

COMMENTARY

QALYs, Disability Discrimination, and the Role of Adaptation in the Capacity to Recover: The Patient-Sensitive Health-Related Quality of Life Account

Julia Mosquera

Institute for Futures Studies (IFFS), Stockholm, Sweden
Email: Julia.mosquera@iffs.se

Introduction

Quality-Adjusted Life Years (QALYs) and Disability-Adjusted Life Years (DALYs) are two of the most commonly used health measures to determine resource prioritization and the population burden of disease, respectively. There are different types of problems with the use of QALYs and DALYs for measuring health benefits. Some of these problems have to do with measurement, for example, the weights they ascribe to health states might fail to reflect with exact accuracy the actual well-being or health levels of individuals. But even if these weights represent accurately the well-being levels of individuals, there is room for questioning whether these measures capture everything that we care about in these cases, or whether there are important issues that they leave out, including considerations of fairness or equality. In this regard, the measures have been criticized for treating the aggregation of small benefits as greater than the aggregation of fewer but bigger benefits,¹ for disregarding fair chances in favor of utility maximization,² and for raising problems when applied in the context of variable population size.³ Perhaps one of the most pervasive ethical issues that has been associated with the use of these measures is the fact that they seem to discriminate against disabled people.⁴ Since the measures assume that disabled people have lower well-being and a shorter life span, treating a disabled person's medical condition contributes less to the maximization of years of life with good health than treating a non-disabled patient's medical condition.

In his paper "Disability Discrimination and the Patient-Sensitive Health-Related Quality of Life,"⁵ Lasse Nielsen proposes an amendment to the use of QALYs with the aim of avoiding discrimination against disabled patients. According to his account, the Patient-Sensitive Health-Related Quality of Life account, the only variable relevant to determine a patient's health-related quality of life per year and thus the ranking of health interventions between patients, should be the disposition of patients to respond to a given medical treatment. In this paper I show how, under some of the most plausible understandings of the capacity of patients to respond to a given medical treatment, his amended approach can in some circumstances lead to unfairly deprioritizing some disabled patients over non-disabled ones. To understand the magnitude of this challenge, it is necessary to determine the prevalence of these types of cases. This is a highly contextual, case-by-case project that would involve finding out which medical conditions would behave in which way, for which treatments, and in connection with which unrelated, pre-existing conditions.

Disability Discrimination in DALYs and QALYs

DALYs result from the sum of two components, one of which incorporates the discounting of years of life lived with a disability. DALYs result from the sum of Years of Life Lost (YLL) and Years of Life lost due to Disability (YLD). The first component of the sum, YLL, is *prima facie* disability discrimination-free since it measures the badness of a person's death by reference to the number of years of life lost due to death occurring at an age earlier than a given, constructed average life expectancy (e.g., ~80 years), thus treating the death of a disabled and a non-disabled person equally. The second component of the sum, YLD,

however, measures each of the years a person lives with a disability not as ‘full years’ of health, but rather as ‘fractional years’, where a weight of between [0,1] is applied to each year with a disability depending on the stipulated severity of the disability in question. For example, 10 years with a disability of badness 6 on a scale (0–10) would count as 6 years of life (i.e., 0.6×10).

The DALYs measure has been argued to discriminate against disabled patients in that it gives less credit to (otherwise equivalent) health interventions aimed at saving the lives of disabled people. But perhaps the more crucial instances of discrimination arise in those circumstances where DALYs give priority to *health-improving* interventions over *life-saving* interventions when the life at stake is the life of a disabled person.⁶ Such recommendation would seem to suggest that restoring a person’s health back to her non-disabled state is more valuable, in the sense of more worth investing in from the economic point of view, than saving the life of a disabled person given her presumed sub-optimal health state. This is a harsh value judgment.

The use of QALYs has raised similar disability discrimination criticism.⁷ In his paper, Nielsen argues that health-care rationing, exemplified by Nielsen by reference to the use of QALYs, is discriminatory against the disabled person. QALYs measure the years of perfect health of a patient and are calculated as the product of the years of life lived by that patient and the health utility score associated with her health state. The discrimination arises because QALYs calculations assume that disabled people have on average lower quality of life, as well as shorter life span due to being disabled and to other health conditions related to their disability, which results in fewer potential QALYs to be maximized.

Take the standard case below. A and B are two patients who currently suffer from the same health condition, condition C. A is non-disabled and B has a disability that causes a 10% reduction in her health-related quality of life (HRQoL). Both patients A and B have 60 years of life ahead. Only one treatment against condition C is available.

Standard Case⁸

$A = \text{timespan (60)} \times \text{HRQoL per year (1)} = 60 \text{ QALYs}$

$B_{\text{disab}} = \text{timespan (60)} \times \text{HRQoL per year (0.9)} = 54 \text{ QALYs}$

In the standard case above, the maximization of QALYs recommends the intervention that gives the treatment to patient A given that the quality-of-life adjusted number of years that the treatment of condition C would yield is higher for patient A, 60 years, than for patient B, 54 years. Referring to the Standard Case above, Nielsen argues that cost-effectiveness discriminates against the disabled person because

- (i) B has a disability that A does not have,
- (ii) it treats B worse than A through prioritization, and
- (iii) it is because B has a disability that A does not have that cost-effectiveness treats B worse than A through prioritization.²⁴

Nielsen suggests that the discrimination embedded in QALYs may not translate into the practical realm for two reasons. First, “cost-effectiveness analysis is a health-economic tool enabling economists to make large scale macro-priority recommendations to be weighed against other relevant considerations”, and second, “[economists] use average quality-of-life measures, which seldomly capture differences between disabled and able-bodied patients.”⁹ However, even if disability discrimination does not translate into practice, Nielsen argues that it still needs to be taken into account as a theoretical problem. Below I present Nielsen’s account and how it aims at dealing with this problem.

The Patient-Sensitive Health-Related Quality of Life Account

Different amendments to the use of QALYs have been suggested, for example ascribing greater weight to QALYs improvements to the worse off, including those with pre-existing conditions or disabilities.^{10, 11} Proposals like this rely however on the ascription of precise weights to differences in health states for

which we are sometimes epistemically unsure about, and which might be subject to incommensurability issues.

Nielsen proposes a theoretical, patient-sensitive, health-related, quality of life approach, according to which the effect of a given treatment on a patient's life quality should be measured from the perspective of the patient in question.¹² The proposal consists in revising the HRQoL coefficient to take into account only the value of the treatment and its effects on the targeted condition for a specific individual. Since the aim is to capture how well a given person responds to a certain treatment for a specific condition, the assessment will factor in information about the disposition of that person to respond to that treatment. I come back to this later. If there is no difference in how well patients A and B respond to the same treatment for the same condition, the HRQoL per year for both A and B will be the same.

Nielsen's account is grounded on a theoretical appeal to Frances Kamm's subjectivism and to current public research data on the preferences of disabled patients.¹³ With respect to the subjectivist inspiration, the idea is that prolonging the life of a particular person must depend on the life options available to that person. The assumption is that the disabled person's life can be just as valuable *for the disabled* as the non-disabled life is for the non-disabled given that their preferences are of the same strength. The fact that a given medical intervention that treats a disabled person could have been more valuable "for another person" if it treated a non-disabled person instead, is a justification that the disabled patient can reasonably reject for not being an appropriate justification of a health intervention.

Nielsen complements the subjectivist assumption above with a claim about the relationship between disability and well-being. He claims that in most cases of disability, there is no connection between disability and reduced well-being. Recent philosophical analysis on the effects of disability on personal wellbeing suggests that most disabilities—even if quite different from each other—are compatible with realising some of the most widely recognized goods in life, including happiness, rewarding relationships, knowledge, and achievement, which are ecumenically appreciated in different well-being theories, like objective list theories, hedonism, and preference-based theories.¹⁴ This conclusion aligns with recent proposals that understand the badness of disability as lying on the costs of having to transition to a newly acquired functional state and on the impermissibility of interfering with someone's self-identity without their consent, and not on disability being suboptimal from the point of view of quality of life.¹⁵ Views like these reject the traditional default Standard View of Disability according to which disability implies a net reduction in well-being.¹⁶

Nielsen takes the compatibility argument mentioned above as indicating a solution to the apparent tension between the popular assumption that disability lowers life quality, and the relatively high scores that disabled people give in self-reported happiness studies. The proposal is to take disabled individuals' self-reported scores as genuine reflections of their quality of life.

Applied to the Standard Case above, Nielsen argues that his account is indifferent between giving the treatment to patient A and B, provided that both patients respond to the treatment equally.^{17, 18}

Standard Case under Patient-Sensitive Account

$$A = \text{timespan (60)} \times \text{HRQoL per year (1)} = 60 \text{ QALYs}$$

$$B_{\text{disab}} = \text{timespan (60)} \times \text{HRQoL per year (1)} = 60 \text{ QALYs}$$

Nielsen recognizes that sometimes the disposition to respond to a certain treatment will depend on whether a certain patient has a pre-existing condition or a disability that can make people less predisposed to respond well to a given treatment aimed at curing their disability-unrelated condition, but he does not elaborate further on this challenge.¹⁹ I come back to this point in the next section.

Disability and Well-Being: Measurement and Comparability Issues

Nielsen takes his account to be free from the interpersonal comparisons that contribute to the disability discrimination problem of the use of QALYs. It is however unclear how this is possible. First, interpersonal comparisons are still needed every time we need to determine whether a patient responds

better to a treatment than another patient. Second, Nielsen claims that how well a given patient may respond to a treatment will depend both on individual factors as well as on how a certain pre-existing disability or condition may predispose patients to respond to certain treatments. This would leave room for comparisons which, he recognizes, could make his proposal fall prey of the disability-discrimination problem that motivated his account. Nielsen is silent on how this potential discrimination should be factored into his account. In what follows, I show some of the ways in which his account requires interpersonal and intrapersonal comparisons and some of the challenges that arise from them.

First, comparability issues arise in the context of the research on the value of disability that Nielsen relies on as theoretical inspiration for his account, including those views that understand most disabilities as implying no reduction in well-being. There are several theoretical challenges that are crucial for them. One of them is how to understand trade-offs between the different components of well-being that these views take to be central to the most ecumenically accepted theories of well-being. Happiness, rewarding relationships, knowledge, and achievement are elements of a very different nature, and as such, measuring and comparing them against each other comprises special theoretical challenges. Similar problems arise at the individual level when disabled individuals are asked to rate their own health states. It can be difficult for individuals to decide on the right trade-offs between the different aspects involved in their new health states (in the case of acquired disabilities). For example, it can be challenging to trade activity limitation aspects against experiential ones given their different nature. Other measurement challenges include whether these views assume the same ratio scale for disabled and non-disabled individuals (i.e., same absolute zero level and same proportion of intervals between well-being levels or scale variables).

Second, comparability issues arise too when trying to determine patients’ capacity to respond to a given treatment, both intra- and interpersonally. Nielsen does not elaborate further on what he means by “the predisposition of a patient to respond to a given treatment”. However, I take it as aligning with the subjectivist theoretical inspiration of his account that this predisposition would be determined by reference to the self-reported scores of patients, and to the comparison between their health-states prior and posterior to the health treatment aimed at curing their disability-unrelated condition.²⁰

Nielsen’s account would minimize disability discrimination the most (in more instances of medical interventions, as opposed to by degree of discrimination) if it were actually the case that most disabilities do not influence the capacity of patients to respond to medical treatments for unrelated medical conditions. [Case 1](#) below illustrates one of those cases.

The table below shows the self-reported well-being scores of two patients, A and B, non-disabled and disabled, respectively, both in need of the same medical treatment, at t_0 , the moment at which B acquires her disability, at t_1 , after B adapts to her disability, at t_2 , after A and B acquire a disability-unrelated medical condition, and at t_3 , after A and B are provided the medical treatment that cures their medical condition. Both A and B report the same scores throughout t_0 – t_3 and thus show to respond equally to the medical treatment for the disability-unrelated condition they have.

However, it is far from obvious that *all* disabilities behave as it is portrayed in [Case 1](#), something Nielsen recognizes in his paper. There is room for a number of disabilities to negatively influence the ability of patients to respond to medical treatments aimed at curing some further, non-related health conditions. Finding out which conditions would behave in which way, for which treatments, and for which unrelated conditions would require a significant amount of empirical research, of high value in contexts of priority setting in the allocation of medical resources. However, absent information about this, and thus about the extension of Nielsen’s account, it becomes hard to judge the extent to which his

Case 1. Equal Response

	t_0	t_1	t_2	t_3
A	1	1	0.4	1
B _{dis}	<1	1	0.4	1

account would in practice (and not only theoretically) avoid the disability discrimination problem in the allocation of medical resources that originally motivated his proposal.

Further, some take the systematic divergence between the self-reported scores of patients under a given condition, and the scores of the public and of patients who have recovered from the same condition, as an indication that current patients are in some sense biased towards their own health state (e.g., Eyal, 2021).²¹ The reasons for this bias may vary, including cognitive denial or the lowering of expectations. If it is the case that current patients systematically underestimate the severity of their conditions, the risk is that they might end up underprovided from a medical point of view. To avoid this, some have tried to provide measures that can account for this bias (the degree of divergence between current patient's scores and former patients' scores) and 'correct' it.²²

The focus on the individual disposition to respond to a medical treatment as a way of determining a patient's HRQoL per year and thus as a way to rank health interventions can, at least in theory, exacerbate the deprioritization of disabled patients that Nielsen's account is concerned with. If we were to take adaptation seriously, the risk is that some disabled patients may not evaluate a given medical treatment as having greatly improved their health state since, because of adaptation, the health state in which they have a disability-unrelated condition is not evaluated badly to start with. *Case 2* below aims at illustrating one version of this problem.

In *Case 2*, A and B, non-disabled and disabled, respectively, report the same scores at t_1 , prior to acquiring the same health condition. After becoming sick with the same disability-unrelated condition in t_2 , patient B, with a pre-existing disability, reports a higher score than patient A, who has the same medical condition as B and has no pre-existing disability. At t_3 , after having received the same medical treatment to treat their medical condition, both A and B report back the same scores.

B's self-reported scores at t_1 being equal to A's (presumably not at t_0) are explained by adaptation, since t_1 occurs some time after patient B has been living with her acquired disability and has already assumed the transition costs of adapting to it. B's higher reported score than A's at t_2 , when both patients acquire the same disability-unrelated medical condition, responds to what I refer to as 'double adaptation'. The idea here is that adaptation can *permeate* every health state of a patient that results from the acquisition of new medical conditions. If disabled patients adapt in some way to their disabilities, it is possible to think that they will adapt to further conditions they might acquire. It could be that the adaptation of B to her original, pre-existing disability may have predisposed her to adapt to further conditions she might acquire, even if unrelated to her pre-existing disability. This possibility would seem most realistic in those cases in which the further acquired conditions are comparatively less severe than the pre-existing disability and which are, as if it were, 'overseen' by those patients with pre-existing disabilities. In *Case 2*, this mechanism would translate into B underrating the badness of new health states resulting from the acquisition of further, un-related and curable medical conditions, ranking them comparatively higher than what A would rank those same health states, given her non-disabled, non-adapted condition.

It may be argued that whether cases like this pose a problem to Nielsen's account will depend among other things upon how "capacity to respond to a given medical treatment" is defined. If it is defined in terms of the size of the health-scores interval (i.e., how much of an improvement the medical treatment can make in a patient as compared to another), in *Case 2* Nielsen's account would recommend giving the treatment to patient A, non-disabled, despite the fact that A and B are affected by the same health condition, report the same scores in t_2 (prior to having acquired the health condition), and the fact that

Case 2. Double Adaptation and Small Improvement

	t_0	t_1	t_2	t_3
A	1	0.6	0.3	0.6
B _{dis}	>1	0.6	0.5	0.6

Case 3. Double Adaptation and Falling Behind

	t_0	t_1	t_2	t_3
A	1	1	0.3	0.6
B _{dis}	>1	1	0.5	0.55

they reported the same recovery score. This result is problematic, given that B’s comparatively higher score in t_2 is due to double adaptation, and not to comparatively lower need for the treatment in question.

It could be argued that “capacity to respond to a given medical treatment” should not be understood in terms of the interval between the health scores prior and post medical treatment, but rather as a measure of how close a given medical treatment brings someone back to their original scores prior to acquiring the medical condition the treatment is provided against. This interpretation would however also lead Nielsen’s account to recommend in some cases giving priority to non-disabled patients over disabled patients, despite the disabled patient’s condition not being of less medical urgency. Case 3 above illustrates one of those cases.

Case 3 involves the same kind of double adaptation taking place in Case 2, which is reflected in B’s scores at t_1 and t_2 . Importantly, B’s reported score at t_3 does not respond to the fact that B does not have the capacity to recover back to her departing health condition (1 in t_1), but rather to a perceived small improvement in t_3 with respect to t_2 .

Cases 2 and 3 were aimed to show that, under two of the most intuitive understandings of “capacity to respond to a given medical treatment”, the interval and the closeness to original score ones, Nielsen’s account would still in some circumstances recommend the prioritization of non-disabled patients over disabled patients. I have here explained this reported smaller improvement after a certain medical treatment by reference to the phenomenon of adaptation permeating every next health state a patient enters, as opposed to disability diminishing a patient’s capacity to recover. Thus, the set of cases presented here add to the set of cases where a pre-existing disability may actually negatively predispose individuals to respond well to a given medical treatment, cases that Nielsen recognizes his account would deprioritize, leaving the door open to the possibility that this would count as unjustifiable discrimination.

Finally, there is a set of cases of a different nature where Nielsen’s account could recommend deprioritizing disabled patients over non-disabled, despite the disabled patients’ condition not being of less medical urgency than the non-disabled patients’, and despite both disabled and non-disabled patients having the same capacity to respond to the medical treatment in question.

Case 4 below is a case where B’s reported scores remain the same throughout t_1 – t_3 , while A’s score at t_2 lowers as compared to t_1 due to the acquisition of the disability-unrelated medical condition that affects both patients A and B, and it goes back to 1 after the medical intervention at t_3 .

The unaffected reported scores of patient B throughout t_1 – t_3 are explained by the fact that the health condition of patients A and B affects something that B’s pre-existing disability already impacts, making the new health condition less of a short-term negative burden and the medical intervention to treat it less beneficial short-term, but not necessarily making it less important medically speaking for B to receive the treatment. Cases that would resemble the distribution of scores depicted in Case 4 could include the treatment of some eye condition for a blind person, or the treatment of arthritis in the lower limbs for a person who moves in a wheelchair. While medical conditions like these might not be of the same short-

Case 4. No Worsening and No Improvement

	t_0	t_1	t_2	t_3
A	1	1	0.6	1
B _{dis}	1	1	1	1

term negative impact for people with certain, very specific pre-existing disabilities, not treating those conditions could still become a medical problem in the long run.

Conclusion

I have tried to show that appealing to the capacity of patients to respond to a given medical treatment from a subjectivist perspective to avoid the disability discrimination problem of prioritization measures like QALYs can, in some cases, lead to the deprioritization of disabled patients over non-disabled patients. My argument was that adaptation can affect disabled patients' scores prior and posterior to a certain medical treatment in various, unpredictable ways, and can in some cases be taken as reflecting disabled patients having a lower capacity to respond to a given medical treatment. I have also tried to show that there are other types of cases where certain health conditions affect a function that a pre-existing disability had already affected, making the new health condition less of a short-term negative burden, and the medical intervention to treat it less beneficial in the short-term, but not necessarily less important medically speaking.

It could be argued that Nielsen's account will give lower priority to whomever (disabled or non-disabled) happens to have a lower capacity to recover from a given treatment, which would in turn seem to help the account avoid discrimination against the disabled *qua disabled*, even if it does not avoid giving lower priority to specific individual disabled persons. Although it is true that the account can give lower priority to non-disabled individuals too if for whatever reason they happen to show lower capacity to recover, I take that this would happen less systematically than in the case of disabled people. The idea is that, if there are systematic biases in the reporting of disabled patients' scores due to disability-related phenomena like adaptation (as some of the literature shows), and if disabled patients' self-reported scores are to be taken as (partial or total) indication of their capacity to recover, it is possible that the post-treatment scores of disabled people might also be affected by adaptation, which can translate into some disabled patients showing systematically lower capacity to recover from the same treatment than non-disabled patients.²³

Determining the prevalence of cases like the ones I discussed in this paper is a highly contextual, case-by-case project. It would involve, among other things, finding out which pre-existing disabilities or conditions would behave in which way, for which treatments, and in combination with which new, unrelated medical conditions. If we are to stick to the capacity of patients to respond to a given medical treatment to avoid the disability discrimination problem in the use of QALYs, as Nielsen proposes, this would require a significant amount of empirical research, of high value in contexts of priority setting in the allocation of medical resources.

Acknowledgments. I am thankful to Joona Räsänen, Krister Bykvist, and to an anonymous reviewer of this journal for helpful comments to an earlier version of this paper. Funding from Riksbankens Jubileumsfond (SE) (Grant No. M170372:1) is gratefully acknowledged.

Notes

1. Kamm FM. *Morality, Mortality, Volume One, Death and Whom to Save From It*. Oxford: Oxford University Press; 1998.
2. See 1, Kamm 1998.
3. See Hutchinson M. People are not replaceable: Why it's better to extend lives than to create new ones. In: Gamlund E, Tollef Solberg C, eds. *Saving People from the Harm of Death*. Oxford: Oxford University Press; 2019: 203–214; and Campbell T. *Using DALYs to Evaluate Health Interventions: Lessons from Population Ethics*, mimeo. Stockholm: IFFS.
4. See Esposito L, Hassoun N. Measuring health burden without discriminating against the disabled. *Journal of Public Health* 2016;**39**(3):633–639; Brock D. Health care resource prioritization and

- discrimination against persons with disabilities. In: Francis LP, Silvers A, eds. *Americans with Disabilities*. London: Routledge; 2000:223–235; Brock D. Cost-effectiveness and disability discrimination. *Economics and Philosophy* 2009;25:27–47.
5. Nielsen L. Disability discrimination and patient-sensitive health-related quality of life. *Cambridge Quarterly of Healthcare Ethics* 2022;32(2).
 6. For a detailed analysis of the disability discrimination problem behind the use of DALYs, see 4, Esposito, Hassoun 2016. Their alternative proposal, *Ethically Adjusted Life Years* (EALYs), incorporates a fixed component reflecting the status of being alive and a variable component accounting for the degree of healthiness. EALYs are meant to support three ethical principles or desirability criteria: (i) *Disability Monotonicity*, by which disabilities should count according to their severity; (ii) *Life Egalitarianism*, by which an additional life year granted should count equally, regardless of the health status of the patient, and (iii) *Life Supremacy*, by which a life year saved counts more than any disability year alleviated.
 7. For a reply to the objection that cost-effectiveness analysis is discriminatory against the disabled, see Bognar G, Hirose I. *The Ethics of Health Care Rationing*. London: Routledge; 2014:79–88. Their reply consists in denying that because a person has lower QALYs, that person has a worse life, all things considered, than a person in full health. According to them, the use of QALYs does not conflate the moral distinction between the *value of persons* and the *quality of their lives*. An additional premise of their argument is that the disability discrimination objection usually conflates selecting treatments with selecting patients. Their argument emphasises that QALYs are not assigned to people, and thus QALYs should not be understood as a ranking of patients, but rather as a ranking of the outcomes resulting from the implementation of treatments or health care services. The authors recognize though that in certain circumstances, selecting treatments sometimes unavoidably leads to the selection of patients.
 8. See 5, Nielsen 2023, p. 6.
 9. See 5, Nielsen 2023, p. 9
 10. As opposed to those for whom the treatment would be less beneficial.
 11. See John TM, Millum J and Wasserman D. How to allocate scarce health resources without discriminating against people with disabilities. *Economics and Philosophy* 2017;33(2):161–186.
 12. See 5, Nielsen 2023, p. 10.
 13. Kamm F. Deciding whom to help, health-adjusted life years, and disabilities. In: Anand S, Peters F, Sen A, eds. *Public Health, Ethics and Equity*. Oxford: Oxford University Press; 2004:225–242.
 14. Campbell S, Nyholm S, Walter JK. Disability and the good life. *Journal of Medicine and Philosophy* 2021;46:704–728.
 15. See Barnes, E. *The Minority Body: A Theory of Disability*. Oxford: Oxford University Press; 2016 and Valuing disability, causing disability. *Ethics* 2014;125(1):88–113.
 16. Amundson, R. Disability, ideology, and quality of life: A bias in biomedical ethics. In: Wasserman D, Bickenbach J, Wachbroit R, eds. *Quality of Life and Human Difference*. Cambridge: Cambridge University Press; 2005:101–124.
 17. By appeal to Kamm’s synchronic properties’, Nielsen is open to the possibility that discrimination in terms of lifespan reduction and discrimination in terms of disability may be two different types of discrimination, the former being easier to justify. I thus leave the life-length discrimination problem regarding QALYs aside and focus only on the disability and quality of life reduction.
 18. Nielsen’s proposal seems to be meant to cover only those cases in which disability does not make people’s lives worse, which he takes to be the majority of cases, and where discrimination (i.e., giving them less medical priority over non-disabled people due to their disability) is unjustified. As far as I understand, his account is silent regarding those cases in which disability makes people’s lives worse from their own perspective and whether in those circumstances, giving lower medical priority to a disabled person over a non-disabled person should count as unjustified discrimination. I am thankful to an anonymous reviewer for pressing on this point.
 19. See Bognar G. Does cost effectiveness analysis unfairly discriminate against people with disabilities? *Journal of Applied Philosophy* 2010;27(4):394–408; Impartiality and disability discrimination.

Kennedy Institute of Ethics Journal 2011;21(1):1–23, for a proposal with a similar motivation. On his view, disability is ignored unless it negatively affects the capacity to benefit from the treatment and the individual is responsible for it. Nielsen’s account does not however introduce elements of responsibility for distinguishing between which disabilities ought to be ignored. I take the issues I raise here as applying to this proposal, too.

20. Perhaps combined in some way with some sort of objective medical assessment of the supposed medical improvement after the treatment.
21. Eyal N. Measuring health-state utility via cured patients. In: Cohen IG, Shachar C, Silvers, A, Stein MA, eds. *Disability, Health, Law, and Bioethics*. Cambridge: Cambridge University Press; 2020:274–277.
22. Elsewhere, I showed some of the challenges of constructing a measure of this sort and proposed some basic desirability criteria for it, as well as some ways of interpreting the data scores based on their distribution. See Mosquera J. The bias of adapted patients in practice. *Journal of Law and the Biosciences* 2021;8(2) 1–10.
23. I am grateful to an anonymous reviewer for raising this point.
24. See 5, Nielsen 2023, pp. 6–7.