resource issues must be addressed by both funders and researchers of health metrics enterprises. Furthermore, studies using actual and real-time data at source are required to make appropriate updated models, which will require changing from established knowledge and dogma of previous infectious disease epidemics, and a mindset change from WHO and other global public health bodies.

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Francine Ntoumi, Alimuddin Zumla
fntoumi@fcrm-congo.com

Fondation Congolaise pour la Recherche Médicale, Brazzaville, Congo (FN); Institute for Tropical Medicine, University of Tübingen, Tübingen, Germany (FN); Division of Infection and Immunity, Center for Clinical Microbiology, University College London, London, UK (AZ); National Institute for Health Research Biomedical Research Centre, UCL Hospitals NHS Foundation Trust, London, UK (AZ)

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Financing the future of WHO

WHO has anchored the global health architecture since its founding in 1948, and it is impossible to imagine another institution filling the void if the international community were to let it atrophy. While also confronting and guiding the response to COVID-19, WHO is engaged in the most consequential reforms since its founding, including negotiating a global pandemic agreement and revising the International Health Regulations. Underpinning all these reforms is the need for robust and sustainable financing.

WHO's resources have consistently lagged behind its constitutional mandate. There is a deep misalignment between what governments and the public expect WHO to do and what the organisation is resourced to do. WHO is challenged by low levels of political will to increase its financing, strained government treasuries, and a battle over control of priorities.[1] These tensions were clear when the Working Group on Sustainable Financing, chartered by WHO's Executive Board, did not reach consensus by the January, 2022 deadline.[1] WHO's Executive Board has now charged the Working Group on Sustainable Financing with identifying a viable plan before the World Health Assembly in May, 2022.[2]

There is no time to lose. WHO's resourcing strategy must match its mission with assured financial support from member states buttressed by proven, innovative financing methods. By defining its priorities, delivering on them, and being transparent and accountable, WHO can more boldly pursue its public health mission.

WHO's revenue model has always been politically contentious with its first budget slashed by 23%, thus "preventing us from being an operating agency to any extent".[3] In 2022, WHO is expected to support a world health agenda with a budget less than that of a major research hospital or mid-sized subnational health agency.

The constitution of WHO gives the organisation flexibility to receive voluntary contributions from state

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and non-state actors to supplement mandatory assessed contributions from member states. That should have augmented its funding. Yet voluntary contributions have skewed WHO's revenue model such that more than 80% of its income now derives from them.[4,5] Voluntary contributions risk prioritising the parochial interests of major donors over collectively driven all-of-society activities. WHO has little control over its budget, suppressing fiscal predictability, lessening purchasing power, undermining longer-term investments, and diminishing the opportunity to attract and retain world-class scientists consistently.

Former German Chancellor Angela Merkel urged a special session of the World Health Assembly in 2021 to increase assessed contributions from member states to 50% of WHO's base programme budget.[6] Yet despite high-profile advocacy, and that assessed contributions represented roughly half of WHO's budget in 2000,[7] the Working Group on Sustainable Financing could not reach agreement. Member states variously cited already stretched government budgets, the need for WHO to work within its existing means, and the desire for governance reforms,[1] reflective of the need to ensure fiscal legitimacy, fairness, and justice.[8] From a purely financial perspective, however, there is an opportunity to connect increases to assessed contributions with the inevitable tapering of country spending on the acute phase of the COVID-19 pandemic. Such expense substitution is politically easier to accomplish than newly taxing already pressured national budgets.

The tension for control between funders and implementors is nothing new, but a special dynamic exists when underwriting the activities of an intergovernmental organisation. For member states, there is little prospect for a financial return on investment and contributions are made from public treasuries. These realities unsurprisingly cause funders to engage in more risk-averse behaviours than other suppliers of capital, such as company shareholders or charitable foundations. Voluntary contributions, moreover, have become a way to dictate the terms of WHO's activities. The key questions for the future are who gets to set the global health agenda, and will WHO be relegated to an agency that simply implements particular donors' projects?

If the COVID-19 pandemic has taught us anything, it is that the global health agenda should be elevated above the political fray. Yet as a membership organisation of sovereign nations and thus a political institution, WHO has faced stiff political opposition to achieving ample and sustainable financing. Prominent heads of state must become champions of WHO, expending political capital to generate global will. Finance ministers, who are powerful domestic political figures, must be invited as regular, fully engaged participants in WHO's programmes and financing, and be persuaded assessed contributions could save orders of magnitude of economic pain later.

Organisational credibility underpins any potential long-term commitment to support WHO financially. WHO can achieve that by clearly defining its priorities, delivering on them, and promoting that it did so. Despite WHO's expansive world health remit, prioritisation is necessary and inevitable, even between essential activities and other valuable pursuits. WHO released an investment case[9] before COVID-19, a sound method used by other global health actors to articulate goals and financing needs. The organisation must now maintain and refine its mission so that it is transparent about its priorities, successes, shortcomings, and how it incorporates fresh thinking.

This approach could lead to additional pools of capital. Public and private actors are more apt to boost funding if they believe their investments can be leveraged. For example, sovereign nations pool their money in multilateral development banks to access attractive capital markets pricing collectively[10] and will partner with the private sector to co-finance and co-research basic biomedical science.[11] As the Humanitarian Finance Forum has proposed, there are also "leaders in humanitarian institutions, international organisations, investment banks, insurance companies and government" who may be interested in championing WHO's mission and could "assist in the development of sustainable financing tools at scale".[12]

Holding a periodic replenishment conference would boost resources and gain support from civil society and stakeholder communities. Such a meeting could syphon potential contributions to WHO's overall strategic plan. Alternatively, replenishment goals could be geared towards acute priorities in WHO's budget to address one-off investments, such as supporting the new mRNA vaccine hubs in Africa,[13] thus ensuring that assessed contributions are reserved for ongoing activities.

More tactically, WHO could pursue new in-kind services, refine its purchasing methods, partner with other actors to achieve concessionary pricing, or design an incrementally

more aggressive investment policy. Additionally, the self-imposed 13% cap on programme support cost fees that WHO charges should be reconsidered.[14] A meaningful increase, combined with smart application, such as only applying them to voluntary contributions, could release some pressure.

All these proposals involve risk, but there is an existential risk of doing nothing and backsliding into irrelevance. Björn Kümmel, Chairperson of the Working Group on Sustainable Financing, told WHO's Executive Board in January, 2022 that "what we are discussing is not just the financing of WHO. It is the future of WHO".[15] It is also a choice between integration and fragmentation, higher or lower health outcomes, and thriving or pressured economies. The world needs an empowered, well financed WHO at the centre of the global health architecture. WHO is an essential investment.

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Lawrence O Gostin, Kevin A Klock, Helen Clark, Fatimatou Zahra Diop, Dayanath Jayasuriya, Jemilah Mahmood, Attiya Waris
gostin@law.georgetown.edu

O'Neill Institute for National and Global Health Law, Georgetown University Law Center, Washington, DC 20001, USA (LOG, KAK); Foundation for the National Institutes of Health, North Bethesda, MD, USA (KAK); The Helen Clark Foundation, Auckland, New Zealand (HC); Partnership for Maternal Newborn & Child Health, Geneva, Switzerland (HC); Fondation Afrivac, Dakar, Senegal (FZD); International Advisory Council, The Round Table, Colombo, Sri Lanka (DJ); Sunway Centre for Planetary Health, Sunway University, Selangor, Malaysia (JM); University of Nairobi School of Law, Nairobi, Kenya (AW)

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The value of alleviating suffering and dignifying death in war and humanitarian crises

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Despite a vast literature on humanitarian crisis response,[1–5] palliative care, pain relief, and care for the dying and bereaved need increased and urgent attention,[5–11] particularly in the context of armed conflict. *The* Lancet *Commission on the Value of Death*[12] challenged the medicalisation of dying and death and reaffirmed the moral injustice of the global palliative care and pain relief divide.[13] The devastating humanitarian crisis in Ukraine raises the vital importance of these issues.[12,13]

Between 2014 and 2021, the long-term Russian–Ukrainian armed conflict led to more than 50 000 Ukrainian casualties and since Feb 24, 2022 more than 3 million Ukrainian residents have been displaced.[14] In Ukraine, attending to the seriously ill and dying is complicated by the trauma and instability of war,[11,12] as well as the unfolding COVID-19 pandemic in a country with low vaccination coverage.[15] Organisations such as the Palliative Care in Humanitarian Aid Situations and Emergencies (PallCHASE) have called for multisectoral global leaders and governments to ensure timely measures are enacted to maintain human dignity for