

Promoting the sustainability of healthcare resources with existing ethical principles: scarce COVID-19 medications, vaccines and principled parsimony

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Munthe *et al*¹ argue for an asymmetry between positive and negative dynamics that justifies a new sustainability principle among the operational principles for ethical healthcare resource allocation. The purported asymmetry is that while positive dynamics are ‘taken into account in present applications of the operational principles..., negative dynamics are not’.¹ Positive dynamics occur when allocations in the present lead to there being more healthcare resources per health need in the future (than are available in the present), whereas negative dynamics occur when present allocations lead to there being *less* future healthcare resources per health need.¹ Munthe *et al*¹ are correct that we have ethical reason to reduce negative dynamics—all other things being

¹I use the authors’ definition in the text from page 3. This is the clearest of a number of definitions the authors provide. For example, this definition is distinct from the “Total value of met health needs possible to generate” mentioned in figure 2 because the former definition makes no reference to total value but instead just to the resources themselves. As Munthe *et al* correctly note, because available healthcare resources do not always contribute to such value (eg, empty ICU beds), it is important to distinguish resources from such value. Nevertheless, my arguments apply *mutatis mutandis* to this ‘total value’ definition. There is another definition of positive dynamics on page 3 that makes no reference to need and instead invokes intertemporal consistency in the use of principles: “a resource allocation according to the operational principles positively affects the available outcome value possible to generate through a future resource allocation that uses these principles”. Given that Munthe *et al* believe that one can change the principles (eg, by adding a sustainability principle) and that different allocators over time (even in the same health system) may use different principles, including intertemporal consistency of use is not practically useful to incorporate into the definition of positive dynamics.

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equal, having less future healthcare resources per health need is worse than having more. Furthermore, this ethical reason ought to be accounted for by operational principles. However, using current examples from the COVID-19 response, I argue that allocation policies guided by existing operational principles already take into account negative dynamics and thus obviate the need for a new sustainability principle. Nevertheless, Munthe *et al*¹ make a valuable contribution to the literature by opening up new lines of important research regarding the mitigation of allocation policies’ negative dynamics.

As Munthe *et al*¹ cogently argue, existing healthcare allocation policies (eg, of vaccines) take positive dynamics into account. However, when they do so, they also often implicitly or explicitly take negative dynamics into account. For an explicit example, consider the Centers for Disease Control and Prevention (CDC)’s recently published ethical guidelines for allocating the initial supplies of COVID-19 vaccine, arguably the single most influential statement of operational ethical principles for that allocation throughout the USA.² When they elaborate on the justification and implementation of their first operational principle to ‘Maximise benefits and minimise harms’, they state that allocating such supplies to certain essential workers will help to protect the health of others by preserving services (eg, healthcare worker resources) available in the future. This policy both promotes positive dynamics and reduces negative dynamics. It does so by appealing to an existing operational principle focused on beneficence and non-maleficence, not by appealing to an independent, sustainability principle.

Similarly, White and Angus’s policy for the allocation of scarce medications to treat COVID-19³ explicitly endorses withholding drugs (eg, remdesivir) from some current patients in favour of future

patients because of the negative dynamics of distributing all scarce medications to current patients. Such a distribution would lead to a substantial negative dynamic: periods of time in the future in which no such medications are available. This withholding feature of the policy is explicitly designed (and implemented at the University of Pittsburgh healthcare system with the endorsement of the Commonwealth of Pennsylvania⁴) so that hospitals will have those drugs available for future patients, thus reducing negative dynamics. Like the CDC guidelines, this policy does not appeal to an independent, sustainability principle. These two contemporary examples demonstrate that Munthe *et al*’s¹ asymmetry is false and that a principle of sustainability is not necessary to take negative dynamics into account.

There are at least three reasons why parsimony in operational principles is a merit, and these reasons count against the addition of an operational principle of sustainability. First, all-other-things-being-equal, parsimony in ethical principles is a theoretical merit, and thus there is good reason to avoid adding a sustainability principle if it is unnecessary (eg, in the way I have argued above). Second, parsimony in operational principles is a practical merit, because an excessive number of such principles (or overcomplicated principles) can lead to difficulties and costly delays in the development or implementation of allocation policy. Third, insofar as policy makers are already sensitive to negative dynamics as evidenced by the cases above, adding an additional sustainability principle could lead policy makers to give negative dynamics excessive importance (eg, by double-counting the reasons of beneficence and sustainability). For these reasons, we should reject Munthe *et al*’s¹ argument for a new sustainability principle.

Even so, Munthe *et al*’s¹ arguments can be used to cogently defend the claim that present applications of the operational principles do not always take negative dynamics *sufficiently* into account. For example, despite antibiotic/antimicrobial stewardship programmes existing for decades, Munthe *et al*¹ are correct to note the problem of antibiotic resistance is significant and increasing, in part because of flaws in existing allocation policies. However, even if we establish that the aforementioned sufficiency claim is true, Munthe *et al*¹ would still need further argumentation showing that a new sustainability principle would actually lead to ethically superior allocation policies that sufficiently account for negative dynamics.

This empirical conclusion would require empirical justification. Related empirical work could also evaluate the efficacy of other initiatives aimed at reducing allocation policies' negative dynamics, such as clinician education campaigns. These are promising avenues for building on the contributions of Munthe *et al*'s¹ paper to the bioethical literature.

Acknowledgements The author wishes to sincerely thank Aidan Penn and Govind Persad for comments on earlier versions of this commentary.

Contributors Single author with acknowledgements to others for feedback and suggestions on earlier versions of this commentary.

Funding The author has not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

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To cite Vong G. *J Med Ethics* 2021;**47**:104–105.

Received 5 December 2020
Accepted 9 December 2020
Published Online First 11 January 2021



► <http://dx.doi.org/10.1136/medethics-2020-106644>

J Med Ethics 2021;**47**:104–105.
doi:10.1136/medethics-2020-107132

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