COMMENT



The realities of rationing in health care

Mohammed R. Moosa¹ and Valerie A. Luuckx (1)2,3,4,5 ⋈

Rationing of scarce health-care resources is distressing. Clinicians therefore require clear guidance, which should be developed systematically and transparently through multistakeholder engagement. Rationing is seldom required in high-income settings but is often necessary in low-income settings. Global solidarity and health system strengthening are required to reduce the need for rationing.

An implicit global double standard has long upheld that rationing was unacceptable for HICs but was tolerable for LMICs

The coronavirus disease 2019 (COVID-19) pandemic has catastrophically devastated global health sytems. The number of cases continues to rise, as well as the number of fatalities. Individuals and global economies will bear the brunt of this pandemic and its long-lasting consequences are expected to perpetuate adverse health outcomes for years to come. The COVID-19 pandemic has placed unmitigated pressure on the availability of resources of all categories¹. This pressure has affected virtually every nation on earth — regardless of national income level — and has forced planning and/or the implementation of health-care rationing almost universally.

Rationing has always carried negative connotations and, until the current crisis, its mention would have at least raised some eyebrows, if not invited outright condemnation by members of civil society and many health-care workers. However, the need to potentially restrict the allocation of health-care resources in face of the relentless onslaught of COVID-19 has been widely accepted as a required response to the pandemic. The matter-of-fact development of recommendations for prioritized triaging of critically ill patients based on ethical principles gained rapid acceptance^{1,2}. The initial graphic scenes of patients dying in hospital corridors because of the lack of critical care beds played itself out nightly in homes around the world — not in low-income countries but in some of the most prosperous nations on earth. The fact that older individuals were the main victims of these ad hoc rationing policies somehow seemed to make the process 'acceptable'. Although unprecedented in high-income countries (HICs), this situation reflects the everyday reality of the majority of the world's population, who live in low- and middleincome countries (LMICs) where access to life-saving treatments is limited or absent. An implicit global double standard has long upheld that rationing was unacceptable for HICs but was tolerable for LMICs.

The COVID-19 pandemic spread rapidly across the globe and caught most health systems unaware and hopelessly underprepared. This lack of readiness resulted in a shortage of many items required for an effective response to COVID-19. The scarcity of

personal protection equipment (PPE) triggered protests in many countries, including HICs. However, the shortage of intensive care unit (ICU) beds has been the most agonizing, as the numbers of patients requiring invasive mechanical ventilation soared, outstripping the available resources. Dialysis capacity was also strained in some settings. Health-care workers working under extremely stressful situations found themselves having to make rapid life and death decisions about resource allocation at the bedside. Other ethical dilemmas faced by frontline workers included withdrawal of life-support and denying families access to dying relatives2. The Italian experience vividly highlighted the magnitude of the problems and their national body was forced to draw up triage guidelines to reduce the moral distress of bedside health-care workers, and introduce some objectivity and transparency in decision-making. These guidelines were based on a utilitarian approach to distributive justice, which aimed to maximize benefit (that is, lives saved or life-years saved) while treating patients with equal needs equally. Given the lack of guidance in the literature, the recommendations were largely expert-based. In view of their positive correlation with mortality, older age and other comorbidities were the de facto main determinants restricting access to ICUs3.

In response to the Italian experiences, multiple national societies and bodies also issued consensus guidance for rationing of ICU resources in response to COVID-19 (REF.⁴). Overall, most documents are similar and apply a utilitarian principle to achieve distributive justice (Supplementary Table 1). However, areas of disagreement among guidance documents include the appropriateness of the use of age and comorbidities as rationing criteria, which outcomes to consider (shortor long-term survival), which groups to prioritize (for example, health-care or other essential workers) and which tie-breakers to use (for example, lottery or first-come first-served) when two very similar patients require one resource4. Some authors have proposed alternative strategies based on a 'multi-principle allocation framework' and scoring systems⁵. However, such scoring systems, which include clinical severity scores

- ¹Department of Medicine, Faculty of Medicine and Health Sciences, University of Stellenbosch, Cape Town, South Africa.
- ²Institute of Bioethics and History of Medicine, University of Zurich, Zurich, Switzerland.
- ³Renal Division, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.
- ⁴Department of Child Health and Pediatrics, University of Cape Town, Cape Town, South Africa.
- ⁵Cantonal Hospital Graubünden, Chur, Switzerland.
- **⊠e-mail:** valerie.luyckx@ uzh.ch

https://doi.org/10.1038/ s41581-021-00404-8

COMMENT

An ethical framework for the allocation of scarce health-care resources ... should be developed between nations

(for example, the Sequential Organ Failure Assessment (SOFA) score), although relevant at a population level, lack sensitivity and specificity at the individual level². The tension between maximizing individual and population health therefore remains. Thus far, successful efforts to increase ICU and dialysis capacity in many high-resource settings have minimized the need to implement rationing protocols on a large scale and, therefore, the true utility and impact of the guidance documents have not been tested. However, many smaller resource allocation decisions must still be made daily by individuals; these decisions might not be as high-profile as ICU care but they are distressing nonetheless.

The African response to the pandemic was anticipated with great concern, as the continent is still battling the aftermath of Ebola virus and the human immunodeficiency virus (HIV). The measured approach with equanimity, dignity and selflessness of African nations contrasted glaringly with that of some powerful industrialized nations who sought to monopolize scarce resources and focused only on their own interests⁶. The outcomes achieved by African countries have compared favourably with those of HICs. Despite glaring inequities, the World Health organization (WHO) has struggled to mobilize global solidarity and ensure equitable distribution of scarce health-care resources. The global challenge going forward is to develop suitable instruments to deal with global inequalities related to health in a fair and ethical way⁷. An ethical framework for the allocation of scarce health-care resources, especially in pandemic emergency situations, should be developed between nations, led by the WHO. African nations and other LIMCs must also do their part and ensure that they become more self-reliant for critical goods and services by promoting and supporting local investment⁶.

Regrettably, the circumstances of resource scarcity highlighted by COVID-19 are familiar to nephrologists in LMICs who are faced with the epidemic of chronic kidney disease, which claims more lives each year than COVID-19 likely will, although less acutely. With limited availability of kidney replacement therapy (KRT; that is, dialysis and transplantation), difficult moral and ethical decisions regarding who should be prioritized for access must be made regularly. In an attempt to address the challenges of prioritizing access in South Africa, guidelines for access to KRT were developed

based on the 'Accountability for Reasonableness' ethical tool, using several of the principles employed by national bodies to develop rationing guidelines for COVID-19 (Supplementary Table 1)^{2,9}. This process requires extensive stakeholder engagement and iterative feedback to ensure equity is indeed advanced and maximized, and that the triage process is fair and transparent⁹.

No rationing tool is perfect, which is why responsiveness, accountability, transparency, fairness and multi-stakeholder engagement are necessary during development; the right to appeal is also crucial and must be protected ¹⁰. The COVID-19 pandemic has cruelly highlighted the global unpreparedness and the dire consequences of the lack of global solidarity. We hope that health systems and societies will heed the painful lessons of COVID-19 and will emerge from the pandemic strengthened, better prepared and more committed to the prevention of infectious and non-communicable diseases, such that the need for rationing, both under pandemic and under 'normal' circumstances, may be minimized if not obviated in the future.

- Emanuel, E. J. et al. Fair allocation of scarce medical resources in the time of Covid-19. N. Engl. J. Med. 382, 2049–2055 (2020).
- Robert, R. et al. Ethical dilemmas due to the Covid-19 pandemic. Ann. Intensive Care 10, 84 (2020).
- Vergano, M. et al. SIAARTI recommendations for the allocation of intensive care treatments in exceptional, resource-limited circumstances. *Minerva anestesiol.* 86, 469–472 (2020).
- Jöbges, S., Vinay, R., Luyckx, V. & Biller-Andorno, N. Recommendations on COVID-19 triage: international comparison and ethical analysis. *Bioethics* https://doi.org/ 10.1111/bioe.12805 (2020).
- White, D. B. & Lo, B. A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. *JAMA* 323, 1773–1774 (2020).
- Kavanagh, M. M., Katz, I. T. & Holmes, C. B. Reckoning with mortality: global health, HIV, and the politics of data. *Lancet* 396, 288–290 (2020).
- Bollyky, T. J., Gostin, L. O. & Hamburg, M. A. The equitable distribution of COVID-19 therapeutics and vaccines. *JAMA* 323, 2462–2463 (2020).
- Liyanage, T. et al. Worldwide access to treatment for end-stage kidney disease: a systematic review. *Lancet* 385, 1975–1982 (2015)
- Moosa, M. R., Maree, J. D., Chirehwa, M. T. & Benatar, S. R. Use of the 'Accountability for Reasonableness' approach to improve fairness in accessing dialysis in a middle-income country. *PloS ONE* 11. e0164201 (2016).
- Daniels, N. & Sabin, J. E. Setting Limits Fairly. Learning to Share Resources for Health. 2nd edn (Oxford University Press, 2008).

Competing interests

The authors declare no competing interests.

Supplementary information

Supplementary information is available for this paper at https://doi.org/10.1038/s41581-021-00404-8.