

WORKING PAPER DECEMBER 2024 THE COMMISSION ON INVESTING IN HEALTH 3.0: A ROADMAP TO HALVING PREMATURE DEATH BY 2050

> Gavin Yamey, Sarah Bolongaita, Angela Chang, Ayodamope Fawole, Dean Jamison, Omar Karlsson, Wenhui Mao, Ole Norheim, Osondu Ogbuoji, Marco Schäferhoff, David Watkins, Jesper Sundewall and Armand Zimmerman

# Chapter 3. The Commission on Investing in Health 3.0: A Roadmap to Halving Premature Death by 2050

Gavin Yamey, Sarah Bolongaita, Angela Chang, Ayodamope Fawole, Dean Jamison, Omar Karlsson, Wenhui Mao, Ole Norheim, Osondu Ogbuoji, Marco Schäferhoff, David Watkins, Jesper Sundewall and Armand Zimmerman

Working Paper, November 2024 to The Expert Group for Aid Studies (EBA) This paper is a chapter in the EBA report Anthology of trends and perspectives on global health 2024:09 (En antologi om trender och olika perspektiv på global hälsa 2024:09). This is the original English version of the chapter. In the anthology, this chapter has been translated to Swedish.

Please refer to the present report as: Yamey, Gavin et al. (2024). The Commission on Investing in Health 3.0: A Roadmap to Halving Premature Death by 2050. In M. Ahrne and J. Sundewall (Ed.). An anthology of trends and perspectives on global health 2024:09, pp 59-91. Working Paper November 2024

The Expert Group for Aid Studies (EBA), Sweden.

This report can be downloaded free of charge at <u>www.eba.se</u>

Cover design by Julia Demchenko

**Gavin Yamey** is the Hymowitz Professor of Global Health and Associate Director of Policy at the Duke Global Health Institute (DGHI), a Professor of Public Policy in the Duke Sanford School of Public Policy, and the Faculty Director for the Duke Global Policy Program in Geneva. He is Director of DGHI's Center for Policy Impact in Global Health, an innovative policy lab that addresses critical challenges in financing and delivering global health and leads its Core for Advancing Policy Engagement. Yamey has served on four Lancet commissions—on investing in health, tuberculosis, global surgery, and peaceful societies through health equity and gender equality—and co-chairs the economics and finance working group of the Partnership for Maternal, Newborn and Child Health. He trained in clinical medicine at Oxford University and University College London, medical journalism and editing at the BMJ, and public health at the London School of Hygiene and Tropical Medicine.

Sarah Bolongaita is a doctoral candidate in the Bergen Centre for Ethics and Priority Setting at the University of Bergen. Her research focuses on health systems in low- and middle-income countries, aiming to understand the distribution of health improvements within populations to inform equity-driven policies. Prior to her doctoral studies, Sarah was trained in global health systems at Georgetown and Harvard Universities and held roles at the US Centers for Disease Control and Prevention and the World Bank.

**Angela Chang** is an Associate Professor at the Danish Institute for Advanced Study and Danish Centre for Health Economics at the University of Southern Denmark. Her research lies in the areas of global health, health economics, and health metrics. She is a member of the Lancet Commission on Investing in Health.

**Ayodamope Fawole** is a second-year graduate student in Global Health at the Duke Global Health Institute. He has a bachelor's degree in dental surgery from the University of Ibadan in Nigeria. He has worked as a clinician and recently as a disease surveillance expert at the Nigeria Centre for Disease Control. He is interested in health systems strengthening, health economics, and health policy. His thesis research employs mathematical modelling methods to forecast the health and economic benefits of a mental health and life skills intervention designed for adolescents and young people living with HIV in Tanzania.

**Dean Jamison** is Emeritus Professor in the Institute for Global Health Sciences at the University of California, San Francisco. In addition to UCSF, Dean has been with UCLA and the University of Washington and served as the T. & G. Angelopoulos Visiting Professor in the Harvard Kennedy School and the Harvard T. H. Chan School of Public Health (2006-2008). Dean previously worked at the World Bank as a research economist and as manager of the Bank's Education Policy Division and of its Health, Nutrition and Population Division. Dean was lead author for the Bank's 1993 World Development Report, Investing in Health. Dean served as co-chair with Lawrence H. Summers of The Lancet Commission on Investing in Health (The Lancet 2013 and 2024).

**Omar Karlsson** is a Visiting Research Fellow at Duke University Population Research Institute and Duke Global Health Institute, a Postdoctoral Fellow at Lund University's Centre for Economic Demography, and a commissioner of The Lancet Commission on Investing in Health. He holds a PhD in Economic History from Lund University, where his dissertation explored child health disparities and early life adversity. Omar has published over 30 peer-reviewed articles, including in The Lancet, Pediatrics, International Journal of Epidemiology, and Population and Development Review. His experience includes a Takemi research fellowship at Harvard and consulting for UNICEF's Nutrition Section.

Wenhui Mao is an Assistant Director of Programs at Duke Global Health Innovation Center and Innovations in Healthcare, and Instructor of Global Health at Duke Global Health Institute, Duke University. Wenhui supports the policy and research initiatives, and her current interests include 1) the impact of health policy through policy analysis and economic evaluation; 2) health financing, including both external and domestic financing; and 3) access to health products. Wenhui has published over 120 academic articles, policy briefs, working papers and blogs and serves as Commissioner of The Lancet Commission on Investing in Health.

**Ole Norheim** is a physician and Professor of Medical Ethics, Department of Global Public Health and Primary Care, University of Bergen and

Director of Bergen Center for Ethics and Priority Setting (BCEPS) at UiB. He is also Adjunct Professor of Global Health at the Department of Global Health and Population, Harvard TH Chan School of Public Health (2015-2024).

**Osondu Ogbuoji** is a health systems researcher with a background in medicine, public health, and health economics. His primary research interest is in making health systems work better for all, especially people living in poverty. His work includes the application of quantitative models to explore complex health system challenges such persistent health inequities, child mortality, as and inefficient/inequitable health financing in low- and middle-income countries. Dr. Ogbuoji serves as a commissioner on the Lancet Commission on Investing in Health, the Lancet Commission on Preventing Viral Spillovers, and the Lancet Commission on Global Hearing Loss. He is also a member of the advisory board at the Africa Center for Disease Control's Health Economics Programme and a member of the Economics and Financing workstream at the World Health Organization's Partnership for Maternal Newborn and Child Health.

**Marco Schäferhoff** is the Managing Director of Open Consultants. He brings over 15 years of experience in global health financing and policy. He has supported a broad array of institutions in global health, including Gavi, the Global Fund, the Bill & Melinda Gates Foundation, WHO, UNAIDS, UNICEF, the World Bank, PMNCH, major donor governments and a range of NGOs. In 2016, Marco led a project for the International Commission on Financing Global Education Opportunity to develop an investment case for education. Marco co-chairs the Joint Countdown to 2030 and PMNCH Financial Working Group for Tracking SRMNCAH Financing. He is also a member of the Commission on Investing in Health. Marco has published widely on global health financing and policy and holds an advanced degree in Politics and a PhD in Political Science.

**David Watkins** is an associate professor in the Division of General Internal Medicine and in the Department of Global Health. He currently leads the University of Washington site for the Disease Control Priorities Project and is affiliated with the Implementation Science Program in the Department of Global Health. Additionally, he is the codirector of the Learning for Action in Policy Implementation and Health Systems (<u>LAPIS</u>) initiative. He studies health system reform and policy challenges, with a particular emphasis on universal health coverage and the growing burden of non-communicable diseases in low-income countries.

Jesper Sundewall is a researcher and teacher in health systems and health policy. He is an associate professor at Lund University and the University of KwaZulu-Natal in South Africa. Jesper has over 20 years of experience in global health and development in various roles at Sida, the Swedish International Development Cooperation Agency and in academia. Jesper received his PhD from Karolinska Institutet in 2009 with a thesis on Swedish health aid to Uganda, Zambia and Bangladesh.

**Armand Zimmerman** is a Research Program Leader at the Center for Policy Impact in Global Health at Duke University. His research focuses on the use of economic evaluations to inform evidence-based health policies in low- and middle-income countries. Armand holds a Master of Science degree in Global Health from Duke University and a Bachelor of Science degree in Biological Sciences from University of California, Santa Barbara.

## The Commission on Investing in Health 3.0: A Roadmap to Halving Premature Death by 2050

- The Lancet Commission on Investing in Health (CIH) launched its third report (CIH 3.0); "Global Health 2050: The Road to Halving Premature Death by Mid-Century" in October 2024.
- The report shows that all countries could halve their premature mortality (death before the age of 70 years) by 2050 (a 50 percent reduction by 2050, or "50 by 50") by focusing on 15 high priority conditions (eight infections and maternal conditions and seven non-communicable diseases and injuries).
- Global Health 2050 argues that a modular approach to health systems, strengthening and publicly financing medicines, vaccines, and diagnostics to control the 15 priority conditions, can bring focus and specificity to the health systems agenda.
- The most important intersectoral policy to help achieve "50 by 50" is large excise taxes on tobacco, given the large number of deaths caused by tobacco and the established and improving capacity of governments to implement tobacco policy.
- CIH 3.0 argues that to become better prepared for the next pandemic, all nations need basic public health capacities, including surveillance and contact tracing.
- The commission argues that development assistance for health should increasingly be directed towards providing global public goods and supporting nations with the least resources.

## The evolution of the Lancet Commission on Investing in Health

In 1993, for the first and so far only time, the World Bank devoted its annual flagship World Development Report (WDR) to the topic of health. The 1993 report, "Investing in Health" (Berkley et al, 1993), was aimed at finance ministers and aid donors and made the case that investing in the most cost-effective health

interventions for high-burden diseases improves health and wellbeing while boosting the economy. The report was commissioned by Lawrence Summers, who at the time was the Chief Economist at the bank, and was led by health economist Dean Jamison.

To mark the twentieth anniversary of "Investing in Health," in 2013 the *Lancet* published the first report of a newly convened Commission on Investing in Health (CIH). The first CIH comprised an international group of 25 economists and health experts chaired by Summers and co-chaired by Jamison (Jamison et al, 2013). The 2013 report, "Global health 2035: a world converging within a generation" (GH2035), examined progress in health from 1993 to 2013 and laid out an ambitious framework for achieving a global health transformation by 2035 through carefully chosen health investments.

Looking back over the period 1993-2013, GH2035 noted impressive progress on child and maternal mortality—though the rate of decline was too slow to reach the 2015 health-related Millennium Development Goals (MDGs) 4 (reducing child mortality) and 5 (reducing maternal mortality). Looking forward to 2035, the CIH saw four challenges ahead for low-income countries (LICs) and middle-income countries (MICs). The first challenge was the unfinished agenda of high rates of mortality from infections, especially HIV/AIDS, tuberculosis, malaria, and from maternal and child health conditions. The second challenge was an emerging agenda of mortality and morbidity from noncommunicable diseases (NCDs) and injuries. The third challenge was a cost agenda: the growing burden of impoverishing medical expenses combined with unproductive, rapidly rising healthcare costs (WHO, 2010). The fourth challenge was a threats agenda—most importantly, the threat of a pandemic of similar magnitude to the 1918 influenza pandemic.

How could each of these four challenges be tackled within a generation? To address the unfinished agenda, GH2035 showed that with aggressive scale-up of existing health tools and development of new health technologies, the world could achieve what the report called a "grand convergence" in health. It defined grand convergence as a universal reduction in infectious disease, child and maternal mortality down to rates seen in the best-performing MICs. The CIH estimated that achieving such convergence would cost an additional USD 70 billion annually from 2016 to 2035 (in 2011 USD), averting around 10 million deaths a year from 2035 onwards. At the time that GH2035 was published, the International Monetary Fund was predicting robust economic growth for LICs and lower-MICs, which were on course to add almost USD 10 trillion a year to their gross domestic product by 2035. Under this optimistic scenario, most of the costs of convergence could be paid for by domestic financing if governments of these nations devoted just 1-3 percent of their income to the convergence agenda, an amount that could be readily financed by growth.

The CIH proposed that fiscal policies would be the most powerful tool for addressing the emerging NCDs agenda, especially taxing tobacco and other harmful substances and cutting subsidies on fossil fuels. Such policies should be combined, it argued, with a package of low-cost clinical interventions for cancer, cardiovascular disease, pulmonary disease and mental health delivered at the clinic level and basic surgical and injury care, including children's surgical care, provided at the district hospital level.

To curb impoverishing medical expenses and provide health and financial protection, especially to the poorest households, GH2035 recommended two "progressive universalist" pathways to universal health coverage (UHC). In the first pathway, publicly financed health insurance—paid for by general tax revenues and payroll taxes—would cover a benefits package for everyone, a package that covers convergence conditions and basic medical and surgical services for NCDs and injuries. This pathway is pro-poor (progressive) because the poor are disproportionately affected by these problems. A second type of progressive universalism would provide a larger package of interventions to everyone, but would require some patient premiums and copayments, from which poor people would be exempt. A wider range of financing mechanisms could be used—not just general taxation revenue and payroll taxes, but also mandatory insurance premiums and copayments.

Finally, to tackle global threats such as pandemics and antimicrobial resistance, GH2035 argued forcefully that development assistance for health (DAH) should increasingly be targeted towards the lowest income countries, to providing global public goods (GPGs), and to managing negative cross-border externalities. For example, it called on donors to step up their support for the development of pandemic vaccines and for global outbreak surveillance and response. Using DAH for other GPGs, such as the development of new control tools for HIV, tuberculosis, malaria, and maternal and child health conditions, would also be a crucial way for donors to support grand convergence.

GH2035 influenced the global health policy agenda in several ways. The findings fed into discussions of the Sustainable Development Goals (SDGs) (Horton, 2015). The report informed global women's and children's health strategies at WHO and the Partnership for Maternal, Newborn and Child Health (PMNCH)—indeed, GH2035 worked with WHO and PMNCH on a joint study that modelled scale-up of maternal and child health interventions (Stenberg et al, 2014). It also helped support the Global Fund's fourth replenishment (Dybul, 2013). After publication of GH2035, Sweden's Expert Group for Aid Studies (the EBA) invited the CIH to examine Sweden's development assistance for health (DAH) and advise the EBA on how the lessons of GH2035 could be applied to Sweden's DAH portfolio. The resulting report, "Sweden's development assistance for health—policy options to support the Global Health

2035 goals," was published in 2014 (Yamey et al, 2014) and presented to Sida, the Swedish International Development Cooperation Agency. The *Oxford Review of Economic Policy* invited the CIH to publish this analysis of Swedish DAH in a special issue on the economics of global health (Yamey et al, 2016).

In 2018, five years after publication of GH2035, the 40th anniversary of the Alma-Ata Declaration gave the CIH an opportunity to assess progress towards grand convergence and to reflect on the future of the global push for UHC (Watkins et al, 2018). The second CIH report (CIH 2.0), "Alma Ata at 40 years: reflections from the Lancet Commission on Investing in Health," found a mixed picture on progress towards convergence—substantial progress on AIDS and child mortality, much less progress on tuberculosis and maternal mortality. Specifically, it found that if global trends in mortality achieved in 2010–16 were to continue, convergence targets for under-5 and AIDS mortality would be achieved worldwide close to the year 2035. However, the CIH's maternal and tuberculosis mortality targets would not be achieved until 2067 and 2074, respectively—in part, in retrospect, because they may have been overly ambitious.

As with GH2035, the CIH 2.0 report departed from mainstream thinking on UHC by stressing the need for selectivity in inclusion of interventions in health benefit packages (Yamey and Watkins, 2018). It identified a set of 218 interventions, called the "essential UHC" package, of which 198 could be delivered in primary care (only 20 interventions require delivery in specialty hospitals). It also defined a sub-set of 108 interventions that it called "the highest priority package." Under an optimistic economic growth scenario, CIH 2.0 found that most middle-income countries, except India, could afford to scale up the essential package to high population coverage by 2035. However, low-income countries would struggle to scale up even the highest priority package unless they generated substantially more resources for health spending.

Rising geopolitical tensions, increasingly manifest climate change, growth in nationalistic populism, dwindling concern for global health, slowed progress towards UHC, and, most significantly, the COVID-19 pandemic, have defined the six years since CIH 2.0. At the invitation of Richard Horton, editor of the *Lancet*, the CIH was reconvened in 2023 to examine the case for investing in health despite these many headwinds. The third iteration of the CIH ("CIH 3.0") extended the time frame under consideration from 2035 to 2050. It also increased the authorship to 50 authors, with stronger representation of early career researchers and scholars in low- and middle-income countries.

On October 15, 2024, the *Lancet* published the CIH 3.0 report, called "Global health 2050: the path to halving premature death by mid-century" (GH2050), which was launched at the 2024 World Health Summit in Berlin, Germany

(Jamison et al, 2024). The GH2050 report reached seven key conclusions, which we summarise in the rest of this chapter.

### Seven key conclusions of the CIH 3.0 report

### Conclusion 1: Premature death can be halved by 2050

The CIH 3.0 report shows that dramatic improvements in human welfare are achievable in every country by mid-century with the right health investments. Specifically, by 2050, countries that choose to do so can halve their probability of premature death (PPD)—the probability of dying before age 70 years—from their pre-pandemic level in 2019. The CIH calls this "50 by 50," a 50 percent reduction in PPD by 2050. The age of 70 years was chosen as a cut-off, based on a previous CIH study by Norheim et al, who noted in 2015 that: "World life expectancy is now just over 70 years, and most deaths before that age are avoidable" (Norheim et al, 2015).

Is "50 by 50" over just a 31-year time frame (i.e. from 2019 to 2050) really feasible? The first argument for suggesting feasibility is historical experience. Over the last half century, seven of the 30 most populous countries halved their PPD in 31 years or less—Bangladesh, China, Iran, Italy, Japan, Republic of Korea, and Vietnam—so we know it can be done (Figure 1). The second argument is that continued scientific advances will accelerate mortality decline. For example, countries that adopt new health technologies when they become available experience an additional 2 percent per year decline in child mortality compared to countries that do not (Jamison et al, 2016). A recent study by Ogbuoji and colleagues (2024) found that today's pipeline of candidate medicines, vaccines, and diagnostics for infectious diseases and maternal health is likely to yield many game-changing health technologies.



Figure 1. Seven high-population countries that achieved a halving of PPD in the last half century over 31 years or less

Given that mortality is highly correlated with morbidity—life expectancy is highly correlated with health-adjusted life expectancy (Figure 2) (Norheim et al, 2024)—scaling up health interventions to achieve "50 by 50" will *also* reduce morbidity and disability. Nevertheless, GH2050 acknowledges that the correlation between mortality and morbidity or loss of functions does not apply to all conditions—e.g., psychiatric disorders, old age dementias and failure in normal growth of children and adolescents cause major morbidity without causing major mortality. In its recommendations on health systems strengthening (HSS), discussed in conclusion 3 below, it recognises the importance of ensuring service provision for such conditions.

Data source: United Nations, 2024

Figure 2. Life expectancy (LE) versus health-adjusted life expectancy (HALE), 2019



Data source: WHO, 2021

# Conclusion 2: Sharp mortality decline is achievable early on the path to UHC

The second conclusion of GH2050 is that countries do not need to wait to achieve full UHC before they achieve sharp mortality decline. Early on the path to UHC, countries can see rapid, large mortality declines by focusing on a remarkably narrow set of just 15 conditions—these 15 conditions are responsible for a large fraction of the difference in PPD between high- and low-income nations. Eight of these are infections and maternal health conditions (the CIH calls these the "I-8"): neonatal conditions, lower respiratory infections, diarrheal diseases, HIV/AIDS, tuberculosis, malaria, childhood cluster diseases, and maternal conditions. Seven are NCDs and injuries (the CIH calls these "the NCD-7"): atherosclerotic cardiovascular diseases, haemorrhagic stroke, NCDs strongly linked to infections (e.g. stomach- and cervical cancer), NCDs strongly linked to tobacco use (e.g. lung cancer, chronic obstructive pulmonary disease), diabetes, road injury, and suicide.

For high mortality countries, tackling the I-8 is the highest priority. Addressing the NCD-7 will prove central to achieving "50 by 50" in all countries, even for those with lower initial levels of mortality.

# Conclusion 3: A modular approach to health systems strengthening can bring focus and specificity to the health systems agenda

Although UHC is one of the targets of the SDGs, the latest UHC Monitoring Report shows that, in the aggregate, the world has made almost no progress on health service coverage since the start of the SDGs era (WHO, 2023). This lack of progress, coupled with the rising incidence of catastrophic health expenditure, shows that the health systems and UHC agendas are clearly stalling; innovation is needed to break the stalemate.

GH2050 introduces new thinking on HSS, by proposing a modular approach to HSS that supports an initial tight focus on the I-8 and NCD-7 and a gradual broadening of effort as these conditions become more fully addressed. Public finance would be used to fund a package of services to initially tackle these 15 priority conditions, fully prepaid and available to everyone. This would be a form of what the CIH has called "progressive universalism"—the poor get the most benefit early on the pathway because the benefits package covers conditions that disproportionately affect the poor. As the resource envelope grows, the package is broadened.

GH2050 identifies highly cost-effective interventions that are feasible to implement in LICs and lower MICs and groups them into 19 "modules" (see Table 1). Each module represents a programme area with a specific set of policies and financing arrangements. The interventions shown in Table 1 can be thought of as foundations of a healthcare system (e.g. treatment of HIV, prevention of cardiovascular disease, family planning) or as a checklist for health system development. GH2050 notes that "local circumstances will dictate the details, and not every module or intervention will be relevant in every country." Twelve of the modules can be delivered by community-based primary healthcare teams, five by first-level delivery platforms, and two by referral clinics and hospitals. Beyond mortality-reducing interventions, the table also includes interventions that address other major demands on health systems and improve quality of life, e.g. rehabilitation, child and adolescent development, and palliative care.

The report also proposes that policymakers use a two-phase approach called "modular cost-effectiveness analysis" (mCEA). In the first phase, planners would identify a set of modules corresponding to different health sector programs and activities—these could be organised around diseases (e.g. malaria, cardiovascular disease), delivery platforms (e.g. outreach clinics, primary clinical care), payment mechanisms, or other organising principles. Planners would estimate current spending on each module and the budget space for expanding or reducing each module based on the available resources. Table 1 gives

estimates of the incremental cost of expanding the coverage of GH2050's recommended "core" interventions, tailored to reaching "50 by 50," for 19 modules to an additional 10 percent of the population, a realistic increment of expansion within a given policy cycle. The second phase would involve optimising value for money within each module and identifying synergies or inefficiencies (in terms of costs or outcomes) that may emerge when interventions are implemented together.

Health Area	Module number and namea	High-priority interventions within module	Primary outcome metric(s) (Secondary outcome metric)	Cost of expanding coverage to an additional 10% of persons in needb
Commu	nity-based prima	ary healthcare teams		
1-8	1. Routine childhood immunisation	Most or all antigens recommend by WHO for all countries (n=11)	Child deaths averted (Child height for age)	0.22
	2. Treatment of acute childhood illness <sup>c</sup>	Treatment of enteric and lower respiratory infections, malaria, and acute malnutrition	Child deaths averted (Child height for age)	2.2
	3. Pregnancy and childbirth services <sup>d</sup>	Antenatal care, safe delivery, management of labour complications, routine care for postpartum women, neonatal care (includes caesarean sections for safe delivery and management of labour complications)	Maternal deaths averted (Stillbirths and neonatal deaths averted)	2.2
	4. Tuberculosis (TB) <sup>d</sup>	Treatment of infected persons, including those with drug-resistant TB, <sup>d</sup> and preventive therapies among high-risk contacts	Adult deaths averted	0.87
	5. HIV/AIDS <sup>d</sup>	Long-term antiretroviral drug therapy for infected persons, preventive	Adult deaths averted	4.1

Table 1: A modular approach to health system strengthening

	1		1	
		therapies among		
		Combination drug		
		Combination drug		
		therapy for persons		
		at high CVD risk <sup>e</sup> ,		
	6. Basic	glycemic control and		
	cardiovascular and respiratory care <sup>d</sup>	monitoring for	Adult deaths averted	
		microvascular		7.1
		complications in		
		persons with		
		diabetes,		
		management of		
NCD-7		asthma and COPD		
		Combination of drug		
		therany and		
		nevelothorapy for		
		psychotherapy for	Cases adequately	
	7. Mental	severe moou		2.0
	health care <sup>d</sup>	alsorders,	managed for one year	3.0
		schizophrenia, and	(Suicide deaths averted)	
		other serious and		
		commonly occurring		
		conditions'		
	_	Contraception	Unintended pregnancies	
	8. Family planning	services appropriate	averted	0.26
		to setting and patient	(Couple-years of	
		preference	protection)	
		School-based		
		programmes to		
	9. School age child and adolescent development	deliver are	Child height for age	
		deworming,	15 year olds' maths	
		immunisation (e.g.		0.67
		HPV), screening for		
		refractive error, and	(Glasses coverage)	
		oral health; excludes		
		school feeding		
		Shared responsibility <sup>g</sup>		
	10. Custodial and palliative care	between health		
		system and		
HS		household for		
		providing shelter		
		food security dignity		
		and symptom		
		and symptom management for	Cases adequately	
				1.5
		conditions not	managed for one year	
		amenable to		
		functional integration		
		(e.g. dementia, spinal		
		cord injury) or		
		treatment (e.g.		
		metastatic ovarian		
		cancer)		
	11. Public	Population-based	Child deaths averted	
	health	interventions to	Adult deaths averted	0.97
	functions	improve disease	Addit deaths averted	

		prevention and control, including case-finding efforts for TB and HIV, vector control efforts for malaria, mass drug administration for selected neglected tropical diseases, micronutrient supplementation, and measures to identify and isolate infectious individuals during epidemics/pandemics		
	12. Primary care functions	Integrated approaches to stable, common signs and symptoms (includes essential diagnostics and supportive care)	N/A; enabling interventions	1.7
Speciali	sed first-level de	livery platforms		
NCD-7	13. Primary surgical care	Surgical services at first-level hospitals to address common surgical emergencies, focusing on injuries and digestive diseases (addresses all the common procedures that can be done at a district hospital by a trained clinical officer or general practitioner, e.g., fracture reduction, appendectomy).	Adult deaths averted	3.7
	14. Enhanced cardiovascular and respiratory care	Long-term management of cardiovascular disease (CVD) and heart failure, treatment of acute cardiovascular and respiratory complications, secondary prevention of rheumatic heart disease	Adult deaths averted	3.2

l

HS	15. Rehabilitation	Essential rehabilitation services, focusing on post-acute CVD and injury care	Cases functionally reintegrated within one year	0.95
	16. Dental care	Treatment of infections and caries, dental extraction	DMF (Decayed/missing/Burden reduced	0.49
	17. Emergency care functions	Integrated approaches to common emergency presentations in community, outpatient, and first- level hospital settings (including prehospital care), includes treatment of acutely ill persons during epidemic/pandemic <sup>h</sup>	N/A; enabling interventions	2.2
Referra	l clinics and hosp	itals		
NCD-7	18. Basic cancer care	Treatment of pre- cancer and early- stage cervical, breast, colorectal, and oral cancer (with curative intent)	Cases advanced to ten year survival (Adult deaths averted)	1.2
	19. Enhanced cancer care	Organised screening programmes for first- tier cancers, treatment of selected cancers with potential for long- term remission <sup>i</sup>	Cases advanced to ten year survival (Adult deaths averted)	13

#### Notes:

- a. A modular structure for a country, or for a region in a country, will depend on local epidemiology, system characteristics, and preferences. The CIH table is intended only to serve as an example and a possible starting point.
- b. Incremental annual cost of increasing population coverage of all the high-priority interventions in the module by 10%, expressed in basis points of gross domestic product (GDP) per year. A basis point is one percent of one percent. Note: analysis done only for low- and lower-middle-income countries (n = 82).
- c. In many countries, these interventions will be delivered using the Integrated Management of Childhood Illness approach.
- d. Facility-based care is an important delivery modality for many of the interventions that address these conditions. Additionally, for a subset of persons with these conditions, dedicated facilities or clinics will be needed for enhanced care, e.g. to manage complex cases and provide care to key subpopulations.
- e. Includes "secondary prevention" among those with established cardiovascular disease.
- f. Conditions include psychotic disorders, bipolar disorder, depressive disorders, anxiety disorders, trauma disorders, and opioid use disorder.
- g. Many countries struggle to finance a generous package of long-term care services. However, the cost of this caregiving can be a major economic burden on households and falls disproportionately on women and girls. Countries with sufficient resources should

consider providing transfer payments to households to offset unpaid care and related expenses.

- h. Some of this will be long-term rather than emergency care.
- i. The cancers in this list will vary considerably by country and as medical care improves; examples include common childhood leukaemia and lymphoma, prostate cancer, uterine cancer, Hodgkin and selected non-Hodgkin lymphomas in adults, thyroid cancer and kidney cancer.

### Conclusion 4: Publicly financing a short list of commodities steers HSS towards delivering high priority interventions

GH2050 proposes a pragmatic way to steer resources towards the 15 priority conditions and the modules that support service delivery for these priorities: publicly financing a list of medicines, vaccines, and diagnostics targeted at these conditions. The report calls this approach the "Arrow mechanism," named after the late Kenneth Arrow, the Nobel Prize winning economist who was an author of GH2035 and who developed the mechanism to be applied to malaria drugs—the Affordable Medicines Facility malaria or AMFm (Arrow, 2012). Unlike the AMFm, which only applied to malaria drugs, the Arrow mechanism in GH2050 applies to a range of commodities targeting the 15 priority conditions.

There are four key components to the subsidy mechanism proposed by the CIH in GH2050. The first component concerns general budget transfers to ministries of health; in this mechanism, these general transfers would be redirected to lineitem budget transfers for specific priority drugs. The second component is pooled purchasing, quality assurance, and a long-term commitment to manufacturers to ensure a steady supply of commodities. The third component is to ensure procurement in sufficient volume to ensure availability. Finally, existing public *and* private supply chains would be used, and would be strengthened. The Arrow mechanism could greatly expand access to essential commodities and reduce out-of-pocket expenses. In many LICs and lower MICs, such expenses are a huge barrier to accessing essential medicines for a variety of conditions—not just infectious diseases (Barter et al, 2012) but also NCDs and NCD risk factors (Gnugesser et al, 2022).

A critical aspect of the Arrow mechanism—and of the AMFm on which the design is based—is to rely whenever useful on existing private drug supply chains. By providing substantial quantities of a selected drug to the top of private supply chains at the subsidised price, existing private sector distribution capacity can benefit, and benefit from implementation of an Arrow mechanism. Pharmaceutical companies could of course also help to drive down the prices of, and expand access to, medicines, vaccines, and diagnostics through mechanisms that are well described elsewhere, such as sharing the patent in the

Medicines Patent Pool (Wang, 2022) or transferring the technology to manufacturers in LICs and MICs (Crager, 2014).

# Conclusion 5: Large excise taxes on tobacco are the most important intersectoral policy for achieving "50 by 50"

A wide range of intersectoral policies can improve public health outcomes, such as setting and enforcing speed limits on roads to curb road deaths, regulating highly hazardous pesticides to reduce suicide, and banning household coal use to reduce deaths from respiratory and cardiovascular disease. The third edition of Disease Control Priorities included a chapter that examined the evidence on which of these policies are likely to have the largest impact on mortality (Watkins et al, 2017). GH2050 makes the case that tobacco control is by far the most important intersectoral policy to help achieve "50 by 50," given the large number of deaths caused by tobacco and the established and improving capacity of governments to implement tobacco policy.

GH2050 argues that countries should institute a comprehensive set of policies to curb tobacco use, including banning smoking in public places and strictly regulating the advertising, promotion, packaging, and availability of tobacco. The most important policy is to levy large excise taxes on tobacco. "Raising taxes on tobacco," say Bloomberg and Summers (2019), "can do more to reduce premature mortality than any other single health policy."

# Conclusion 6: All nations need basic public health capacities, including surveillance and contact tracing

In the wake of the 2014-2016 Ebola epidemic in west Africa, the international health community advocated for increased investment in pandemic prevention, preparedness, and response (PPR) and for new PPR governance mechanisms (Keita et al, 2024). The last decade has seen several reforms in the PPR architecture, such as the 2016 launch of WHO's Health Emergencies Programme, the 2016 launch of the Joint External Evaluation tool to assess countries' core PPR capacities, and the 2017 launch of CEPI, the Coalition for Epidemic Preparedness Innovations. However, the massive health, economic, and societal impacts caused by COVID-19 showed that there were still major weaknesses in national, regional, and global PPR systems.

GH2050 examined country performance during the emergency phase of COVID-19, i.e. from when the pandemic was declared a Public Health Emergency of International Concern (PHEIC) on January 30, 2020, to when the

PHEIC ended on May 5, 2023. It assessed performance using a metric called the P-score, derived from excess deaths during the period of the emergency as a percentage of the number of deaths that would reasonably have been expected had the pandemic not occurred. The report concludes that the large variation between countries in the P-score during the emergency phase, particularly before COVID-19 vaccines were developed, points to the importance of basic public health capacities. Such capacities include rapid response, isolation of infected individuals, quarantine of those exposed, and social and financial support for those isolating or quarantining. GH2050 concludes that "in the next pandemic, these fundamentals will help to avert mortality while waiting for vaccine development and deployment."

# Conclusion 7: Development assistance should fund global public goods and support nations with the least resources

The six conclusions of GH2050 summarised above are mostly aimed at national governments, although they clearly have implications for aid donors. For example, external financing could contribute to a country's Arrow mechanism, and there is an important role for DAH in funding population, policy, and implementation research to generate and share knowledge on modular HSS and intersectoral policies.

The seventh conclusion is aimed firmly at the development assistance community. GH2035 made the case that as LICs and lower MICs graduate from receiving external financing for disease control and HSS, DAH should increasingly fund GPGs for health. GH2050 doubles down on this recommendation. It argues, in particular, that DAH should support the strengthening of data and surveillance systems; reducing the development and spread of antimicrobial resistance; PPR; fostering global health leadership and advocacy; identifying and spreading best practices; and developing and deploying new medicines, vaccines, and diagnostics (Schäferhoff et al, 2024). Direct country assistance, i.e. the provision of direct financial and technical support to countries, should target nations with the least resources—to help control diseases and develop health systems. In both cases—directing DAH to GPGs and targeting direct DAH towards nations with the least resources—to belp focusing efforts on the 15 priority conditions would best contribute to "50 by 50."

## Revisiting recommendations from the 2014 EBA report

The 2014 EBA report "Sweden's development assistance for health – policy options to support the global health 2035 goals" provided a set of recommendations and suggestions for Swedish health aid and in this section, we revisit some of these recommendations in light of the CIH 3.0 conclusions.

The 2014 report made projections for the future growth of Swedish DAH based on assumptions on economic growth and increased investments in health. The report also argued that there are strong arguments for increasing the share of Swedish aid allocated to DAH given the massive return on investment in achieving grand convergence that the GH2035 report presented (a cost benefit ratio of about 9-20). We note that neither the growth of Swedish aid overall nor the share allocated to DAH has developed in line with these suggestions. In nominal terms, from 2013 to 2022, Swedish DAH increased from SEK 3,763 million to SEK 5,910 million, but the share of Swedish aid allocated to DAH fell from 13 percent in 2013 to 11.3 percent. So, both in absolute numbers and as a share of total aid, the growth of Swedish DAH has fallen short of expectations.

Another recommendation from the 2014 report was that Swedish DAH to an increasing extent should target high priority "core functions" including provision of global public goods and global health leadership and governance. While we note that an increasing share of Swedish DAH is channelled through multilateral cooperation, 65 percent in 2022 compared to 60 percent in 2013, indicating more focus on multilateral organisations, it is not possible based on these overall numbers to draw conclusions about to what extent the funding has targeted the priority core functions outlined in GH2035. As discussed in the 2014 EBA report, many of the multilateral organisations supported by Swedish DAH, like the Global Fund, Gavi and UNFPA, primarily provide direct country support (what the CIH calls local functions), and this also remains the case in 2024.

One core function that the 2014 report emphasised strongly was preparing for the next pandemic and tackling antimicrobial resistance (AMR). Since then, Sweden has continued to take a leading role in keeping AMR high on the agenda. However, in retrospect, the COVID-19 pandemic was a wake-up call in showing insufficient investment in pandemic preparedness and global inequity in vaccine access.

The 2014 report also highlighted the need for improving global health leadership and stewardship and in that context Sweden's historically strong backing of the multilateral organisations such as WHO and UNAIDS were lifted as positive examples. Ten years down the line, UNAIDS' role is being questioned and Sweden recently announced that it will terminate its core support to the agency from 2025. While it is reasonable to discuss if there is a continued need for a dedicated UN agency focusing on one specific disease area, we want to reiterate the need for strong global leadership for collecting and compiling robust data on international health metrics and providing global health leadership. Development assistance for health has a critical role in funding these core functions of the global system in the coming 25 years. Sweden has historically played an important role in this regard, and it would be unfortunate if the decision to stop the core support to UNAIDS means that Sweden is taking a step back from its traditionally strong support for global health institutions.

The findings from CIH 3.0 carry significant implications for our recommendations regarding Swedish DAH moving forward. Investing in health is a prudent and impactful decision. We recommend that Sweden reverse the trend of allocating a diminishing proportion of its total official development assistance (ODA) to DAH. Given the current inflation crisis and the government's departure from the one percent target for Swedish ODA, there is a real risk that Swedish DAH could be severely undermined. Secondly, direct country assistance should prioritise the least developed countries. While the concept of "graduation" from aid has been under discussion for some time, it is becoming increasingly pertinent as more nations transition to middle-income status. Lastly, addressing global health challenges necessitates robust global health leadership. Sweden has historically played a crucial role in supporting global health institutions, and it is likely more important than ever that Sweden continues to uphold this role.

# Next steps for CIH 3.0: translating evidence into action

Following the launch of the CIH 3.0 report at the 2024 World Health Summit, the Commission has embarked on a programme of activities aimed at translating evidence from GH2050 into policy action. A key vehicle for such translation is national CIH 3.0 commissions, which are now being convened and chaired by national policymakers with technical support provided by the GH2050 authors.

The CIH 3.0 national commissions are modelled after national commissions that were launched after GH2035, such as the Mexico and Myanmar commissions. The CIH conducted and published multiple analyses of how Mexico could achieve the goals set out in GH2035, including publications in Spanish in a Mexican public health journal (Beyeler et al, 2015) and in *Lancet Global Health* (Gonzalez-Pier et al, 2016), and presented this work to Mexico's Ministry of Health in Mexico City. For the Myannar commission, the CIH was commissioned to conduct an analysis—called "Investing in health in Myanmar:

How can the country reach grand convergence and pro-poor universal health coverage?" (Commission on Investing in Health, 2016)—which it presented at the 2015 Myanmar Health Forum.

Alongside these national commissions, the CIH is also engaging with bilateral and multilateral donors to explore ways in which the CIH 3.0 report can inform donor funding and policies. An in-depth discussion of the implications of the report for each donor is beyond the scope of this paper; however, as a case study, in Box 1, we have outlined our suggested recommendations to the European Union based on the report.

GH2050 recognises the many challenges ahead but its analysis shows a practical pathway for all countries to halving premature death by 2050 despite these headwinds. National commissions are the next step in operationalising how countries can achieve the prize of "50 by 50." By focusing resources against a narrow set of conditions and scaling up financing to develop new health technologies, this prize is within reach.

#### Box 1. Implications of the CIH 3.0 report for the European Union

#### Funding for Research and Development

A larger portion of the research budget of the EU Framework Programme for Research Innovation—Horizon Europe for 2021-2027 and then Framework Programme 10 (FP10) starting in 2028—should go to global health, including neglected diseases. The EU's research funding is key in cooperation between EU and African countries to address infectious diseases, neglected tropical diseases, and AMR. Additional funding should also reinforce this cooperative stream with African countries. Future EU research funding is likely to be substantial. For example, Mario Draghi's report on the future of European competitiveness states that "the budget of the new Framework Programme [FP10] should be doubled to EUR 200 billion per seven years" (Draghi, 2024).

## Pandemic Preparedness and Response (PPR) including stronger regulatory systems and local manufacturing

The Health Emergency Preparedness and Response Authority (HERA), established as a Directorate General within the European Commission, plays a role in R&D, PPR, AMR and cooperation with Africa, among other activities. For example, HERA is the centre leading the EU's coordination on the 2024 mpox outbreak, including potential donations of vaccines to affected nations in Africa. HERA's budget should be increased in line with its mission and large scope, including being sufficiently resourced to support large-scale investment in R&D. In addition, the EU should build on HERA's achievements in international cooperation and support to LICs and MICs,

including cooperation with the Africa Centres for Disease Control and Prevention.

### Antimicrobial resistance (AMR)

Having made AMR a priority, the EU and its member states should continue showing global leadership on AMR by developing pull and push incentives for development of new antimicrobials, increasing funding for R&D, and intensify its work on AMR and One Health with the Quadripartite collaboration (World Health Organization, the Food and Agriculture Organization, the World Organization for Animal Health, and the UN Environment Programme). In addition to the political commitment for AMR, HERA can also provide a technical perspective.

### Levels of development assistance for health (DAH)

The EU should increase its overall levels of DAH. Global health is among the priorities of the EU's external action and funding and Sub-Saharan Africa (SSA) receives a significant share of the EU's bilateral official development assistance for 2021-2027. However, in recent years, competing political priorities and increasing funding to Ukraine led to a decrease in funding for LICs. The next EU budget framework should maintain global health and SSA as key thematic and geographic priorities in funding allocation.

### Intellectual property (IP) strategy in global health

The EU should show more openness towards an IP waiver on pandemic medical countermeasures (medicines, vaccines, diagnostics), especially once WHO Director General has declared a public health emergency of international concern. When it comes to IP sharing and technology transfer, the pandemic treaty negotiations have shown that the EU remains resistant to enforceable mechanisms that would mandate such sharing and transfer in future pandemics (Cullinan, 2023). The EU favours flexible voluntary approaches and long-term capacity building. The EU argues that its position safeguards R&D incentives for the industry, and that broad IP waivers would undermine innovation.

### References

Arrow K. Saving a malaria program that saves lives. *New York Times* Nov 13, 2012. <u>https://www.nytimes.com/2012/11/14/opinion/saving-a-malaria-program-that-saves-lives.html</u>

Barter DM, Agboola SO, Murray MB, Bärnighausen T. Tuberculosis and poverty: the contribution of patient costs in sub-Saharan Africa – a systematic review. *BMC Public Health* 2012; 12:980.

Berkley S, Bobadilla JL, Hecht R, et al. World development report 1993: investing in health. Washington, DC: World Bank Group, 1993. <u>http://documents.worldbank.org/curated/en/468831468340807129/World</u> -development-report-1993-investing-in-health

Beyeler N, González-Pier E, Alleyne G, et al. Salud global 2035: implicaciones para México. *Salud Pública de México*. vol.57 no.5 Cuernavaca Sept/Oct 2015.

Bloomberg MR, Summers LH, Ahmed M. Health Taxes to Save Lives. Employing Effective Excise Taxes on Tobacco, Alcohol, and Sugary Beverages. 2019. Available from: <u>https://www.bloomberg.org/public-health/building-public-health/coalitions/task-force-on-fiscal-policy-for-health/</u>

Commission on Investing in Health. Investing in health in Myanmar: How can the country reach grand convergence and pro-poor universal health coverage?" January 2016. <u>https://globalhealth2050.org/files/2024/04/myanmar-brief.pdf</u>

Crager SE. Improving global access to new vaccines: intellectual property, technology transfer, and regulatory pathways. Am J Public Health 2014;104: e85-91.

Cullinan K. Intellectual Property Negotiations Belong at WTO, European Countries Tell Pandemic Accord Negotiations. Health Policy Watch, 6 Nov 2023. https://healthpolicy-watch.news/intellectual-property-negotiations-belong-at-wtoeuropean-countries-tell-pandemic-accord-negotiations/

Dybul M. A grand convergence and a historic opportunity. Lancet 2013;382: e38-9.

Draghi M. The future of EU competitiveness. Sept 2024. https://commission.europa.eu/topics/strengthening-europeancompetitiveness/eu-competitiveness-looking-ahead\_en

González-Pier E, Barraza-Lloréns M, Beyeler N, et al. Mexico's path towards the Sustainable Development Goal for health: an assessment of the feasibility of reducing premature mortality by 40% by 2030. *Lancet Glob Health* 2016; 4: e714–25

Gnugesser E, Chwila C, Brenner S, et al. The economic burden of treating uncomplicated hypertension in Sub-Saharan Africa: a systematic literature review. *BMC Public Health* 2022; 22:1507.

Horton R. Offline: Can one turn an aspiration into reality? Lancet 2015; 385:492.

Jamison DT, Summers LH, Alleyne G, et al. Global health 2035: a world converging within a generation. *Lancet* 2013; 382: 1898–955.

Jamison DT, Sandbu M, Wang J. Why has infant mortality decreased at such different rates in different countries? *J Health Econ.* 2016; 48:16–25.

Jamison DT, Summers LH, Chang AY, et al. Global health 2050: the path to halving premature death by 2050. *Lancet* 2024 (in press).

Keita M, Boland ST, Okeibunor J, et al. 10 years after the 2014–16 Ebola epidemic in west Africa:

advances and challenges in African epidemic preparedness. *Lancet* 2024; 403:2573-2575.

Norheim OF, Jha P, Admasu K. Avoiding 40% of the premature deaths in each country, 2010-2030: review of national mortality trends to help quantify the UN Sustainable Development Goal for health. *Lancet* 2015; 385:239–52.

Norheim OF, et al. Halving premature death and improving the quality of life at all ages. Background paper for CIH 3.0 [Internet]. 2024. Available from: <u>https://www.uib.no/en/bceps/170424/lancet-commission-investing-health-cih3</u>

Ogbuoji O, Schäferhoff M, Zimmerman A, Fawole A, Yamey G. Health and economic benefits of improving efficiencies in product development for neglected diseases, emerging infectious diseases, and maternal health. 2024. <u>https://centerforpolicyimpact.org/wp-</u>

content/uploads/sites/18/2024/07/health-and-economic-benefits-of-improvingefficiencies-in-product-development.pdf

Schäferhoff, M, Zimmerman A, Foppe M, Yamey G, Jamison D. Financing for international collective action for health between 2020-2022. Background paper for CIH 3.0. 2024; Available from: at <a href="https://www.uib.no/en/bceps/170424/lancet-commission-investing-health-cih3">https://www.uib.no/en/bceps/170424/lancet-commission-investing-health-cih3</a>

Stenberg K, Axelson H, Sheehan P, et al. Advancing social and economic development by investing in women's and children's health: a new Global Investment Framework. *Lancet* 2014; 383:1333-1354.

United Nations. World Population Prospects 2024. Department of Economic and Social Affairs, 2024. <u>https://population.un.org/wpp/</u>

Wang LX. Global drug diffusion and innovation with the medicines patent pool. *J Health Econ* 2022 Sep: 85:102671.

Watkins DA, Nugent R, Yamey G, et al. *Intersectoral Policy Priorities for Health*. In: *Disease Control Priorities* (third edition): Volume 9. Jamison DT, Gelband H, Horton S, et al (eds). Washington, DC: World Bank, 2017.

Watkins DA, Yamey G, Schäferhoff M, et al. Alma Ata at 40 years: reflections from the Lancet Commission on Investing in Health. *Lancet* 2018; 92:1434-1460.

World Health Organization. The World Health Report 2010: Health Systems Financing: The Path to Universal Coverage. Geneva: World Health Organization; 2010.

World Health Organization. Global health estimates: leading causes of death in 2019. Published 2021. Geneva: WHO; 2021.

World Health Organization, World Bank. Tracking Universal Health Coverage: 2023 Global Monitoring Report [Internet]. Washington, DC: World Bank; 2023. Available from:

https://openknowledge.worldbank.org/entities/publication/1ced1b12-896e-49f1ab6f-f1a95325f39b

Yamey G, Saxenian H, Hecht R, Sundewall J, Jamison DT. Sweden's development assistance for health—policy options to support the Global Health 2035 goals. EBA report 02|2014, <u>https://eba.se/wp-</u> <u>content/uploads/2014/11/891866 EBA WEB LR.pdf</u>

Yamey G, Sundewall J, Saxenian H, et al. Reorienting health aid to meet post-2015 global health challenges: a case study of Sweden as a donor. *Oxford Review of Economic Policy* 2016; 32:122–146. https://academic.oup.com/oxrep/article/32/1/122/2452856

Yamey G, Watkins D. Let's end the fuzziness in universal health coverage. *Global Health Now*. Oct 25, 2018. <u>https://globalhealthnow.org/2018-10/lets-end-fuzziness-universal-health-coverag</u>