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How the G20 can prevent the next pandemic

Nicole Hassoun, Xiaoshun Li, Marc Fleurbaey / 21 Nov 2024

As the COVID-19 pandemic demonstrated, the global health system is only as strong as its weakest link. This column proposes a Global Health Impact metric to measure the effectiveness of health interventions by evaluating lives saved and disabilities prevented. The authors suggest that by considering the dynamic nature of health interventions and their effectiveness in different contexts, the metric can facilitate more equitable and targeted resource allocation. They also propose linking health funding to measurable outcomes in order to incentivise long-term investments in global health and ensure better pandemic preparedness and responses.

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In an increasingly interconnected world, the health of one is the health of all. Yet, as the COVID-19 pandemic painfully demonstrated, our global health system is only as strong as its weakest link. The landmark innovation in mRNA vaccines that have been crucial in curbing the pandemic could have been missed (Veugelers 2022), and the distribution of vaccines has been shockingly unequal. For the preparation of future pandemics, transformative change must be initiated as soon as possible.

The World Health Organization's pandemic agreement has struggled to gain the necessary traction and consensus (Michaud et al. 2024). This

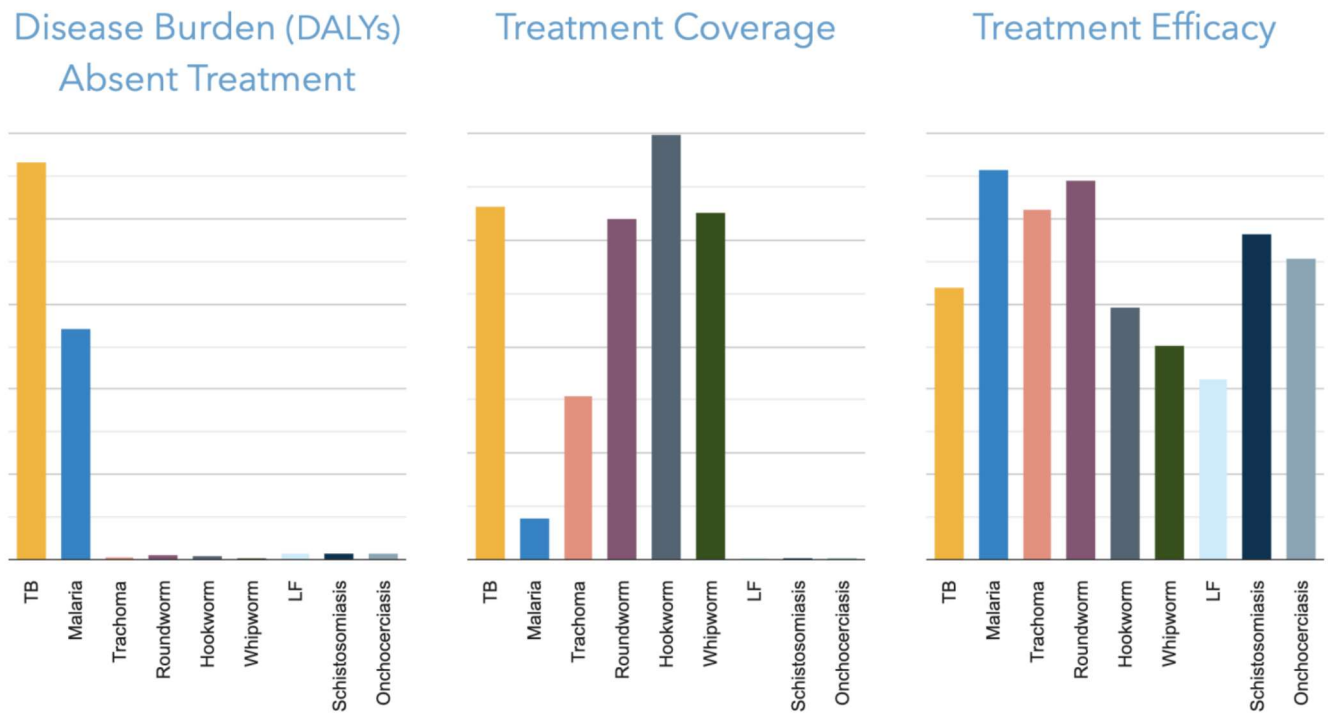
The next gathering of world leaders on 18-19 November 2024 at the G20 Summit presents a critical opportunity for the world to better prepare for and respond to pandemic threats (Hassoun and Basu 2024; see also the T20 website here). This summit should support the adoption of innovative health metrics and strengthen global health governance. Furthermore, tying development cooperation flows to these metrics of health impact can help the international community set targets, evaluate performance, and improve pandemic preparation and response efforts.

To enhance global health initiatives effectiveness, a new metric is needed to measure the health impacts of vaccines and other essential countermeasures accurately. This metric should measure both mortality and morbidity averted by treatment to help the international community prioritise health interventions and allocate resources effectively (Institute for Health Metrics and Evaluation 2024).

Some have measured the health consequences of disease (lives lost), but to date, few have looked at the consequences of interventions in alleviating the global disease burden, which is important for setting targets, evaluating performance, and meeting needs.

We propose measuring the lives saved and disability prevented with essential counter-measures by using data on treatment effectiveness, access, and the need for treatment. For proof of concept, see the Global Health Impact index here. Our proposed impact metric shifts the focus from merely assessing disease burden to evaluating the impact of health interventions in reducing this burden (Hassoun et al. 2022). This approach provides a clear picture of the impact of medicines in terms of life years saved and improvements in quality of life.

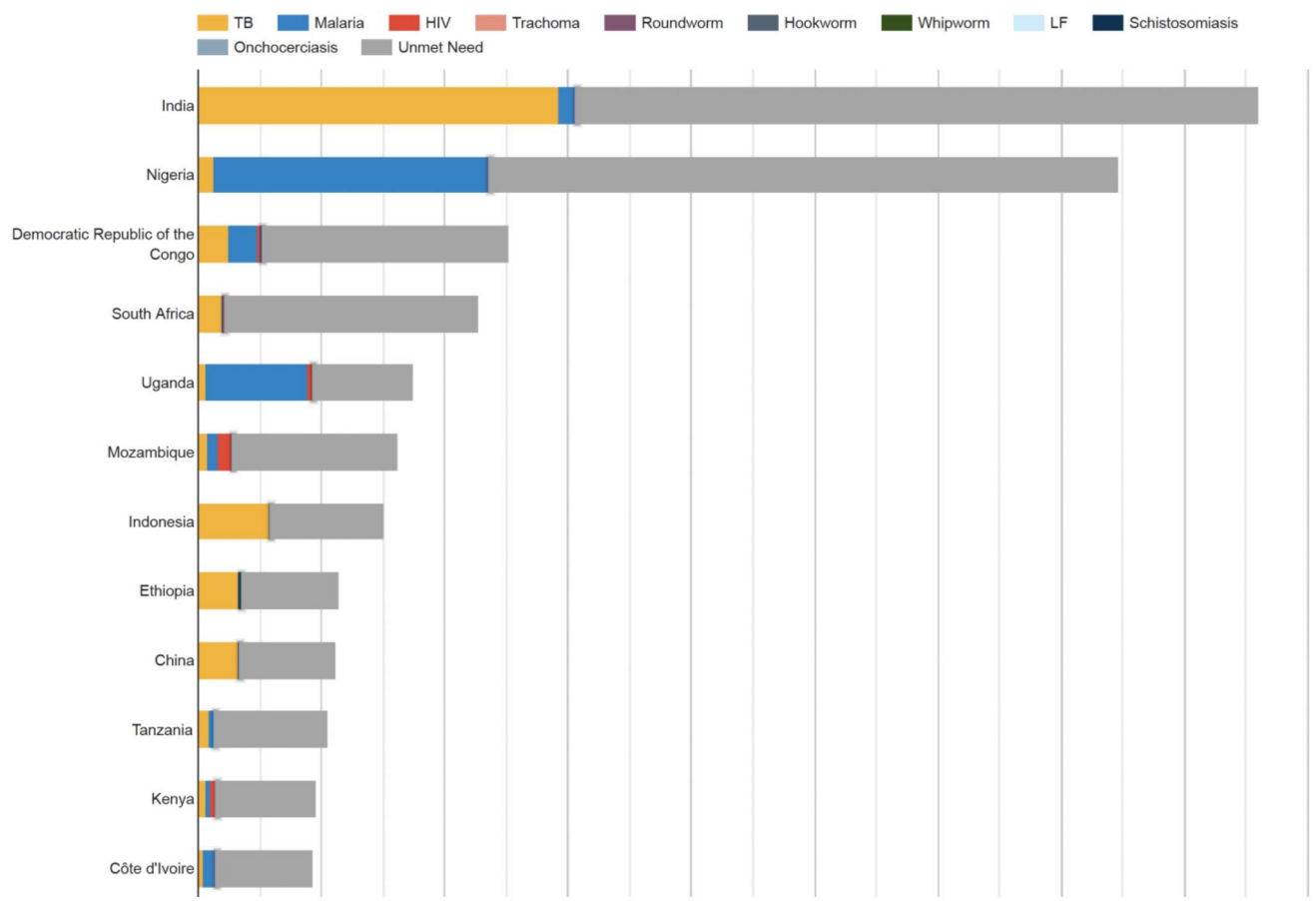
Figure 1 A comparison of the disease burden, treatment coverage and treatment efficacy of selected diseases



***Note*: This figure compares the disease burden (in DALYs), treatment coverage, and treatment efficacy for several diseases. The first graph highlights that tuberculosis (TB) and malaria have the highest disease burdens in the absence of treatment, while other diseases like trachoma, hookworm, and lymphatic filariasis (LF) show lower burdens. The second graph indicates that diseases such as roundworm and hookworm have higher treatment coverage, whereas TB and malaria have lower coverage. The third graph shows that TB, malaria, and trachoma have high treatment efficacy, while schistosomiasis and LF have comparatively lower efficacy.**

Health interventions do not operate in a vacuum; their effectiveness can vary significantly based on the context. Factors such as population demographics, socioeconomic conditions, healthcare infrastructure, and cultural attitudes toward health can influence interventions' success. Our proposed metric considers the dynamic nature of health interventions and their varying effectiveness in different contexts (Hassoun and Cosler 2023). This allows for more tailored and context-specific health strategies, addressing the unique health needs of different populations (Hassoun 2020). For instance, a vaccination programme that reduces the incidence of a disease not only decreases the number of deaths but also reduces the prevalence of long-term disability. By measuring these outcomes, the Global Health Impact metric provides a clear measure for evaluating the success of health interventions and the unmet needs.

Figure 2 Treatment impact and unmet healthcare needs across countries



***Note*: A visualisation of the treatment impact (coloured by disease) and unmet healthcare needs (grey) across various countries. Each bar represents a country and is segmented to show different diseases and the level of unmet need (DALYs lost).**

Since development cooperation is not a 'one size fits all' model, the needs of different populations are considered through this approach. The metric will allow for tailored strategies to achieve the greatest health impact in specific contexts. By measuring how well an intervention works in a given setting and how many people can realistically benefit from it, we can ensure that resources are allocated efficiently and equitably, maximising health outcomes across diverse populations.

In the context of pandemic preparedness and response, this new metric can encourage international development organisations to focus on the actual health outcomes of interventions. For example, instead of merely tracking the number of healthcare facilities built, the metric would evaluate reductions in disease transmission and mortality rates attributable to those facilities. In vaccination campaigns, rather than counting doses administered, the focus would be on decreasing infection rates to reduce subsequent hospitalisations and deaths.

Additionally, we propose funding for research on new vaccines and other essential countermeasures be linked to measurable improvements in patient recovery rates and the overall reduction in the disease burden. We believe this new financial mechanism will incentivise the provision of health as a global public good. Currently, companies often lack the incentive to invest in health interventions that have long-term or uncertain returns. By tying funding to essential countermeasures' impacts, we ensure that investments in global health are linked to improvements in population health.

The Global Health Impact metric provides a framework for informing health policy and resource allocation. By clearly demonstrating the impact of interventions, it can help the G20 prioritise initiatives that yield the highest health benefits. This metric empowers health policymakers to craft strategies that save lives and prevent suffering, transforming health interventions from broad strokes to targeted actions. This shift holds the promise of a world where health equity is not just an aspiration but a reality; where the burden of disease is not merely measured, but decisively reduced.

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