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## **Sustainable healthcare resource allocation, grounding theories and operational principles: response to our commentators**

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We proposed adding a sustainability principle to the operational ethical principles guiding public healthcare resources allocation decisions [1]. All our commentators [2-6] acknowledge our core message: healthcare needs to pay (much better) attention to the future. They also strengthen our proposal by offering support by luck egalitarian [2] and Rawlsian [3] arguments, and helpfully point out ambiguities and gaps requiring attention in the further development of the proposal, and its practical implementation.

We here consider some more substantial objections.

Vong [6] claims that healthcare resource allocation decisions already take dynamic effects into account. We agree that they sometimes do, and illustrated this in our article, but also demonstrate that they do so arbitrarily, systematically ignoring important negative dynamics.

Several commentaries highlight the importance of distinguishing philosophical theories which justify the *operational* principles used in healthcare resource allocation systems from these latter principles themselves. Operational principles generate normative outcomes together with an administrative framework for accumulation and distribution of resources (e.g., the distribution of tax money within a fiscal year). Philosophical theories, in contrast, are not bound by such administrative arrangements. The normative content of the operational principles therefore cannot be equated with that of whatever philosophical theory that grounds them. So, Persad's [5] and Vong's [6] claim that a concern for sustainability is already implicit in the operational principle of equal treatment conflates this principle with an egalitarian theory thought to justify it. We argued that this theory supports an operational sustainability principle, as this principle would block inegalitarian negative dynamics. Charitably interpreted, Persad and Vong seem to agree.

A similar point applies to Albertsen's [2] and Guerrero's [4] respective appeals to luck egalitarianism and expected utility. We do not dismiss luck egalitarianism as a theory justifying our proposal; our points about lack of future-orientation concern other theories.

Nor do we deny that an expected utility principle could play this role, though this is partly an empirical matter. However, we resist the idea that using any of these theories as operational principles would fix the sustainability problem. Even if practically feasible, such use would be constrained by the temporal structure of real administrative systems, creating precisely the kind of negative dynamics that our sustainability principle seeks to counteract.

Davies [3] proposes that lack of sustainability is a mere instance of a more generic phenomenon of resource allocation systems sacrificing efficiency for other concerns. This is true in a sense, but does not quite appreciate the systemic, progressive accumulation of such sacrifice that negative dynamics generate. Negative dynamics do not just represent an inefficiency, but a systemic threat of depletion of the resource and capacity base of health systems. Our proposed sustainability principle primarily addresses this hazard, leaving room for debate about how to balance efficiency against other considerations.

In all, we think our proposal stands strong. However, the complex task of implementing it in ways that fit particular health systems remains. This includes choosing between the variants of the principle we outline in specific decision contexts, and determining the normative weight of sustainability for actual decisions. Here, ethicists need to team with health systems, health law and health economics experts to develop actual, workable designs.

## References

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