<sup>61</sup> Brock asks, “Shouldn't the 20-year-old patient have a fair chance to get closer to a normal lifespan that the 50-year-old has already reached? Would it be fair to give the organ to the 50-year-old patient, thereby increasing still further the undeserved inequality in the years that each will live?”<sup>62</sup>

There is a sense in which, as Brock says, the “inequality in the years each will live” is indeed undeserved: the older person presumably has not done anything to deserve to live longer than the younger person; the older person is simply more fortunate than the younger person. At the same time, the older person is not to blame for living longer; he has not been unfair to the younger person by virtue of having lived a longer life. His longer life is not “undeserved” because he

took more of life than was his due, as if life were like a pie. His longer life is only “undeserved” in the sense that no one *merits* a longer life.

Nonetheless, Brock claims that “the ground for preferring the young precisely is fairness.”<sup>63</sup> His explanation for “why the young may have a stronger claim grounded in fairness for life-extending interventions than do the old” turns on the observation that, if the young do not have priority, “they will have had so much less life.” That is unfair, however, only if fairness obligates a society to try to see to it that people have the opportunity to experience more or less equal sums of life and the goods it affords. But what, finally, is the argument for that understanding of fairness?

At this point, Norman Daniels's prudential life span account might be invoked to help us move at last beyond intuitions. Daniels explicitly addresses rationing by age in his book *Am I My Parents' Keeper?* He submits that “pure age rationing,” which takes age into account without considering its bearing on the likely effectiveness of a medical intervention, “is morally permissible under certain, very specific, and restrictive conditions.”<sup>64</sup> The “reason for appealing to age,” he specifies, “has to do with effectively promoting opportunity.”<sup>65</sup>

Through the prudential life span account, Daniels seeks to transform how people envision the relatively “new” question of how to distribute social resources among different age groups that are or at least appear to be in competition with one another for them.<sup>66</sup> His key proposal is that people should cease framing the question in terms of competition between fixed age groups: for example, between “the young” and “the old.” Instead, in recognition of the fact that we all age (such that the young become the old), we should ask how it would be just to distribute resources over a normal life span, across its different stages. This “fundamental shift in perspective” frees us from pitting age groups against one another and allows us to conceive of trans-



fers between age groups “as transfers between the stages of a life, not between persons” of different ages.<sup>67</sup> In other words, we are to ask, not how to divide resources between persons, but how to distribute resources over a normal life span. As Daniels acknowledges, he thereby substitutes for the problem of justice between age groups the problem of how rational agents would “prudently allocate fair shares of basic social goods over their lifespan.”<sup>68</sup> Against that background, “whatever is prudent . . . constitutes what is just.”<sup>69</sup> The consideration that comes front and center is thus what principle or principles prudent deliberators would follow in designing institutions to distribute goods over a normal life span. In brief, how is a person’s fair share of health care benefits to be determined?

To advance the argument, Daniels turns to a modified form of John Rawls’s original position, specifying constraints on the deliberators’ knowledge of their circumstances, but he also makes clear that the “frame” governing this thought experiment must be the principle of fair equality of opportunity. According to Daniels, what makes fair equality of opportunity the appropriate principle to govern decisions about the design of health care institutions is the fact that “[i]mpairment of normal functioning through disease and disability restricts individuals’ opportunities” relative to what they might have enjoyed had they been healthy.<sup>70</sup> In other words, disease and disability subtract from a person’s “age-relative opportunity range.” They strike at a person’s capacity to enjoy the goods distinctive to the different stages of life. Taking this into account, prudent deliberators would distribute health care over a life span in such a way that a person’s age-relative normal opportunity range would be protected at each stage of life.<sup>71</sup>

That conclusion might lead us to think that, while on this account health care resources would be distributed according to the expected needs of each stage of life, rationing

by age as such would be impermissible. Daniels says, however, that it “cannot be ruled out . . . under all conditions,”<sup>72</sup> namely, those in which allocating resources to provide for a life span “beyond the normal range” would put at risk earlier stages of life: for example, by diverting funding from prenatal care to acute care of the dying elderly.<sup>73</sup> Under such resource constraints, Daniels claims, “prudent deliberators would prefer a distributive scheme that improves their chances of reaching a normal lifespan to one that gives them a reduced chance of reaching a normal lifespan but a greater chance to live an extended span once the normal span

conditions does not support rationing by age in a public health emergency. Daniels explicitly rejects “the piecemeal use of age criteria” by hospitals or physicians, “or in any way that is not part of an overall prudent allocation” of health care resources.<sup>75</sup> He contrasts his argument for rationing by age with one that is not based on prudence. According to this other argument, as Daniels presents it, “We should give priority to the young in rationing life-extending services . . . because the old have already had a chance to live more years and it is only ‘fair’ to the young to give them an equal chance.”<sup>76</sup> Daniels cites such an argument by Robert Veatch,<sup>77</sup> but

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is reached.”<sup>74</sup> Moreover, he claims that prudent deliberators would also take into account the low probability that they would live beyond the normal life span and thus choose to distribute resources to stages of life at which they would more likely benefit.

One critical question to put to Daniels’s argument is how to determine what constitutes a life span “beyond the normal range” and therefore beyond the help of the principle of fair equality of opportunity. Is the normal life span simply a statistical determination, which then can advance or retreat as healthy living does? Or is the normal life span a normative concept, specifying how long a life should last or what stages it should include? If the answer is the latter, then an argument is needed to support the conclusion that a normal life span goes only this far and no further.

For the purposes of this paper, however, the more important point is that Daniels’s argument for rationing by age under specific, restricted con-

ditions is also more or less the argument that Harris explicates and that Kamm and Brock advance. Daniels rejects “[t]his appeal to intuitions about fairness” as “not persuasive.”<sup>78</sup> He questions just “where [our] intuitions lead us or whether they are to be trusted” once we fill in or introduce variations to the cases on which this other argument depends.<sup>79</sup> “Does it matter to our intuitions,” Daniels asks, “whether the old have already made claims on comparable resources to extend their lives, or is the occasion of competition with the young the first such claim? What if the young person has already received a lot of help, but the old person none . . . ?”<sup>80</sup> And so forth.

If egalitarian appeals to fairness do not support rationing by age in a public health emergency, utilitarianism might seem more apt: we should choose that action that yields the best consequences. Saving A will yield the best consequences inasmuch as A will likely derive greater benefit than Z will; therefore, we should save A. Along these lines, Peter Singer has

claimed, with respect to the Covid-19 pandemic, that “some forms of ageism are justifiable.”<sup>81</sup> His thought experiment in support of that claim, however, is surprisingly convoluted and easily countered,<sup>82</sup> which raises the question of why he does not appeal to a simple utilitarian calculus.<sup>83</sup> Perhaps the answer is that seeking to save the most life-years (because that is the course of action that will yield the best consequences) invites discrimination not only against the elderly but also against the disabled of whatever age, since it could be claimed they, too, potentially stand to lose fewer goods by dying than the nondisabled risk losing. Many people, including philosophers, would reject reducing the value of a life to the goods it seems to offer in the present and to promise in the future. It seems Singer, too, recoils from doing so.<sup>84</sup>

### The Reasonable, Fair, and Just Alternative

The enthymematic premise of many pandemic rationing protocols is that the circumstances of overwhelming need and acute scarcity require us to change our ethical standards. We disagree. When the circumstances are dire, we need our fundamental ethical principles more than ever. Accordingly, the approach to take is not to abandon ethics as usual but to apply the basic principles of ethical medical decision-making, appropriately tailored to the special circumstances. When patients are ill, physicians, who have sworn to help *all* patients to the best of their ability, make decisions on the basis of need, prognosis, and effectiveness. When resources are so scarce that not all can be treated, justice requires that decisions about whom to treat and whom not to treat continue to be guided by these principles.

The first duty, of course, is to do all that one can to avoid rationing in the first place. This might require resource sharing between services and institutions, transferring patients, or

employing comparably effective alternative treatments. It might require even ingenuity, such as sharing ventilators between patients or fashioning ventilators out of other equipment.

Should rationing prove necessary, adherence to the standard duties of beneficence, respect for persons, and justice would entail:

- valuing each person equally, regardless of age or disability, and
- on the basis of a duty of equal beneficence toward all, deciding which treatments are potentially beneficial (and ordinarily indicated) for each patient.

Upholding these duties would then also entail

- recognizing that the likelihood of effectiveness (defining effectiveness clinically as the likelihood of survival to hospital discharge) will vary between patients;
- recognizing that some particular interventions may not be effective at all for some patients;
- recognizing that some patients may already be dying of another condition so that, even were they to survive to hospital discharge, they would be unlikely to survive more than weeks to months after, reasonably dissipating any effectiveness;
- recognizing that neither clinical judgment nor any outcome prediction score is perfect but that morality requires only a faithful and unbiased best effort in making these judgments; and, finally,
- rationing limited resources on the basis of the expected effectiveness of treatment for each patient.

In other words, we endorse an aim to save the most lives while we reject an aim to save the most life-years. While not perfect, physicians are experts in judging the expected effectiveness of medical interventions for particular

patients and in judging who is most likely to survive to hospital discharge, whether by a clinical scoring system or clinical assessment. Clinical determinations to withhold or withdraw ineffective care are ethically justified on the grounds that there can be no moral duty to do what will not work.<sup>85</sup>

It also would be ethically justifiable, in the circumstances of acute scarcity and overwhelming need, on the basis of practical wisdom and respect for the equal dignity of all patients, to exclude anyone with any condition from which they are likely to die within one year. While most such terminally ill patients would be unlikely to survive to hospital discharge, it seems fair to exclude those very few who might survive to hospital discharge only to die of an underlying malignancy within a few more months. Very near-term prognostic judgments are at least modestly accurate and probably best considered an extension of the concept of effectiveness, while judgments about life expectancy beyond one year are extremely inaccurate and amount to an attenuated form of a life-years judgment.

On the chance that two patients have the same expected benefit, one might allocate by lottery rather than some discriminatory criterion such as age or expected life-years or social worth or race or gender or any other characteristic of the person as a “tie-breaker.”<sup>86</sup>

Of course, many older persons or those suffering with debilitating chronic diseases will already have judged for themselves that the burdens of ventilator care outweigh the benefits, perhaps even before the advent of Covid-19. By virtue of the overriding premise that fundamental ethics do not change in a pandemic, informed refusals of potentially life-saving treatment should be honored. This includes refusals by patients who, charitably, would be willing to forgo treatment to allow others to be treated instead.

This approach seems most just and fair, respectful of the equality of all, basing decisions not on personal characteristics of the patient, such as age, disability, or social worth, but on basic medical criteria. The acute limitation of resources would dictate maximizing the number of lives saved, but it would not permit deciding which lives will be saved on the basis of other criteria such as expected life-years. It can be ethically defensible to decide that a treatment is not worthwhile, but it is never justifiable to judge that a patient is not worthy of treatment.

### Counterarguments

It might be objected that our view is so counterintuitive that we cannot be serious. Given the terrible choice between saving a young child or an older person, would anyone hesitate to choose the young child? Imagine that the two would in fact receive much the same benefit from treatment, so that we need some tiebreaker. Would “discriminating” by age in such a case really be unjust? Even if it is granted that it would not be unfair to the child to care for the older person, would doing so not be wrong in some other sense, or on different grounds? Would it be, for example, the virtuous choice? Is it the choice that an exemplary clinician would make, one whom we would want to emulate?<sup>87</sup> Would we even be able to live with ourselves if we chose the older person on the basis of a mere coin toss?

We argue that the intuition upon which such criticisms rest is far from universal. It might be prevalent in our youth-glorifying Western culture, but many cultures revere their elders above all others.<sup>88</sup> Moreover, intuitionism is a weak theory of morality. Which intuition about age is correct, and how could one know? A moral theory ought to be able to sort out intuitions, or at least adjudicate among competing intuitions, not impose one on everyone. Nor does it make sense to turn age discrimination into

a clinical virtue. The exemplary physician is guided by patient need and prognosis, not speculation about how many years the patient is expected to live beyond hospitalization. The exemplary physician rejects the temptation of playing god by making decisions based on nonclinical criteria. Physicians and other health care professionals should not be discriminating on the grounds of personal characteristics such as age or disability, even when rationing. Basing triage decisions on need, prognosis, and effectiveness focuses attention where it is due: namely, on the ability of a scarce intervention to change the

people such that they are more likely to contract the virus, more likely to become ill from it, and more likely to die from it, but now the health care system actively discriminates against them by shutting them out from care.<sup>89</sup> It is the sick who need care, and if they have a reasonable chance of benefiting from care, fairness dictates that they be given their shot. Health care should not be turned into a conspiracy of the young and able-bodied against the sick and disabled, even in a pandemic.

Another objection, similar to the second, might be that looking beyond the effectiveness of a particu-

### The exemplary physician is guided by patient need and prognosis, not speculation about how many years the patient is expected to live beyond hospitalization.

course of an illness, not on whether the patient deserves treatment.

A different objection might be that age is already baked into the clinical scoring system or clinical assessment of short-term prognosis that we suggest be used to allocate scarce medical resources. According to this objection, we are merely disingenuously hiding our preference for saving the young. On average, younger persons with Covid-19 will have a better medical prognosis than older persons will, and so our argument equally favors saving the most life-years.

It is certainly true that age affects prognosis. But this only describes how the virus discriminates, which is not the same as advocating that caregivers discriminate. Age is but one among a cluster of factors predictive of the outcome, such that a generally healthy seventy-year-old woman might score better than a thirty-year-old man with multiple chronic diseases. That, as we stated earlier, is unfortunate but not unfair. Moreover, what the proponents of rationing by life-years advocate amounts to a double whammy. Not only does the disease discriminate against older

lar treatment to consider near-term prognosis in deciding who receives care amounts, in practice, to something similar to aiming to save the most years of life. If we have granted that patients who are expected to die within one year (due to another condition or terminal prognosis) may be excluded from receiving life-sustaining resources in times of scarcity, can we reasonably defend a distinction between excluding those with an expected prognosis of a few months but not excluding those expected to live only a few years?

The distinction we endeavor to make in talking about one-year survival versus five-year survival is between the practical effectiveness of an intervention and rationing on the basis of expected life-years. Many of the various state crisis standards of care plans make a similar distinction. These plans categorize one-year survival or less as a measurement of saving the most lives, while five-year life expectancy is the attenuated form of life-years to which many plans reverted after the intervention of the Office for Civil Rights.<sup>90</sup> In the setting of scarcity during a pandemic, not offer-



ing ventilator support to persons who are expected to die within a year from a preexisting terminal condition is a judgment of practical reason. Such persons are not typically considered candidates for screening mammography for similar practical reasons. Such persons would be very unlikely to survive to hospital discharge and would most likely be screened out by clinical scoring systems. Were they not screened out, however, as a practical matter, they would probably be on the ventilator for a long time, followed by prolonged courses of rehabilitation, effectively consuming the time they have remaining, given their underlying conditions. Common sense dictates that this would be practically ineffective, and common-sense judgments of the ineffectiveness of treatment are not the same as rationing.<sup>91</sup> As a very practical matter, prognostication of six-month and one-year survival, while not great, is far better than prognostication for five-year survival.<sup>92</sup> Moreover, rationing by five-year survival would eliminate huge numbers of sick persons; those admitted to an academic medical center already have a five-year mortality rate of 63 percent.<sup>93</sup>

Finally, one might object to our reliance on classical principles of medical ethics in responding to unprecedented circumstances. One could argue that intensified uncertainty and heightened controversy surrounding decisions of allocating scarce medical resources during a pandemic are symptomatic of the failure of our ethical principles to meet the needs for which they were allegedly developed. Ought we instead establish principles better suited to addressing the particular questions that arise in these circumstances?

Our response is that true principles are not subject to change when the going gets tough. Rather, it is precisely in times of stress that principles are needed most. The bedrock principles of medical ethics are respect for persons and beneficence toward them. Justice does not undermine those principles but ampli-

fies them. The fundamental problem with the life-years approach is that it places value on the experiences a person might have over a lifetime, not on persons themselves. The approach we advocate emphasizes the necessity of respecting persons as valuable in themselves. To think otherwise undermines the meaning of health care, since illness and injury always limit the experiences persons can have. Medicine exists as a human enterprise because all sick, injured, and disabled persons have equal value in themselves as persons, no matter what their afflictions prevent them from doing. To abandon that principle in the setting of pandemic scarcity would undermine the moral basis of health care.

#### Notes

1. E. J. Emanuel et al., “Fair Allocation of Scarce Medical Resources in the Time of Covid-19,” *New England Journal of Medicine* 382 (2020): 2049-55; D. B. White and B. Lo, “A Framework for Rationing Ventilators and Critical Care Beds during the COVID-19 Pandemic,” *Journal of the American Medical Association* 323 (2020): 1773-74.

2. Emanuel et al., “Fair Allocation,” 2052 (emphasis added).

3. See, for example, Hospital & Healthsystem Association of Pennsylvania, *Interim Pennsylvania Crisis Standards of Care for Pandemic Guidelines*, version 2, (Pennsylvania Department of Health, April 10, 2020), <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/COVID-19%20Interim%20Crisis%20Standards%20of%20Care.pdf>, pp. 30-33; Subject Matter Experts Advisory Panel for the Governor’s Expert Emergency Epidemic Response Committee, *Crisis Standards of Care Guidelines for Hospitals for the COVID-19 Pandemic*, version 2.0 (Colorado Department of Public Health & Environment, April 26, 2020), 34, at <https://www.colorado.gov/pacific/cdphe/colorado-crisis-standards-care>; Executive Office of Health and Human Services, *Crisis Standards of Care Planning Guidance for the COVID-19 Pandemic* (Commonwealth of Massachusetts, Department of Public Health, April 7, 2020), 16-17, 21, at COVID-19 Public Health Guidance and Directives, <https://www.mass.gov/info-details/covid-19-public-health-guidance-and-directives>; Oklahoma State Department of Health, “Hospital Crisis Standards of Care: Resource Reference Cards,” April 7, 2020, <https://www.ok.gov/health2/documents/>

[Hospital%20Crisis%20Standards%20of%20Care.pdf](https://www.ok.gov/health2/documents/Hospital%20Crisis%20Standards%20of%20Care.pdf), p. 28; Missouri Hospital Association, *A Framework for Managing the 2020 COVID-19 Pandemic Response and Implementing Crisis Standards of Care*, version 1.0 (April 6, 2020), [https://medicine.missouri.edu/sites/default/files/A\\_Framework\\_for\\_Managing\\_2020\\_COVID.pdf](https://medicine.missouri.edu/sites/default/files/A_Framework_for_Managing_2020_COVID.pdf), p. 18; State of New Jersey Department of Health, “Allocation of Critical Care Resources during a Public Health Emergency,” April 11, 2020, <https://nj.gov/health/legal/covid19/FinalAllocationPolicy4.11.20v2%20.pdf>, pp. 8-9. This final source, from New Jersey, notes that it is “[a]dapted from the University of Pittsburgh Model Policy”; the March 26, 2020, version of this policy, “Allocation of Scarce Critical Care Resources during a Public Health Emergency,” from the Department of Critical Care Medicine at the University of Pittsburgh School of Medicine, is available as the second document in an appendix here: [jvp200068supp1\\_prod.pdf](https://www.pitt.edu/~pittmed/medcritcare/appendix/jvp200068supp1_prod.pdf). We have conducted a comprehensive review of state protocols and emergency response plans and have carefully differentiated the plans based on their use of life-years, fair innings, and other age-based criteria for resource allocation. E. Scire et al., “Rationing with Respect to Age during a Pandemic: A Comparative Analysis of State Pandemic Preparedness Plans” (unpublished manuscript, 2020), Microsoft Word file.

4. None of the expert reports cited by Emanuel et al. explicitly prioritize the value of saving more years of life over other relevant values. One report does not mention life-years at all; another discusses life-years, life cycles, and fair innings (among other, related concepts or values) and ultimately adopts a multiple-principle approach. In fact, one of the expert reports cited, *Ventilator Allocation Guidelines*, by the New York State Task Force on Life and the Law, states, “Proponents of excluding elderly adults believe that children should be offered ventilator therapy over individuals who have lived long lives, arguing that it is more appropriate to maximize the life-years saved rather than the number of lives saved. However, the Task Force believed that to exclude older adults discriminates against the elderly, especially where there is a greater likelihood that the advanced-aged patient will survive” (p. 45) (published November 2015 by the New York State Department of Health, the report is available at [https://www.health.ny.gov/regulations/task\\_force/reports\\_publications/docs/ventilator\\_guidelines.pdf](https://www.health.ny.gov/regulations/task_force/reports_publications/docs/ventilator_guidelines.pdf)).

5. M. Dempsey, “Decline in Tuberculosis: The Death Rate Fails to Tell the Entire Story,” *American Review of Tuberculosis* 56 (1947): 157-64; F. G. Dickinson and E. L. Welker, “What Is the Leading Cause of Death?,” *AMA Bulletin* 64 (1948): 1-25.

6. E. Farmery and P. Milner, *Renal Replacement Therapy: Purchasing Review and Recommendations* (Devizes, U.K.: Wiltshire Health Authority, 1997). This criterion supported an aim “to prioritise entry on to the programme for those patients who have the most likelihood of health gain from treatment, based on potential life years to be gained from treatment (anticipated as at least 12 months), absence of significant comorbidity, and the capability of independent living” (as cited by S. Chanda et al., “Is There a Rationale for Rationing Chronic Dialysis? A Hospital Based Cohort Study of Factors Affecting Survival and Morbidity,” *BMJ* 318 [1999]: 217).

7. J. Glover, *Causing Death and Saving Lives: The Moral Problems of Abortion, Infanticide, Suicide, Euthanasia, Capital Punishment, War and Other Life-or-Death Choices* (Harmondsworth, U.K.: Penguin, 1977).

8. J. Harris, *The Value of Life: An Introduction to Medical Ethics* (London: Routledge, 1985).

9. M. Colvin-Adams et al., “Lung and Heart Allocation in the United States,” *American Journal of Transplantation* 12 (2012): 3213-34; American Society of Transplant Surgeons, John P. Roberts, president, letter to Peter G. Stock, chair of the OPTN Kidney Transplant Committee, December 18, 2008, <https://asts.org/docs/default-source/optn-unos/proposed-kidney-allocation-concepts---asts-response-december-18-2008.pdf?sfvrsn=6>.

10. D. B. White et al., “Who Should Receive Life Support during a Public Health Emergency? Using Ethical Principles to Improve Allocation Decisions,” *Annals of Internal Medicine* 150, no. 2 (2009): 132-38.

11. Harris, *The Value of Life*.

12. A. Williams, “Intergenerational Equity: An Exploration of the ‘Fair Innings’ Argument,” *Health Economics* 6 (1997): 117-32.

13. E. J. Emanuel and A. Wertheimer, “Public Health. Who Should Get Influenza Vaccine When Not All Can?,” *Science* 312 (2006): 854-55; White et al., “Who Should Receive Life Support?”

14. White et al., “Who Should Receive Life Support?,” 136. See also Emanuel and Wertheimer, “Public Health,” 854-55.

15. As an anonymous reviewer rightly noted, it is important to consider how these different ethical priorities lead to different implications. Under a fair-innings or life-cycles approach, a thirty-year-old patient with a serious condition who is expected to die within a decade may still be prioritized over a healthy sixty- or seventy-year-old patient, even if the older patient is expected to live beyond a decade, as the older patient is assumed to have already enjoyed the goods of the stages of life that the thirty-

year-old has yet to experience. An approach that aims to maximize life-years may lead to prioritizing the older patient if there is a reasonable expectation that the sixty- or seventy-year-old would live longer than ten years. An explicit age cutoff (say, of eighty-five) may not offer any guidance regarding who should be prioritized.

16. See D. Callahan, *Setting Limits: Medical Goals in an Aging Society* (New York: Simon & Schuster, 1987).

17. See, for example, “Exclusion Criteria for Hospital Admission” (p. 5) in the Utah Hospitals and Health Systems Association’s “Utah Pandemic Influenza Hospital and ICU Triage Guidelines,” version 2, August 11, 2009, [http://pandemicflu.utah.gov/plan/med\\_triage081109.pdf](http://pandemicflu.utah.gov/plan/med_triage081109.pdf).

18. Given that much of the literature conflates these concepts, our analysis will, at certain points, consider age-related rationing protocols in general as we respond to this literature. However, we have aimed to be careful to pull apart explicit references to maximizing life-years as a particularly problematic criterion of resource allocation.

19. See D. P. Sulmasy and J. Sugarman, “The Many Methods of Medical Ethics (or Thirteen Ways of Looking at a Blackbird),” in *Methods in Medical Ethics*, 2nd ed., ed. J. Sugarman and D. P. Sulmasy (Washington, DC: Georgetown University Press, 2010), 3-20, and D. P. Sulmasy, “Ethics and Evidence,” *Journal of Clinical Ethics* 30, no. 1 (2019): 56-66.

20. L. Daugherty-Biddison et al. [a University of Maryland project team], *Maryland Framework for the Allocation of Scarce Life-Sustaining Medical Resources in a Catastrophic Public Health Emergency* (August 24, 2017), [https://www.law.umaryland.edu/media/SOL/pdfs/Programs/Health-Law/MHECN/ASR%20Framework\\_Final.pdf](https://www.law.umaryland.edu/media/SOL/pdfs/Programs/Health-Law/MHECN/ASR%20Framework_Final.pdf); L. Daugherty-Biddison et al., “Scarce Resource Allocation during Disasters: A Mixed-Method Community Engagement Study,” *Chest* 153, no. 1 (2018): 187-95.

21. Emanuel et al., “Fair Allocation of Scarce Medical Resources in the Time of Covid-19,” 2052, 2055.

22. New York State Task Force on Life and the Law, *Ventilator Allocation Guidelines*, p. 45. Ontario similarly reevaluated its position in response to vaguely described expert and public opinion but, unlike New York, overturned its rejection of age as a criterion for rationing. See M. D. Christian et al., “Development of a Triage Protocol for Critical Care during an Influenza Pandemic,” *Canadian Medical Association Journal* 175 (2006): 1377-81.

23. White et al., “Who Should Receive Life Support?,” 132-38.

24. Emanuel and Wertheimer, “Public Health,” 854-55.

25. J. Neuberger et al., “Assessing Priorities for Allocation of Donor Liver Grafts: Survey

of Public and Clinicians,” *BMJ* 317 (1998): 172-75; M. L. Cropper et al., “Preferences for Life Saving Programs: How the Public Discounts Time and Age,” *Journal of Risk and Uncertainty* 8 (1994): 243-65; M. Johannesson and P. O. Johannsson, “Is the Valuation of a QALY Gained Independent of Age? Some Empirical Evidence,” *Journal of Health Economics* 16 (1997): 589-99.

26. The Veterans Health Administration considered but explicitly rejected the similar concept of fair innings as an allocation strategy. See appendix 1, “An Ethical Framework for Decision-Making Regarding Allocation of Scarce Life-Saving Resources,” in “Meeting the Challenge of Pandemic Influenza: Ethical Guidance for Leaders and Health Care Professionals in the Veterans Health Administration,” July 2010, [https://www.ethics.va.gov/docs/policy/meeting\\_the\\_challenge\\_of\\_pan\\_flu\\_ethical\\_guidance\\_vha\\_2010\\_web\\_posting\\_2013.pdf](https://www.ethics.va.gov/docs/policy/meeting_the_challenge_of_pan_flu_ethical_guidance_vha_2010_web_posting_2013.pdf).

27. White and Lo, “A Framework for Rationing”; State of New Jersey Department of Health, “Allocation of Critical Care Resources,” 4; Pennsylvania Department of Health, *Interim Pennsylvania Crisis Standards of Care*, 30.

28. T. M. Egan et al., “Development of the New Lung Allocation System in the United States,” *American Journal of Transplantation* 6, no. 5, part 2 (2006): 1212-27.

29. White and Lo, “A Framework for Rationing Ventilators and Critical Care Beds during the COVID-19 Pandemic.”

30. A 2007 proposal to ration kidneys by life-years from transplantation (LYFT) was ultimately rejected. See P. Reese et al., “How Should We Use Age to Ration Health Care? Lessons from the Case of Kidney Transplantation,” *Journal of the American Geriatrics Society* 58, no. 10 (2010): 1980-86; Organ Procurement and Transplantation Network, “Concepts for Kidney Allocation,” February 16, 2011, p. 13, [http://media1.s-nbcnews.com/i/MSNBC/Sections/NEWS/z\\_Personal/AJohnson/110301\\_KidneyConceptDocument.pdf](http://media1.s-nbcnews.com/i/MSNBC/Sections/NEWS/z_Personal/AJohnson/110301_KidneyConceptDocument.pdf).

31. Organ Procurement and Transplantation Network, “Policy 8: Allocation of Kidneys,” April 26, 2021, pp. 137-62, [https://optn.transplant.hrsa.gov/media/1200/optn\\_policies.pdf](https://optn.transplant.hrsa.gov/media/1200/optn_policies.pdf); B. Chopra and K. K. Sureshkumar, “Changing Organ Allocation Policy for Kidney Transplantation in the United States,” *World Journal of Transplantation* 5, no. 2 (2015): 38-43.

32. See Colvin-Adams et al., “Lung and Heart Allocation in the United States.”

33. M. Christian et al., “Development of a Triage Protocol for Critical Care during an Influenza Pandemic,” *Canadian Medical Association Journal* 175, no. 11 (2006): 1377-81, box 2. The original version of the Ontario protocol has been replaced online by a revision.

34. T. Powell, K. Christ, and G. Birkhead, "Allocation of Ventilators in a Public Health Disaster," *Disaster Medicine and Public Health Preparedness* 2, no. 1 (2008): 20-26.

35. New York State Task Force on Life and the Law, *Ventilator Allocation Guidelines*, 45.

36. *Ibid.*

37. See Veterans Health Administration, "Meeting the Challenge of Pandemic Influenza."

38. White et al., "Who Should Receive Life Support?," 133.

39. *Ibid.*, 135.

40. While it is true that Harris does state that "it is always a misfortune to die . . . [but] it is both a misfortune and a tragedy [for life] to be cut off prematurely" (*The Value of Life*, 93), he ends the chapter by writing, "Neither should age normally be a criterion. I think the anti-ageist argument is powerful and, except where appropriately tempered by the fair innings argument, it should be respected" (p. 110). Moreover, elsewhere, he forcefully repudiates the life-years approach to rationing as inherently unjust and "ageist" in a response to Alan Williams, the economist whom White et al. cite in their 2009 paper, "Who Should Receive Life Support?" See Harris, "QALYfying the Value of Life," *Journal of Medical Ethics* 13 (1987): 117-23. And Harris has recently explicitly rejected using age or life-years to allocate resources for Covid-19 in "Why Kill the Cabin Boy," *Cambridge Quarterly of Healthcare Ethics* 30, no. 1 (2021): 4-9.

41. Both the March 26, 2020, and April 15, 2020, versions of "Allocation of Scarce Critical Care Resources during a Public Health Emergency," from the Department of Critical Care Medicine at the University of Pittsburgh School of Medicine are available at [jvp200068supp1\\_prod.pdf](https://www.pitt.edu/~jvp200068supp1_prod.pdf).

42. The Institute of Medicine defines crisis standards of care as "a substantial change in the usual health care operations and the level of care it is possible to deliver . . . justified by specific circumstances and . . . formally declared by a state government in recognition that crisis operations will be in effect for a sustained period." Institute of Medicine, *Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report*, ed. B. M. Altevogt et al. (Washington, DC: National Academies Press, 2009), 150.

43. Emanuel et al. "Fair Allocation"; White and Lo, "A Framework for Rationing."

44. See note 3.

45. See D. P. Sulmasy, "Respirators, Our Rights, Right and Wrong: Medical Ethics in an Age of Coronavirus," *New York Daily News*, March 22, 2020; D. P. Sulmasy, "Principled Decisions and Virtuous Care: An Ethical Assessment of the SIAARTI

Guidelines for Allocating Intensive Care Resources," *Minerva Anestesiologica* 86, no. 8 (2020): 872-76; and B. G. Prusak, "All Hospitals Want to Save Lives. Should They Also Be Seeking to Save 'Life Years'?" *America*, May 28, 2020, <https://www.americamagazine.org/faith/2020/05/28/all-hospitals-want-save-lives-should-they-also-be-seeking-save-life-years>.

46. H. J. Ehni, "Six Propositions against Ageism in the COVID-19 Pandemic," *Journal of Aging and Social Policy* 32, no. 4-5 (2020): 515-25.

47. See, for example, D. Carlson et al., Disability Rights Washington, "Complaint of Disability Rights Washington, Self Advocates in Leadership, The Arc of the United States, and Ivanova Smith against the Washington State Department of Health (WA DOH), the Northwest Healthcare Response Network (NHRN) and the University of Washington Medical Center (UWMC)," letter to R. Severino, director of the Office for Civil Rights, U.S. Department of Health & Human Services, March 23, 2020, [https://www.centerforpublicrep.org/wp-content/uploads/2020/03/OCR-Complaint\\_3-23-20-final.pdf](https://www.centerforpublicrep.org/wp-content/uploads/2020/03/OCR-Complaint_3-23-20-final.pdf); Center for Public Representation, "COVID-19 Medical Rationing & Facility Visitation Policies," <https://www.centerforpublicrep.org/covid-19-medical-rationing/>.

48. Sociedad Española de Medicina Intensiva, Crítica y Unidades Coronarias, "Recomendaciones éticas para la toma de decisiones en la situación excepcional de crisis pandemia COVID-19 en las unidades de cuidados intensivos," accessed September 2, 2020, p. 12, [https://semicyuc.org/wp-content/uploads/2020/03/%C3%89tica\\_SEMICYUC-COVID-19.pdf](https://semicyuc.org/wp-content/uploads/2020/03/%C3%89tica_SEMICYUC-COVID-19.pdf); C. Sheets, "'Last Resort': Alabama's Plan for Deciding Which Coronavirus Patients Get Ventilators," *AL.com*, March 24, 2020, <https://www.al.com/news/2020/03/last-resort-alabamas-plan-for-deciding-which-coronavirus-patients-get-ventilators.html>.

49. U.S. Department of Health and Human Services, Office for Civil Rights in Action, "Civil Rights, HIPAA, and the Coronavirus Disease 2019 (COVID-19)," bulletin, March 28, 2020, [www.hhs.gov/sites/default/files/ocr-bulletin-3-28-20.pdf](https://www.hhs.gov/sites/default/files/ocr-bulletin-3-28-20.pdf).

50. See, for example, Pennsylvania Department of Health, *Interim Pennsylvania Crisis Standards of Care*, 86.

51. N. A. Christakis, *Death Foretold: Prophecy and Prognosis in Medical Care* (Chicago: University of Chicago Press, 1999); C. E. O'Hanlon et al., "Life Expectancy Predictions for Older Diabetic Patients as Estimated by Physicians and a Prognostic Model," *Medical Decision Making Policy and Practice* 2, no. 1 (2017): doi:10.1177/2381468317713718; L. C. Yourman et al., "Prognostic Indices for Older Adults: A Systematic Review,"

*Journal of the American Medical Association* 307, no. 2 (2012): 182-92.

52. We have, to this point, focused on the use of "life-years" in allocation strategies. In our analysis of philosophical arguments in favor of saving the most years of life, we use the terms deployed by those arguments (various congeners of "life-years").

53. F. M. Kamm, "Deciding Whom to Help, Health-Adjusted Life Years and Disabilities," in *Public Health, Ethics, and Equity*, ed. S. Anand, F. Peter, and A. Sen (Oxford: Oxford University Press, 2004), 225-42, at 229.

54. To be sure, as an anonymous referee nicely observed, if a person's long life was achieved in part at the expense of others who were treated unfairly (for a simple example, consider a slaveholder and enslaved people), then we can intelligibly say that the person's long life was gained unfairly.

55. Kamm, "Deciding Whom to Help," 228.

56. Harris, *The Value of Life*, 91.

57. *Ibid.*, 91, 93.

58. *Ibid.*, 91.

59. Harris observes, "Anyone who does not reach 70 suffers, on this view, the injustice of being cut off in her prime" (p. 91). He also states, "[A]lthough there is nothing to choose between the two candidates [for a life-saving intervention] from the point of view of their respective will to live and both would suffer the injustice of having their life cut short when it might continue, only one would suffer the further injustice of being deprived of a fair innings [*sic*]—a benefit that the other [older candidate] has received" (p. 101).

60. For example, in "QALYfying the Value of Life," Harris certainly takes a very hard line against not only quality-adjusted life-years but also other "considerations based on life-expectancy or on 'life-years' generated by the proposed treatment" (p. 122). Yet a sentence such as the following may be read either as rejecting the fair-innings argument or as making allowance for it under very narrow circumstances: "Where we cannot save all, we should select those who are not to be saved in a way that shows no unjust preference" (p. 122)—prompting the question, does the fair-innings argument show unjust preference or not?

61. D. W. Brock, "Health Care Resource Prioritization and Rationing: Why Is It So Difficult?," *Social Research* 74, no. 1 (2007): 125-48, at 140-41.

62. *Ibid.*, 141.

63. *Ibid.* Compare Brock's "Justice, Health Care, and the Elderly," *Philosophy and Public Affairs* 18, no. 3 (1989): 297-312, which states, "[T]he loss of life years needed to reach a normal lifespan and 'complete that biography' is commonly a significantly greater loss than the loss of a comparable number of life years needed to



live beyond the normal lifespan. Thus . . . we can often do substantially more good by preventing deaths before instead of after the normal lifespan has been reached” (p. 304).

64. N. Daniels, *Am I My Parents’ Keeper? An Essay on Justice between the Young and the Old* (Oxford: Oxford University Press, 1988), 84.

65. *Ibid.*, 83, note 1.

66. *Ibid.*, 11.

67. *Ibid.*, 45, 47.

68. *Ibid.*, 66.

69. *Ibid.*, 92.

70. *Ibid.*, 70.

71. *Ibid.*, 76, 82.

72. *Ibid.*, 80.

73. *Ibid.*, 86-87.

74. *Ibid.*, 86.

75. *Ibid.*, 96.

76. *Ibid.*, 92.

77. See also this piece that followed the publication of Daniels’s book: R. M. Veatch, “Justice and the Economics of Terminal Illness,” *Hastings Center Report* 18, no. 4 (1988): 34-40. “Older persons generally have had a greater opportunity for wellbeing than, say, critically ill infants,” Veatch states, going on to assert (without any further argumentation) that, thus, “the infant has much stronger claims on resources in order to have an opportunity for wellbeing over its lifetime” (p. 39).

78. Daniels, *Am I My Parents’ Keeper?*, 92.

79. *Ibid.*, 93.

80. *Ibid.*, 92-93.

81. P. Singer, “Is Age Discrimination Acceptable?,” *Project Syndicate*, June 10, 2020, <https://www.project-syndicate.org/commentary/when-is-age-discrimination-acceptable-by-peter-singer-2020-06>.

82. In “Is Age Discrimination Acceptable?,” Singer proposes,

[I]magine that you have just become a parent and are being consulted on an issue that will affect your newborn child, whose interests, naturally, are close to your heart. You are informed that at some stage in your child’s life, she is likely to be infected with a dangerous virus. Her chances of being infected are the same in any year of her life, and so is the risk of her dying from the virus, unless she receives a specially designed drug.

Researchers have discovered, however, that the design of the drug must vary with the patient’s age. Drug A is

effective on those under 40, and drug B on those over 40, but the production process is so costly that the national health service cannot afford to pay for both drugs to be produced. It must choose one of them. You can vote on which.

Given this choice, and assuming that you believe your child’s life will be valuable, it is clearly contrary to her interests to vote for drug B. That would increase your child’s risk of dying before her 40th birthday. To improve her chances of living a longer life, you should vote for drug A.

Suppose, however, that you are not the parent of a newborn but, instead, the childless adult daughter or son of two beloved elderly parents. Now it is in your interests to vote for drug B. One way or the other, how does either Singer’s thought experiment, or this revision to it speak to the question of whether ageism is justifiable?

83. Compare M. S. Stein, “The Distribution of Life-Saving Medical Resources: Equality, Life Expectancy, and Choice behind the Veil,” *Social Philosophy and Policy* 19, no. 2 (2002): 212-45. Stein’s paper is sophisticated rather than simple, but in the end, he commends medical professionals as “the noble savages of moral philosophy” for knowing “[w]ithout needing to be taught . . . that utilitarianism is the correct theory of distributive justice” (p. 243).

84. See also, however, Singer’s comments in the interview by E. Bazelon, “Restarting America Means People Will Die. So When Do We Do It?,” *New York Times Magazine*, April 10, 2020. Singer says, “This [virus] is killing mostly older people. I think that’s really relevant. I think we want to take into account the number of life years lost—not just the number of lives lost.”

85. D. P. Sulmasy, “Futility and the Varieties of Medical Judgment,” *Theoretical Medicine* 18, nos. 1-2 (1997): 63-78.

86. A study by Wunsch and colleagues has found that triage protocols based on triage scores have limited ability to distinguish between many patients. Matthew K. Wynia has proposed, in light of that study, that values other than clinical efficiency “must come into play, at least to break ties.” We caution against the use of discriminatory criteria. See M. K. Wynia, “Crisis Triage—Attention to Values in Addition to

Efficiency,” *JAMA Network Open* 3, no. 12 (2020): e2029326.

87. See L. T. Zagzebski, *Exemplarist Moral Theory* (Oxford: Oxford University Press, 2017).

88. See, for example, N. S. Jecker, “African Conceptions of Age-Based Moral Standing: Anchoring Values to Regional Realities,” *Hastings Center Report* 50, no. 2 (2020): 35-43; N. S. Jecker and L. J. Schneiderman, “Is Dying Young Worse than Dying Old?,” *Gerontologist* 34, no. 1 (1994): 66-72.

89. As an anonymous reviewer thoughtfully pointed out, we need to be careful to consider why it is the case that older patients are more likely to die from Covid-19. While it is often assumed that this is due to biological frailty, there are several social determinants that may also play a role in decreasing their likelihood of survival (particularly in an ageist society that may disadvantage older individuals in a number of ways). Though we do not take up these issues here, it is important to consider how an approach that aims to maximize life-years builds upon existing structures that perpetuate inequality and discrimination toward aged populations.

90. State of New Jersey Department of Health, “Allocation of Critical Care Resources,” 13; Pennsylvania Department of Health, *Interim Pennsylvania Crisis Standards of Care*, 86; Massachusetts Department of Public Health, “Crisis Standards of Care,” 34.

91. J. C. Tilburt and D. P. Sulmasy, “Context and Scale: Distinctions for Improving Debates about Physician Rationing,” *Philosophy, Ethics, and Humanities in Medicine* 12, no. 1 (2017): doi:10.1186/s13010-017-0048-6; D. P. Sulmasy, “Cancer Care, Money, and the Value of Life: Whose Justice? Which Rationality?,” *Journal of Clinical Oncology* 25, no. 2 (2007): 217-22.

92. W. J. Mackillop and C. F. Quirt, “Measuring the Accuracy of Prognostic Judgments in Oncology,” *Journal of Clinical Epidemiology* 50, no. 1 (1997): 21-29.

93. B. O. Eriksen, I. S. Kristiansen, and J. E. Pape, “Prediction of Five-Year Survival for Patients Admitted to a Department of Internal Medicine,” *Journal of Internal Medicine* 250, no. 5 (2001): 435-40.