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ARTICLE

Cost-Effectiveness and the Avoidance of Discrimination in Healthcare: Can We Have Both?

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Abstract

Many ethical theorists believe that a given distribution of healthcare is morally justified only if (1) it is cost-effective and (2) it does not discriminate against older adults and disabled people. However, if (3) cost-effectiveness involves maximizing the number of quality-adjusted life-years (QALYs) added by a given unit of healthcare resource, or cost, it seems the pursuit of cost-effectiveness will inevitably discriminate against older adults and disabled patients. I show why this trilemma is harder to escape than some theorists think. We cannot avoid it by using age- or disability-weighted QALY scores, for example. I then explain why there is no sense of "discrimination" on which discrimination is *both* unjust, and thus something healthcare rationing must avoid, *and* something cost-effective healthcare rationing inevitably involves. I go on to argue that many of the reasons we have for not favoring rationing that maximizes QALYs outside the healthcare context apply in healthcare as well. Thus, claim (1) above is dubious.

Keywords: ableism; ageism; compounding injustice; discrimination; distributive justice in healthcare; healthcare rationing; moral worth; QALY

Introduction

When is a scheme of healthcare rationing, for example, a public healthcare system's policy regarding which treatments to offer and which not to offer, morally justified?[1] This is obviously a hugely complex issue, but two thoughts are familiar:

1) A scheme of healthcare rationing is justified only if it does not discriminate against older adults and the disabled (the *Non-Discrimination Condition*, or simply *Non-Discrimination*).[2]
2) A scheme of healthcare rationing is justified only if it is cost-effective (the *Cost-Effectiveness Condition*, or *Cost-Effectiveness*).

Both of these, as necessary conditions, look right. Healthcare rationing which is racist, or sexist, or religious, is clearly unjustified. If that is so, why is the same not true of ageist and ableist rationing, which is the two sorts of discrimination this article focuses on?[3] The non-discrimination condition is very plausible. Similarly, cost-effectiveness seems correct because a cost-ineffective rationing scheme is wasteful—in it, we could have gotten more health benefits from the resources we have, and some patients pay the price for that.[4]

But now a problem arises. It is widely assumed that healthcare cost-effectiveness is a matter of maximizing the sum of quality-adjusted life-years (QALYs) obtained from the available healthcare resources.[5] But it is not hard to see that, quite often, resources used treating older adults and disabled people will be used less cost-effectively than they would have been had they been used in the treatment of young and non-disabled people. Often, a treatment that saves the life of an older adult patient predictably results in fewer extra life-years at a lower level of health than the same treatment, offered to a younger

patient, would have delivered.[6] Accordingly, cost-effectiveness rationing (CER) favors lower priority for older adults, leading to allocations of health resources that appear to discriminate against them.[7] A similar line of thinking appealing to the different fact that, all else being equal, the extra life-year of a disabled person has a lower QALY value than the extra life-year of a non-disabled person can be set out in connection with disabled patients.[8] Hence, we should accept:

3) Cost-effective healthcare rationing discriminates against older adults and disabled people (the *Incompatibility Claim* or *Incompatibility*).[9]

Each of (1), (2), and (3) is plausible, yet together they form an inconsistent set. I shall call this the *Healthcare Trilemma.* Any pair of the claims entails denial of the third. For example, the conjunction of (1), Non-Discrimination, and (3), Incompatibility, entails that cost-effectiveness is not a necessary condition of justified healthcare rationing, controverting (2). We must reject at least one claim.

The first three sections vindicate Incompatibility by addressing three challenges to it: that CER need refer neither to disabled nor to older adults; that CER is not typically used to decide which people to treat; and that CER using age- and disability-weighted QALYs can be non-discriminatory. The next three sections examine and reject three arguments purporting to show that CER involves discrimination of the kind to which Non-Discrimination does, or should at least, refer: that CER clashes with the equality of moral status of persons; that such rationing compounds injustice; and that it demeans disabled people and older adults, or involves relating to such people as unequals. The final substantive section argues that, in the light of how we think about justified distributions of goods other than healthcare, we should reject cost-effectiveness—sometimes the promotion of other values justifies deviations from cost-effective rationing. Thus, my answer to the question which figures as the article's subtitle is: "Yes. Cost-effective rationing need not unjustly discriminate against older adults and disabled people. But in any case, cost-effectiveness is not all that matters."

Incompatibility: The No-Reference Challenge

The most obvious challenge to Incompatibility appeals to the fact that QALY-maximizing rationing makes no essential reference to older adults or disabled people. From the point of view of CER, whether extra QALYs accrue to older adults or younger people, or to disabled or able-bodied people, makes no difference. All that matters is the sum of QALYs that result from using a particular pool of healthcare resources. Nor do healthcare planners seeking to maximize QALYs aim to disadvantage disabled people or older adults.

This challenge characterizes QALY-maximizing rationing correctly, but it does not overturn Incompatibility. It is usual to distinguish between direct and indirect discrimination.[10] All cases of discrimination are either direct or indirect, and none is both. Where people draw the line between the two differs, but this does not matter for present purposes. Let us adopt the following definition of direct discrimination:

> X directly discriminates against Y relative to Z if and only if: (i) X treats Y disadvantageously relative to Z; and (ii) X does this *either* because X mentally represents Y as being a member of a particular socially salient group and Z as not being so *or* because X formulates a rule, policy or the like that explicitly picks out or corresponds to people in the socially salient group to which Y belongs and imposes on them disadvantageous treatment relative to Z.[11]

On this definition, a QALY-maximizing healthcare planner typically will not—and certainly need not—directly discriminate against older adults and disabled people. Here rationing decisions might satisfy (i), but they need not satisfy (ii). In selecting an allocation that maximizes the sum of QALYs, the planner need not have disabled people or older adults in mind. Nor need the selection of the allocation involve

any rules referring to these people. This, however, does not clear the healthcare planner of the charge of discrimination, since *indirect* discrimination requires only the following:

> X indirectly discriminates against Y relative to Z if and only if: (i) X does not directly discriminate against Y relative to Z and (ii) X, does, however, act in a way which imposes disadvantages on the group of people to which Y belongs that are disproportionate relative to the benefits that acting in this way confers on others.[12]

For reasons already mentioned, CER imposes disadvantages on disabled and older adult patients. Presumably, people who object to it that it discriminates against these groups take the view that these disadvantages are disproportionate relative to the benefits the rationing schemes confer on the young and the non-disabled. To assess whether this view is correct, we need a criterion of proportionality. That might be set out in various ways, but there is little doubt that on some explications of the criterion CER will indirectly discriminate against older adults and the disabled. In effect, I come back to this in later sections ("Non-Discrimination: The Moral Equals Argument," "Non-Discrimination: The Compounding Injustice Claim," and Non-Discrimination: General Theories of Wrongful Discrimination"). Whatever the outcome of the assessment, however, we know enough now to dismiss the no-reference challenge—QALY-maximization can discriminate, indirectly, even if it makes no essential reference to older adults and disabled people and thus is not directly discriminatory.

Incompatibility: The Treatments-Not-People Challenge

A rather different challenge to Incompatibility points out that CER is often discussed as if healthcare allocation is a matter of making "choices about who gets medical treatment and who gets it before others".[13] However, it continues, most CER choices "do not concern setting priorities among patients. They concern setting priorities among treatments, services, pharmaceuticals, medical procedures, and so on… Cost-effectiveness does not rank people in terms of QALYs at all. It ranks interventions… In short, the [disability discrimination objection] confuses selecting treatments with selecting patients".[14] Call this the *treatments-not-people challenge.*

Unfortunately, this defense has limited relevance to the present issue. First, it fails as a challenge to Incompatibility because, even if CER always selects treatments that are then offered to the relevant patients whether they are older adults or disabled, that does not prevent CER from being indirectly discriminatory. It does not prevent this, for example, when the treatments that tend to be selected are those that first and foremost benefit people who are able-bodied or young, thereby imposing disproportionate harm on disabled and older adult patients. And actually this does seem to happen. Geriatric diseases primarily affect old people. Arthritis and osteoporosis, for instance, are diseases that people are much more likely to suffer from when they are older than when they are young. Accordingly, treatments for these diseases are likely to produce less QALYs than otherwise comparable diseases that tend to strike when people are young.[15] Similar points can be made about several co-morbidity involving disabilities. Hence, CER is likely to disadvantage—and sometimes disproportionately so—older adults and disabled people relative to rationing based on, say, the degree of urgency with which patients need healthcare resources. As a result, it might well be indirectly discriminatory against these people.

Second, while cost-effectiveness analysis is indeed typically used to select treatments, not patients, it clearly *could* be used in decisions about who is to be treated.[16] Moreover, the reason that speaks in favor of selecting treatments of the basis of their cost-effectiveness—that we want to maximize the QALYs we get from healthcare resources—also speaks in favor of selecting people on that basis. Hence, if that reason justifies selecting treatments based on cost-effectiveness it also justifies selecting patients based on cost-effectiveness, *ceteris paribus.* But if the latter is directly discriminatory, then the treatments-not-people challenge does not defeat Incompatibility—on my understanding of it, at any rate. On that understanding, it is not about the actual use of CER. It is about CER which is true to whatever normative principle underpins the commitment to selecting treatments based on cost-effectiveness analysis. This

understanding entails that, even if were true (contrary to my first reply above) that a CER scheme that only selects treatments does not discriminate against the older adult, or disabled person, it would not follow that healthcare rationing based on the normative principle which underpins CER does not discriminate against patients. It is only because these principles are not consistently followed that actual CEO rationing does not discriminate against people (given the stated assumption).[17]

Incompatibility: The Weighted QALYs Challenge

The third challenge to Incompatibility notes, in essence, that while standard cost-effectiveness analysis uses unweighted QALYs, there is nothing objectionable in principle with such analyses using weighted QALYs.[18] QALYs can be weighted on many different bases. Specifically, QALYs added to the lives of disabled and older adult people might count for more than those added to the lives of others.[19] Indeed, the extra weight given to such QALYs might be scalar, so that the older, or more (in a sense requiring elucidation) disabled, you are, the greater value your QALYs would have. Such scalar weights can be fine-tuned so that CER with weighted QALYs avoids recommending any potentially ageist or ableist distributions of health. The point would be that since age- and disability-weighted QALY CER is also a form of CER, Incompatibility is false.

How damaging to Incompatibility is this? I will focus on ageism. Consider:

> *Pandemic*: We face a pandemic involving a new disease. Curiously, this disease will only affect people born in the future, after a certain date. Fortunately, the pandemic will not shorten lives. It will simply put unvaccinated people who contract the condition into a coma, causing them to lose twenty years of conscious life. People can contract the disease at any age, and it is impossible to predict the age at which they will do so. We can inoculate people so that, if they contract it, they will retain consciousness and remain largely symptom-free. However, inoculating older adults requires a much more expensive vaccine than inoculating young people.

In pandemic, if we use age-weighted QALYs, the greater costs involved in treating older adults might be offset by the added value of the QALYs accruing to older adults. If this were to be the case, CER based on age-weighted QALYs would imply that we should give priority to treating older adult patients, thereby significantly increasing the risk to any future person of losing 20 years of conscious existence provided we do not have the means to vaccinate everyone. Clearly, doing so would involve a worse health outcome, since fewer people would get the relevant health benefit and none who gets it would benefit more than those who would benefit under the alternative scheme.[20] Living with this implication of the age-weighted QALY strategy is less appealing than accepting the alternative implication, of non-age-weighted QALY maximization, that older adults will be disadvantaged. Hence, the possibility of using age-weighted (or for that matter disability-weighted) QALYs does not introduce a plausible challenge to Incompatibility.[21]

Non-Discrimination: The Moral Equals Argument

The considerations adduced above suggest that Incompatibility is secure. Perhaps, then, we should respond to the Healthcare Trilemma by rejecting one, or both, of its two remaining components. In this and the next two sections I argue that there is no way to construe discrimination in such a way that Non-Discrimination is true *and* CER involves discrimination (thus, suggesting a conditional rejection of Non-Discrimination). What kind of discrimination, if any, could satisfy both requirements?

Faced with this question, most justice and healthcare theorists would probably want to consider the idea that CER is indirectly discriminatory against older adults and disabled people because it violates the *equal moral status* of these people, thereby making the disadvantages imposed on them through such rationing disproportionate.[22] Defenders of CER often respond to this by distinguishing between the notion that people have equal moral status (e.g., have the same moral worth as persons) and the notion

that people's lives are equally good for them prudentially speaking. They concede that CER implies that people's lives are not equally good for them prudentially, but deny that this implies people have unequal moral status. Typically, they append to the former claim the observation that, in effect, even critics of CER think that some people's lives are better for them than other people's lives are for *them* when they accept that CER can be used to select between different treatments for the same patient. Typically, they also support the latter claim by observing that CER implies that same-sized healthcare benefits have the same value whomever they accrue to. If some people had higher moral status than others, the opposite ought to be the case, they add.

I am sympathetic to these replies. However, I feel we can offer a more direct response to the charge that CER involves invidious indirect discrimination against disabled and older adult people. Consider:

> *Bad Non-Disabled Converters*: Suppose half the population is disabled. Disabled people live 50 years, each of which has a value of 0.4 QALYs. Non-disabled people live 70 years, each of which has a value of 0.9 QALYs. We can either spend all healthcare resources on disabled people, enabling them to live 70 years instead at a value of 0.8 QALYs a year, or we can spend them on non-disabled people, enabling them to live 80 years at a value of 0.95 QALYs a year. The first option gives us an extra 18 QALYs per person $((50 \times 0.4 + 20 \times 0.8)/2)$, whereas the second gives us an extra 6.5 QALYs per person $((70 \times 0.05 + 10 \times 0.95)/2)$.

CER recommends that we spend all resources on disabled people, because they are the better converters of healthcare resources into additional QALYs. This is so even though both initially and after all healthcare resources have been spent on them, they live shorter lives than non-disabled people and even though each year that a disabled person lives has a lower QALY value than each year a non-disabled person lives. To see what this scenario shows, consider Dan Brock's[23] formulation of the moral equals argument:

> The future life that the disabled person will have if treated is less good or of less value than the future life that the non-disabled person would have if treated instead. It is a less good or valuable outcome if the person with a disability survives than if the person without a disability survives because the person with a disability has a less good and so less valuable life—it will be shorter and/or of lesser quality. This seems to imply that the lives of persons with disabilities are worth less or have less value than the lives of persons without disabilities.

My scenario shows that Brock appeals to the wrong sort of comparison.[24] CER is not interested in a comparison of the value of the lives of surviving disabled persons and surviving non-disabled persons. Its interest is in the quantity of extra QALYs gained by spending an extra unit of healthcare resources on disabled people as compared with the amount of extra QALYs gained by spending an extra unit of healthcare resources on non-disabled people.[25] This much is evident in Bad Non-Disabled Converters. In this scenario, the "future life that the disabled person will have if treated is less good or of less value than the future life that the non-disabled person would have if treated instead" but CER nevertheless recommends spending all of the healthcare resources on disabled people. In principle, a CER analysis could be fed information only about the marginal QALY gains derived from treating different groups, in which case it would not imply anything about the relative value of the lives of disabled and non-disabled persons.

In response, it might be conceded that, strictly speaking, CER disadvantages people who receive fewer additional QALYs from an extra unit of healthcare resources. It might be agreed that the mere fact that, on average, older adult and disabled people typically have a shorter life expectancy and live lives with a lower QALY value does not in itself imply that they belong to this group of people. But along with these concessions, it could be insisted that the discrimination charge sticks because the proportion of disabled and older adult people belong to the group of people who receive fewer additional life-years and extra life-years of lower QALY value out of additional healthcare resources is higher than the proportion of non-disabled and young people who belong to this group.

I do not think this reply works. Women live longer than men. Accordingly, other things being equal, treating a 20-year-old woman can be expected to produce more QALYs than treating a 20-year-old man. However, no critic of CER has objected that its supporters deny the equal worth of men.[26] In effect, the critics have agreed that affirming women's greater prudential interest in life-saving treatment is different from affirming the higher moral status of women. Friends of CER will see this insight as one applying to the cases of older adult and disabled people as well. I conclude that CER does not constitute unjust discrimination because it involves denial of the moral equality of older adults and disabled people.

Non-Discrimination: The Compounding Injustice Claim

Building on the idea that CER could disadvantage men relative to women, one might suggest a different account of why CER clashes with Non-Discrimination properly understood. Basically, the idea is that the notion of discrimination in Non-Discrimination implies that discriminatory acts, and practices, and so on, are unjust because they compound prior misfortune or injustice. This would explain why opponents of CER have not objected on the grounds that it disadvantages men: it does do that, but it does not compound injustice against men (qua men), because, since they have not suffered from sexist injustice, there is no injustice to be compounded. It may also explain why opponents of CER do object to it on the grounds that it disadvantages disabled people. The idea here is that the disabled have already borne the undeserved badness of disability, and CER turns that misfortune, or injustice, into the additional misfortune or injustice of being denied healthcare.[27] And:

> … we should not use a person's undeserved or unjustified disadvantages as the grounds or basis for choosing to impose a further disadvantage on them. Social policies under our control should not compound further an already existing undeserved or unjustified disadvantage.[28]

Interestingly, a leading discrimination theorist, Deborah Hellman,[29] has suggested that what makes indirect discrimination wrong is precisely that it compounds injustice.

It seems that this view of discrimination is tailormade to support a version of Non-Discrimination that explains how CER indirectly and unjustly discriminates against disabled people. However, this way of looking at the issues is not without its own difficulties. First, its explanatory reach is at best limited. It cannot explain how CER involves unjust discrimination against older adults. It is neither a misfortune, nor an injustice, to have become older—quite the contrary. Generally, older adults are better off than young people in that they have lived longer than them, so if CER unjustly discriminates against the older adult that cannot be because it involves indirect discrimination compounding prior injustice or misfortune.

Second, it is unclear that it is the fact of being disabled which is the "ground or basis" of CER making disabled people worse off (relative to some relevant alternative way of rationing). For the reason stated in section "Non-Discrimination: The Moral Equals Argument," it is more plausible to say that the ground or basis of being given lower priority is that one is a bad converter of healthcare resources into QALYs. Sometimes older adults and disabled people are efficient converters. Hence, CER healthcare planners can plausibly deny that the misfortune of being disabled is their ground or basis for generally giving lower priority to disabled people.[30]

Finally, one might question whether there is a duty not to compound injustice. We need to untangle this duty from a slightly different principle:

> … we should not use the fact that a person is undeservedly or unjustifiably disadvantaged as the grounds or basis for choosing to make this person even more disadvantaged. Social policies under our control should not make people who are undeservedly or unjustifiably disadvantaged even worse off.[31]

To see the difference between this principle and Brock's, imagine a person who suffers an unjust disadvantage but is, at the same time, unjustly privileged *overall.* Applying this amended duty not to

increase injustice overall, we can see that there may be no special reason to avoid using the relevant local, unjust disadvantage, or misfortune, as a "ground or basis" for imposing additional disadvantage on this person where that will leave the relevant person unjustly advantaged (though less so) relative to others. If some disabled (and older adult) people are undeservedly, or unjustifiably, advantaged relative to others—in terms of health or other goods—we obtain the result that, even if their disability is an undeserved misfortune, CER might reduce the overall degree of unjust disadvantage they bear. The idea that CER in this case is not unjust speaks against the duty not to compound injustice. And this gives rise to the suspicion that the anti-compounding principle illicitly draws intuitive support from the amended duty not to compound injustice, since, in almost all cases, if one violates the anti-compounding duty one thereby boosts the overall level of unjust disadvantage. I conclude that the concern to avoid compounding injustice cannot explain why CER violates Non-Discrimination in relation to disabled people—let alone in relation to old people.

Non-Discrimination: General Theories of Wrongful Discrimination

In a final attempt to identify a notion of discrimination that both renders Non-Discrimination true and sustains Incompatibility, I turn to Deborah Hellman and Sophia Moreau's recent, prominent accounts of what makes discrimination wrong.[32]

I start with Hellman's.[33] According to Hellman, wrongful discrimination is differential treatment that demeans the discriminatee. A discriminatory act demeans someone if, and only if, the following pair of conditions are satisfied. First, the discriminator treats the discriminatee as "not of equal moral worth".[34] Second, the social context must be such that the discriminator can demean the discriminatee: "Whether classification demeans depends on the social or conventional meaning of drawing a particular distinction in a particular context".[35] Generally, the discriminator must be in a position of power, or have a superior status, over the discriminatee.[36] A boss can demean an employee, but in the absence of some employment-unrelated power or status difference, an employee cannot demean her boss.

The idea of equal moral worth of persons is central to Hellman's account, but it plays a role that differs from the one it has in the moral equals argument discussed above in section "Non-Discrimination: The Moral Equals Argument." For Hellman, the relevant fact would not be whether CER clashes with the equal moral status of all, including older adults and disabled people. Rather it would be whether the cultural meaning of CER incorporates an assertion of the older adult's or disabled person's possession of a lower moral worth than others. Hence, to sustain a Hellmanian, discrimination-based complaint about CER, one will need to show that this is how a reasonable interpreter of the rationing scheme's cultural meaning would understand it.

Bearing in mind the many commentators who have objected to CER on grounds, in effect, of the moral equality argument, and given the way critics of CER see it as ageist or ableist, it is a plausible to assume that this indeed how such an interpreter would regard it.[37] It also seems that in some of the more marginal cases where CER does not appear unjust, Hellman's account can explain that as well. Take the case of what are, from the point of QALY calculus, relatively insignificant life extensions for older adults in a terminal state. The older adults would lose out in CER. Yet few of us would consider that unjust ageist discrimination, and the cultural meaning of denying them treatment does not seem to me to be that they are not moral equals.[38] However, this fact also points to a limitation of the Hellmanian objection to CER. Cultural meanings can change. They *could* change to such an extent that, in any situation where a group of people are denied benefits on the grounds that another group of people would enjoy a greater sum of aggregated benefits if they were to enjoy the resources instead, this would not be taken to signify a denial of the former's possession of equal moral status. If that happened, there would be no objection to CER. Friends of CER with sympathies for Hellman's view would obviously urge us to revise our cultural understanding in this direction. At any rate, it can be seen that on Hellman's account, in a world with different cultural meanings, CER would not violate Non-Discrimination.

Sophia Moreau asserts that "whenever we wrongfully discriminate against others, we fail to treat them as equals",[39] thereby wronging them. Can this notion of discrimination render Non-Discrimination true

and sustain Incompatibility? Moreau thinks discriminators can fail to treat those they discriminate against as equals in three rather different ways: by unfairly subordinating the discriminatee; by violating her right to deliberative freedom; or by depriving her of basic goods. So the issue is whether cost-effectiveness rationers subordinate older adults and/or disabled people, or violate their right to deliberative freedom, or deprive them of basic goods? Let us consider each possibility.

One "unfairly subordinates" another by either marking the discriminatee and people like her out as inferior to others or contributing causally to people being marked out in that way. As I acknowledged in discussing Hellman's account, CER can mark out old and disabled people as inferior. However, we are capable of changing our cultural understanding of rationing so that it no longer does this. Given this, the rationing need not unfairly subordinate older adults or disabled people.

Take next violations of the right to deliberative freedom. Simplifying somewhat, by "deliberative freedom" Moreau means real freedom to deliberate about a certain matter without having to consider the fact that one has a certain trait and the further fact that others hold certain beliefs about what people with that trait are, or should be, like.[40] Plausibly, one's advanced age and disabled status are traits such that, in very many contexts, one has a right to deliberate free from concerns about how these traits shape one's options. The question then is whether the fact that one gains only limited extra QALYs from additional healthcare resources prevents the restriction of one's deliberative freedom from amounting to a violation of old and disabled people's rights to deliberative freedom.[41] I suspect Moreau's position can be developed in more than one direction here. Probably, the most plausible extension of her account is one giving no general answer to the question whether CER violates older adults' and disabled people's right to deliberative freedom. It depends on the weight of the competing interests at stake, and on the nature of the choices in connection with which CER restricts the deliberative freedom of older adults and those with disabilities. For example, do those choices concern matters of central importance or more peripheral ones?[42]

Take, finally, Moreau's third way of failing to treat discriminatees as equals: by depriving them of basic goods. It may seem likely that CER will deprive disabled and older adult people of healthcare goods and thereby involve a failure to relate to them as equals. However, Moreau illustrates deprivation of basic goods with the case of the many indigenous people in Canada who have been denied access to clean water. The implicit, and plausible, assumption underpinning her discussion is that these people could have been supplied with clean water without other Canadians being denied access to their basic goods. However, we cannot make the equivalent assumption in the context of healthcare.[43] Here rationing is a matter of deciding who should *not* get access to the relevant basic goods that they need. But rationing cannot typically be a matter of not relating to people as equals by way of denying them access to basic goods. Hence, the mere fact that CER deprives older adult and disabled people of certain basic goods that they need cannot imply that, in virtue of that, it involves treating them as inferior. I conclude that Moreau's account of what makes discrimination wrong does not imply that, necessarily, CER involves wrongful discrimination. Hellman's account might be different in this regard, but for the reasons indicated it does not ground a principled critique of CER.

Cost-Effectiveness: The Pluralism Challenge

I want now to argue that cost-effectiveness can be rejected. The argument is:

4) Rationing schemes outside healthcare can be morally justified even if they are not cost-effective.
5) We cannot point to any relevant difference between these distributive spheres and the sphere of healthcare that explains why, unlike the former, healthcare rationing is morally justified only if it cost-effective.
6) Hence, a scheme of healthcare rationing can be morally justified even if it is not cost-effective.

In defense of (4) consider the rationing of paid employment. One scheme that many see as justified says that jobs should be given to those who are best qualified.[44] Should it turn out, for instance, that giving jobs to mediocre applicants maximizes the sum of relevantly modified QALYs, few would see this as a reason

for thinking that a meritocratic job-rationing scheme is unjustified.[45] Something similar is true of education. One reason for this is that many people care about equality of educational opportunity.[46] Housing is analogous. Few people would say that available accommodation should be distributed in a way that maximizes housing-adjusted QALYs. Part of the reason for this is property rights. Another part of the explanation is that a QALY-maximizing rationing scheme might cater to people's racist preferences—for example, if people prefer to live in neighborhoods with same-race neighbors.[47] The truth is that in various domains rationing schemes are often felt to be justified even if they do not maximize QALYs.

The obvious reply to these observations is to deny my argument's second premise. Thus, against (5) my opponent would insist that healthcare *is* a special case: in healthcare (unlike in the cases I have just mentioned) the rationing of the good is justified only if it cost-effective. The problem with this reply is that all of the concerns that I touched upon in briefly explaining the acceptability of deviations from QALY-maximization in employment, education, and housing seem to apply to healthcare as well. First, just as who has the best qualifications can be determined by discriminatory preferences that we do not want to cater for, people's assignment of low values to the state of being disabled, or the typical state of health of an older adult, might accurately reflect disadvantages imposed on people as a result of ableist or ageist preferences that we do not want to cater to (recall note 25). Second, it is unclear that we are more committed to equality of educational opportunity than we are to equality of opportunities in healthcare. We accept distributions of healthcare that reduce inequality of opportunity for healthcare at the expense of QALYs.[48] Finally, if redistributing private houses with no regard to the property rights of the owners is, for most of us, unacceptable, it seems likely that so, too, would be redistributing healthcare resources by, say, cancelling private healthcare insurance contracts and using the proceeds to fund arrangements generating more QALYs in total.

So, I think cost-effectiveness is false. Obviously, this does not mean I am recommending that healthcare resources be wasted—just as those who lobby for more to be spent on educational resources for kids with worse prospects, thereby reducing inequality of opportunity, are not recommending that we waste educational resources. Nor need I deny that QALY-maximization is a factor in the moral justification of healthcare resource allocation. Indeed, one merit of CER is to draw our attention to the cost of promoting other values in seeking to maintain a morally justified distribution of healthcare. Specifically in our context, the appeal to such values is likely to justify devoting more healthcare resources to treat geriatric diseases and disabled people than CER would recommend.

Conclusion

I began this article by setting out what I called the Healthcare Trilemma. I then defended the claim that CER and Non-Discrimination against older adults and disabled people are irreconcilable against three standard challenges. With this in mind, I showed that there is no sense of discrimination such that Non-Discrimination is true *and* that CER necessarily involves discrimination in this sense. In short, Incompatibility and Non-Discrimination cannot both be true. Finally, I argued that cost-effectiveness is false. The case for this is essentially that when it comes to rationing of goods other than healthcare a morally justified rationing scheme might accommodate other values to the detriment of cost-effectiveness and these values bear on the distribution of healthcare as well. Perhaps not all philosophical trilemmas can be resolved. Fortunately, the Healthcare Trilemma can. However, none of the arguments presented in this article suggests that cost-effectiveness analysis has no value or is not vital to the justification of healthcare rationing schemes. It is just that it is not the only concern and that it does not rule out non-discriminatory rationing—at least not in a wrongfulness-involving sense of "discrimination."

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Notes

1. From here I shall take the "morally" as read. The assumption that distributions of healthcare resources can be justified is not uncontroversial. Right-libertarians deny that distributions in general can be justified independently of their genesis (Nozick R. *Anarchy, State, and Utopia*. Oxford: Oxford University Press; 1974). Others (utilitarians and luck egalitarians) deny that a distribution of healthcare can be justified independently of how it fits into a larger distributive pattern of some general *distribuendum* such as welfare (Singer P, McKie J, Kuhse H, Richardson J. Double jeopardy and the use of QALYs in health care allocation. *Journal of Medical Ethics* 1995;**21**:144–50, at 149), for the view that healthcare is a separate distributive sphere; see Walzer M. *Spheres of Justice*. Oxford: Oxford University Press; 1982, 86–91. I address the latter concern by stipulating throughout that there are no counterbalancing distributive inequalities in relation to non-healthcare-related goods.
2. By "older adults" I mean people aged 67+. That is stipulative. By "disabled people" I mean people with "a physical or mental impairment that substantially limits one or more major life activities" (http://www.ada.gov). Non-discrimination derives from a general non-discrimination condition. I discuss the disabled and older adults because, for good reason, the literature on healthcare rationing and discrimination focuses on these groups.
3. Harris J. It is not NICE to discriminate. *Journal of Medical Ethics* 2005;31:373–75, at 375. The reason I focus on ageist and ableist discrimination is that these are the two forms of discrimination that cost-effective healthcare rationing based on conventional cost-effectiveness measures is most likely to result in and result into significant higher degree than the other forms of discrimination. The reason I do not address racist, sexist, or religious discrimination in a healthcare setting is not that these forms of discrimination are somehow less morally problematic.
4. Ubel P, DeKay ML, Boran J, Asch DA. Cost-effectiveness analysis in a setting of budget constraints: Is it equitable? *New England Journal of Medicine* 1996;**334**:1174–77, at 1174.
5. Bognar G. Age weighting. *Economics and Philosophy* 2008;**24**:167–89; Bognar G. Does cost effectiveness analysis unfairly discriminate against people with disabilities? *Journal of Applied Philosophy* 2010;27:394–408; Bognar G. Impartiality and disability discrimination. *Kennedy Institute of Ethics Journal* 2011;**21**:1–23; Bognar G, Hirose I. *The Ethics of Health Care Rationing*. London: Routledge; 2014, 53–78; Gold MR, Stevenson D, Fryback DG. HALYS and QALYS and DALYS, oh my: Similarities and differences in summary measures of population health. *Annual Review of Public Health* 2002;23(1):115–34; Singer P, McKie J, Kuhse H, Richardson J. Double jeopardy and the use of QALYs in health care allocation. *Journal of Medical Ethics* 1995;**21**:144–50. An extra life-year at full health has the value 1 QALY, while an extra life-year at a lower level of health has a value between 0 and 1, depending on the severity of the health condition (for criticism, see Schneider P. The QALY is ableist. *Quality of Life Research*, online first: https://link.springer.com/article/10.1007/s11136-021-03052-4 (last accessed 8 February 2022); Tännsjö T. *Setting Health-Care Priorities*. Oxford: Oxford University Press; 2019, 143). In my view, there are conditions better than full health, for example, having an artificially enhanced health condition better than "natural" full health, and conditions such that it would be better not to exist, for example, being in constant and extreme pain with no prospect of improvement, and, accordingly, one should accept QALY value assignments to an extra life-year lower than 0 and higher than 1. While I discuss QALYs, my arguments apply *mutatis mutandis* to other measures of health-adjusted life-years such as disability-adjusted life years (DALYs). For overviews of measures of health-adjusted life-years, see Bognar G, Hirose I. *The Ethics of Health Care Rationing*. London: Routledge; 2014, 29–52; Gold MR, Stevenson D, Fryback DG. HALYS and QALYS and DALYS, oh my: Similarities and differences in summary measures of population health. *Annual Review of Public Health* 2002;23(1):115–34.
6. Tsuchiya A. QALYs and ageism: Philosophical theories and age weighting. *Health Economics* 2000;9 (1):57–68.
7. Harris J. QALYfying the value of life. *Journal of Medical Ethics* 1987;**13**:117–23; Harris J. It is not NICE to discriminate. *Journal of Medical Ethics* 2005;**31**:373–75.

8. Bognar G. Does cost effectiveness analysis unfairly discriminate against people with disabilities? *Journal of Applied Philosophy* 2010;**27**:394–408; Brock DW. Ethical issues in the use of cost-effectiveness analysis for the prioritization of health care issues. In: Anand S, Peter F, Sen A, eds. *Public Health, Ethics, and Equity*. Oxford: Oxford University Press; 2004:201–23; Brock DW. Cost-effectiveness and disability discrimination. *Economics and Philosophy* 2009;**25**:27–47; John TM, Millum J, Wasserman D. How to allocate scarce health care resources without discriminating against people with disabilities. *Economics and Philosophy* 2017;**33**(2):161–86. It is sometimes argued that CER is discriminatory because QALY values of different states reflect the fact that as a result of discriminatory bias people overestimate the badness of disability and advanced age (https://ncd.gov/sites/default/files/NCD_Quality_Adjusted_Life_Report_508.pdf,) p. 40; Brock DW. Ethical issues in the use of cost-effectiveness analysis for the prioritization of health care issues. In: Anand S, Peter F, Sen A, eds. *Public Health, Ethics, and Equity*. Oxford: Oxford University Press; 2004:201–23; Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. *The Lancet* 2009;**373**(9661):423–31, at 427; Sinclair S. How to avoid unfair discrimination against disabled patients in healthcare resource allocation. *Journal of Medical Ethics* 2012;38:158–62; for a reply to Sinclair, see Whitehurst DGT, Engel L. Disability discrimination and misdirected criticism of the quality-adjusted life year framework. *Journal of Medical Ethics* 2018;**44**:793–95. I sidestep this concern. It cannot show that CER based on non-biased assignments of QALY values is discriminatory (Bognar G. Cost-effectiveness analysis and disability discrimination. In: Cureton A, Wasserman D, eds. *The Oxford Handbook of Philosophy and Disability*. Oxford: Oxford University Press; 2020), and where certain disabilities (chronic depression, and very old age) are concerned, it becomes less relevant.
9. Incompatibility is consistent with treatments being perfectly equally effective from a medical point of view across old and young patients and across disabled and non-disabled persons, for example, a patient receiving a bypass operation will gain the same number of extra life years whether the patient is blind or not. (However, the QALY value of these additional years will be lower for the blind patient than for the non-blind person, *ceteris paribus*. Also, some disabilities, e.g., depression, come with co-morbidities, e.g., an increased risk of suicide) Incompatibility is concerned with cost-effectiveness and not medical effectiveness even though, of course, the latter affects the former. One might think that healthcare resources should be distributed based on medical effectiveness. However, that is not an objection to incompatibility. Incompatibility is also consistent with its being the case that many medical treatments, for example, very expensive cancer treatments, are cost-ineffective independently patients' disability status or age. Finally, incompatibility is consistent with there being medical treatments such that they are more cost-effective if given to older or disabled patients than if given to young or non-disabled patients (see note 25). I thank an anonymous reviewer for pointing out the need to clarify these points.
10. Lippert-Rasmussen K. *Born Free and Equal?* Oxford: Oxford University Press; 2013, 13–78.
11. "A socially salient group" is a group such that perceived membership of it makes a significant difference to social interactions across a wide range of different social contexts (Lippert-Rasmussen K. *Born Free and Equal?* Oxford: Oxford University Press; 2013, 30–6). As defined here, the concept of direct discrimination is silent on whether instances of direct discrimination are always, often or only occasionally unjust. Sometimes "discrimination" is used in this purely descriptive sense. Thus, the 2005 NICE guidelines say that "where age is an indicator of benefit or risk, age discrimination is appropriate" (quoted by Harris J. It is not NICE to discriminate. *Journal of Medical Ethics* 2005;**31**:373–75, 374). However, on other occasions the term is used in a moralised sense so that anything discriminatory is *ipso facto* unjust or otherwise morally objectionable (Lippert-Rasmussen K. *Born Free and Equal?* Oxford: Oxford University Press; 2013, 13–53).
12. "Proportionate" can be cashed out in purely descriptive or (as is more often the case) non-descriptive terms. An example of the latter: disadvantages are proportionate if, and only if, they are of such a size relative to the benefits deriving from the relevant action that the action is not unjust.
13. Bognar G, Hirose I. *The Ethics of Health Care Rationing*. London: Routledge; 2014, 12. For an illustration of this way of challenging CER, see the HCFA's objection to Oregon Health Services

Commission's rationing scheme (Brock DW. Cost-effectiveness and disability discrimination. *Economics and Philosophy* 2009;**25**:27–47, at 29).

14. Bognar G, Hirose I. *The Ethics of Health Care Rationing*. London: Routledge; 2014, 12, 82; see also Bognar G. Cost-effectiveness analysis and disability discrimination. In: Cureton A, Wasserman D, eds. *The Oxford Handbook of Philosophy and Disability*. Oxford: Oxford University Press; 2020, 8; Bognar G. Impartiality and disability discrimination. *Kennedy Institute of Ethics Journal* 2011;**21**:1–23, at 8.
15. Harris J. It is not NICE to discriminate. *Journal of Medical Ethics* 2005;**31**:373–75, at 373.
16. Menzel P et al. Toward a broader view of values in cost-effectiveness analysis of health. *Hastings Center Report* 1999;29(3):7–15, at 10. Greg Bognar (Bognar G. Cost-effectiveness analysis and disability discrimination. In: Cureton A, Wasserman D, eds. *The Oxford Handbook of Philosophy and Disability*. Oxford: Oxford University Press; 2020) stresses that he uses the treatments-not-people response as part of a defense of cost-effectiveness analysis "as it is used in practice."
17. Greg Bognar and Iwao Hirose hold: CER is not defeated by the fact that (arguably at least) justice is concerned with the distributive profile of health benefits and yet, as it is typically conducted, CER is distribution insensitive, because it need not be distribution insensitive (Bognar and Hirose 2014, 67; see section "Incompatibility: The Weighted QALYs Challenge"). It is not clear how they can take this position consistently with defending it against the ageism/disability discrimination objection based on how, in fact, it is conducted.
18. Bognar G. Cost-effectiveness analysis and disability discrimination. In: Cureton A, Wasserman D, eds. *The Oxford Handbook of Philosophy and Disability*. Oxford: Oxford University Press; 2020; Bognar G. Fair innings. *Bioethics* 2015;**29**:251–61, at 259–61; Johri M, Norheim OF. Can cost-effectiveness analysis integrate concerns for equity? *International Journal of Technology Assessment in Health Care* 2012;**28**:125–32; Nord E, Pinto JL, Richardson J, Menzel P, Ubel P. Incorporation of societal concerns for fairness in numerical valuations of health programs. *Health Economics* 1999;**8**:25–39.
19. This raises the challenging question of what weight an extra QALY has when it accrues to a person who is *both* old and disabled.
20. Suppose pandemic involves only 1 person and that the effect of the vaccine lasts for only 40 years. We can give the vaccine either at birth or at the age of 40, but not both. Surely, it is not a better health outcome for that person to have the vaccine at the age of 40 rather than at birth as the weighted QALY view suggests.
21. A similar challenge can be directed at disability-weighted QALYs. Suppose we have a choice between giving a greater benefit to a person at a time in her life when she is not disabled or providing a smaller benefit to that person at a stage in her life when she is disabled. If we use disability-weighted QALYs, cost-effectiveness analysis may recommend the latter even if it is worse for the person in question.
22. Harris J. QALYfying the value of life. *Journal of Medical Ethics* 1987;**13**:117–23; Harris J. The age-indifference principle and equality. *Cambridge Quarterly of Healthcare Ethics* 2005;**14**:93–9, at 96.
23. Brock DW. Cost-effectiveness and disability discrimination. *Economics and Philosophy* 2009;**25**:27–47, at 34.
24. John et al.'s description of the first leg of what they call the QALY trap involves a similar appeal: "If we want to value interventions that raise people's quality of life, we are forced to give less value to saving the lives of those with lower quality of life" (John TM, Millum J, Wasserman D. How to allocate scarce health care resources without discriminating against people with disabilities. *Economics and Philosophy* 2017;**33**(2):161–86, at 164).
25. Bad non-disabled converters are not far-fetched. In their response to Harris, Rawlins and Dillon give the example of secondary treatment for osteoporosis. This treatment has a significantly higher incremental cost-effectiveness for patients aged 70 than for patients aged 50, because the former are at higher risk of complications of osteoporosis (Rawlins M, Dillon A. NICE discrimination. *Journal of Medical Ethics* 2005;**31**:683–84, at 683).
26. Bognar G. Impartiality and disability discrimination. *Kennedy Institute of Ethics Journal* 2011;**21**:1–23, at 6. Admittedly, some might respond that this is an oversight on part of friends of

the moral equals argument and that CER treats women as if they have a higher moral status. In my view, this response is quite implausible—especially when coupled with the view that this putative fact renders CER unjustified.

27. Some argue that developing a disability is not a misfortune, but an injustice, the reason being that it is because of ableism that disabled people enjoy fewer QALYs than non-disabled people do. CER using QALYs—even when they are assigned in a non-biased way—compounds injustice in that ableist injustice is, so to speak, built into the QALY values assigned to different states (e.g.,Wasserman D, Asch A, Bickenbach J. Mending, not ending. In: Clements L, Read J, eds. *Disabled People and the Right to Life*. London: Routledge; 2008:37–50; John TM, Millum J, Wasserman D. How to allocate scarce health care resources without discriminating against people with disabilities. *Economics and Philosophy* 2017;**33**(2):161–86, at 169, note 15). In my view, there is something in this view, but the issues are complex. My arguments in this section apply *mutatis mutandis* to this way of compounding injustice as well.
28. Brock DW. Cost-effectiveness and disability discrimination. *Economics and Philosophy* 2009;**25**:27–47, at 35. For related but slightly different versions of the compounding injustice claim, see Kamm F. Deciding whom to help, help-adjusted life years, and disabilities. In: Anand P, Peter F, Sen A, eds. *Health and Equity*. Oxford: Oxford University Press; 2004:225–42, at **240** and Harris J. QALYfying the value of life. *Journal of Medical Ethics* 1987;**13**:117–23, at 119–20.
29. Hellman D. *When Is Discrimination Wrong?* Cambridge: Harvard University Press; 2008.
30. It might be replied that being disabled and being a bad converter of healthcare resources are too tightly connected to allow compounders of injustice to concede that the latter is a ground for imposing a disadvantage on people whereas the former is not. I am not sure this reply is sustainable. In any case, it requires a principled account of the conditions under which connections are "tight"—one that avoids implying that being a man is too tightly connected to being a bad converter of healthcare resources.
31. Lippert-Rasmussen K. Is there a duty not to compound injustice? *Law and Philosophy*; forthcoming.
32. Obviously, these are not the only accounts to which one might have recourse. Ben Eidelson's respect-based account of the wrongness of discrimination is worth mentioning (Eidelson B. *Discrimination and Disrespect*. Oxford: Oxford University Press; 2015, esp. 71–94). On his account, the use of CER might directly discriminate against disabled and older adult people if, say, healthcare planners would not have used CER had its implications for white, middle-aged men been like those it has for older adults and disabled people. However, this possibility does not point to CER being inherently discriminatory (as opposed to a particular use of it being discriminatory). In previous work (Lippert-Rasmussen K. *Born Free and Equal?* Oxford: Oxford University Press; 2013:193–216), I have defended a desert-based prioritarian account of the wrongness of discrimination. On this account, CER would probably not qualify as wrongful discrimination against older adults and disabled people *per se*. Indeed, on a lifetime prioritarian view benefits to old people count for even less than they do on the standard non-weighted QALY measures, so the desert-based prioritarian account, also, is not of interest here.
33. By this I mean her 2008 account of the wrongness of discrimination in general. In the previous section, I referred to her later, narrower account (Hellman D. *When Is Discrimination Wrong?* Cambridge: Harvard University Press; 2008) of the wrongness of indirect discrimination.
34. Hellman D. *When Is Discrimination Wrong?* Cambridge: Harvard University Press; 2008:**8** and 48, 175n2.
35. Hellman D. *When Is Discrimination Wrong?* Cambridge: Harvard University Press; 2008:**8** and 48, 175n2, 29, 7.
36. Hellman D. *When Is Discrimination Wrong?* Cambridge: Harvard University Press; 2008:8 and 48, 175n2, 35, 57.
37. Some readers might think that more evidence must be provided for the contention that the cultural meaning of CER is ageist or ableist to be plausible. Such skepticism, however, goes hand in hand with, rather than undermines, the overall argument that I make in this paragraph.

38. It is well documented that people generally prefer weightings that favor treating younger people. Presumably, this indicates that rationing against older adult people in the sort of case I have in mind here does not carry the cultural meaning of unequal moral status (Bognar G. Fair innings. *Bioethics* 2015;**29**:251–61, at 260; Bognar G. Age weighting. Economics and Philosophy 2008;24:167–89, at 168; Williams A. Intergenerational equity: An exploration of the 'fair innings' argument. *Health Economics* 1997;**6**(2):117–32, at 128).
39. Moreau S. *Faces of Inequality*. Oxford: Oxford University Press; 2020:211.
40. CER of treatments does not affect deliberative freedom, since the treatments offered will be offered irrespective of traits such as whether one is disabled or an older adult. However, Moreau might dismiss this point on grounds like those to which I appealed in section "Incompatibility: The Treatments-Not-People Challenge." Note also that the deliberative freedom Moreau is concerned with is not the freedom to engage in deliberation *per se*, but the freedom from having to engage in deliberation of a certain kind, i.e., one where one or more of one's extraneous traits should be regarded as a cost.
41. There is also the question of whether CER that gives some slight priority to women over men because of the former's greater life-expectancy would violate the deliberative freedom of men.
42. Bognar G. Cost-effectiveness analysis and disability discrimination. In: Cureton A, Wasserman D, eds. *The Oxford Handbook of Philosophy and Disability*. Oxford: Oxford University Press.
43. Perhaps not all healthcare goods are basic goods. If they are not, Moreau's third way of not relating as equals does not speak to CER of *these* healthcare goods.
44. Mason A. *Levelling the Playing Field*. Oxford: Oxford University Press; 2006:39–67.
45. A relevantly modified QALY here would be one where an extra life-year in a perfect job has the value 1 QALY, while an extra life-year in a less satisfying job has a value between 0 and 1 QALYs depending on how much less satisfying the job is. A less satisfying job will have a QALY value of 0.5 when one would be willing to trade 2 years in it for 1 year in the perfect job (everything else ignored).
46. Swift A. *How not to be a Hypocrite*. London: Routledge; 2003.
47. Anderson E. *The Imperative of Integration*. Princeton: Princeton University Press; 2013.
48. Segall S. *Equality and Opportunity*. New York: Oxford University Press; 2013:173–206.

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