

subgroups and against specific immunocompromising conditions which, ideally, should not be grouped together.

Nevertheless, these data are some of the first of their kind and the effect has already started to emerge with the updated US Advisory Committee on Immunization Practices respiratory syncytial virus vaccine guidance in June, 2024,<sup>13</sup> providing definitive recommendations to vaccinate all adults aged at least 75 years and adults aged at least 60 years who are residents of long-term care facilities, or those who have chronic medical conditions that are associated with a higher risk of severe respiratory syncytial virus disease. These recommendations are a good start, although more data like these will be needed to provide insight on rare potential side-effects and clarify the need for and timing of re-vaccination. Hopefully, as more real-world evidence emerges that builds confidence in respiratory syncytial virus vaccines, and informs how best to use them, access and benefit for respiratory syncytial virus prevention products for older adults will move beyond high-income countries and settings.

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## Investing in the future of global health

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We commend the *Lancet* Commission on Investing in Health for providing a substantive analysis of progress and future prospects for global health.<sup>1</sup> Beginning in 1993 with the World Bank’s influential report on investing in health, a series of timely analyses<sup>2–4</sup> have documented substantial improvements in life expectancy and wellbeing over past decades, as well as evolving opportunities for action to enhance progress into the future. Despite a reversal of progress during the COVID-19 pandemic,<sup>5</sup> there are important opportunities for rapid progress. The global health community and governments can build on the progress made in halving child mortality and halve premature death by 2050, as proposed by the Commission in its new Global Health 2050 report.<sup>1</sup>

We wish to amplify ten important implications of this report. First, global health continues to offer a

moral imperative as well as a compelling investment opportunity. Improvements in longevity and wellbeing, shared by all, are crucial for all, across nations and the global community.<sup>6</sup> However, there are important shifts in demography, epidemiology, and distribution of resources. Impressive progress has been achieved in reducing the burden of selected infectious diseases and improving maternal, neonatal, and child health (MNCH) services. These remain crucial areas but need to be complemented by services for key non-communicable diseases, responding to mental health challenges, and strengthening efforts to reduce pandemic risk. In addition, public health interventions, such as tobacco control, ending subsidies to fossil fuel, and health taxes on harmful products are key.

Second, sub-Saharan Africa is now the only region with projected population growth and where infectious disease

and MNCH challenges constitute the largest opportunity for mortality reduction and increased longevity.

Our third point is to learn from past success, while imagining and adopting new approaches. Support must be tailored to country priorities and capacities to encourage and support development of national systems, as recently underscored in the Lusaka agenda.<sup>7,8</sup> The *Lancet* Commission on Investing in Health's Global Health 2050 report<sup>1</sup> can inspire but should not dictate such national or local priorities.

Global health initiatives have an important role in improving global health outcomes, but are not sufficient to respond to variable and evolving challenges. Our fourth point is that the global health architecture is imbalanced, fragmented, and must adapt to changing needs and contexts. Global health platforms must serve to aggregate political and leader-level will and demand and drive collective investment around a feasible programme of action, while supporting the development of sustainable national health systems.

Our fifth message is that political leadership is needed to achieve the Commission's 50 by 50 goal (by 2050 reduce by 50% the probability of premature death). Progress will rest on national efforts to double domestic financial allocations to health, while focusing investment on a limited package of services such as the 15 conditions identified by the Commission and largely delivered through primary health care and community platforms. In every region, some countries are already on track,<sup>1</sup> so it is possible. Given considerable fiscal pressures, this remains a substantial request for national governments.

The sixth message is that these shifts are unlikely to occur without increased development assistance for health (DAH) and reinforcing local leadership. DAH is a vital instrument but must be better targeted to the poorest countries and better allocated to drive positive outcomes while supporting sustainable national systems. Coordination of public financing at national, regional, and global levels is needed to align domestic finance, external grants, external loans, debt management, and private investment.

Transnational health challenges, global public goods, and externalities of insufficient health emergency responses imply the need for "beyond aid" investments for global issues such as health security and pollution management. National and global health financing is becoming more complex and interconnected. To ensure



Andrew Estabrook/Panos Pictures

fair contributions and effective use of resources, new forms of governance of the global health architecture are needed that are more inclusive and responsive to the full range of country priorities and build accountability to recipients as well as investors.

Our seventh point is that new partnerships at national, regional, and global levels are needed to mobilise political intent, scientific cooperation, manufacturing capabilities, market access, and societal capacities to enhance wellbeing.

The eighth message relates to how innovation for cheaper, robust, and effective health products and technologies across a wider range of issues can drive global health gains. Together, established and new partnerships can advance coordinated clinical trial networks and increase funding for development of multiuse platforms (eg, mRNA). Developments in artificial intelligence have the potential to accelerate discovery times,<sup>9</sup> while regulatory harmonisation can reduce licensing delays.<sup>10</sup> It is estimated that new innovations for neglected diseases will have saved more than 40 million lives between 2000 and 2040.<sup>11</sup> And fulfilling the 100-day commitment to rapidly develop new tools in response to pandemics is vital for minimising the human and economic devastation of pandemics.<sup>9,12</sup>

However, the COVID-19 pandemic taught us lesson nine, that the discovery of new treatments, diagnostics, vaccines, and other health products and technologies is necessary but insufficient. Access to medicines and diagnostic tools is one of the key drivers of catastrophic

health expenditure, driving millions of people into poverty every year and forcing others to forego essential care.<sup>13,14</sup> Action is required to accelerate equitable access to affordable quality health products, including through more resilient and regionally distributed manufacturing and supply chains.<sup>15</sup>

Finally, our tenth point is that health systems have both domestic and international value. There is considerable variation in health outcomes between countries with similar levels of economic development and technological access. No matter the level of international effort, sustained progress towards universal health coverage is founded on national political leadership.<sup>16</sup> Public policy makes a difference in ensuring protection, promoting healthy behaviours, providing equitable access to effective quality care, and in regulating and synergising public and private health actors to contribute to equitable health outcomes.

Deliberate and sustained leadership at country level is required to raise funds and focus investment on an explicit list of cost-effective priority services. Ensuring broad coverage of these simple promotive, preventive, and curative interventions, through primary health care and communities, is the foundation for good health systems that are affordable and effective.<sup>17</sup> Progress must be monitored, and public officials must be held to account—to their people and to the international community.

The *Lancet* Commission on Investing in Health's Global Health 2050 report<sup>1</sup> emphasises the importance of focusing on services where substantial change can be realised and evolving that focus as the context and challenges change. This approach implies greater strategic capacity at country level. Timely, reliable, and actionable data systems are essential to track progress, ensure accountability, and deliver measurable impact, particularly in rapidly changing global health contexts. Additionally, the report signals an imperative for reform of DAH and the global health architecture.<sup>7,8</sup> Global health is increasingly presented with internationalised challenges, demanding collaboration between countries despite geopolitical tensions.<sup>18</sup> The benefits of collaborating for health not only accrue directly to people and nations, but also to the global body politic, sustaining channels of communication and cooperation, working for outcomes that are not zero-sum but benefit all, and establishing action oriented and legitimate partnerships that can contribute to stability in the international order. The

failure to seize these opportunities will have a negative impact on all. Together, governments, civil societies, health and research communities, and the private sector can halve premature mortality by 2050—and witness a broader convergence in longer healthy lives for all citizens.

The *Lancet* Commission on Investing in Health invited a group of decision makers from countries and organisations to form an Advisory Committee and to discuss and provide feedback on a first draft of their report. The Advisory Committee constituted a diverse set of perspectives, and this Comment does not necessarily reflect the views of all members. The Norwegian Development Cooperation Agency (Norad), the Bill & Melinda Gates Foundation, and GIZ Germany supported the work of the Commission; meeting costs were supported by the Commission but travel and hotel costs were met by individual attendees. AD is a Senior Health Advisor to Norad and a Policy Advisor to the Bergen Center for Ethics and Priority Setting. SA is the Assistant Director-General, Data, Analytics, and Delivery for Impact, WHO, Geneva and a former Chief of the Global NCD Unit, Division of Global Health Protection, Center for Global Health, Centers for Disease Control and Prevention. CB is the Director for Global Health Diplomacy, Joep Lange Institute, Geneva and a former Director of External Relations for the Global Fund to Fight AIDS, Tuberculosis and Malaria. MB is the Chief Director of the National Treasury of South Africa. SE is a former Director of the Global Health Strategy Division of the Ministry of Foreign Affairs, Japan, is Deputy Assistant Minister for Global Health at the Ministry of Health, Labour and Welfare, Japan, is the Director for Planning and Coordination at the National Institute of Public Health, Japan, and is a Visiting Lecturer in the Department of Global Health Policy at the University of Tokyo, Japan. HF is the Director of Health for UNICEF and a former Executive Director of the Partnership for Maternal, Newborn and Child Health. GG is the President for Global Policy & Advocacy for the Bill & Melinda Gates Foundation. GL is the Executive Director of Charities and Community at The Hong Kong Jockey Club, is Honorary Clinical Professor at the University of Hong Kong, and is a former Dean of Medicine and inaugural Helen and Francis Zimmern Professor in Population Health at the University of Hong Kong. SN is Executive Head of G20 Joint Finance and Health Task Force at WHO and is a former Deputy Director of Global Issues and Governance and a former Deputy Director, Head of Vaccines, Global Health and Climate at HM Treasury, UK. JN is the Technical Director, Management Sciences for Health and Professor of Health Economics at the School of Public Health, University of Ghana and a former head of the Health Economics Unit at Africa Centres for Disease Control and Prevention. J-AR is the Chief Executive Officer of The Wellcome Trust and a former Ambassador for Global Health, Ministry of Foreign Affairs, Norway. OS is a Social Policy Special Adviser to the President of South Africa and the President and Chief Executive Officer of Evidence Based Solutions, a private policy, research, and ICT company. VT is a Senior Adviser to the International Health Policy Program, Ministry of Public Health, Thailand. JPU is the Global Director of Health, Nutrition, and Population and Director of Global Financing Facility for Women, Children and Adolescents at the World Bank and a former Minister of Health and Social Protection of Colombia.

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## Changing the culture of blood culture

The second UN High-Level Meeting on Antimicrobial Resistance on Sept 26, 2024 is expected to address the looming threat that antimicrobial resistance poses to global health and food security.<sup>1</sup> The outcome document of the meeting on the realisation of the Millennium Development Goals sets a target of a 10% reduction in global deaths associated with bacterial antimicrobial resistance by 2030, compared with the 2019 baseline of 4.95 million deaths, by enabling at least 80% of countries to test for antimicrobial resistance in all bacterial and fungal Global Antimicrobial Resistance and Use Surveillance System pathogens.<sup>2</sup>

Blood culture has been the default standard for diagnosing bloodstream infections since the 1970s,<sup>3</sup> as it isolates a wide range of live pathogens for antimicrobial-sensitivity testing. In specialised laboratories, the technology is inexpensive and has well established protocols and interpretation guidelines. However, despite its advantages, blood culture has many weaknesses (panel). It has poor sensitivity, especially with low blood volumes, and an extended processing time (ie, 24–72 h for initial results). The incidence of cross-contamination varies substantially between

laboratories, ranging from 0.6% to 12.5%.<sup>4</sup> Any antibiotic treatment administered before culturing compromises results. Furthermore, blood culture requires specialised equipment and media processed by skilled technicians.

Two problems relate to reliance on blood culturing to diagnose bloodstream infections. The first is over-reliance on a single manufacturer for essential supplies, manifested in a global shortage of blood-culture bottles.<sup>5</sup> On July 12, 2024, the US Food & Drug Administration (FDA) declared a shortage of blood-culture media bottles due to disruption in the supply chain of the primary manufacturer, BD Bactec (owned by Becton, Dickinson and Company).<sup>6</sup> The second is no accessible alternatives. Both problems compromise the diagnosis and treatment of bloodstream infections.

One solution to these problems is to embrace more modern, efficient, and resilient innovations. However, traditional medical education, training, and experience in detecting bloodstream infections have unintentionally produced an entrenched culture of culture (ie, a reflexive dependence on blood culture, even when alternatives can be more efficient and less expensive). This entrenchment negatively affects health



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