Health:
A Political Choice

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From
Fragmentation
to Integration

Health For All, Hunger For None

" *Our Bayer vision "Health For All, Hunger For None", drives us every day in our ongoing pursuit to provide access to medicines and food for a growing world population. This can only be done through partnerships, innovation and trust. To guide us, we have key sustainability goals. For example, we aim to help provide 100 million women in low- and middle-income countries with modern contraception by 2030, in line with the UN Sustainable Development Goals. Join us in bringing this vision to life.* "

Stefan Oelrich
Member of the Board of Management of Bayer AG and
Head of the Pharmaceuticals Division

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From Fragmentation to Integration

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CONTENTS

1 A DECISIVE YEAR FOR GLOBAL HEALTH

2 EDITORS' INTRODUCTIONS

3 A NEW GLOBAL HEALTH ORDER

4 INTEGRATING ACTION FOR HEALTH AND WELL-BEING

CONTENTS

7 PREPARING FOR A SAFER WORLD TOGETHER

8 INTEGRATING RESPONSES TO INEQUALITIES AND DISEASE BURDENS

Health: a human right

Since the World Health Organization was founded, human health has improved significantly – but progress in many areas has slowed or stalled, and this year represents an important opportunity to chart a new path forward and put people's health first

The World Health Organization was founded 75 years ago, as countries were rebuilding after the collective trauma of World War Two. It was against that backdrop that the authors of the WHO's constitution affirmed both that health is a human right and that the health of all people is fundamental to peace and security.

Since then, human health has improved significantly. Global life expectancy has increased from 46 to 73 years, with the greatest gains in the poorest countries. Smallpox has been eradicated, polio and Guinea worm disease are on the brink, and the epidemics of HIV, malaria and tuberculosis have been pushed back. In the past 20 years alone, smoking has fallen by a third, maternal mortality has fallen by a third and child mortality has more than halved.

However, even before Covid-19 arrived, progress towards many health targets agreed by all in the Sustainable Development Goals had slowed or stalled, and the pandemic set us even further back. On top of the death and suffering it caused, Covid-19 severely disrupted health systems, roiled economies and caused immense social upheaval, while also fraying the fabric of multilateralism.

One of the key lessons of Covid-19, therefore, is that a pandemic is so much more than a health crisis: when health is at risk, everything is at risk. If

By Tedros Adhanom Ghebreyesus, director-general, World Health Organization

we fail to learn that lesson, we expose ourselves and future generations to the potentially devastating impacts of future pandemics on lives, livelihoods, societies and economies.

That means investments in protecting health are also investments in social, economic and political stability and security. Countries spend vast sums preparing for the threat of a terrorist attack, but relatively little preparing for the attack of a virus, which can be far more damaging, and far more costly.

GOVERNMENTS UNDER PRESSURE

At a time when economies are stagnating, debt is rising and budgets are squeezed, governments are under pressure to tighten the purse strings. But now is exactly the right moment to make strategic investments in health – investments in human capital – that will pay dividends for decades to come in more healthy, productive, secure, equitable and sustainable societies.

The best investments in health – and the most cost effective – are in primary health care. Many people think of primary health care as delivering essential health services at the local level, and it certainly includes that. But a primary health care approach goes beyond providing health services to include action to address the drivers of disease, and to empower people to take charge of their own health. It recognises that health does not start in hospitals or clinics, but in homes, schools, streets, workplaces and markets – in the air people breathe,

the food they eat and the conditions in which they live and work.

Creating healthy populations is therefore not solely the task of ministries of health, but requires health-promoting policies in trade, commerce, education, energy, agriculture, urban planning, transport and more.

The health challenges we face today have changed considerably since the WHO was founded in 1948. Non-communicable diseases now account for 70% of all deaths globally; obesity rates have skyrocketed; antimicrobial resistance threatens to unwind a century of medical progress; and air pollution and climate change are jeopardising the very habitability of the planet on which all life depends.

These challenges have no regard for the lines humans draw on maps, nor for ideologies, religions, economic or military might, or for anything else that we use to divide ourselves from each other. The need for multilateral cooperation is therefore greater than ever, and so is the opportunity. At a time of polarisation, health is one of the few areas in which countries that are otherwise political and economic rivals can work together to build a common approach to common threats.

Indeed, that is what countries are doing, in negotiating a new legally binding pandemic accord and amendments to the International Health Regulations, the instrument of international law that governs the global response to health emergencies. At this year's United Nations General Assembly, countries also agreed on political declarations on pandemic preparedness and response, universal health coverage and tuberculosis. The negotiations are not always easy, and there remain areas of contention between countries, particularly concerning equitable access to health technologies.

However, just as in 1948 when countries came together in the aftermath of the bloodiest war in history to establish the WHO, now countries must come together in the wake of the most severe health crisis in a century to chart a new path forward together. The challenges we face may be different, but the vision remains the same: health as a human right, and the foundation of peace and security. ■

TEDROS ADHANOM GHEBREYESUS

Tedros Adhanom Ghebreyesus was elected director-general of the World Health Organization in 2017 and re-elected for a second term in 2022. He was the first person from the WHO African Region to serve as WHO's chief technical and administrative officer. He served as Ethiopia's minister of foreign affairs from 2012 to 2016 and minister of health from 2005 to 2012. He was elected chair of the Global Fund to Fight AIDS, Tuberculosis and Malaria Board in 2009, and previously chaired the Roll Back Malaria Partnership Board, and co-chaired the Partnership for Maternal, Newborn and Child Health Board.

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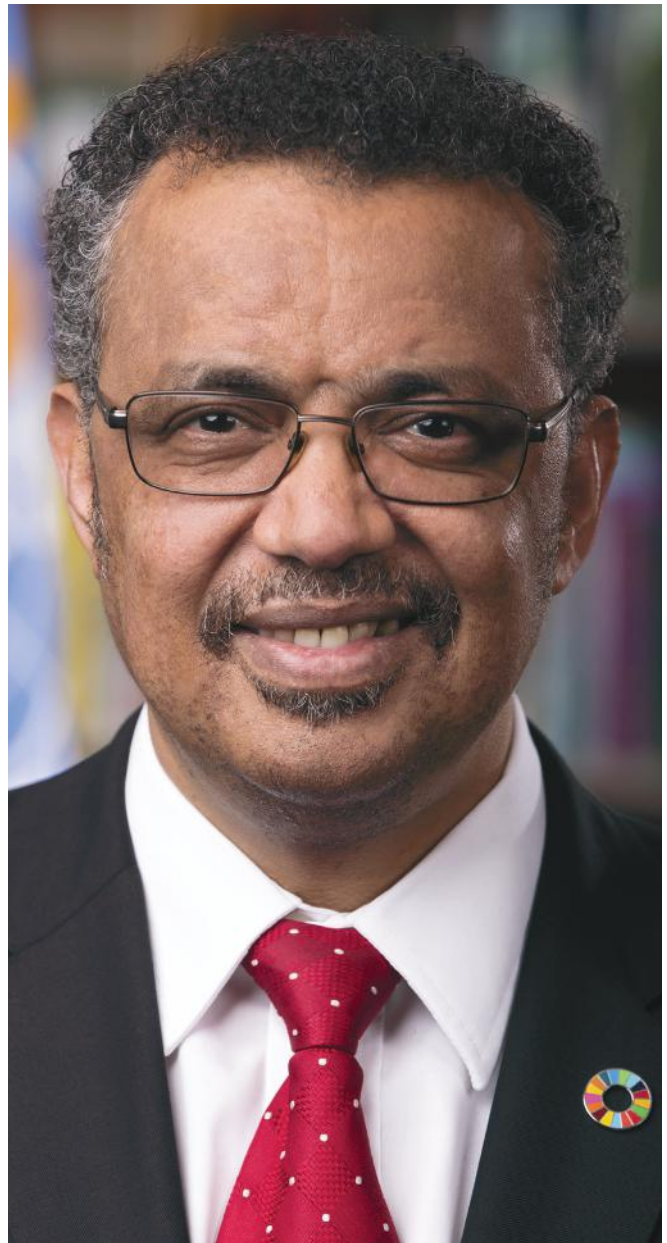
Addressing the deficiencies of globalisation

This year is a defining one for global health, as the world endeavours to tip the balance towards coordinated, strong, multilateral action and away from fragmentation. But progress so far has been disappointing – and time is running out to make the right political choices that will drive positive change

The world is facing more and more truly global threats and challenges. As an example, Covid-19 did not respect national or regional boundaries, effectively making the entirety of humankind an infection reservoir and breeding ground. Similarly, the climate crisis endangers living conditions in all regions of the world. This year perhaps more than ever, people everywhere have experienced its devastating effects and its impact on health and well-being.

Humanity is not passively suffering from different plagues and natural events – it has, in fact, caused or exacerbated many of these developments. This is reflected in the scientific discussion over the term 'Anthropocene', the proposed geological epoch characterised by humankind's dominating force. We have drastically reduced living spaces for many species and significantly changed the composition of the atmosphere. The human domination of the biosphere has not been carried out systematically but results from increasing industrial, technological and scientific achievements and the fragmented actions of individuals and countries, according to their interests and motivations.

The corollaries of human development are far-reaching in their scale and impact. We can only face these threats, mitigate the negative impacts of human-made changes, and secure a

By Axel R Pries and Frederike Sontag, World Health Summit

healthy and sustainable world for the future if we establish a coordinated reaction – and transition from fragmentation to integration.

For this change, 2023 is a 'Defining Year for Global Health' as reflected by the theme of this year's World Health Summit. It is defining with respect to tilting the balance towards coordinated and strong multilateral action and away from fragmentation and national egoism. We must seize this chance and live up to our responsibility.

This year, the 78th United Nations General Assembly focused on health, underlined by various high-level meetings in New York in September. Long-standing, yet pressing, issues such as universal health coverage, the fight against tuberculosis, as well as pandemic preparedness, prevention and response were covered. Yet the initial reactions to the draft declarations for these meetings were dominated by disappointment and frustration. Despite much anticipation, there appears to be little advance from the status quo.

Underlying the disappointing progress is a phenomenon that may be referred to as a 'globalisation mismatch': science and industry operate effectively at the global scale, while political power is largely focused on a national level.

BARRIERS TO COOPERATION

The globalisation mismatch describes barriers to international cooperation on a political scale that do not exist in the same way in other domains such as scientific research and innovative technology. The globalisation mismatch and the lack of political power on an international, global level favour already powerful states, enterprises and individuals. This has ultimately led to inequality within and between countries, which in turn has reduced social cohesion as well as trust in political institutions. Most importantly, it has obstructed effective global responses to pressing global challenges in health, climate, pollution and migration.

Governments still aim to protect national sovereignty while the strengthening of international cooperation seems to have a set limit. This is an understandable reaction considering national election processes and geopolitical tensions are making truly global cooperation impossible. Yet the deeply rooted mechanisms of the past cannot help us through the crises that these reflexes have themselves generated. As Einstein said: "You can't solve problems with the same mindset that created them." With climate-related crises happening regularly across the globe, there are no real alternatives to international cooperation. We need to strengthen international institutions to ensure solid, multilateral non-nationalist leadership in times of global challenges. In the health sector, a strong World Health Organization is needed to avoid fragmented responses to future health threats.

At the World Health Summit in 2021, the Global Preparedness Monitoring Board launched its annual report, From Worlds Apart to a World Prepared. It warned of a "cycle of panic and neglect" and called for a level of ambition to match the global need. Two years later, these requests for change remain highly relevant and, to a large part, still not fulfilled. With regards to the climate crisis, governments seem immune even to entering the panic stage, regardless of how many climate activists are flocking to their doorsteps. We seem to be entering a phase of neglect regarding pandemic preparedness and corresponding international commitments.

IMPROVING HEALTH WORLDWISE

Fragmentation in global health is prevalent in governments, research and

Industry and science
Globalized approaches and power

THE GLOBALISATION MISMATCH

Governance
National interest and power

Figure 1: The global spread of scientific knowledge and technological innovations is fast, supply chains span the world, and industry has global reach and power. At the same time, governance is mostly confined to the national level and international political bodies are weak.

AXEL RADLACH PRIES

Axel Radlach Pries became president of the World Health Summit in 2021. He was the dean of Charité from 2015 to 2022, having been head of the Charité Institute for Physiology from 2001. He has chaired the Council for Basic Cardiovascular Science and the Congress Programme Committee basic section in the European Society of Cardiology, was president of the Biomedical Alliance in Europe and CEO of the Berlin Institute of Health. He has received the Malpighi Award, the Poiseuille Gold Medal and the Silver Medal of the European Society of Cardiology.

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aid programmes. Private foundations are trying to play an integral role in improving health worldwide. The number of global health actors with somewhat different missions all aiming to benefit health and well-being for all is countless. The integration of these efforts has fallen short. The goal of the World Health Summit is to overcome fragmentation, to bring together stakeholders from various sectors, including academia, politics, the private sector and civil society, and to stimulate new and coordinated approaches. It raises awareness of the urgency of such change and provides an opportunity for global health actors to interact and synergise in their different perspectives. This alone will not suffice to address the globalisation mismatch, which requires a fundamental change in political approaches. But such a change should be motivated by the equally fundamental change in the nature of challenges to humankind. It is not about who wins or how to help in cases of regional calamities. We must stand together in unprecedented ways to safeguard life on Earth in the way we know it and want to preserve for future generations.

I am confident that this synergy will prove that health is a political choice. ∎

By Amina J Mohammed,
deputy secretary-general,
United Nations

Everyone has a right to health and medical care – a right enshrined in the Universal Declaration of Human Rights and the Constitution of the World Health Organization. Yet hundreds of millions of people, in rich countries as well as poor, do not have access to the care they need. This jeopardises their health, undermines their rights and deepens inequalities. And it makes it more difficult to meet the Sustainable Development Goals.

Far too often, people are faced with costly, fragmented and poorly integrated care systems that fail to uphold their health and well-being. Such fragmentation can be fatal, leading to complications, duplications, and delayed or discontinued care. Even where health care is accessible, access can be fragile, as the Covid-19 pandemic illustrated. More than 90% of countries reported that the pandemic disrupted essential health services. Some 25 million children under the age of five missed out on routine immunisation.

Each of us needs timely, affordable access to comprehensive, quality health care, staffed by people we trust. Accessibility of health care is vital to ensuring no one is left behind. That means integrating health care into other services and sectors, supported by systems and environments that promote health and well-being. Tuberculosis, diabetes and many other conditions are preventable through societal and environmental changes – improved hygiene, nutrition and air quality, for example. We need to recognise that we are not islands; our health is intertwined with the well-being of our planet and our societies. We need to create health systems that invest in managing disease as well as in promoting good physical, mental and social well-being, prioritising interventions that address major risk factors. We also need to redesign infrastructure and systems to promote health and social cohesion, ensuring they support everyone equally and respect our environment.

Think of a mother, a nomad, in the deserts of the Sahel, who awakes in the night, alarmed by her baby's high temperature. She needs good roads so

Health at the heart of sustainable development

Millions of people around the world are being denied their human right to health and medical care. Only by placing universal health coverage at the core of sustainable development efforts can we truly ensure the health and well-being of all people – for our shared prosperity and for the planet that sustains us

that local transport can reach her and take her to a healthcare centre that is open all hours and where qualified, trusted staff, who understand her needs, will refer her to specialist care if necessary. Or think of a teenager, unable to cope with the stress of school and the effects of the Covid-19 pandemic. They need an education system that promotes health, understands their fears, and provides them with the information and support they need to stay active and healthy, including mental health services.

Universal health coverage embodies the world's agreement on the need for quality health care for all, without discrimination or financial hardship. It means that services are delivered in an integrated, people-centred way, close to where they live and work, in ways that respect their values, human rights, dignity and equality.

REFOCUSING HEALTH SYSTEMS

Refocusing national health systems on primary health care is the most equitable, effective and cost-efficient way to deliver on the promise of universal health coverage and health security.

A health system that is founded on the principles of primary health care can better protect and serve communities by treating people when they are sick and helping to prevent diseases by addressing the external factors that affect health and well-being.

Such a system is key to the long-term resilience of health systems – the fragility of which has been exposed by the Covid-19 pandemic. As the first point of contact between individuals, communities and national systems, for example, a PHC system can effectively control disease outbreaks through immunisation and prevention and maintain essential health and social care services when hospitals are overwhelmed. Strengthening resilience is critical to providing continued care, and to ensuring timely and effective responses to, and recovery from, shocks and crises.

Focusing health systems on primary health care requires government and governance, backed by strong and aligned financing systems. Many continue to rely on external assistance to fund their health systems. This external assistance is still too often heavily earmarked to support specific diseases or interventions that drive fragmentation and separate delivery channels, making it difficult

for country decision makers to finance and deliver a universal package with comprehensive services. Even when external funds are moved 'on budget', fragmented fund flows will persist without specific efforts to improve coordination. We need international and national actors to unite on a common vision to avoid this.

This September, three high-level meetings on health took place at the United Nations General Assembly, providing world leaders a unique opportunity to make progress on these issues: to bolster health systems to achieve universal health coverage, end tuberculosis, strengthen pandemic prevention, preparedness and response, and invigorate progress on SDG3 – to ensure healthy lives and well-being for all. This is a chance to elevate health to the highest political level, to generate clear political commitment, and align national and international actors. Governments must agree on ways forward to scale up progress on communicable diseases, address the rising burdens caused by non-communicable diseases and mental health, and the growing threats posed by climate change and antimicrobial resistance.

Civil society, healthcare representatives and more of us can support them by raising our voices and sharing a common vision of people-centred, integrated health services for all. In all countries, a PHC approach can be critical to achieving that vision. Investing in a PHC approach is vital for the health and well-being of all people, for their prosperity, and for the planet that sustains us. ∎

> " Universal health coverage embodies the world's agreement on the need for quality health care for all, without discrimination or financial hardship"

AMINA J MOHAMMED

Amina J Mohammed is deputy secretary-general of the United Nations and chair of the United Nations Sustainable Development Group. Previously she served as the minister of environment of Nigeria. She first joined the UN in 2012 as special adviser to Secretary-General Ban Ki-moon with the responsibility for post-2015 development planning. In Nigeria, she served as an advocate for increasing access to education and other social services, and advised four successive presidents on poverty, public sector reform and sustainable development.

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An 'off the shelf' cure for fragmentation?

I n 2015, countries and communities joined hands to craft and agree on the 2030 Agenda for Sustainable Development, a historic plan of action for people and planet. Much progress has been made, including reducing poverty and child mortality. Yet life expectancy dropped between 2019 and 2021 in the wake of the Covid-19 pandemic, the first such drop since 1950. The pandemic has stalled, and even reversed, steady improvements in public health. At the current rate of progress, universal health coverage, a pathway to delivering on everyone's right to health, remains beyond reach, with approximately two billion people facing the effects of "catastrophic or impoverishing health spending". Just 15% of the Sustainable Development Goal targets are on track.

HOW DID WE END UP WITH THE FUTURE WE HAVE?
Consider the fact that taxpayers give fossil fuel companies $11 million in subsidies every minute – which are supercharging

The virus of fragmentation is afflicting our countries and institutions, sickening people and planet – but, with its globally shared promise to leave no one behind, the 2030 Agenda offers an 'off the shelf' cure

By Achim Steiner, administrator, United Nations Development Programme

the climate emergency – even as droughts, floods, fires, hurricanes and heatwaves are harming and destroying the livelihoods of millions of people. Violent conflicts are at their highest levels since the Second World War. We are seeing pushback on

human rights, the rule of law, gender equality and civic space. Today, another 'disease' afflicts our countries and institutions, sickening people and planet: a virus of fragmentation. The 2030 Agenda, with its globally shared promise to leave no one behind, represents the best, 'off the shelf' cure.

BRIDGING COUNTRIES
Time, political will, financing and action remain in short supply. In this time of polycrisis, with global threats growing in number and complexity, we must think and act differently. As United Nations secretary-general António Guterres says, we must prepare for the health threats to come – from the next pandemic to climate threats – to prevent them where we can and respond fast and effectively where we cannot.

The World Health Summit and the SDG Summit in 2023 represent new opportunities to secure the rights and well-being of all and protect our planet. That includes extending universal health

ACHIM STEINER

Achim Steiner has been the administrator of the United Nations Development Programme since 2017. He is also the vice-chair of the UN Sustainable Development Group, which unites 40 entities of the UN system that work to support sustainable development. Prior to joining UNDP, he was director of the Oxford Martin School and Professorial Fellow of Balliol College, University of Oxford. He led the UN Environment Programme (2006–2016) and was also director-general of the United Nations Office at Nairobi. He previously held other notable positions including director-general of the International Union for the Conservation of Nature and secretary-general of the World Commission on Dams.

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coverage and pandemic preparedness and response based on a human security approach so we can realise resilient health systems that flexibly tackle health emergencies and multiple threats to health. We can also bring a globally networked innovation and access ecosystem for medical countermeasures to life by committing to sharing solutions such as vaccines and other health technologies as global public goods. This would save lives and restore trust in our global systems.

We must also reverse other areas of fragmentation affecting health and well-being. The Paris Agreement is a public health agreement as much as it is one of climate action. By delivering on it, we can advance the right to a clean, healthy and sustainable environment together with people's health and well-being.

RETIRING 'TRADE-OFFS'

The 2030 Agenda is also prompting a re-think of the metrics needed to secure the future of people and planet. That means looking beyond gross domestic product to leverage synergies across sectors. For instance, a just energy transition would dramatically reduce harmful greenhouse gas emissions while advancing social justice, human rights, gender equality, health, education, jobs and livelihoods.

Smart use of data and analytics are key to scaling the integrated solutions to responding to the multidimensional aspects of health and well-being. The UN Development Programme's 'SDG Push' analysis shows that it is still possible for countries to outperform their pre-Covid development projections by investing across core SDG 'drivers' including health, social protection, a green transition, digitalisation and governance.

INSTITUTIONS FOR THE 21ST CENTURY

The UN system, as our primary global anchor to promote peace, security, and development, must also evolve. Secretary-General Guterres has an ambitious plan for a revitalised UN through the Our Common Agenda report, and a spirit of multilateral collaboration is being nurtured through initiatives such as the SDG3 Global Action Plan. This has paved the way for the UN Comprehensive Response to Covid-19, which integrated health, development and humanitarian support through the pandemic. There is much more to be done on pandemic preparedness and response, but the UN and its many partners are now better equipped to respond to complex health emergencies. Efforts to stay and deliver in Afghanistan, Sudan, Syria, Ukraine and beyond demonstrate this fact.

Global health governance is evolving in other ways. Gavi, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the US President's Emergency Plan for AIDS Relief are

integrating their disease-specific responses with broader efforts to strengthen health systems and prepare for pandemics. The International Health Regulations are undergoing long-awaited amendments; a new pandemic accord is in the works; and other strong proposals have been put forth to make Covid-19 the last pandemic of its kind. The mRNA vaccine technology transfer hub in South Africa initiated by the World Health Organization is a clear demonstration of how developing countries are becoming a nucleus for the solutions that our global community now needs.

Whether this all ultimately makes the world safer depends on the same essential elements: political will at all levels for multisectoral and timely responses, an empowered WHO and a shared commitment to equity. As ever, finance is pivotal. That involves reforming the international financial architecture and directly tackling the global debt crisis at a time when many developing countries are spending, on average, 1.4 times more simply to service their debt than they allocate to health care. These shifts could unlock hundreds of billions of dollars to invest in health, climate and all 17 SDGs.

SOLIDARITY OVER SEPARATION

The estimated 24 million excess deaths and counting due to Covid-19 should not be the jolt we need to take pandemic preparedness seriously. Nor should countries and communities be locked into a never-ending cycle of polycrisis to grasp the importance of the SDGs. In a world riven by the impacts of conflicts, geopolitical tensions and the climate emergency, we have a clear way out. The 2030 Agenda represents one of the only platforms that all countries still agree on for navigating through this sea of uncertainty. We must act upon it as our global community's best hope to defeat the virus of fragmentation. Solidarity can win over separation. ∎

The world is changing dramatically, and never has the need for greater integration, coherence and cooperation from our global organisations been more critical. There is no easy solution, but bold steps are worth taking

The calls for more integration, coherence and cooperation in matters of global health are intensifying as the global health universe expands. Discussion about which of the many existing bodies – new and old – is the most appropriate for taking certain agendas forward becomes ever more contested, especially as frustration mounts over the lack of progress, particularly in global health. Many questions have arisen in recent years. Which is the best place for global policymaking on health as the issues expand far beyond traditional health policies? Is it better to negotiate within the World Health Organization? Would a high-level council at the United Nations really make a difference? Can political clubs such as the G7 and the G20 achieve more than staid UN bodies? Are totally new bodies needed to reflect the geopolitical powershift? Does decision-making improve when the number of stakeholders is expanded? Does fragmentation reflect a lack of political will to address global challenges jointly? There is probably only one issue on which nearly everyone agrees: reforming the UN Security Council. And that is probably the most difficult reform of all.

Excitement was high in global health circles when health was finally regularly included in UN deliberations and at the G7 and the G20. An analysis of the most recent outcomes of the meetings in 2023 have poured some cold water on that enthusiasm. The results are bland and meagre compared to the challenges at hand: the financing crisis of health systems, the tragic cycle of increasing poverty and ill health, the expansion of profitable industries that produce non-communicable diseases and the devastating climate and health nexus, the rollback of the right to health. Indeed, the situation was so bad that the fact that there were declarations at all was considered a success. Yet the skies over New York were filled with colourful drone messages as the 2023 UN General Assembly opened.

The patchwork of global health policymaking

By Ilona Kickbusch
founding director, Global Health Centre, Graduate Institute of International and Development Studies

Perhaps we do need to celebrate the fact that countries are still talking despite the strong nationalist tendencies, the North-South divide, conflicts between the West and China, and the impacts of the war in Ukraine. This is today's real world, defined not by the haze of hegemony but by deep differences and power inequalities, which are no longer accepted. The inability to reach consensus is an expression of that powershift. Politics and ideology are back with a vengeance, and play out in global health over issues of intellectual property, sexual and reproductive health and rights, access to technologies and much more. For too long they have been glossed over until Covid-19 brought them to the fore. Yet many organisations and negotiators are inadequately prepared for differing values and competing world views. They have forgotten that this was why many organisations were created in the first place: to address conflicts and play out power dynamics. This is a new phase of global health diplomacy.

TO SOLVE COMMON PROBLEMS
The role of the UN organisations shifted dramatically from their post-war function to resolve political conflicts before they turn into military action to producing global goods. This is one reason that global governance has been approached in a very functionalist manner without regard to power differences: the priority to deliver the international cooperation required to produce results to solve common problems. Consequently, a very managerial approach built on goals, targets and investment cases was institutionalised. In many cases the targets were bold – the Sustainable Development Goals are a testimony to that – but the mechanisms to reach them have not followed the same level of ambition. This imbalance has redefined global solidarity and contributed to a development that has made the UN the major provider of humanitarian support – first and foremost food, shelter and medical care – as one emergency follows another.

The failure to reach the objectives is consistently put down to political will. Yes, many countries could and should be doing more to ensure planetary and human health, both at home

ILONA KICKBUSCH

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and together. The political declarations on universal health coverage and pandemic prevention at UNGA reiterate health as a universal goal – that everyone wants for themselves and for others, from individuals to states. But those declarations leave it at statements about redoubling efforts for universal health coverage and prioritising preparedness. The polarisation after Covid has shown clearly that health has become a key area of action where the stark inequalities of the global system become tangible. All the development aid for health, all the philanthropy and charity were reduced to Band-Aids as the power divide played out through vaccine nationalism and the lack of access to medical countermeasures. This is why negotiations for a pandemic accord are so controversial and difficult – power and politics are back because global norm setting is more than a functional enterprise. The stakes are very high, as are emotions and frustrations. But the UN Pandemic Summit did one thing right: it was bland because the negotiations on a pandemic accord are at the World Health Organization, to which it gave priority. Attempts at forum shifting did not work. Indeed, the summit was badly timed and probably unnecessary at this point.

THE EMERGING POLITICAL MESSAGE

The emerging political message is clear: before new debates arise about integration, coherence and cooperation in matters of global health and the reform of its institutions, two basic issues of inequality need to be addressed: representation and democratic governance and the elementary financial determinants of the system. At UNGA, Angola's President João Manuel Gonçalves Lourenço highlighted the lack of sufficient representation in global governance institutions to contribute to formulating realistic solutions to their problems. The G20 has addressed this by inviting the African Union to join. The BRICS is working on broadening its influences as a voice of the Global South by expanding its membership. The G7 in turn is refining itself as a forum of democracies.

William Ruto, president of Kenya, stated it clearly at the Climate Ambition Summit: "Neither Africa nor the developing world stands in need of charity, handouts or harms from the developed countries. What we need is fairness: a fair financial system; fair market access for green assets, products and services; fair national regional trade mechanisms." Barbados prime minister Mia Mottley in turn called for a loss and damage fund following the Bridgetown Initiative and said "it is painful" that the Global North continues asking countries "to increase borrowing to build resilient infrastructure for something that we did not do". UN secretary general António Guterres called for reforming the financial institutions and architecture, and the G20 declaration (with India clearly defining itself as the voice of the Global South) echoed the calls of the Bridgetown Initiative on debt and access. In the pandemic accord negotiations, the principle of common but differentiated responsibilities was put on the table. The paltry sum available for the Pandemic Fund combined with a complex application procedure still reflects the approaches of the systems that must be overcome. UNAIDS executive director Winnie Byanyima drew attention to the fact that Africa has made $79 billion in debt repayments in 2021 – but that the pandemic fund has only $3 billion to disperse.

There is therefore every reason why the UN and its organisations are rocked by political debates – the world is changing dramatically. This is where these debates must happen, in the only inclusive forum that enables them, including the WHO. This does not mean that the organisations are not fit for purpose: they are integral political platforms for reshaping the world. They must respond to this role with sound judgement. We cannot afford their demise, as happened with the League of Nations. All the African leaders who spoke at UNGA reiterated its importance to them – those leaders who did not come might want to keep this in mind. Multilateralism will continue to be a patchwork and very much more difficult over the next years.

The solutions will not come quickly. They will need to be bold, but they are worth fighting for. ∎

Integrating global health governance for a fragmented world

As interconnected crises loom ahead that threaten our physical, mental and social well-being, the world urgently needs global health governance to replace our existing fragmented systems

By John Kirton,
director, Global Governance Program

The outbreak of the deadly Covid-19 pandemic in 2020 catalysed a proliferation of innovation in health practice, policy and governance. But almost four years later, serious questions remain about how integrated and impactful the many institutional innovations at the global, regional and country levels have been.

Covid-19 and its ongoing offspring from new variants dramatically showed that the health of our planet and its living things is a highly integrated whole. It also showed that our ways of protecting and promoting their health and well-being remain fragmented, and consequently often fail to meet the growing global need.

The midsummer arrival in 2023 of the unprecedented heat and extreme weather events around the world further showed that our planet is a single integrated ecosystem, on which its people, animals and plants directly depend to stay alive and thrive. Our failure to protect the health of our planet is harming the physical, mental and social well-being of its eight billion human inhabitants and their descendants for generations to come.

The death and damage are compounded by the simultaneous eruption of several other, interconnected crises that threaten to overwhelm us: armed conflict between and within states, and resulting energy and food insecurity, inflation, debt crises and development lags. As a result, progress towards reaching the United Nations' 17 Sustainable Development Goals is stalling as we pass the halfway mark to deliver them by 2030.

The world thus urgently needs global health governance to replace the fragmentation of an incomplete set of single silos with integration based on synergies among all its components and coherence as a comprehensive whole.

THE WORLD HEALTH ORGANIZATION

At the centre of the global health architecture stands the World Health Organization. It alone has the legal power and political responsibility "to act as the directing and coordinating authority on international health work".

It admirably defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". With full inclusiveness it affirms "the health of all peoples is fundamental to the attainment of peace and security and is dependent on the fullest co-operation of individuals and States".

The WHO and its governing body, the annual ministerial-level World Health Assembly, have initiated, overseen or contributed to many of the institutional and legal innovations catalysed by the Covid-19 crisis. These include efforts to revise the International Healthy Regulations and to create a fund for pandemic preparedness and response, COVAX and its Accelerator, and the WHO Hub for Pandemic and Epidemic Intelligence in Berlin. The crisis also led WHA member states to agree to increase to 50% the share of their WHO financing they give as assured, assessed contributions, rather than in voluntary, discretionary form.

Yet the WHO's budget remains only the size of that of a large hospital in a major city, while its responsibilities are ▶

> # " Integration requires a whole-of-government approach and thus active global governance by heads of state and government"

global and far greater. And there is doubt that member states will raise their share of assessed contributions. Their failure here would increase the fragmentation within the WHO, with each member voluntarily providing what and when it wants, to address the particular disease or instrument it prefers. While this can produce platforms to support other health-inducing activities, as the major funding to combat HIV/AIDS shows, it tends to favour responses to acute outbreak events, rather than action to prevent them, or to strengthen the social, economic and ecological determinants of health.

THE G7

Integration requires a whole-of-government approach and thus active global governance by heads of state and government. They alone have the domestic political authority, comprehensive vision and responsibility to act on all the major components and causes of health. A major contribution has thus come from the annual summits of the G7 major democratic powers, formed in 1975 and acting on health since 1979. G7 summits have given health up to 72% of their outcome documents, made 687 collective, precise, future-oriented, politically binding decisions, and complied with them at an average of 78%.

This year, the G7 summit in Hiroshima on 19–21 May produced 34 health commitments. The health ministers' meeting, in Nagasaki on 13–14 May, focused on strengthening global pandemic prevention, preparedness and response (referred to as PPPR), universal health coverage and health innovation, emphasising antimicrobial resistance and a One Health approach.

Together G7 members possess a predominance of the global capabilities required for effective global health governance, notably in finance, scientific capacity and the intellectual property for the leading vaccines and pharmaceuticals. Its global health governance has made major contributions, notably by joining with the UN in 2000–2001 to launch the Global Fund against HIV/AIDS, Tuberculosis and Malaria.

Yet the G7 has done little on mental health, dementia and the other health needs of the ageing populations in Japan and Italy, and beyond in Korea, China and elsewhere. Moreover, the G7 has no members from the Global South, where the greatest burden of disease now lies, where more capacity is needed most and where many cost-effective innovations exist. As leaders of often inward-looking democratic countries, G7 governors are constrained by what their voting publics want for themselves at home. Their ability to provide genuinely global health governance depends critically on how they can inspire, initiate, join or support more inclusive summit forums.

THE G20

The G20's systemically significant states are one such forum. Its leaders came together in 2008 to address the American-turned-global financial crisis erupting then. With an equal number of members from developed and developing countries, it contains 85% of the world's economy and two-thirds of its population. It thus has the capacity to produce effective global health governance for all.

Its direct global health governance began in 2014, in response to the deadly Ebola outbreak in Africa. From then to 2022, G20 summits devoted 10% of their attention to health in their outcome documents, produced 141 commitments and complied with them at an average of 70%.

On 9–10 September 2023, G20 leaders in New Delhi produced 25 health commitments, second only to their 47 development ones.

G20 health ministers' meetings began in 2017 in Berlin, which made 51 commitments. They culminated in August 2023 in Gandhinagar, India, where they made 28 commitments.

But the leaders' 25 health commitments at New Delhi represented only 10% of their 242 commitments, even though Covid-19 infections and deaths had started to rise again. Unlike 2021, when Italy hosted the G20, the special G20 summit India as host has added for November 2023 will focus on development, not health. The G20 remains largely a responsive rather than a proactive, preventive body – except regarding universal health coverage and antimicrobial resistance – and is subject to the all-too-familiar cycle of panic then neglect.

THE UNITED NATIONS

Attention thus shifts to the fully inclusive UN

and its General Assembly in New York, where all the world's needs can be addressed.

The UN Charter in 1945, although focused on peace and security, included health as an integral part. Article 13 empowers the General Assembly to "initiate studies and make recommendations for the purpose of … promoting international co-operation in the economic, social, cultural, educational, and health fields".

In 1996, the UN created UNAIDS to draw on the resources and actions of 11 UN system organisations, covering refugees, children, food security, population, drugs and crime, gender equality, science, education, culture, development and, of course, the WHO, for an integrated response to the HIV/AIDS pandemic.

However, after 1945, UN summits started only in 1990. Since then, its summit-level high level meetings have proliferated, including those devoted to health. In September 2023 it had four – on PPPR, universal health coverage, tuberculosis and the SDGs, whose third goal is on health.

However, while these UN health summits add value, the leaders of most UN members and especially those of the major powers seldom attend. And members' compliance with their UN commitments is often very low.

REGIONAL INSTITUTIONAL INTEGRATION

This underscores the importance of advances at the regional level. Here the European Union, long a leader, has created the Pan-European Commission on Health and Sustainable Development and taken other measures to integrate health and the economy and foster a 'well-being society' for all.

In February 2022 the African Union Assembly of Heads of State and Government made the Africa Centres for Disease Control and Prevention an autonomous health body, to confront Africa's broad array of infectious disease outbreak events and its rising burden of non-communicable diseases. Africa CDC is now proposing a New Deal to implement a 'New Public Health Order', fully integrated with the AU's Agenda 2063 and the SDGs.

COUNTRY-LEVEL CONTRIBUTIONS

At the country level, institutional integration is advancing too. The US State Department has created the Bureau of Global Health, to assemble the assets of the whole department and make global health security a key feature of US national security policy. The bureau also integrates the major resources of the President's Emergency Fund for AIDS Relief and seeks partnerships with other countries and international institutions.

Lebanon's Ministry of Health is implementing its comprehensive five-year National Health Strategy: Vision 2030 to integrate responses to immediate and longer-term challenges. Its Sustainable Energy Strategy for the Healthcare Sector seeks to transform the production and use of green energy, in ways that support the SDGs and the decisions of successive UN climate change conferences.

REMAINING CHALLENGES

Yet there is still much to do. The first major challenge is to mobilise much more public and private finance for health and its supporting social determinants. The second is to strengthen the badly overburdened global health workforce in all its components. The third is to share technology and build manufacturing and innovation capacity throughout the developing world. And the fourth is to fully integrate health in all its dimensions into the response to climate change, which is now an existential threat for all. ∎

JOHN KIRTON

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Generative AI and the impact on health equity

Generative AI-based tools could hold the key to better health care, lower costs and improved health outcomes – and with a coordinated global effort, they could help catalyse health equity in the world's hardest-to-reach places

By Vanessa Huang, general partner, and Dr Zhi Yang, chair, BVCF

Many people globally have been fascinated by the possibility of generative AI. Large language models (LLM), like GPT-4, hold the promise to increase efficiency, precision and productivity across virtually all segments of society. Like many, we explored the capability of GPT-4 and mused on its feasibility in healthcare delivery in emerging markets and the potential impact on health equity. The challenges are instantly clear: the disparities in internet access within and across countries, varied levels of computer literacy among different generations and populations, and the nascent state of regulations that can facilitate AI's deployment in high-need areas but also safeguard data privacy, information integrity, fairness and accountability. The most immediate and practical applications for generative AI also appear to be in exactly the communities where many of these challenges are discernible:

rapidly ageing societies such as Japan and China, countries with vast rural populations and localities where healthcare infrastructure is not mature.

POTENTIAL GENERATIVE AI APPLICATIONS
AI Revolution in Medicine by Peter Lee, Carey Goldberg and Isaac Kohane is a stimulating primer on GPT-4's aptitude in health care. The authors identified numerous low-hanging fruit applications of generative AI in current healthcare delivery systems (though mostly using the US as an example) and biomedical R&D processes. Examples include the holistic analysis of a patient's existing medical records; a virtual assistant to doctors that can provide medical references and analyses instantaneously; the automation of administrative tasks in a complicated payment environment; knowledge support for therapeutics and medical devices R&D processes; ready access to medical information in an understandable language for the general public; portable personal health data and chronic disease monitoring for patients; and mental health support for isolated elderly populations and resource-constrained communities.

HEALTHCARE-TRAINED LLMS
Generative AI as a technology is still in a work-in-progress phase, and a formally healthcare-trained LLM is not yet widely available. The logical expectation is that in the (near) future, there can be LLMs trained with local patient medical records, local oriented medical research papers, languages and cultural aspects. These localized health LLMs can then be the engine for scientists, researchers and medical professionals to more effectively and accurately identify local disease trends and

demographic needs. Policymakers can coordinate with scientists, doctors and researchers to apply the insights gleaned to develop public health solutions that are in sync with local resources and wellness practices. Healthcare information interpreted in dialects and languages comprehensible by the public and patients will empower them to actively participate in their own health decisions.

STRENGTHENING THE PUBLIC HEALTH MANAGEMENT ECOSYSTEM

Ideally, applications based on generative AI will enable patients' data and medical records to be easily transferred across various care settings, thereby creating a truly patient-centric health management ecosystem. The health management value chain can extend to both before (ideally) and after acute events in community clinics or at home: patients could attain earlier diagnoses at community clinics, undergo treatment and initial monitoring at hospital, and receive post-treatment prognosis and maintenance care at home or community clinics. Health management systems supported by generative AI applications provide and encourage more contact points between patients and health professionals, making health management a day-to-day event as opposed to acute events only. Continuity of care across different care settings should result in better health outcomes, more efficient allocation of healthcare resources and lower overall healthcare costs for providers.

TAP THE BENEFITS OF GENERATIVE AI

To get organised to effectively deploy generative AI as a healthcare tool, there are a few obvious requirements:
● Reliable internet access and network security
● Well-documented and labelled electronic medical records, or at least a system to capture case data

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VANESSA HUANG

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⊕ bvcf.com

> "Continuity of care across different care settings should result in better health outcomes, more efficient allocation of healthcare resources and lower overall healthcare costs for providers"

consistently going forward while digitising existing records
● A strong community-level primary care or telemedicine network with health professionals that patients trust

Furthermore, the public needs to be guided to utilise community-level healthcare resources whenever possible and also be educated on the uses and limitations of generative AI applications in health care. Health solutions should incorporate technical accessibility of the vulnerable and elderly populations. Local data is the key for locally attuned treatment options, population health solutions and biomedical research. Policymakers need to develop regulations that protect patients' data privacy and information integrity. However, the regulations should be balanced, ensuring they will not stifle the utilisation and mobility of health data for global biomedical R&D and development of tools that advance health equity.

GLOBAL COLLABORATION

The accuracy of an LLM likely increases with the volume of data it is trained on. Once countries start to organise their healthcare systems towards digitalisation, available quality data will surge. Access to comprehensive global health data can provide potential insights that are non-achievable with single population data. This can guide health innovations and interventions to areas with the highest needs. Global communities should develop a regulatory framework that enables countries, organisations and individuals to share stratified data and anonymised information across borders. The World Health Organization's collection and analysis of daily Covid-19 data from countries during the pandemic is one example of a central repository of health data. Generative AI's potential is immense; a cohesive global coordination in health can further harness and amplify its effectiveness as a tool in promoting public health and global health equity.

A POTENTIALLY POSITIVE CATALYST

The need to keep healthcare costs under control is a top priority for many governments. Generative AI-based tools, community-based healthcare delivery systems and population health-focused solutions can be key to help manage costs, evaluate treatment effectiveness and improve overall health outcomes. With good policies, effective planning and active participation, in addition to a cohesive global coordination effort, generative AI can be a positive catalyst for better resource allocation into communities that are in greater need and at higher risks. ■

Global health security and diplomacy in the 21st century

Good politics alongside good public health practice saves lives – and embedding global health as a core component of diplomacy and foreign policy will have a significant impact on global readiness for tackling present and future disease threats

By John Nkengasong, US global AIDS coordinator and senior bureau official for the Global Health Security and Diplomacy Bureau

We are living in a time of pandemics. In the last four years, the World Health Organization has declared a public health emergency of international concern on three separate occasions (Ebola in the Democratic Republic of Congo, Covid-19 and Mpox), with Covid-19 alone estimated to have caused the deaths of over 20 million people across the world, including 1 million in the United States. The infectious diseases responsible for a large share of global mortality – HIV, tuberculosis and malaria – remain persistent threats. According to UNAIDS, in 2022 alone there were 1.3 million new HIV infections, and 630,000 AIDS-related deaths.

Disease threats are also becoming more frequent and more severe, due to greater global connectivity, a changing climate, population growth, food insecurity and a host of other factors. Covid-19 showed us that a disease threat in one country is a national security and development threat globally. The US State Department has recognised this fact by taking the unprecedented step of creating the Bureau of Global Health Security and Diplomacy. This new bureau brings together assets from across the State Department to accomplish three main objectives: to lead US diplomatic engagement to strengthen the global health security architecture, to leverage and coordinate US foreign assistance to address health threats, and to elevate and integrate global health security as a core component of US national security policy. The GHSD bureau will have a unique ability to bring together a strong programmatic base through the US President's Emergency Plan For AIDS Relief – PEPFAR – with the diplomatic power of the State Department to help address current and future disease threats.

ELEVATING HEALTH IN DIPLOMACY

Disease threats require a whole-of-government and whole-of-society response. The world learned this lesson during Covid-19, when health departments and ministries were forced to come together with their finance, trade, commerce, education and foreign affairs counterparts to develop a unified response. But this has also been a key lesson in the fight against the HIV/AIDS pandemic. Countries that have been most successful in fighting HIV are the ones that have elevated their HIV/AIDS response to the highest levels of government priority, and have implemented coordinated, multisectoral strategies taking into account the societal and economic dynamics of the disease. The creation of the GHSD bureau provides a tremendous opportunity to re-elevate the HIV/AIDS response as a political priority on a global

and regional stage. This is especially critical given the need for partner countries to take on the increased responsibility required to sustain the HIV/AIDS response going forward.

The GHSD bureau will expand upon this effort by other foreign ministries to elevate tackling global health threats as foreign policy and national security priorities, and establish key lines of work that require greater global collaboration such as sharing data, facilitating access to medical countermeasures and countering misinformation. The bureau will take a leadership role in using data and evidence to help shape diplomatic priorities, and showcase the return on investing in preparedness and health security across government, multilateral institutions and other partners.

LEVERAGING THE PEPFAR PLATFORM

Over the past 20 years, PEPFAR has been one of the largest investors in the overall public health systems in our partner countries – supporting 3,000 labs, 70,000 facility and community-based clinics, and training over 340,000 healthcare workers. This platform is a vital component of the HIV/AIDS response, and has been effectively leveraged to tackle other disease threats, especially when they pose a risk to the continuity of HIV services. This was demonstrated at a very large scale during Covid-19, when PEPFAR platforms were vital to creating access to diagnostics, supporting vaccination campaigns and conducting surveillance of the threat by building upon PEPFAR-supported data systems. In Tanzania, when the vaccination campaign stagnated in early 2022, PEPFAR supported platforms helped vaccinate 25 million individuals in less than five months. More recently, PEPFAR-platforms have helped to respond to the Ebola outbreak in the DRC, Marburg in Tanzania, and Mpox in several countries in Africa and Latin America. Our partner countries will continue to find ways to build upon the PEPFAR-supported platforms to prevent, detect and respond to future outbreaks.

DEVELOPING TRANSFORMATIVE PARTNERSHIPS

Partnerships have always been central to success in global health – no one entity can drive outcomes through their own funding and efforts. But given

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𝕏 @USAmbGHSD

the multisectoral challenges that disease threats provide, there is an increasing opportunity to bring in new partners who have aligned interests. This includes global and regional development banks that have the ability to invest in infrastructure relevant to health, and also the private sector, which has distinct expertise that can be engaged across the entire health value chain – from research and development to surveillance to service delivery. A critical example of these partners coming together is in decentralised manufacturing for diagnostics, therapeutics and vaccines. Manufacturing companies in the United States can provide technology and capacity, development financing institutions can provide financing, and global health donors such as PEPFAR, the Global Fund and Gavi alongside countries can provide demand. This can help to catalyse the development of a pharmaceutical manufacturing base in regions of the world where current access to medical countermeasures is limited. This will not only help to create a shorter and more resilient supply chain, but will also serve to build the flexible capacity needed to respond to future health threats. Similar transformative partnership opportunities are possible in a whole range of critical health areas going forward.

Good politics alongside good public health practice saves lives. Embedding global health as a core component of diplomacy and foreign policy will better prepare the world for tackling the disease threats in the present and future. ∎

+20m
deaths worldwide
from Covid-19

1.3m
new HIV infections
in 2022

A healthier future in sight

By Katsunobu Kato, former minister of health, labour and welfare, Japan

This year's G7 health ministers' meeting marked a meaningful opportunity for the G7 to show its common direction in the post-Covid era – and for Japan to commit to ensuring that universal health coverage is achieved worldwide by 2030, the target year to achieve it and the next time Japan assumes the G7 presidency

The world is moving towards a post–Covid-19 era. On 5 May 2023, the World Health Organization declared the end of the 'public health emergency of international concern', and Japan updated the status of Covid-19 to the same level as seasonal influenza. The lessons learned from the pandemic over the past three years remind us of the need to strengthen prevention, preparedness and response – PPR – for health emergencies, and of the importance of achieving universal health coverage, which forms the basis for public health and pandemic PPR in normal times and in emergencies.

Japan hosted the G7 health ministers under its 2023 G7 presidency in Nagasaki on 13–14 May. G7 members and outreach countries discussed global health collaboration in the post-Covid era under the theme of Working Together for a Healthier Future. The meeting focused on three agendas: strengthening the global health architecture for PPR for future emergencies; contributing to achieving more resilient, equitable and sustainable universal health coverage through strengthening health systems; and promoting health innovation.

Ministers endorsed the G7 Global Plan for UHC Action Agenda. This is a compilation of actions by G7 members to contribute to achieving universal health coverage all over the world, as well as achieving the Sustainable Development Goals by 2030. Japan, among the first to establish a universal health insurance system, has been leading the global discussion on universal health coverage. However, while we have been responding to the Covid-19

emergency over the past three years, the entire world has experienced setbacks in health efforts, such as in improving infrastructure for routine health services, developing human resources for health, and supporting the maintenance and promotion of people's health. G7 members will work on eight action areas, including positioning universal health coverage as a national priority, developing political momentum on achieving universal health coverage, and supporting the improvement of health services in low- and middle-income countries, based on the principle of leaving no one behind. The global plan includes commitments by G7 members and related countries and international organisations to provide further support.

AN END-TO-END ECOSYSTEM
Second, G7 ministers recognised the need to ensure equitable access to medical countermeasures – MCMs – for all people around the world, particularly for countries and regions that have experienced inequitable access in the past. During the pandemic, vaccine research and development was facilitated more rapidly than ever before, but significant obstacles remain in delivering those vaccines equitably and rapidly all over the world, especially in low- and middle-income countries. Therefore, the G7 will contribute to strengthening an 'end-to-end' MCM ecosystem to facilitate sustainable, equitable, effective, efficient and timely access, in preparation for future health emergencies, focusing on enhancing the entire value chain from R&D to delivery. The G7 Hiroshima Vision for Equitable Access to Medical Countermeasures sets out guiding principles, and ministers launched the MCM Delivery Partnership for this purpose. These efforts are aligned with ongoing discussions on enhancing equitable access to MCMs. Based on these concepts, it is necessary to work in close collaboration with G7 and G20 members and other countries, as well as international organisations.

Third, G7 ministers increased measures to tackle antimicrobial resistance, a particularly important issue on the health innovation agenda. They provided support through international initiatives such as the Global Antibiotic Research and Development Partnership and Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X) as 'push incentives' to facilitate R&D and promote antimicrobial stewardship. In addition, the ministers emphasised, for the first time, the importance of 'pull incentives' to reward new antimicrobials as a post-market incentive. In Japan, there is a new project of pull incentives this year, and we will further promote R&D. Because addressing AMR requires cross-sectoral efforts in the areas of human health, animal health and the environment, we

are planning a high-level technical meeting later in 2023 on the theme of One Health, with the participation of G7 ministries of health, agriculture and the environment, for the first time. Through such efforts, we hope to promote responses to global issues, including AMR, that require a One Health approach.

Although the Covid-19 pandemic has brought an unprecedented level of attention to health issues, efforts to promote and protect people's health may get pushed aside as normal economic and cultural activities resume. At Nagasaki G7 health ministers expressed their deep gratitude to the healthcare workers of the world. As the chair, I also emphasised my commitment to protecting the working environment for those involved in various services, including medical care, nursing care and welfare, who continue to respond to health emergencies, including Covid-19.

RESPONDING TO LONG COVID
We also discussed ways to respond to long Covid. The pathophysiology of long Covid and actual situations are still not fully understood, and many people are suffering physically, mentally, socially and economically. We thus highlighted the importance of research and management for long Covid and the provision of appropriate care, including mental health care.

Finally, G7 ministers emphasised the need to restore many international initiatives for various health challenges set back by the Covid-19 pandemic and to accelerate global efforts to achieve universal health coverage. The year 2023 is marked by several leader-level meetings, including the G20 New Delhi Summit and three high-level meetings at the United Nations General Assembly on universal health coverage, pandemic PPR and tuberculosis, which all provide excellent opportunities to maintain and increase political momentum on global health. Japan will contribute to deepening discussions and international cooperation by linking the outcomes of the G7 meeting to these important meetings.

I believe this year's G7 health ministers' meeting was a meaningful opportunity for the G7 to show our common direction as the first G7 meeting in the post-Covid era. The year 2030, the target year to achieve the SDGs and universal health coverage, is also the year that Japan will assume the G7 presidency again. Japan will commit to working proactively to ensure that universal health coverage is achieved worldwide and a 'Healthier Future' is created by then. ∎

KATSUNOBU KATO

Katsunobu Kato was Japan's minister of health, labour and welfare from August 2022 to September 2023, having previously held that role from 2019 to 2020 and from 2017 to 2018. He also served as chief cabinet secretary from 2020 to 2021, and has held many ministerial positions since being re-elected to the House of Representatives in 2014. He was first elected to the House of Representatives in 2003.

🌐 www.mhlw.go.jp/english

AI's transformative potential to improve global health equity

By Karen DeSalvo, chief health officer, and Ivor Horn, chief health equity officer, Google

The new capabilities of the current generation of AI models is opening exciting opportunities to bring high-quality, equitable, and socially beneficial health on a planetary scale

Technology has the potential to advance health for everyone, everywhere. But reaching this ambitious goal requires that we be both bold and responsible – bold enough to envision a world where digital tools contribute to improved health for all; responsible by working collectively with communities, governments and the private sector to develop solutions that are effective, inclusive and equitable.

And while technology can bring many benefits, it can also exacerbate inequities in ways that none of us would want. This is why health equity is at the centre of our work to build for everyone, everywhere and not just some people in some places. Anchoring in equity is integral to our bold vision to address health challenges aligned with the UN Sustainable Development Goals. At Google, we have invested in tools to address what we call the four Ms: mental health, metabolic diseases, malignancy and maternal health.

We have long believed that information is a determinant of health – that access to high-quality information contributes to equitable health outcomes. This is particularly true for mental health where the right information at the right time can save lives. Through Search and YouTube, we are working with the World Health Organization to raise authoritative health content, with YouTube partners to reduce the stigma associated with mental health challenges and with local organisations to connect users to resources during moments of crisis. For example, we recently launched a Spanish language version of clinically-validated mental health self-assessments in the U.S. on Google Search, increasing access for

the second largest population of native speakers in the country.

With the help of artificial intelligence, we are building tools that provide personalised insights to people using Android, Pixel and Fitbit devices. Pairing machine learning algorithms with mobile sensors on phones and watches allows for the monitoring of irregular heart rhythms, heart rate and blood oxygen levels. These clinical signals can be relevant in people with metabolic diseases such as hypertension and diabetes. The insights enable patients to understand their personal health status and make data driven decisions with their medical providers.

EFFECTIVE PARTNERSHIPS

While technical innovations are important, we recognise that the boldest achievements result from the most effective partnerships. In 2020, there were an estimated 685,000 deaths worldwide due to breast cancer,[1] the most common malignancy for women. Early screening and diagnosis improves cancer outcomes by providing enhanced care at the earliest possible stage when treatments work best and more lives can be saved. In response, we partnered with iCAD, a global leader in breast cancer detection, to bring our mammography AI research model into clinical practice and make state-of-the-art screening available to millions of women around the world.

Partnerships are also at the centre of our maternal health collaboration with the OnTIME Consortium in Nigeria. For high-risk pregnancies, access to health facilities that perform caesarean sections can mean life or death for mother and child. Measuring distances to facilities on a map is easy, but these measurements do not represent a facility's true accessibility. Road conditions, traffic and mode of transportation affect how quickly a woman in labour can reach emergency obstetrics care. We created a Google Maps–based tool to assess real-world travel time to EmOC so that local leaders could make more informed decisions for their communities.

Google has been developing AI products for more than two decades and using them to solve health challenges. The new capabilities of the current generation of AI models are opening exciting opportunities to bring high-quality, equitable health on a planetary scale. One example is Med-PaLM, a medically

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IVOR HORN

Dr Ivor Horn is chief health equity officer at Google, where she leads a cross-functional team that provides health equity leadership to ensure that health-related products, research and other initiatives are diverse, fair, accessible and inclusive.

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tuned generative AI model. Google Cloud customers are exploring ways to use the technology to improve medical research, assist clinicians and understand health information.

Being responsible in technology and AI is grounded in our AI Principles[2], Google's commitment to develop technology responsibly and work to establish specific applications areas we will not pursue. For health applications, we anchor ourselves in the adage: first, do no harm. Our AI principles take us one step further to solutions that are also socially beneficial.

Responsible AI should be a shared responsibility among companies, communities, clinicians and governments. We must all work together to put people at the centre of AI development and deployment, bringing the best thinking to ensure that our collective work is ethical, equitable and evidence based. To demonstrate our commitment to collaboration, Google helped to establish the Coalition for Health AI, a group from academia, the private sector and government created to promote the adoption of credible, fair and transparent health AI models.

ENSURING EQUITY

We believe that equitable health AI models require input from experts from diverse geographies, clinical disciplines, lived experiences and personal demographics. We are checking for bias in our data to ensure proper coverage of minority groups in training examples, assessing for bias in model design by adjudicating for quality and safety across a range of experts, and evaluating model output for bias during implementation.

Although technology will not reduce the global burden of disease, it will increase the ability of the global health community to address more health needs across more geographies. We at Google look forward to working collaboratively to reach the vision of a bold and responsible future for health. ∎

1. https://www.who.int/news-room/fact-sheets/detail/breast-cancer

2. https://ai.google/responsibility/principles/

Google Health

Navigating the complexities of One Health requires input from all stakeholders – and in India, synergies are emerging, with the country committing to it as a key item on the political agenda for progress on development, equity, economic and health gains

A view from the Global South

The ongoing Covid-19 pandemic is a long overdue reminder of the interconnectedness of human, animal and environmental health and the urgency of developing global, regional and national One Health frameworks.
An intergovernmental negotiating body is currently drafting and negotiating an agreement under the One Health framework to strengthen pandemic prevention, preparedness and response in the form of a pandemic accord to be presented to the World Health Assembly in 2024. Along with the amended International Health Regulations, this will constitute a comprehensive, complementary and synergistic set of global health agreements.

THE G20'S COMMITMENT
Due to the Covid-19 pandemic, Italy's 2021 G20 presidency identified three key pillars of health – people, planet and prosperity – for creating resilient health systems for future unknown disease outbreaks. G20 health ministers underlined the importance of operationalising the One Health approach. They called for a multisectoral approach to strengthening surveillance, prevention, preparedness and response to health

By Mansukh Mandaviya, union minister of health and family welfare, India

threats. The G20 also established a Joint Finance-Health Task Force to tackle antimicrobial resistance, enhance global cooperation and dialogue for pandemic preparedness, and exchange best practices among members. It envisaged increasing engagement among finance and health ministries for collective action, preparation for future health emergencies and resource mobilisation to foster the goal of One Health. The group came up with a 'Call to Action' to build One Health resilience in collaboration with the World Health Organization, the Food and Agriculture Organization, the World Organisation for Animal Health and the United Nations Environment Programme.

In 2022, the One Health Joint Plan of Action by the FAO, UNEP, WHO and WOAH supported Indonesia's G20 presidency to come up with the Lombok G20 One Health Policy Brief. It identified seven key areas: awareness and advocacy, identification of gaps and opportunities, One Health governance, One Health funding and investment, the One Health joint action plan, implementation of One Health through all policies and strengthened One Health research.

G20 health ministers in 2022 also emphasised implementing national AMR action plans using scientific evidence. They acknowledged that the investment

in disease prevention using the One Health approach is moderate, around $11.5 billion annually (according to the World Bank) compared to the response, which would cost $30.1 billion annually. Developing and adopting a One Health framework emerges as a cost-effective approach for underdeveloped, developing and developed economies alike. Such investment will help achieve Sustainable Development Goal 3, support global health security, and address health inequities and social cohesion.

INDIA'S VISION

Strengthening the G20 legacy, India's 2023 presidency consolidated health priorities and commitments. We identified three key priorities for the G20 Health Track: health emergencies prevention, preparedness and response; the availability of and access to affordable medical countermeasures, vaccines, therapeutics and diagnostics; and digital health. We facilitated relevant discussions across various multilateral forums.

In view of repeated infectious disease outbreaks and to enhance future preparedness, the Prime Minister's Science, Technology and Innovation Advisory Council reviewed ongoing activities across agencies and noted the existence of vertical

MANSUKH MANDAVIYA

Mansukh Mandaviya is currently serving as India's minister of health and family welfare and of chemicals and fertilisers. With 30 years of public service, he has been a member of the Indian Parliament's Raija Sabha (upper house) from Gujarat since 2012. He was previously minister of state for road transport and highways, ports, shipping and waterways. He is also a member of the executive board of Gavi, the Vaccine Alliance and chair of the Stop TB Partnership Board. Recognised as the 'Green MP', he promotes a healthier lifestyle with his enthusiasm for cycling.

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programmes to address human, environmental and animal health. It recommended addressing gaps in the One Health approach and synergising efforts across sectors by establishing an integrated framework in the form of a 'National One Health Mission'. A cross-ministerial steering committee unanimously agreed that the mission will steer research and development on emerging threats, promote linkages of data and databases across sectors, and encourage the use of emerging technologies for vaccine development, next-generation sequencing approaches and artificial intelligence tools for surveillance and disease modelling. The mission is steered by the Office of the Principal Scientific Advisor to the Government of India and includes key stakeholders from various ministries and departments including health and health research, science and technology, animal husbandry and dairying, agriculture, the environment and forestry, defence, and disaster management. To create an institutional mechanism linking various sectors within the One Health framework, the National Institute for One Health has been established in Nagpur, Maharashtra. Coordinated by the Department of Health Research, it will facilitate the mission's R&D activities, and will be jointly operationalised by all ministries and departments working under the One Health mission. NIOH will lead the development of surveillance tools and methods, support outbreak investigations, and lead the development of required diagnostics, therapeutics and vaccines.

INSTITUTIONALISING THE CORE VALUES OF ONE HEALTH

India unequivocally endorses integrating key equity considerations in the evolving roadmaps for operationalising One Health. First, Indigenous knowledge, which has traditionally respected the interconnectedness of human, non-human and ecosystem health, must be recognised and incorporated. Second, traditionally under-represented groups must be substantively and equitably included in treaty design and implementation. And third, health equity impact analysis and gender-based analysis must be used to identify and develop mitigation plans for potentially inequitable effects caused by epidemics.

The key principles and ethos of implementing One Health are equity; holism and systems thinking; inter- and transdisciplinarity, intersectorality and multilateralism; intersectionality (recognising that social identities such as gender, caste, class and race interact to render some groups more vulnerable to the impacts of health events); and One Health leadership and governance.

THE POLITICAL ARTICULATION OF ONE HEALTH

G20 and G7 members have emerged as key stakeholders for universal health coverage, and underscore health as a political choice. This concept is central to the global consensus and national political commitment to primary health care, embodied in the Astana Declaration. Unless political support to One Health is unwavering, consensus in principle may not be enough to knock down disciplinary silos and dismantle institutional hegemonies. Conversely, political structures and interests as well as corporations and other influential organisations constitute critical barriers to the multisectoral, transdisciplinary framing of One Health collaborations.

There are signals of synergies emerging in India, with Prime Minister Narendra Modi himself demonstrating leadership and a commitment to One Health as a key political agenda for development, equity, economic and health gains. ∎

By Stella Kyriakides, European Commissioner for Health and Food Safety

Since 2020, we have been confronted with an unprecedented global pandemic that has changed the world as we know it and set back progress towards the United Nations Sustainable Development Goals. It also highlighted an undeniable truth: global pandemics do not respect borders and require global solidarity and decisive action both for preparedness and response.

In the European Union, we have used the opportunity of the pandemic to redefine the way health policy is done by putting in place the pillars of a strong European Health Union, for the benefit of our citizens.

Each of the pillars of our Health Union – the ambitious Europe's Beating Cancer Plan, the Pharmaceutical Strategy, the world-pioneering European Health Data Space, as well as our comprehensive approach to mental health – together with a stronger EU health security framework, will make a lasting difference in rebuilding and strengthening our healthcare systems and ensure that the EU is better prepared to face health threats in the future.

Throughout the pandemic, the EU did not shy away from its responsibilities for global solidarity. Through our Vaccines Strategy, we ensured equal deliveries of lifesaving Covid-19 vaccines to all 27 member states at the same time. The EU also became the world's pharmacy during this time, exporting billions of doses all over the world and playing a leading role in the COVAX mechanism to ensure equitable access to vaccines for citizens worldwide.

From the outset, the EU has championed a reform of the global health architecture and called for a comprehensive pandemic agreement to strengthen global preparedness.

A NEW STRATEGY

We presented a new EU Global Health Strategy to work together with our international partners towards a stronger health architecture for all. This is our agenda of global action for the next 10 years, premised on the knowledge that we

From crisis to partnership

The coming year is a crucial one for global health as the nature of the health threats we face evolve. But also evolving are the tools we have to tackle them – and the EU is set to exploit new possibilities and implement solutions on a global scale

can only achieve global health goals by continuing the strong spirit of solidarity and cooperation built up during the pandemic. This strategy has two main goals: regain the ground we have lost on achieving our universal health targets and reinforce health systems and preparedness worldwide.

The coming year is crucial to strengthen the global health architecture with a strong, effective and accountable World Health Organization at its core. Supported by G7 and G20 discussions, this year's UN General Assembly High Level Meetings provide the political impetus needed to achieve universal health coverage, fight tuberculosis, and advance towards an ambitious and legally binding pandemic agreement in May 2024.

We, as a global community, share the responsibility to emerge stronger

and wiser from the Covid-19 pandemic and make the world safer. Our call for a comprehensive pandemic agreement has been supported by ambitious proposals at the negotiating table to achieve more equitable and effective pandemic prevention, preparedness and response, empower low- and middle-income partners, and support their health sovereignty.

A concrete proposal concerns worldwide equity in access to essential medical countermeasures. Our proposals aim to support our partners to improve their research and manufacturing capabilities through technology transfer and, in addition, measures to ensure prices better match countries' resources. Expanded production across the world, together with greater affordability and availability for those most in need,

is crucial to address the challenges partners face, genuinely promoting equity.

The EU Global Health Strategy also underlines the importance of a global mechanism that promotes equity for low- and middle-income countries regarding access to vaccines and other essential medical products – another key lesson of Covid-19. Although such a mechanism would naturally be anchored in the pandemic agreement, the next pandemic may not wait for its entry into force. This is why we support the swift establishment of an interim mechanism to ensure we have a safety net. The September meetings in New York this year were a unique opportunity to set it in motion.

Beyond the medical response to health crises, the world will simply not be safe unless we collectively strengthen prevention and preparedness as well. Here, the EU is proposing to significantly strengthen infection prevention and control across the board through a One Health approach. This includes improved capabilities to detect, survey and identify pathogens, including zoonotic ones; better access, sharing and storage of pathogen samples and of genomic sequences; and tighter biosafety and

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biosecurity. To achieve this, support would be provided to low- and middle-income economies, creating a powerful barrier to pandemics that would help save lives.

A SHARED RESPONSIBILITY
Prevention and preparedness, too, are a shared responsibility. There is no trade-off between equity in response on the one hand, and prevention and preparedness on the other. They are not a zero-sum game, but two sides of the same coin. The new pandemic agreement is not an EU project, but a partnership of equals. We see it as a common good for all of us. For it to succeed, we must all embrace it in equal measure and share the same sense of responsibility.

Last but not least, three important horizontal benefits underpin the EU's approach to a new global health architecture: greater emergency workforce capabilities, better information to tackle pandemics and measures to fight misinformation and disinformation, and extended capacity-building in all areas.

The EU's vision for a stronger global health architecture aims to deliver tangible results for all our partners. The kind of solidarity and common purpose that will promote equity must go hand in hand with an inclusive approach that considers the views of all countries and stakeholders.

The nature of the health threats we face are evolving, but so too are the tools we have to tackle them. Developments in research and digitalisation are expanding the possibilities for building stronger and more sustainable health systems.

With the new Global Health Strategy, the EU intends to exploit these new possibilities and fully embrace its duty of taking a leadership position in this process. We want to do so by building on our experience and bringing the solutions we are putting in place onto a global scale.

The health landscape has irrevocably changed over the last years. The next year will be a collective test of just how much we have truly learned. In the EU, we are determined to stay the course. ∎

G20 and G7 convergence key for a new global health order

By Hatice Beton, executive director, G20 and G7 Health and Development Partnership

In the past three years the world has been grappling with the consequences of the Covid-19 pandemic, an ongoing war in Europe, renewed migration flows putting vulnerable communities in distress and natural disasters increasingly affected by climate change. These developments are imposing severe inflationary pressures and economic burdens on our societies. Achieving the Sustainable Development Goals by 2030 seems a distant reverie.

At the heart of these challenges, we have the G20 and G7, originally created for international economic cooperation but over the years widening their mandates to include global health as a determinant of economic growth, social integrity and well-being.

G20 AND G7 ZEITENWENDE

Both the G20 and the G7 were born of geopolitical and financial crises. The G20 at the finance ministers' level was created following the Asian financial crisis in 1999 and G7 leaders first met in 1975 as a direct result of the 1973 oil crisis.

With widening mandates, the G20 and G7 have become all-inclusive platforms for policy coordination and leverage across policymakers and stakeholders from the public and private sectors. This trend has led to a plethora of communiqués with little convergence between the two forums.

While we should appreciate multilayered and inclusive policy coordination, for international rules and norms to prove relevant, they cannot merely be affirmed by joint declarations. As Henry Kissinger says, they must be fostered by common conviction.

That conviction must be strengthened by convergence within and between the G20 and G7 and by concrete, impact-driven initiatives that last within the cycles of the past, current and incoming presidencies, if not longer, as current and future challenges do not respect borders.

Health has featured higher on G20 and G7 agendas since the G7 health ministers began meeting annually in 2015 and G20 ministers in 2017. Common challenges including the need to prepare for future pandemics, develop a One Health approach, tackle antimicrobial resistance and promote universal health coverage featured early. But Covid-19 triggered a new recognition of the impact of global health on all areas of daily life. Each crisis has a different cause, but the common feature is the systemic underappreciation of risk – and the same applies to health. Despite the G20 health ministers' pandemic simulation exercise in 2017, the reactive approach to Covid-19 has cost $13.8 trillion in gross domestic product, about five times more than the Chernobyl disaster.

The tremendous unity and collaboration during the Covid-19 pandemic helped supply the world

> The responsibility of defining future health and non-health priorities falls into the hands of our leaders, and policymakers must consider the impacts of the initiatives and programmes they support – and how they inform one another

with tests, therapeutics, medical supplies and vaccines, via G20 initiatives such as the ACT-Accelerator. Yet the many lessons learnt from the crisis have led to the awakening that health means wealth, and that health is a good investment rather than a sheer cost for finance ministers.

What I call the Zeitenwende has kicked in among global health actors, health and finance ministers, and the investor community about the changing role of global health and the global health architecture. Calls for stronger dialogue among G20 and G7 health and finance ministers have led to the G20 Joint Finance and Health Task Force created in 2021 and the G7 Impact Investment Initiative for Global Health in 2023. The G20 task force promotes best practices, collective action and stewardship of resources to address financing gaps in pandemic preparedness and response. The G7 Triple I aims to share best practices for impact investment with a view to achieving universal health coverage. With ever-decreasing budgets for global health, due to the many multipolar challenges, shrinking resources from governments and development finance institutions, and low- and middle-income countries struggling with debt, the G20's 2024 and 2025 presidencies of Brazil and South Africa and the G7 presidencies of Italy and Canada have an increasing responsibility to help close these funding gaps, moving sustainable finance for health higher on the political agendas if we are to achieve SDG 3 on good health and well-being by 2030.

A NEW G20 CYCLE IN 2026

Global health has featured high for the G20 and G7 presidencies in 2023. India and Japan have done excellent work in keeping the existing and new initiatives prominent, committing to the central role of the World Health Organization at the core of health coordination and diplomacy, and recognising the need for more convergence between the G20 and G7. At this year's United Nations General Assembly three high-level meetings focused on ending tuberculosis, delivering universal health coverage, and strengthening pandemic prevention, preparedness and response.

This first observation may be a relief. However, health is slipping down the international political agendas and becoming fragmented. Silos are re-emerging as the rally for funds increases. Climate change, nature preservation and biodiversity challenges are taking centre stage. Yet there should not be competition within the global health community or other communities, let alone a competition and creation of new forums outside of the G20, G7 or WHO.

The recent G20 New Delhi Leaders' Declaration highlighted the importance of reinvigorating multilateralism. The next two years are critical for global governance and global health diplomacy before the second G20 presidency cycle starts in 2026. To address the global challenges of the 21st century, the

> " Calls for stronger dialogue among G20 and G7 health and finance ministers have led to the G20 Joint Finance and Health Task Force created in 2021 and the G7 Impact Investment Initiative for Global Health in 2023"

HATICE BETON

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world should not fall back onto traditional building blocks. Multilateral forums should promote collaboration between the Global South and the Global North. Current and future crises require proactive diplomatic efforts, starting at the top on the agendas of the G20, G7 and multilateral development banks, as well as from the bottom by integrating parliaments into processes to bridge communications gaps between constituents and their governments and the international agendas.

The world requires more accountability, collaboration and transparency within the G20 and G7, parliaments, and the global health and other communities. A systems rethink is needed. Opportunities lie in strengthening universal health coverage, supply chains, health systems, primary health care and the healthcare workforce. Without systems change in global health and the global health financing architecture, infectious or non-communicable diseases cannot be prevented effectively and the global health community will turn in circles in damage control mode.

It is equally the responsibility of countries and parliaments to define future health and non-health priorities, including climate change, in ways independent of electoral cycles. Health and climate change affect each other and our lives and economies. Policymakers must consider the impacts of the initiatives and programmes they support. Nearly 50% of people worldwide live in countries that spend more on servicing foreign debt than on health care – a 25% rise since 2020.

We have two years before the G20 hosting cycle restarts. This gives the global health community and G20/G7 leaders time to apply a new approach to sustainable finance in global health by bridging the valley between the investor and health communities and bridging the democratic deficit that emerged during the pandemic. Time will tell whether this will be an opportunity or a challenge for global governance. ∎

The climate crisis is a health crisis

The world is standing on a precipice that will determine the future of humanity's survival. At the crux of the climate and health nexus is a choice to change the status quo, ending the pandemic of expedient and poor choices and understanding that investments in a stronger health system are savings, not costs

By Vanessa Kerry, WHO Special Envoy for Climate Change and Health

Climate change is an existential threat to humanity. Up to 3.3 billion people globally are highly vulnerable to the effects of climate change. Collectively, we face an unknown future defined by increased extreme weather. Decades of inaction have led us to this moment. Elevations in global greenhouse gas emissions are fuelling extreme heat, accelerating changes in our environment, and harming our global biodiversity.

We too often fail to remember, however, that the climate crisis is a health crisis. Climate change is killing us.

According to the World Health Organization, one in four deaths today is attributable to a preventable environmental cause. Seven million people a year die from air pollution – more than died in the entire Covid-19 pandemic globally. Over the next decade, we will see an additional 250,000 deaths per year and increased morbidity for millions of people suffering as a result of the climate's amplification of non-communicable disease, vector-borne disease, maternal and neonatal emergencies, and mental illness.

Climate change not only brings increased deaths. It destroys livelihoods. Extreme heat in India – where heat-related deaths increased 55% between 2017 and 2021 – resulted in a loss of 167.2 billion potential labour hours in 2021 alone, equivalent to about 5.4% of the country's gross domestic product. These economic losses most frequently affect those already vulnerable, accelerating pre-existing inequities and driving even further gaps in the poor's ability to access needed resources. The World Bank estimates that up to 132 million people around the world will enter poverty by 2030 as a direct result of the health impacts of climate change.

OVERWHELMED SYSTEMS

As the climate and health crisis worsens, our already stressed health systems are increasingly overwhelmed. Events, such as the recent floods in Pakistan and Cyclone Freddy in Southern Africa, show how climate change exploits the already well known cracks in our healthcare systems – not only destroying physical

infrastructure, but also taxing limited human resources, and highlighting the failure of health financing and governance. Pakistan had achieved the near elimination of malaria in some provinces, but saw a four-fold increase to more than 1.6 million cases after the 2021 floods. In Malawi, the worst cholera outbreak in the country's history was caused by severe storms brought on by climate change. In South Africa, drought has introduced food insecurity and disrupted the access to and provision of HIV services.

The fragility of our health systems today should be well understood. Covid demonstrated their profound vulnerability: as the pandemic shut down our economic systems, consumed our health resources and challenged our commitment to equity, we saw years of progress reversed. Over 90% of countries saw disruptions in health services, leading to increased deaths from preventable causes, as well as trillions in GDP losses, and a surge in poverty.

There is hope.

We now have an opportunity to learn from the mistakes of the past. We must meet this crucial moment with a new approach – one vested in our collective well-being and one that prioritises people and health equity, and properly values social investments as a global public good.

A NEW APPROACH

First, we must embrace the fact that good human health is the fundamental building block to every aspect of a flourishing society. Without robust and expansive physical and mental well-being, individuals, communities and countries cannot grow their economies or gain long-term security and political stability.

Second, we must not respond to the climate crisis with the old approaches used in global health or international development. For too long, our investments in health have been largely siloed, technocratic and disease-focused. Short timelines too often driven by Global North funding agendas rarely affected the priorities of the communities and countries purported to be served. The result has been piecemeal progress in a few select disease areas at the consequential expense of helping countries build resilient, fit-for-purpose, comprehensive healthcare systems that can handle repeated shocks. We only need to look at the examples of Ebola and Covid to understand that a health system without a solid across-the-board foundation will always be vulnerable. It is time to stop thinking segmentally. We need to embrace the complexity of building strong healthcare systems in their entirety. A holistic approach centred on health system strengthening – long-term financing, strong governance, management and leadership, updated infrastructure, reliable supply chain operations, and a fit-for-purpose skilled workforce to deliver care – is the best adaptation investment to address the inevitability of climate change.

VANESSA KERRY

Vanessa Kerry is CEO of Seed Global Health, a non-profit organisation focused on health systems strengthening. She was appointed WHO Special Envoy for Climate Change and Health in June 2023, and is building advocacy to ensure equitable and just climate action. She also co-chairs a workstream on the World Health Organization's Public Health and Emergency Health Workforce Roadmap. She is a critical care physician at Massachusetts General Hospital in the United States and directs the Global Public Policy and Social Change programme at Harvard Medical School.

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Third, we need to accept that investments in strengthening a health system are savings, not costs. In the dominant neoliberal order, health expenditure is all too frequently sacrificed for fiscal austerity. By bankrupting the public health sector, we only leave ourselves more vulnerable. We end up paying more in lost productivity or reactionary funding when health emergencies strike. Investments in reducing air pollution, for example, will prevent a future loss of the almost $50 trillion that has been spent since 2010 to address its consequences. Studies have shown the economic return of every dollar invested in health is at least $4. Focusing on prevention and the adoption of known healthcare interventions could increase the GDP of lower-income countries by $4.4 trillion by 2040. As these investments lead to better health, they grow economies, create jobs, and foster social inclusion and gender equity, as women comprise around 70% of the health workforce – with returns as significant as nine to one.

Finally, we must invest more ambitiously – with flexible funding that is context sensitive, in line with local priorities, equity focused and longer time horizons. Health system strengthening takes time. Training a necessary workforce, building infrastructure, developing reliable supply chains and cultivating good governance have never occurred in a two-year funding cycle, let alone a five-year one.

Today we are standing on a precipice that will determine the future of humanity's survival. At the crux of the climate and health nexus is a choice about whether we are willing to change the status quo. Recent history has shown us unequivocally that we can no longer afford to suffer from the pandemic of poor and expedient choices that continues to harm our planet and its population. We cannot choose to continue down a road to nowhere with marginal and reactive, donor-driven investments. We must take an ambitious, comprehensive, long-term and equitable path – the only route that offers the possibility of leading all of us to a more just and hospitable world. ■

> **Seven million people a year die from air pollution – more than died in the entire Covid-19 pandemic globally"**

A new financial platform

The Health Impact Investment Platform is designed to accelerate progress towards the Sustainable Development Goals and achieve universal health coverage this decade – but to be successful it requires input from all corners

There is no doubt that the Covid-19 pandemic was a cruel wake-up call for all of us about the importance of investing in strong health systems that can deliver integrated health services through a primary healthcare model of care rooted in equity and solidarity.

Although overall health spending skyrocketed during that public health emergency, there are still challenges for many countries to ensure that the appropriate financing is channelled through their primary healthcare systems, which can help build their resilience.

Increased government spending driven by the pandemic response took global health spending in 2020 to a record $9 trillion, nearly 11% of the

By Catharina Boehme, assistant director-general, External Relations and Governance, World Health Organization, and Thomas Östros, vice president, European Investment Bank

global gross domestic product, with 63% coming from the public sector.

The World Health Organization estimates that improving pandemic preparedness and working towards a safer future for all will require an additional investment of approximately $31.1 billion every year across the world, with approximately one-third required from international financing.

THE COST OF DEVELOPMENT

However, development often comes at the price of public debt. And for some, more than others. A World of Debt, the recent report from the United Nations Conference on Trade and Development, found that African countries pay eight times the borrowing costs of the wealthiest European economies. Their interest payments alone eat up any investment they could make on education or health. This is where multilateral development banks can make a difference. They can provide concessional financing (below market rate) that is accessible to low- and middle-income countries. But they need to do more, and they need to do better. To be more efficient in addressing global challenges such as health and climate

change, multilateral development banks should build on complementarity, join forces and work towards common goals. This would increase the impact of their contribution to the Sustainable Development Goals. The alignment of strategies and coordination among the various MDBs are key success factors to achieve these ambitious goals.

In June 2023, during the New Global Financing Pact Summit in Paris, four MDBs and the WHO did exactly that: they launched the new Health Impact Investment Platform. It aims to pool public and international debt and grant funding from MDBs that will de-risk and encourage further investments at country levels. Relying on WHO expertise to shape and guide these investments, the European Investment Bank, African Development Bank, Islamic Development Bank and the Inter-American Development Bank joined forces to invest in and strengthen essential, climate-resilient and crisis-resilient primary healthcare services in low- and middle-income countries.

The WHO will serve as a system

$9trn

spent on global health in 2020 – a record high

catalyst to drive new investments in primary health care. In line with national priorities, health policies and plans, it will identify health needs and gaps in partner countries. Based on this, the WHO will help governments design sound investment plans, bring in capital providers, support accountability and monitor delivery. The EIB and other MDBs will provide long-term and concessional financing, thereby catalysing local, international, public and private investments to get projects off the ground.

MOBILISING FINANCE

The aim of the platform is to mobilise at least €1.5 billion in concessional loans, investments, grants and technical assistance in support of reaching universal health coverage, included in SDG 3, during this decade.

The funding provided by the platform comes on top of existing financing. It follows a holistic approach to primary health care, ensuring that investments contribute to universal health coverage, health security, and better health and well-being. The focus will be on delivering integrated health services, enabled by strong community engagement and multisectoral action in partner countries.

CATHARINA BOEHME

Catharina Boehme is assistant director-general of External Relations and Governance for the World Health Organization. From 2021 to 2023, she served as the director-general's chef de cabinet. Previously, she was CEO of the Foundation for Innovative New Diagnostics (FIND). She was co-convener of the Access to COVID-19 Tools Accelerator to drive equitable access to Covid-19 testing. Early in her career, Dr Boehme worked in Ghana and Tanzania on research to eliminate tuberculosis. She has served on several WHO and global advisory bodies, and participated in two Lancet commissions.

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Thomas Östros has been vice president of the European Investment Bank since 2020. His areas of oversight include financing energy, health and life sciences, as well as development policy through EIB Global. He also oversees financing operations in Austria, Estonia, Finland, Latvia, Lithuania, Sweden, Russia, Africa and the Pacific, and the Community of Latin American and Caribbean States. His portfolio includes relations with the African Development Bank, the Islamic Development Bank and the Nordic Investment Bank.

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The platform is inspired by an earlier partnership between the WHO and the EIB, during which the institutions worked jointly with the European Commission to support primary healthcare investments in Africa, the Middle East and South Asia. In Rwanda and Angola, the partnership backed the implementation of EIB-financed Covid-19 projects. In Ethiopia and Palestine, the WHO is guiding and shaping the needed investments for primary health care in line with national strategies.

In addition to providing financing for countries, the platform will do much more than this: it breaks the silos, it puts countries in the leading role, and it mobilises key partners to act on the most urgent and critical needs, aiming for the greatest impact and synergies.

We are grateful that other partners decided to join to the benefit of an increasing number of countries, making a strategic political choice, because only together can we make a difference.

The ambition is big, and we want to do more.

We need all hands on deck – all stakeholders committed to a safer, healthier and sustainable future for all.

If there is one thing the Covid-19 pandemic taught us, it is that health systems are strongest when they are able to deliver integrated services. And we learned that global health spending might have skyrocketed, but it did little to build pandemic preparedness and resilience in the countries of the Global South. It is not just a moral imperative for us to address this situation. It is also the only way forward in an interconnected world.

With the additional catalytic and coordinated investments through the new platform, we are confident that we can help advance the sustainable development goal of health for all and access to universal health coverage.

This is a small but important step towards a fair and equitable distribution of funds. We can take a bigger step by mobilising more grants and developing highly concessional financing, as this will put countries in a better condition to invest in their health systems. But we cannot do this alone. We are therefore calling on multilateral, bilateral and philanthropic partners for this mission. We need all of us to build a safer, healthier and sustainable future for everyone, no matter where they are in the world. ∎

We are already at the halfway point to implementing the Sustainable Development Goals, and yet children across the world continue to face a multitude of crises. Those most affected by inequality and discrimination are disproportionately suffering from the debilitating consequences of continued conflict, economic instability and a deepening climate emergency.

SDG3 – the right to Health For All – builds on the adoption of the Universal Declaration of Human Rights by United Nations members 75 years ago and aims to achieve universal health coverage by 2030. Regrettably we are at very high risk of failing to reach this goal.

Not only is progress too slow, but we are also observing the reversal of some of the great gains made in recent decades in improving children's health, nutrition and well-being. Globally, one in every 23 people needs humanitarian assistance to survive. Less than 20% of the humanitarian funding required to ensure children and communities can access life-saving health care is available. Healthcare workers take enormous risks to care for populations experiencing crisis, and routine health services including immunisation are far too often subject to disruption. Inequitable access to basic health and nutrition services makes achieving universal health coverage a far-off reality unless urgent efforts are undertaken to systematically address the challenges identified.

Health workers continue to face significant obstacles in reaching the most vulnerable children and communities. Weak health infrastructure

Nothing about us without us

The world's children are facing deadly consequences from fragmented and failing health systems and a world at high risk of failing to meet SDG3: the right to Health For All. Only accelerated, concerted efforts can help

By Inger Ashing, CEO, Save the Children International

means people and facilities are often far apart, and investment in supporting, training and retaining our health workforce is often lacking – yet health workers persevere under difficult circumstances. The global community must honour this dedication, and likewise go the last mile in delivering on commitments to achieve the right to Health For All.

A CRITICAL YEAR
This year, 2023, is a critical one in this journey – as you read this, the second High Level Meeting for Universal Health Coverage will have taken place at the UN General Assembly in New York. We know that delivering on universal health coverage is essential for ending preventable childhood deaths and ensuring well-being so that children can thrive. Each year, more than 5 million children die before their fifth birthday from preventable and treatable causes, many of which result from a lack of access to affordable health, nutrition and sanitation. In 2021, 25 million children missed out entirely on routine vaccinations, a figure that is slowly recovering – 4 million more children were reached last year but 20.5 million children still missed out in 2022. Catching up on immunisations, building support for breastfeeding and addressing the 80% of malnourished children who lack access to treatment would go a long way in addressing these shortfalls and limit the 50% of under-five deaths attributable to malnutrition.

Achieving Health For All is complex in crisis contexts with collapsing or overwhelmed health systems – where the concept of achieving universal health coverage remains a distant vision. Save the Children sees this

reality daily. As part of our efforts to support SDG3, we partner with health ministries, healthcare professionals and community-based health workers so that children can access primary health care. In countries around the world, our colleagues are supporting the expansion of immunisation campaigns in hard-to-reach locations, training community health workers and supporting health facilities to provide essential services that meet the specific needs of children.

Children have the right to survive, to thrive and to be protected. Yet in this perfect storm of multiple crises it has become increasingly difficult to address their immediate needs at the same time as investing in people, systems and structures that will protect against future shocks. The solutions are known, but access to health care remains a political choice – and requires leaders to sacrifice short-term political gain to achieve better outcomes for children.

INGER ASHING

Inger Ashing is the chief executive officer of Save the Children International. A respected child rights activist, she set up her own youth organisation at the age of 12, working against racism and violence. Since then Inger has been determined to make children's voices heard. She has been associated with Save the Children for more than 25 years, first serving as a youth advocate and later on the boards of Save the Children Sweden and Save the Children International. Prior to her appointment as CEO in September 2019, Inger held various national and international roles focused on children's rights, most recently as the director-general at the Swedish Agency against Segregation.

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INVESTING IN PRIMARY HEALTH CARE

Major causes of child mortality can be addressed at the local level by working with communities, including community health workers. Promoting and implementing a comprehensive – and integrated – package of services across health, nutrition and water, sanitation and health can avert the deaths of millions of children each year. Primary health care is our biggest silver bullet – and yet implementing it remains a big challenge, due to high costs often paid directly by patients that put it further out of reach for the poorest families.

So what does a resilient national health system that prioritises primary health care look like?

- It provides a comprehensive package of health and nutrition services that is available to all.
- It strengthens the health and care workforce by ensuring safe working environments and fair pay – which is, sadly, currently lacking.
- It invests in emergency preparedness and risk reduction strategies so that health systems can sense, prepare, react, adapt and learn.
- It builds child-sensitive social protection systems that are resilient and responsive to crises such as conflict, economic shocks, climate-related shocks or global health emergencies.

GROUNDING GLOBAL PROCESSES

The world is vastly unequal, and the inclusion of under-represented voices is important – civil society, including children, can and must play a critical role in addressing health as a political choice. Progress at the global level can only be achieved if all of us enable and prioritise investment in national systems.

Rebeca, 18, who travelled from El Salvador to Geneva earlier this year, told member states at the World Health Assembly: "There are currently around 1.3 billion young people between the ages of 12 and 24 in the world, representing 16% of the world's population, and our participation in efforts to achieve sustainable development is fundamental to achieving inclusive, democratic and just societies. Therefore, nothing about us without us."

Governments, donors, international financial institutions, civil society and the private sector are all promising to invest in health systems, and deliver on universal health coverage, but these efforts must be accelerated. We must work better together if we are to meet our 2030 goals.

With an estimated 100 million people pushed into poverty each year due to healthcare costs, and only one in four children globally receiving some form of social protection benefit, we must not fail the world's children. ∎

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Inequitable access to basic health and nutrition services makes achieving universal health coverage a far-off reality unless urgent efforts are undertaken"

Addressing global healthcare disparities often requires collaborative innovation on the ground. Particularly in many underserved communities, where human and animal health are closely interdependent. To tackle challenges such as "last-mile" gaps in therapy delivery, innovative solutions like aerial drones and solar-powered vaccine refrigerators are among new solutions achieving tangible results

Soaring drones:
delivering a milestone in tackling healthcare disparities

By Maria Tereno, corporate vice president, culture and sustainability, Boehringer Ingelheim

Achieving health equity is an ultimate goal in global health care. It aims to ensure that each of us has a fair chance to reach our full potential. Yet, despite progress over the past few decades, a significant proportion of our global population still struggles to overcome healthcare disparities.

The many obstacles require tailored solutions. This is particularly true for many rural communities, where the challenges are twofold: taking care of human health, but also ensuring adequate care for animal health. In many of these remote and underserved communities, these factors are interconnected, as smallholder farmers' health and livelihoods are often dependent on just a few animals.

Too often there is a "last-mile" delivery gap — the final critical miles beyond distribution systems, which can prevent access to veterinary care, vaccines and other animal health products to farmers in remote areas. By closing this gap, we can help transform their lives and brighten the prospects of future generations. Moreover, we have learned that supporting farmers can bring benefits beyond those individuals and their families. In rural areas, farmers often take on multiple roles within their communities. And so, providing more stable incomes for farmers can improve quality of life within a community in multifaceted ways.

SCALING INNOVATION THROUGH COLLABORATION
At Boehringer Ingelheim, our human pharma and animal health businesses are dedicated to the ambition to create value in areas of unmet medical need and enabling more equitable healthcare solutions along our value chain. We are driven by a firm commitment to innovation. And while we aim to lead by example, we understand that real transformative change hinges on the collective power enabled by the collaboration of all. That includes healthcare

providers, governments, patients, caregivers, livestock and pet owners, consumers and, of course, ourselves.

Our strategy Sustainable Development – For Generations incorporates three pillars: *More Health*, *More Potential* and *More Green*. The strategy aims to holistically address health equity, as well as the interdependence of human, animal and environmental health, in alignment with the UN Sustainable Development Goals.

By 2030 we aim to positively impact the lives of 50 million people in underserved communities around the world. Our goal is to harness the power of social innovation to tackle these challenges and create solutions that have sustainable impact. We do this by connecting complementary initiatives across the continuum. Our long-term initiative Making More Health – MMH – focuses on partnering with a global network of innovative social entrepreneurs and collaborating with underserved communities. In other initiatives we use complementary approaches, including funding and supporting social enterprises. We are co-creating with our employees and like-minded stakeholders across the entire continuum with the goal of enabling an ecosystem of impact.

ADOPTING THE POWER OF DRONES

Most recently, we have begun leveraging our ecosystem and collaborating with partners to use drone technology to help close the last-mile gap for more efficient and cost-effective vaccine delivery.

In Africa's expanding poultry industry, vaccines protect animal and human health, which in turn supports food safety and security. Improving poultry immunity, health and productivity are critical to address to ensure the industry's continued success and the health of the communities the industry supports.[1]

Another healthcare challenge is rabies, a viral disease present in over 150 countries, predominantly in Africa and Asia. Rabies results in tens of thousands of human deaths annually, 40% of which are children and 99% caused by dog bites.[2]

Those deaths are preventable through animal vaccines. A key challenge, though, is finding ways to securely transport and continuously cool vaccine doses, to ensure they are readily accessible and effective, even in remote communities.

In 2022, Boehringer Ingelheim IMETA – the company's regional operating unit serving India, the Middle East, Turkey and Africa – identified a solution with Zipline, a company specialising in on-demand drone delivery, and assembled a cross-functional team. To optimise the vaccine drone project's effectiveness, we integrated it into our sustainable development ecosystem of local communities, NGOs, social businesses and entrepreneurs. Key to success is on-site understanding through local partners who recognise the potential benefits and can leverage the necessary infrastructure on the ground.

One partner for the initial drone delivery vaccine project was Cowtribe, a last-mile veterinary delivery social start-up in Ghana, which employs technology to help coordinate deliveries of veterinary vaccines and other animal health products to rural and underserved communities. Through its logistics platform based on demand optimisation, Cowtribe can dramatically reduce costs for the farmer. Boehringer Ingelheim has supported Cowtribe since 2019, and last year made the Ghanaian company the first recipient of a grant from our social impact fund, Boehringer Ingelheim Social Engagement, which provides investment and non-financial support to further scale and expand the impact of entrepreneurial businesses.

> **"We have worked hard to build trust and create effective partnerships on the ground. Our shared objective is to create better access to essential health services. This innovative drone delivery project serves as a great example of what we know we can accomplish, if we join forces"**
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> Ayman Eissa, Boehringer Ingelheim (IMETA), lead sustainable development

(Clockwise from left) A dog waiting for its rabies vaccine in Kenya; Dr Joseph Kitur receiving drone-delivered vaccination batches; rabies vaccination drive at the GAASPP community organisation

Building on this trusted partnership and their technology to reach smallholder farmers and agrovets across Ghana, Cowtribe in the first half of 2023 conducted 292 drone flights together with Zipline to distribute 1.4 million poultry vaccine doses to nearly 5,000 rural smallholders. The flights reduced vaccine costs considerably, proving the effectiveness of a new distribution system with the potential to close the crucial last-mile delivery gap.

COLLABORATION AND INNOVATION ENABLE A SUSTAINABLE IMPACT

In July 2023, the next milestone was an anti-rabies vaccine campaign in Kenya, based on the learnings captured from the proof of concept implemented in Ghana through the collaboration between Cowtribe and Zipline. The project is in partnership with two local non-governmental organisations and their communities in Bungoma County, which Boehringer Ingelheim has supported since 2019.

One of the NGOs, Core Health and Wealth International, is partnering with MMH to help transform healthcare delivery to underserved rural communities across western Kenya. CHW receives additional support from the More Green team to improve local environmental sustainability. For example, in Kenya's Bungoma County, solar-powered water towers were constructed to create better access to safe, clean drinking water for the 1.3 million residents for whom the nearest water source, on average, is 1.5 kilometres away.

CHW played a crucial role in the anti-rabies vaccination campaign through its extensive connections to hospitals and health facilities across the country. Moreover, the NGO provided necessary medical infrastructure to ensure efficient distribution of the vaccine doses.

These efforts were complemented by a second local NGO, GAASPP (Golden Age and Albinism Support and Protection Program), a regional community organisation in western Kenya. GAASPP is dedicated to providing a platform

> **"Our collective disruption through a co-created ecosystem is recognized by stakeholders on the ground and within the government, validating our ambitions. Together, we're empowering communities to enhance their living conditions, ultimately aiming for a lasting transformation"**

Kiran Dsouza, Boehringer Ingelheim (IMETA), head of IT

and partnership for the vulnerable elderly, as well as marginalised individuals with albinism. With a focus on empowering solutions, GAASPP assists the most vulnerable by cultivating champions from marginalised communities to represent and support them.

Making use of a dedicated agrovet on site, GAASPP significantly mobilised surrounding communities to bring their dogs for vaccination to their community centre in Webuye and streamlined the administration of drone-delivered vaccines. GAASPP and the on-site agrovet will continue to provide animal health products for the local communities. And thanks to solar panels financed by the More Green fund, which supports environmental sustainability projects in line with our corporate 2030 commitments, the storage and refrigeration of these vaccines will have a minimal environmental footprint.

Another partner ensuring the success of the vaccination program in Kenya is Drop Access, a social start-up that developed VacciBox, a portable solar-powered refrigerator that makes possible the delivery of vaccines to remote areas. This became another successful component in the campaign. Too often, the problem is not a lack of vaccines, but vaccines that are spoiled by lack of refrigeration. Supported by Boehringer Ingelheim since early 2023, this campaign became another proof point for VacciBox, which is capable of storing up to 3,000 vaccine doses and running for 36 hours on battery.

In a single day, an impressive tally of almost 2,000 dogs were vaccinated at eight different sites across Kakamega and Bungoma Counties. Over the next six months, the next step will involve distributing an additional 10,000 doses throughout Kenya's Lake Region.

We firmly believe that creating more sustainable, equitable solutions to interconnected human and animal healthcare challenges in underserved communities requires a holistic approach – innovation, collaboration and enabling an ecosystem of impact. ∎

[1] nepad.org/blog/digitalising-poultry-industry-africa#:~:text=Africa%27s%20poultry%20business%20is%20booming,other%20regions%20of%20the%20world.

[2] who.int/news-room/fact-sheets/detail/rabies#:~:text=Rabies%20is%20present%20on%20all%20continents%2C%20except%20Antarctica%2C,80%25%20of%20human%20cases%20occur%20in%20rural%20areas.Executive-Summary_Fnl_10.7.2022.pdf

MARIA LUCIA TERENO

Maria is a business executive with substantial pharmaceutical experience, including various roles within strategy and marketing, the implementation of the global diversity and inclusion programme and most currently, the sustainable development strategy. Born in Brazil, educated in Canada and fluent in five languages, Maria now lives in Germany with her family.

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The whole: greater than the sum of its parts

The Caribbean is integration writ large, and by actively engaging in collaborative ways of working together, the region is well poised to handle the public health issues it faces

The Caribbean is home to many small island developing states, and home to the Caribbean Community – CARICOM – which is integration writ large through its common history, cultural heritage, and shared economic and social issues. CARICOM is celebrating its 50-year existence in 2023, and a legacy that is a testimony to the resilience of integration. Given that for most of us, our ancestors were forcibly transported from their homes all over the world to this region, it is wonderful that we have learned to live and work and play together.

This 50-year journey has birthed many declarations in many sectors. The historic Port of Spain Declaration "Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases" is the most significant demonstration of the power of the collaborative efforts of CARICOM heads of government to address a major public health issue. It triggered a cascade of global action to combat NCDs.

The Caribbean Public Health Agency is itself an example of integration. Prior to 2013, there were five regional health institutions: the Caribbean Environmental Health Institute, the Caribbean Epidemiology Centre, the Caribbean Food and Nutrition Institute, the Caribbean Health Research Council and the Caribbean Regional Drug Testing Laboratory. The heads of government, in seeking to maximise economies of scale and optimise effectiveness, merged them all to form the sole CARICOM regional public health agency.

INTEGRATION OF SERVICES

CARPHA is known for many public health services that are all integrated to deliver quality public goods to its member states. Services include disease surveillance, research, regulation of medicines, monitoring and evaluation of health surveillance, vector-borne disease detection and control, field epidemiology training, NCD surveillance and control, a tourism and health programme, food-borne disease surveillance and control, health information management, communicable disease management and

> **Getting political, technical and corporate partners from varied disciplines to work together towards a common goal requires extra effort at building trust, dedication and a willingness to advance the cause"**

By Joy St John, executive director, Caribbean Public Health Agency

control, disaster preparedness and response, environmental health and sustainable development, medicines quality testing, health promotion, and procurement of medicines and supplies. Since 2019, CARPHA has sought also to integrate these data sets to ensure an integrated surveillance system to offer an integrated evidence-based perspective on the public health product we deliver.

ECONOMIC INTEGRATION

The Caribbean economies are small and, as most heavily depend on tourism, the economies are sometimes referred to as fragile. There have been several attempts to create a CARICOM single market and economy to integrate all members into a single economic unit. At their meeting in July in Trinidad, CARICOM heads of government agreed to reimplement the CARICOM single market to allow unrestricted travel among member states.

Public health threats can weaken fragile economies. The Covid-19 pandemic exemplified this. CARPHA's Tourism and Health Programme brought together stakeholders before the pandemic. The partnership went into overdrive during the pandemic to ensure the health threat was understood and that the right approach was taken to protect locals and visitors when tourism resumed in full force in 2021. A fragmented response would have been disastrous. Instead, there was a concerted effort to ensure everyone was on the same page in knowledge, understanding and practice to ensure a safer healthier tourism product, even in the worst crisis to date.

POLITICAL INTEGRATION

While each member state has its own sovereignty, the mechanism and structure of the Caribbean Community is a living example of political integration. CARICOM heads of government meet at least twice yearly and on special   ▶

In ensuring that there is regional health security, CARPHA actively engages partners in all technical and diplomatic aspects of this exercise.

One important lesson learnt from the experience of managing and responding to the Covid-19 pandemic is meaningful partnerships. We saw the collaboration of the CARICOM institutions from the security cluster, using their respective areas of technical expertise and collective advice, to provide optimal security for the region.

CARPHA has found that a successful strategy for integration to equitably provide our services to 26 members is to use networks and mechanisms such as the Inter Agency Technical Committee for implementing the Six-Point Policy Package, the Regional Health Communication Network and the Regional Coordination Mechanism for Health Security. All have been well established at CARPHA to support the integration and coordination of different entities in the interest of the public health of the region.

The most recent example of integration is the recent award of the Pandemic Fund in the first round. CARPHA submitted a proposal with the Inter American Development Bank as the implementing entity. The plan is to use the funds to help the CARICOM's pandemic preparedness and response in tangible ways.

Integration efforts that span decades are not without their challenges. Getting political, technical and corporate partners from varied disciplines to work together towards a common goal requires extra efforts to build trust, dedication and a willingness to advance the cause.

We are grateful as a region to have witnessed integration in these various dimensions, particularly demonstrated when it was most needed, in a public health crisis.

CARPHA will continue to be mindful that the whole is greater than the sum of its parts. It will continue to actively engage in collaborative and integrated ways of working to achieve its mandate and to contribute to regional public goods through the Caribbean Cooperation in Health framework. ∎

occasions when necessary to discuss issues affecting the region as a whole and how these can be resolved.

One recent example in public health was the integrated approach to the Covid-19 pandemic response. The decisions by the heads were strategic in saving lives and livelihoods. CARPHA was privileged to have been afforded an opportunity to provide technical guidance.

COLLABORATION WITH PARTNERS

Partnerships have become one of the strongest pillars of support for the successful implementation of many projects. A large share of the available financial resources comes from friendly governments outside the region and from international development partners.

JOY ST JOHN

Joy St John was appointed executive director of the Caribbean Public Health Agency in 2019. From 2017 to 2019, she was assistant director-general of the World Health Organization, responsible for climate and other determinants of health. She served as the chief medical officer of Barbados for more than 12 years, and was the first Caribbean person to chair the executive board of the WHO, from 2012 to 2013.

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Human history has been shaped by our individual and collective brains, moulded by our actions and interactions with others, and by the environment. Our brains are at the core of our problems and our solutions. In the digital age and in a knowledge-based economy, healthy brains have become of paramount importance. Fostering them needs to be lifelong and constant, as advocated by the World Health Organization, since a looming demographic crisis has made this need urgent.

By Vladimir Hachinski,
Western University,
and Mayowa Owolabi,
University
of Ibadan

A CRISIS IN THE MAKING

The world's average life expectancy in 1960 was 51 years; today it is 72 years. In 1960 the birth rate was five children per woman; today it is 2.3 children. In Japan, the most aged society, the average life expectancy is 85 years and the birth rate is 1.3 children.

As life expectancy moves upwards and the birth rate downwards, a demographic crisis is in the making. There will be fewer young people to contribute to the economy and more older adults with disease and disabilities. Neurological disorders have become the leading contributors to disability-adjusted life years. The pandemic has left us with long Covid with unknown long-term consequences and has worsened mental health problems, compounded by natural disasters and wars.

These problems demand holistic 'brainy solutions', not only from academics and political leaders, but from all. Anyone dealing with human behaviour and motivation should begin thinking about how these problems relate to the brain and anyone dealing with the brain needs greater understanding of the behavioural consequences of healthy and afflicted brains. Moreover, these interactions must be understood in the context of interaction with others and the environment.

A GLOBAL BRAIN HEALTH PLAN

The WHO has put forth a global brain health plan across the lifespan. Several countries have developed national brain plans and various organisations have launched brain health programmes. A common limitation is that they are rich in information and aspiration, but scant on supportive resources and synergy. Much could be gained by integrating them and focusing on an overarching goal such as 'holistic brain health for all now'. Holistic brain health is a state of optimal cerebral, mental and social well-being in a safe, healthy and supportive environment. This combines, in one sentence, all our major problems and solutions. A safe and healthy environment implies addressing

From dementia to 'supermentia'

Better, healthier brains can help build a better, healthier world, but while information and aspiration may be abundant, resources and synergy are scarce

> **"Anyone dealing with human behaviour and motivation should begin thinking about how these problems relate to the brain and anyone dealing with the brain needs greater understanding of the behavioural consequences of healthy and afflicted brains"**

the roots of conflicts and the causes and consequences of climate change. A supportive environment means redressing the growing inequalities among and within societies. To tackle these challenges, we need healthy brains, and mental and social health. In the digital age and a knowledge-based economy – where human brain capital is the basic currency – lifelong learning and its application are essential.

This integration is necessary to achieve the overarching vision of holistic brain health for all, for maximising human creativity, productivity, development and evolution. This common vision will create synergy among all individuals and organisations that share the vision. In this era, when humans have created artificial intelligence with phenomenal capacities, our focus should be on enhancing individual and collective human intelligence. We need to understand why dementia occurs, and also to unravel the determinants of superlative human intelligence towards achieving 'supermentia'. We need to characterise various types of human intelligence and understand the genetic and environmental factors that could be optimised to achieve supermentia in the highest possible number of humans. This may be facilitated by various forms of brain computer interfaces. This will require integration among all spheres of human development and technological advancement.

TOWARDS INTEGRATIVE SOLUTIONS
Integration could occur around the concept of holistic brain health. At the

global level the WHO could do more to customise its recommendations beginning with 'best buys', provide more guidance about individual and collective motivation, and share strategies for implementation.

Also at the global level, primary health care forms the essential basis for surveillance, prevention, care and rehabilitation. At the national level, brain plans are a first step to action. These plans could serve as an intersectoral integration of non-governmental organisations, communities and individuals.

Integration avoids duplication, identifies gaps and allows economies of scale. Integration ensures that the whole is greater than the sum of its parts by facilitating a synergistic yield that has a greater impact than the additive effects of isolated efforts. Perhaps the most promising is at the local level, in populations small enough to have a sense of community. The approach needs to be comprehensive to identify the most important and addressable problems, and thus is customised and cost-effective. Additionally, the ABC of whole health – activity and rest including sleep, a balanced diet, and connecting with others – needs to be implemented. It should be simple: identify the minimum that yields the maximum to assure that the majority of the population can practise their ABC.

'Think globally, but act locally' continues to be good advice. Small gains in a population are equivalent to big gains in a minority of individuals. For example, a 2 mmHg decrease in systolic blood pressure is desirable but barely meaningful. An equal decrease at the population level translates into a 24% reduction in the occurrence of stroke. A stroke doubles the chances of developing dementia. So implementing the ABC addresses the common risk factors of stroke, ischemic heart disease and dementia, while promoting holistic brain health, productivity and well-being.

So, we need to:

1. Adopt holistic brain health as the overarching integrating goal by all.

2. Fund the development of a core, actionable holistic brain health 'Wikipedia'.

3. Pilot new approaches to promote holistic brain health at the global, national and community levels.

By promoting holistic brain health for all by all, we will facilitate integration, resulting in better brains to build a better world. ∎

VLADIMIR HACHINSKI

Vladimir Hachinski is a Distinguished University Professor in the Department of Clinical Neurological Sciences at the Robarts Research Institute of Canada's Western University and the former president of the World Federation of Neurology. He has made major contributions to the understanding, diagnosis, treatment and prevention of stroke and dementia, and leads a dementia prevention/brain health initiative.

MAYOWA OWOLABI

Mayowa Owolabi is a professor and the director of the Center for Genomic and Precision Medicine at the University of Ibadan. He is an expert in brain health, global health, neurorehabilitation, implementation science and genomic epidemiology of hypertension, stroke and other non-communicable diseases. He won the 2021 World Stroke Organization Global Award for Outstanding Contributions to Clinical Stroke Research. He is lead co-chair of the WSO-Lancet Commission on stroke and a member of the World Health Organization Technical Action Group on NCDs (Research and Innovation).

Advancing the health of women is critical to creating a healthier, more resilient and gender-equitable world. When we invest in women's health, we not only invest in individuals, but also in their families and communities, as well as in their country's economy and future.

There is a growing recognition among stakeholders that addressing women's unmet health needs is key to unlocking a healthier future. It's estimated that a $300 million investment into research on women's health could yield a $13 billion economic return in terms of reduced healthcare costs, better quality of life and years of productivity returned to the workforce.[1] Simply stated: women's health is wealth.

Now, we must accelerate our collective action to achieve the transformational progress in women's health that is urgently needed. The latest data show that the world is off track to meeting the Sustainable Development Goals, including SDG 5, which focuses on achieving gender equality by 2030.[2] This is particularly noteworthy given the critical linkages gender equality has to other global goals.

As we envision a more prosperous future for all, here are a few approaches that can help accelerate the momentum in women's health.

By Kevin Ali, CEO
and board member,
Organon

REDEFINE WOMEN'S HEALTH

In many people's minds, women's health refers only to sexual and reproductive health. Too often, the diverse health needs of women are ignored – and that has an impact.

It's time to reframe what is considered women's health, so that it includes not only reproductive health, but also the many conditions women face throughout their lives – for instance, endometriosis, cardiovascular disease and many others. To achieve this, we must listen to women and understand all their health needs. In taking a more holistic approach, we can search for potential solutions that can significantly impact and improve care, diagnosis, quality of life and outcomes for women. Ultimately, we can help address some of the most pressing health challenges we're facing as a society.

DRIVE INVESTMENT IN R&D FOR WOMEN

Science and innovation give us the opportunity for the leapfrogs in progress in women's health that the world needs.

There are several opportunities within our collective grasp that can drive real prosperity for all. These opportunities are grounded in advancing gender equity and through better health. The time is now to seize these opportunities so that, together, we have the power to deliver a new era in women's health, and economic prosperity for all

Gender equity is the backbone of global prosperity

New research can transform the field, like what has been seen in oncology, hepatitis and other areas of medicine.

When it comes to women's health, there are green shoots of innovation emerging all over the world. From new treatments to digital tools, these disruptive products show promise to improve health and quality of life for women, as well as drive down the cost of disease to society.

These new solutions are sparking much-needed attention from investors.

And there's a long runway for growth. The global women's health market is expected to reach about $63 billion by 2030, up from $41.35 billion in 2022.[3]

It's not only important to develop innovations, but they must exist within a rich ecosystem to unlock their value – an ecosystem where regulators, government, civil society and the private sector are focused on ensuring innovations are accessible to all. We know that women benefit from having multiple options to meet their needs – such as a full range of contraceptive methods – and that work needs to be done to ensure that care is accessible to all women regardless of where they live or their socio-economic status. Because innovation is meaningless if it doesn't reach people where and when they need it.

BUILD DEMOGRAPHIC RESILIENCE

Every country has its own unique fingerprint when it comes to gender equity and the health challenges women face. But the connective tissue across much of the world is demographic trends and the drag these forces exert on their respective economies.

Two trends that pose significant challenges are falling birth rates – some of which are below the level needed to maintain the population – and high rates of unintended pregnancy. These two trends can even exist in the same country, reflecting the complexity of reproductive health conditions.

More than 20 countries, including Japan, Thailand and Spain, are expected to see their populations fall by 50% before 2100.[4] By advancing policies that increase access to fertility planning and contraceptive options, more women can participate in the economy, enabling markets to become more inclusive and, in the process, grow and thrive.

US$8.56

The average cost, per person, needed to meet all women's needs for family planning and newborn health care in low- and middle-income countries

57%

Percentage of the world's women who are enabled to make their own decisions around family planning and other sexual and reproductive health choices

CREATE INNOVATIVE SOURCES OF FUNDING TO DRIVE INTERVENTIONS AT SCALE

New sources of funding are needed to support health initiatives that drive gender equity. This is particularly important as governments face constrained budgets following the pandemic.

One example is sustainable financing, which is a tool that can leverage private-sector financing in support of public health goals. Today, a growing number of economies are working with the private sector and NGOs to develop sustainable financing projects to scale up the investment in women's health. And there is growing interest given that the economic cost to societies is clear and the outcomes are measurable.

CHANGING THE COURSE OF WOMEN'S HEALTH REQUIRES COLLABORATION

Recently, the conversation around advancing women's health has grown louder. The good news is it's not just talk. More governments and others have recognised that investing in women's health is one of the greatest opportunities for generating social and economic benefits. For example, several countries have developed national women's health strategies to ensure

KEVIN ALI

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women get the attention and resources that are needed.

The bottom line is: It's up to all of us to further uplift gender equity and close the gender health gap. Such collaboration is critical to attain the SDGs and unlock the full economic potential so many countries need. Women can't afford to wait – neither can all of society. The time to act is now. ∎

[1]The WHAM Report Finds Disparities in Biomedical Research Focused on Women and Shows Economic Benefits of Investing More – Wham Now

[2]Progress on the Sustainable Development Goals: The gender snapshot 2022 | Publications | UN Women – Headquarters and In focus: Sustainable Development Goal 5 | UN Women – Headquarters

[3]Women's Health Market Size, Share & Growth Report, 2030 (grandviewresearch.com); Women's Health Market Size to Reach $63.02Bn by 2030 (grandviewresearch.com)

[4]Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100: a forecasting analysis for the Global Burden of Disease Study – The Lancet

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Building integrated health *systems* saves lives

I n Canada, health care is largely delivered by individual provincial governments, with the federal government responsible for Indigenous peoples, corrections, Canadian Forces, veterans and the Royal Canadian Mounted Police. The governance of health and health care in Canada is complex. But there is nothing healthy about fragmentation in complex systems.

In 1990, as a family doctor, I became involved in the campaign to protect the autonomy of a hospital in downtown Toronto. We believed we were protecting the future of health and health care. We were fighting the merger of our hospital with the largest teaching hospital. We believed that our vision and values would be submerged. Our strengths were multidisciplinary teams, ambulatory care focused on community-based care, addressing the social determinants of health and firmly committed to the patient as a true partner in their care. The goal was the most appropriate care in the most appropriate place, by the most appropriate provider at the most appropriate time. We won that fight and Women's College Hospital still leads the healthcare revolution.

Since I was elected to Parliament in 1997, I have been involved in conversations about breaking through silos in government departments and the gridlock among all

> The severe acute respiratory syndrome pandemic in 2003 was the catalyst for Canada overhauling its complex federal health system and building an integrated, data-led system for public health – one that doesn't just patch people up, but keeps them well

**By Carolyn Bennett,
member of Parliament, Canada**

orders of government. From disability issues to childcare to climate change to reducing poverty, fragmentation has hindered progress.

In 2003 after the severe acute respiratory syndrome pandemic, I was appointed Canada's first minister of state for public health. We set up the Public Health Agency of Canada, appointed the first chief public health officer and set up the Public Health Network for Canada to provide a structure for all 13 provincial and territorial jurisdictions to work together to protect the health of Canadians.

GERMS DON'T RESPECT BORDERS

It was clear that 'germs don't respect borders'. We had to do better. We needed an integrated system for public health. The idea of 'central command and control' was anathema to our complex federal system, particularly in the province of Quebec. Four Cs had been put forward as principles for public health: cooperation, collaboration, communication and coordination. The last – coordination – was unacceptable in our federal system, and quickly replaced by 'clarity of who does what when'. Top-down central command and control would not work. Learning health systems must be built from the bottom up, respecting local wisdom and local knowledge. Good
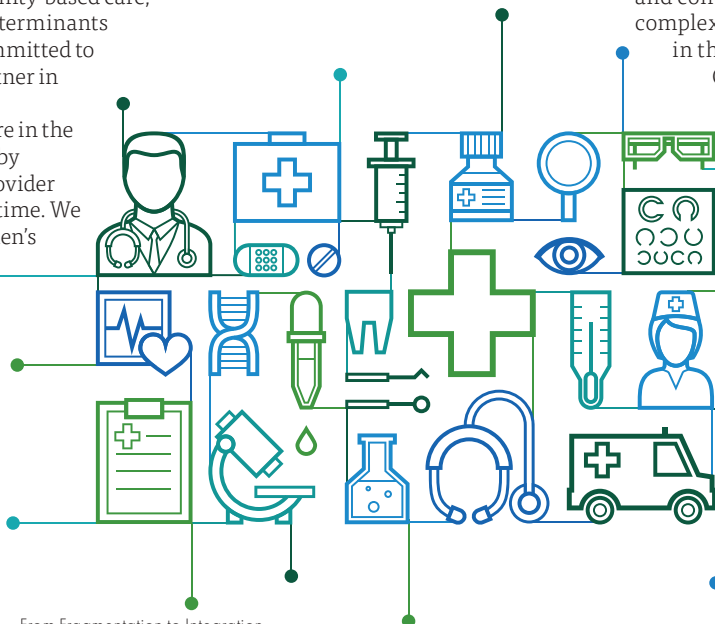
public policy is the result of decision makers actually picturing the people who are affected by it. A learning health system has to move from fragmentation to integration based on shared, accurate data. Complex adaptive systems measure, adapt and measure again. Local public health authorities working together with community-based organisations need the capacity to measure as they go and to be linked to the scholarly work that can determine the wise and promising practices that are evidence based, trauma informed and culturally competent.

We must remove the unacceptable lag in moving from research to policy, and then from policy to practice, with embedded applied research. Data saves lives. Transparency and accountability in outcomes are required for developing and implementing healthy public policy, so the healthy choices become the easy choices. Putting the public back into public health requires serious intentionality in effective public education, health literacy and civic literacy so that citizens can advocate for real change.

When SARS hit Canada, we had 44 deaths in Toronto compared to zero in British Columbia, where the system was much more integrated. Ontario's fragmented system killed people. Moving from fragmentation to integration requires that we measure what matters. The public health data, and administrative data from the healthcare system, are insufficient. We need better community-based data. We need to provide support to the already overworked front-line community workers to collect the data and the stories and link that information with the academy so we have the evidence to fund what works and stop funding what does not work.

MAPPING HEALTH OUTCOMES

If a picture is worth a thousand words, then a map is worth a thousand pictures. Mapping health outcomes with social and environmental determinants can reveal inequities in ways that citizens can understand.

In our fight for evidence-based practice, we also need to tell the stories of unfairness and inequity. The malicious dissemination of misinformation and disinformation is often based on anecdotes. We need stories too, and one unhelpful anecdote needs to be countered by many helpful stories and excellent qualitative research.

The appetite for genuine health and healthcare transformation today makes me optimistic. The Integrated Youth Services model has been adopted by all provinces and territories in Canada with youth-led and youth-centred care for young people aged 12 to 25. Peer support, primary care, psychologists, addiction medicine, social support for housing, education and employment will wrap around each young person. IYS is now an evidence-based success.

Recent federal health investments in provinces and territories have focused on four areas: attachment to family health teams, health human resources, mental health and substance use, and health transformation

"

The appetite for genuine health and healthcare transformation today makes me optimistic"

CAROLYN BENNETT

Carolyn Bennett, MD, was elected to Canada's parliament in 1997, and re-elected eight times. She has served as the first minister of state for public health, minister of Indigenous and Northern affairs, minister of Crown-Indigenous relations and Northern affairs, minister of Crown-Indigenous relations and the first minister of mental health and addictions and associate minister of health. The fight to save the Women's College Hospital in Toronto inspired her to enter politics.
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using modern technology. Each jurisdiction provides action plans with indicators, data, real accountability and transparency to their citizens.

We are all committed to bridging the barriers and obstacles presented by technologies such as diverse and incompatible patient record and referral systems – such harmful fragmentation.

The heartbreaking toxic drug overdose crisis requires integration between public health and public safety and international cooperation on controlling fentanyl precursors and sharing wise and promising practices. All sectors are trying to do their part to end this terrible tragedy. Trade unions hand out Naloxone to members so they can be heroes. Mayors across Canada advocate for supportive housing for the complex cases of people with mental illness and problematic substance use. The largest teaching hospital in Canada – the same hospital whose merger with Women's College Hospital we fought in 1990 – is investing in 55 prescribable housing units. They all want to be part of the upstream solutions.

For decades we have quoted Tommy Douglas, the father of medicare in Canada, who knew that we would have to "keep people well, not just patch them up when they get sick" if our cherished healthcare system was to be sustainable. We need to learn from the teachings of the medicine wheel: a lifecycle approach to achieving balance mentally, physically, emotionally and spiritually. This integrated approach is clearly superior to the fragmentation of the medical model – the repair shop model I was trained in at medical school.

Health is indeed a political choice. Moving from fragmentation to integration is essential for One Health and Health in All Policies. It is our moral imperative. ∎

From a vicious cycle to a virtuous cycle

A vicious cycle of underfunding and losing health workers due to poor or unsafe working conditions is threatening universal health coverage, but with funded country-level workforce plans, we can turn this cycle into a virtuous one

Interview with Pamela Cipriano, president, International Council of Nurses

How and why is a healthy health sector workforce essential for making all other parts of the healthcare system and community work, to deliver health for all?

With rising geopolitical tensions around the world, countries have many competing interests with both political and financial implications, causing economic and financial fragmentation. Spending on health care increased by an average of 1% of gross domestic product in Organisation for Economic Co-operation and Development countries during the pandemic, and the war in Ukraine, rising energy costs and disruptions to supply chains have now increased the cost of health care in many countries and added pressure on government budgets. However, we have learned from the pandemic that investment in health care – and particularly in the healthcare workforce – must be a priority if we are to rebuild strong and resilient health systems to meet future demands and deliver universal health coverage by 2030. As Dr Tedros Adhanom Ghebreyesus, director-general of the World Health Organization, has said many times, "There is no health without health and care workers".

Many studies, including the International Council of Nurses and Saudi Patient Safety Center's white paper on Nurse Staffing Levels for Patient Safety and Workforce Safety, have shown the link between healthy workers and patient safety. In addition, safety and protection are essential for retaining the health workforce that is facing a critical shortage, is expensive to replace and is difficult to produce in rapid order. In 2021, the WHO issued its Global Strategic Directions for Nursing and Midwifery 2021–2025, which argued for the need to invest in nursing jobs, education, leadership and practice. And ICN's 2022 report, Nurses: A Voice to Lead – Invest in Nursing and Respect Rights to Secure Global Health, added two additional policy focuses: protect the rights of nurses and other healthcare workers to build a strong healthcare system, and invest in and care for the health and well-being of nurses and other healthcare workers.

At the end of the day, all roads lead to health, as evidenced by the interdependence of so many of the Sustainable Development Goals, including SDG3 on good health and well-being. Nurses are everywhere. We recognise the deep interconnectedness of all these challenges as well as the need to help lead system level transformation.

How severely has the Covid-19 pandemic, with its deaths, stress and burnout, compounded by inflation, rising debt and poverty, hurt the physical and mental health of clinicians and other health workers?

Nurses and other health workers were already suffering from overwork, poor pay, gender discrimination, and lack of protections and rights even prior to the pandemic. ICN reviewed studies from every region of the world. They confirmed rising trauma, anxiety and burnout caused by Covid-19. The WHO reported that 115,000 healthcare workers died from the virus between January 2020 and May 2021, which ICN believes is a conservative estimate.

In 2021, close to 80% of ICN's national nursing association members responding to an ICN survey had received reports of mental health distress from nurses working on the Covid-19 response. Many nurses still are not seeking help due to stigma or inadequate available resources.

The pandemic was the accelerant for workers to declare they would no longer work in such conditions, especially after putting their own lives and those of their families at risk. Almost every health system today is crippled by the diminished or underfunded health workforce.

We are caught in a pernicious, vicious cycle, leading to a downward spiral of losing health workers from across the spectrum of professionals and essential support workers. Poor or unsafe working conditions and environments that do not value workers lead to hazardous conditions, burnout and exodus from the workforce. As ICN emphasised in our report Sustain and Retain in 2022 and Beyond, "without effective co-ordinated action to protect, support and rebuild the nursing workforce, the current global shortages of nurses will constrain many countries from achieving UHC, and continue to undermine the effectiveness of responses to the COVID-19 pandemic." Our Recover to Rebuild: Investing in the Nursing Workforce for Health System Effectiveness report stressed that "an essential part of the recovery and rebuild response must be to shift the policy, professional and management focus from individual nurses having to 'cope' and 'be resilient' with unbearable burdens to one where employers and organisations take responsibility for creating and maintaining supportive working conditions and adequate staffing. This is the only way to enable the health system to recover and rebuild."

We need to change this vicious cycle into a virtuous cycle, starting with funded country-level workforce plans that address all types of health professionals and personnel. When governments say they cannot afford to invest more in health, the retort must be 'let's find a way to align resources because we cannot afford *not* to invest in health'. We have witnessed the consequences of underfunding during the pandemic and in its aftermath. Now, we need to establish a future that supports nurses and other health workers

> "The pandemic was the accelerant for workers to declare they would no longer work in such conditions, especially after putting their own lives and those of their families at risk. Almost every health system today is crippled by the diminished or underfunded health workforce"

to lead the changes needed to ensure health systems are responsive and resilient. We must force a re-evaluation and realignment of funding priorities that lead to greater investments in the workforce. By making decisions to spend health budgets wisely and fund the right approaches to health, we bolster both our economic and health security.

What actions are needed now to respond, to preserve and promote health for all?

This year, ICN launched its Charter for Change, which presents 10 policy actions that governments and employers must take if they are to create and sustain healthcare systems that are safe, affordable, accessible, responsive and resilient. Briefly, these actions are:

- protect and invest in the nursing profession;
- ensure safe and healthy working conditions and respect nurses' rights;
- recruit and retain nurses by ensuring fair and decent pay and positive practice environments;
- develop, implement and finance national nursing workforce plans;
- invest in high-quality, accredited nursing education programmes;
- enable nurses to work to their full scope of nursing practice;
- recognise and value nurses' skills, knowledge, attributes and expertise;
- engage national nursing associations as professional partners;
- protect vulnerable populations, uphold and respect human rights, gender equity and social justice; and
- appoint nurse leaders to executive positions.

If implemented, these actions will address the complex challenges faced by our health systems and lead to improved patient outcomes and overall healthcare system performance. ∎

PAMELA CIPRIANO

Pamela Cipriano is the 29th president of the International Council of Nurses and a professor at the University of Virginia's School of Nursing in Charlottesville. She has extensive experience as an academic medical centre executive and previously served as dean of the UVA School of Nursing and president of the American Nurses Association. Dr Cipriano has led efforts to prevent burnout and improve the well-being of the workforce, and increase nursing's impact and influence on policy to improve global health care.
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By Maria Neira, director, and Annette Prüss, unit head, policies and interventions, Department of Environment, Climate Change and Health, World Health Organization

Healthier environments: a requirement for better health and safety

Protecting people's health through healthier environments requires bold political and collective action and systemic change, and public support – and it can only be done through regulatory frameworks that set clear standards and enforce compliance

Healthier environments could prevent a quarter of all deaths worldwide. Seven million deaths each year are due to air pollution, 800,000 deaths to unsafe water, sanitation and hygiene, and 2 million to selected chemicals. The largest health gains from creating healthier environments can be made in non-communicable diseases (notably cardiovascular diseases and chronic respiratory diseases), but also in several infectious diseases (such as diarrhoea and respiratory infections) and injuries. While the death rates from water, sanitation and hygiene, household air pollution due to unclean fuels and technologies and occupational risks are decreasing globally, the rate is increasing for ambient air pollution.

But there are the unknowns: these figures cover health impacts that can currently be quantified with reasonable (un)certainty. To a large extent, health impacts from climate change, biodiversity loss and most chemicals cannot yet be quantified. Yet these are the impacts that are rising, with climate change, biodiversity loss and use of chemicals progressing. We can even say they are potentially catastrophic if the next pathogen spilling over into humans is more devastating than the last one, and climate change takes a less optimistic path.

The World Health Organization has been actively advocating and supporting governments for healthier environments for healthier populations, through several streams of work:
- Creating a demand for action through raising awareness, including with politicians and decision makers at all levels, stakeholder groups and communities;
- Developing policy and technical guidance and tools and strengthening capacity for their implementation in countries in all sectors;
- Fostering and supporting international agreements and commitments; and
- Monitoring progress for better targeting of actions.

In the area of climate change, the WHO has been voicing health concerns

at influential events such as the Conferences of the Parties to United Nations conventions, climate and health conferences and inter-ministerial dialogues, thereby bringing the issues to the attention of policymakers and other groups. It has been developing technical guidance and has supported health vulnerability and adaptation assessments, the health components of National Adaptation Plans, and the strengthening of climate resilience and the environmental sustainability of health systems and healthcare facilities. It facilitated countries' commitment to develop climate resilient and low carbon sustainable health systems at COP26, and the Alliance for Transformative Action on Climate Change and Health is a WHO-led mechanism to support delivery of those commitments. And it has supported monitoring climate health hazards and the health sector response in countries to assist in targeting action. WHO work on other key environmental risks to health has been structured similarly.

SIGNIFICANT RETURNS

Disease prevention through healthier environments has also been shown to be cost effective for health, even without counting the co-benefits from other, non-health areas. For example, reducing household air pollution by using cleaner fuels and technologies for cooking provides a 39% higher return on investment through avoiding direct health consequences, even before considering contributions to climate change with its complex consequences. Such prevention also means that suffering from ill health is avoided, and public or private expenditures for health care are saved.

Given the clear benefits of prevention through healthier environments, compared to treating ill health once it has happened, why does society not invest in it more?

There are several reasons. The tenure of politicians is shorter than some of the beneficial results accruing from putting policies into place and harvesting positive results on health – or at least shorter than the easily visible results. Powerful industries may resist regulations or invest heavily in lobbying to prevent government action. We need to ensure that we prioritise the health and well-being of citizens over profit. We cannot accept that the pockets of a few powerful industries outweigh the health of many uninfluential citizens.

MARIA NEIRA

Maria Neira is the director of the Department of Environment, Climate Change and Health at the World Health Organization. She previously served as under-secretary of health and president of the Spanish Food Safety Agency. She began her career as a medical coordinator working for Médecins Sans Frontières. A medical doctor by training, specialised in endocrinology and metabolic diseases, she then spent several years working in different African countries during armed conflicts.

✕ DrMariaNeira

ANNETTE PRÜSS

Annette Prüss is unit head of policies and interventions for health and environment in the Department of Environment, Climate Change and Health at the World Health Organization, where she has been an epidemiologist, public health specialist and chemical engineer for 20 years. She works on environmental health including water, sanitation and hygiene, healthcare waste management, air pollution and community-based methods for creating healthy environments.

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🌐 who.int/teams/environment-climate-change-and-health
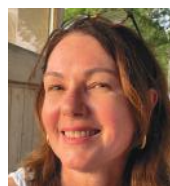
As long as people with vested interests participate in decision making, the result will not be driven by the public interest or people's health. When looking at individual behaviour, a combination of perceived comfort, long-term consumption habits, and lack of awareness or understanding of the severity of the health consequences of pollution and climate change may also hamper change.

Also, questions may not always be asked in the right way.

Specific actions and policies could drastically reduce pollution, climate change and health impacts, yet no

obvious action is taken. We should ask ourselves how many chemicals that we use daily are necessary or useful. Do we really need all these wrappings and cleaning products or could many of them easily be removed by changing habits and using alternative, more natural products? What about the unknown outcomes of microplastics and chemicals in our bodies when we (over)use consumer products for often only minor comfort? Why do we so easily accept the increasingly harmful effects of climate change, with its heatwaves, droughts, and impacts on food production and biodiversity without taking commensurate action? Similarly, why do we so easily accept chemicals that have been associated with male and female fertility dysfunction, hypertension, Parkinson's disease and dementia?

Opportunities for long-lasting and impactful environmental policies and regulations are numerous and would bring about multiple short- and long-term benefits for people. This includes the enhanced development and use of renewable and sustainable energies, the replacement of harmful chemicals by alternative products, the reduction of single use plastics through packaging policies, the reduction of red meat consumption to minimal but healthy levels, equitable taxation and other measures to increase active and public transport, measures leading to reasonable and healthier consumption, or the use of local production where sound and feasible. And there are more steps that could end irrational policy choices and consumption patterns that result in a combination of pollution, health loss and climate change.

Protecting people's health through healthier environments requires bold political and collective action and systemic change, and public support. Hoping for voluntary change at the individual level is not sufficient. Regulatory frameworks to set clear standards and guidelines, monitor and enforce compliance, and hold polluters accountable for any harm caused are needed. New governance mechanisms are required to reverse the degradation of planetary health and to protect populations. Many of the known solutions are win-win in terms of health gains, a healthier planet and costs to society, but do require decision making that is holistic and free of conflicts of interest. ∎

Biodiversity and health: from fragmentation to integration

Living in harmony with nature means a healthy planet and healthy people, but to get there, urgent, collaborative action is required

The links between biodiversity and human health vary, and occur at various scales. On a planetary scale, ecosystems and biodiversity play critical roles in determining the state of the Earth's system, regulating its material and energy flows, and its responses to abrupt and gradual change. Ecosystems, including food production systems, depend on a great diversity of organisms: primary producers, herbivores, carnivores, decomposers, pollinators and pathogens. Services provided by ecosystems include food, medicines, clean air, and both the quantity and quality of fresh water, as well as spiritual and cultural values, climate regulation, pest and disease regulation, and disaster risk reduction – each of which has a fundamental influence on human health, both mental and physical. At a more intimate level, the human microbiota – the symbiotic microbial communities present in the gut, respiratory and urogenital tracts, and on skin – contribute to nutrition, help regulate the immune system and prevent infections.

Biodiversity is thus a key environmental determinant of human health, and the conservation and sustainable use of biodiversity are prerequisites to ensuring human health in the future.

The Covid-19 pandemic has further highlighted the importance of the relationship between people and nature. Although the relationship between biodiversity and infectious diseases is complex, it is clear that the loss and degradation of biodiversity undermine the web of life and increase the risk of disease spilling over from wildlife to people.

A UNIFIED APPROACH
One Health is an integrated, unifying approach that aims to sustainably balance and optimise the health of people, animals and ecosystems. It recognises that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) is closely linked and interdependent. The approach mobilises multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

There are significant strategic opportunities to integrate the full range of biodiversity–health interlinkages in the application of One Health approaches in more systematic, comprehensive and coordinated manners. Such integration

By David Cooper, acting executive secretary, Secretariat of the Convention on Biological Diversity

DAVID COOPER

David Cooper is the acting executive secretary of the Secretariat of the Convention on Biological Diversity. Prior to that, he was deputy executive secretary in charge of leading strategic and planning activities, as well as intergovernmental processes and activities under the convention and its Cartagena and Nagoya Protocols. David has more than 30 years of experience in environmental and agricultural science and policy, and international negotiations. As secretary of the 15th Conference of the Parties to the CBD, he was instrumental in facilitating the adoption of the Kunming-Montreal Global Biodiversity Framework.

𝕏 @hdavidcooper @UNBiodiversity 🌐 cbd.int

> **It is clear that the loss and degradation of biodiversity undermine the web of life and increase the risk of disease spilling over from wildlife to people"**

would serve broader health objectives beyond the simple absence of diseases, entail a greater focus on prevention, and strengthen the resilience of social, ecological and economic systems. It would address the common drivers of biodiversity loss, climate change, ill health and increased pandemic risk. Ultimately, these aims need to be supported by fundamental shifts in political economy, accountability and governance.

The Convention on Biological Diversity has called for greater cooperation among sectors and has invited parties to promote dialogue among ministries and agencies responsible for the sectors of health and environment in several decisions.

A PATH TO RECOVERY

In December 2022, governments adopted the Kunming-Montreal Global Biodiversity Framework with the mission to take urgent action to halt and reverse biodiversity loss and, by 2030, to put nature on a path to recovery for the benefit of people and planet. It includes four outcome-oriented goals for 2050 and 23 action-oriented targets for 2030. The framework acknowledges the human right to a clean, healthy and sustainable environment and encourages a One Health approach to optimise the health of people, animals, plants and ecosystems.

Several of the framework's 2030 action targets directly contribute to human health, for example by:

- Restoring, maintaining and enhancing nature's contributions to people, including ecosystem functions and services, through nature-based solutions and ecosystem-based approaches (Target 11);
- Increasing the area and quality, access to, and benefits from green and blue spaces in urban and densely populated areas, improving human health and well-being (Target 12);
- Reducing the risk of pathogen spillover and zoonotic disease emergence by reducing land use change (Target 1) and ensuring that the use, harvesting and trade of wild species is sustainable, safe and legal (Target 5);
- Reducing negative impacts from pollution including pesticides and highly hazardous chemicals (Target 7);
- Ensuring that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those who depend most on biodiversity (Target 9).
- Ensuring that areas involved in agriculture, aquaculture, fisheries and forestry are managed sustainably, contributing to the resilience, long-term efficiency and productivity of these production

systems and to food security (Target 10); and
- Ensuring that people are encouraged and enabled to make sustainable consumption choices, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Earth (Target 16).

Successful implementation of the Kunming-Montreal Global Biodiversity Framework requires a whole-of-government and whole-of-society approach. Success requires political will and recognition at the highest level of government and relies on action and cooperation by all levels of government and by all actors in society. The full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making and access to justice and information related to biodiversity by Indigenous peoples and local communities must be ensured, respecting their cultures and their rights over lands, territories, resources and traditional knowledge. Everyone must be engaged, including women and girls, children and youth, and people with disabilities.

The time for action is now to put nature on a path to recovery by 2030 and work towards the vision of living in harmony with nature. When our planet is healthy, people can truly be healthy as well. ∎

Interview with Dr Zhi Yang, chair, BVCF

How can we drive further health investments from the private and public sectors?

The Covid-19 pandemic has heightened the urgency to ensure health For All and global health equity. To accelerate and drive responsible investments towards common healthcare goals, a health taxonomy with impactful and measurable health metrics is needed.

To date, the environmental component has dominated the prevailing ESG and sustainability reporting frameworks. Increased awareness of corporate responsibilities has mobilised significant investments from the private sector and ESG asset allocations from financial market participants into climate-positive projects. The social and governance categories have occupied less mindshare when compared to the environmental category.

Health is a theme as important to humanity as climate change. Financing from both public and private means should be engaged to achieve Health For All and global health equity. Health should naturally be part of the social category within ESG initiatives and investments, but currently health is seldom represented. The lack of globally accepted metrics for assessing health and health-related economic activities that are impactful and measurable is a key reason. A health taxonomy that identifies health-positive economic activities that contribute to a set of common healthcare goals can serve as a guideline in directing funding and intensifying awareness for public health investment.

What does a health taxonomy do?

Experience from the climate movement shows that well-studied metrics that are consistently measurable in a straightforward manner, such as carbon emission reductions and water usage, are critical in highlighting the broader societal and population impact of a corporation's economic activities. The European Commission has developed the EU Taxonomy to define environmentally sustainable economic activities, which is intended to serve as a framework in directing funding towards desired projects and protect investors from greenwashing.

The current health-related metrics used in various sustainability

The call for a health taxonomy

Globally accepted health taxonomy can serve as a guideline in directing funding and intensifying awareness for public health investment

reporting frameworks (if health is included) are mostly limited to company specifics, such as employee insurance coverage rate and employee injury rate. Although these metrics are meaningful on a company level, they do not fully reflect the contribution, whether positive or negative, that the corporation's economic activities have on broader societal and population health.

There needs to be a set of impactful and measurable health metrics that define sustainable economic activities for public health. For example, reducing the use of chemicals in a food product supply chain may be more akin to that of carbon emission reduction – where it reflects the public health impact of a company's economic activities beyond the company's employees.

A health taxonomy can serve as a common language to define a set of common health targets. It can ensure that stakeholders have a more holistic

appreciation of health-positive as well as health-negative economic activities.

Why is a health taxonomy important?

Health is defined differently by different people, and health outcomes are affected by many non-medical factors. Research shows that social factors can be more important than health care or lifestyle choices in influencing health, with some studies suggesting that social factors account for between 30-55% of health outcomes.[1] Health is in fact more than a birth rate, insurance coverage, employee injury rate and acute event statistics, such as disease incidence and death rates.

Lessons should be drawn from the financing of climate initiatives for financing of Health For All. In addition to defining what are sustainable health economic activities, there should be conscious efforts to prevent "healthwashing", similar to the current efforts to prevent greenwashing.

> " Financing from both public and private means should be engaged to achieve Health For All and global health equity"

Stakeholders now know to examine the broader impact of climate-oriented activities – while the intention can be good, the activities can potentially lead to negative externalities in some parts of society. Similar to climate-oriented products and initiatives, the healthcare ecosystem and supply chain of products and services are complex and multifaceted. For example, generic pharmaceutical companies sometimes face criticism for not creating value because they lack R&D innovations. However, it is virtually impossible to supply a world of more than eight billion people with drugs from only proprietary manufacturers. To scale up the supply of drugs and manage prices, generic pharmaceutical manufacturers play a critical role in the overall pharmaceutical supply chain.

Furthermore, as ESG investing became mainstream, it led to the development of many different green standards and climate checklists. There are arrays of service providers that aim to help companies and financial market participants interpret and comply with various climate and sustainability regulations. The lack of common definitions and the potential for greenwashing have been the two major challenges for the development of climate/sustainable financing over time. To effectively advocate for health investments, a globally accepted health taxonomy that sets common goals and clarity in communication will be crucial.

How can we kick-start the process of a health taxonomy?

With the WHO as the only dedicated health entity under the UN and its work on the commercial determinants of health as a foundation, it is the best organisation to spearhead the process and work with a consortium of stakeholders and health experts.

The WHO can seek to work with other global entities, such as the EU PSF, the World Bank/IFC, the International Sustainability Standards Board, the International Capital Market Association and stock exchanges, as well as the private sector and financial market participants to develop a set of qualifying and continuing reporting health metrics that are impactful and measurable. Both public market and private market investors can actively include health metrics into their investment evaluations. Coordinated efforts among key stakeholders and organisations to develop a globally accepted health taxonomy will be imperative to effectively crowd in investments towards the common goals of Health For All and global health equity. ∎

[1] World Health Organization. Social determinants of health. https://www.who.int/health-topics/social-determinants-of-health

ZHI YANG

Dr Zhi Yang is founder and chair of BVCF Management. He launched the firm in 2005 when he returned to China after two decades studying and working in the United States with the vision to bring the VC-driven innovation model to China. He launched BVCF as one of China's first venture capital/ private equity firms focused on the healthcare sector.

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From theory to practice

Reducing the risk of zoonotic disease spillover is an immense challenge, and while science can guide transformative change, it cannot make it happen. Human action and engagement alongside political buy-in are critical to make possible the far-sighted solutions that will benefit our complex ecosystem

Interview with Monique Eliot, director-general, World Organisation for Animal Health

Why and how are healthy animals essential for healthy people?
Human and animal health are inherently interlinked and bound to the health of the ecosystems they inhabit. Healthy animals and healthy people come hand in hand.

Animals play a major role in our lives and economies. The nexus is prominently highlighted by our reliance on animal-sourced products: terrestrial and aquatic animals support people's health and well-being, generating food and employment. Animal diseases therefore directly threaten the income of the communities that depend on livestock production for their livelihoods. This makes food security and food safety a priority to ensure animal production systems are efficient and sustainable.

Furthermore, human health is deeply intertwined with the health of wildlife. By protecting wildlife, we safeguard biodiversity – and invest in a healthier, more sustainable future.

Today's increasing risk of health threats at the interface between animal, human and environment underlines the need to consider global health through a holistic One Health approach, where multiple sectors, disciplines and communities work together towards achieving better health outcomes for all. The fact that the health of humans, animals and the environment are part of the same equation can no longer be overlooked. Animal health matters to everyone.

How do today's challenges and emergencies create spillover of pathogens between animal and human species?
Changing patterns in climate and land use, unsustainable agricultural practices and unregulated wildlife trade enable pathogens to evolve into new forms. This increases the likelihood of spillover between animals and humans.

The world is constantly evolving, and so are the interactions at the human-animal-environment interface. This is a key element in facilitating the emergence, re-emergence and spread of zoonotic diseases. Global movements of goods and people, together with technological and demographic change, will only continue to create more opportunities for pathogens to cross over.

Some evolving human practices also threaten animal health and welfare. Just think of the warming of waters and how they are increasing the frequency of fish mass die-offs. Financial turbulence can prevent a country from getting back on its feet after an outbreak or a pandemic like Covid-19, adding yet another layer of complexity to the way we address health challenges.

The World Organisation for Animal Health advocates for reducing the risk of zoonotic disease spillover at source through improved prevention measures including biosecurity at farms, which is more efficient than relying on disease detection and response. We also advocate for investments in veterinary services capacities, with well-structured, staffed and experienced services boosting resilience across communities.

What are effective approaches to tackling health threats, including preventing future pandemics?
Risk reduction strategies need to be integrated into a country's development planning. A risk-based approach considers many different hazards and seeks multi-sectoral responses to threats to animal, human and environmental health. But what can be done to enable multidisciplinary thinking and
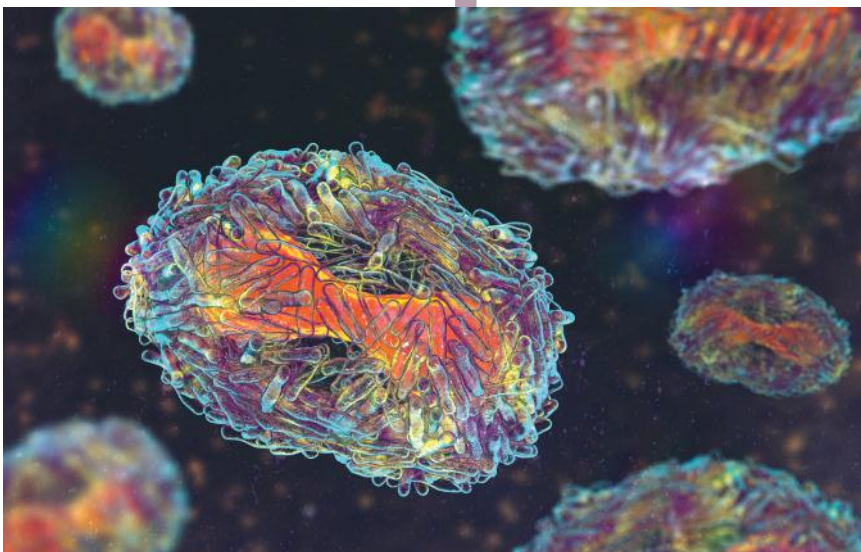
action? To start, an inclusive, participatory approach to One Health governance ensures that the voices of relevant civil society, research institutions, and national and local disaster management agencies are heard equally in addition to those of decision makers. International organisations must work together to prevent, prepare for and respond to health threats. To enhance this collective action, coordination mechanisms are needed at all levels to facilitate joint capacity building, knowledge sharing, investment and networking among the different important actors.

At the same time, health threats can be mitigated. Awareness campaigns can shape perceptions of risk within the local community, leading to safer practices that minimise the exposure to hazards and promote timely reporting and detection. They also contribute to fostering a culture of horizontal collaboration, with communities actively participating in prevention and response.

WOAH is committed to helping countries prevent and prepare for health threats, shifting the infectious disease control paradigm from reactive to proactive. An all-hazards and whole-of-society approach to preparedness is a shared responsibility across multiple stakeholders. Driven by this vision, we use the latest scientific evidence shared by our wide network of collaborative centres, reference labs and international experts. WOAH also promotes the role of veterinary services in global health security and their collaboration with other crucial actors.

How can we put integration first?

Fragmentation undermines the achievement of the Sustainable Development Goals. The Covid-19 pandemic has exposed the interconnectedness of global systems, raising fundamental questions about how we handle infectious diseases and broader health threats, whether old and well known or new and unexpected. We have experienced first hand the negative impacts of a fragmented approach on our societies, delaying preventive actions and responses. Yet we have also witnessed the immense potential of bringing sectors together: when Covid-19 hit, testing support provided by veterinary diagnostic laboratories significantly lessened the burden on public health testing facilities. Many other collaborations have been crucial to managing this crisis.

The benefits from collaboration, including cost saving and efficiency, are unmatched. Drawing on lessons learned from the Covid-19 pandemic, we need to keep advancing integration, which means nurturing dialogue and exploring close synergies between systems, while drawing from our own unique mandates and specific competencies. Coordinating the work of different agencies through a One Health approach is the most promising way to make the world a safer and healthier place for all.

What contribution has WOAH made to improve animal health and welfare? What challenges remain?

Veterinary services are at the forefront of disease

> **"Changing patterns in climate and land use, unsustainable agricultural practices and unregulated wildlife trade enable pathogens to evolve into new forms. This increases the likelihood of spillover between animals and humans"**

surveillance, prevention and control. For nearly a century, WOAH has supported countries in monitoring and controlling health threats through an approach rooted in evidence-based scientific knowledge and solidarity. Our work spans multiple functions, including developing standards and guidelines, reinforcing surveillance systems and disease intelligence, scaling up our efforts for wildlife health, and providing support to enhance the legal foundation of veterinary services work and the sustainable improvement of the capacities of national veterinary services. The major common denominator is the idea that animal health is everyone's health.

WOAH also carries the voice of animal health through negotiation processes coordinated by the World Health Organization in developing a new legally binding pandemic instrument that guarantees political commitment for strengthening global collaboration on pandemic prevention, preparedness and response.

WOAH engages in long-standing coalitions with actors in the human and environmental sectors in the pursuit of One Health outcomes. With the Food and Agriculture Organization, the United Nations Environment Programme and the WHO, WOAH launched the One Health Joint Plan of Action, which provides a framework to prevent and mitigate health challenges at the human-animal-plant-environment interface and address the drivers of these threats.

Science can guide transformative change, but it cannot make it happen. That requires human action and engagement alongside political buy-in. We have a solid scientific foundation for improving animal health, but we need to keep momentum to shape future health agendas and make possible the far-sighted solutions our complex ecosystem can benefit from. In all, translating theory into sustainable practice remains our biggest challenge, but with collective action we can succeed. ∎

MONIQUE ELOIT

Monique Eloit is the director-general of the World Organisation for Animal Health (WOAH, founded as OIE). Prior to her election, she occupied the position of the organisation's deputy director-general from 2009 to 2015. A doctor of veterinary medicine, she has also been the chief veterinary officer of France and served as national delegate to WOAH from 2005 to 2009.
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By Mami
Mizutori,
head, United
Nations
Office for
Disaster Risk
Reduction

In the face of future disasters

There are strong links between the global health agenda and the imperative to implement disaster risk reduction. Yet, historically, much of the coordination between the global health agenda and the agenda of prevention has been limited to emergency response planning. That response is undoubtedly critical to saving lives after a disaster. But much greater benefits can be attained through reducing risks before they become deadly, costly disasters. This became evidently clear at the height of the Covid-19 pandemic.

Both fields champion prevention first, and the need for this approach is growing as countries face more extreme and unpredictable weather events due to climate change, and the threat of a new pandemic remains.

This is why the Political Declaration of the United Nations General Assembly on the Midterm Review of

> The pursuit of health is a political choice, as is the pursuit of better integration between health and disaster risk reduction – and to achieve both we need all sectors of the government and stakeholders represented and involved

the Sendai Framework for Disaster Risk Reduction – adopted unanimously by all member states – stresses "the need to enhance coordination, coherence and integration between disaster and health risk management systems, including at the local level".

It is important to recognise and build on the commonalities between the health sector and disaster risk reduction, especially regarding shared goals, risks and methods.

SHARED GOALS
The Sendai Framework for Disaster Risk Reduction 2015–2030 seeks to reduce disaster losses in lives, livelihoods and health. Among its seven targets, the first two focus on reducing disaster mortality and reducing the number of affected people. This aligns the framework's objectives directly with the health-related Sustainable Development Goals, particularly SDG 3.

The average annual number of deaths and missing persons from disasters decreased from 1.77 per 100,000 people between 2005 and 2014 to 0.82 between 2012 to 2021. We can attribute this positive trend to the expansion

of early warning systems. However, these numbers do not include deaths from the Covid-19 pandemic – and adding them would make the Covid-19 pandemic the deadliest disaster in the last 100 years.

SHARED RISKS

Reducing the risk of pandemics is included as a biological hazard in the Sendai Framework, because when it was negotiated in 2015, the World Health Organization and UN member states – having experienced Ebola, severe acute respiratory syndrome and Middle East respiratory syndrome – strongly advocated for including such outbreaks among the multi-hazards the world will face. Indeed, the WHO's 2019 Health Emergency and Disaster Risk Management Framework cites the proactive management of risks. Despite this mutual recognition of shared risks, the Covid-19 pandemic tragically caught most countries off guard, with unclear working arrangements between the disaster and health sectors to address this common risk. We failed to prevent or be prepared.

Beyond the threat of future pandemics, there is also a cause for collaboration to reduce the direct and cascading impacts of disasters. This includes building the resilience of health facilities and critical infrastructure and reducing the risk of disease outbreaks in the aftermath of disasters, which cause significant morbidity and mortality among affected populations.

SHARED METHODS

Aside from the fact that both the global health agenda and the agenda of disaster risk reduction advocate for investing in prevention, both also adopt a 'people-centred' approach and use many of the same methods to assess and address risks. As a result, there are many practical areas for sharing lessons learned and good practices.

Examples include crafting policies and regulations to finance and incentivise prevention, collecting and managing risk and impact data, designing and executing multi-hazard risk assessments, and developing and evaluating risk communication efforts, to name a few.

WAY FORWARD

To achieve common goals, address common risks, and make the best use of resources and tools, countries must adopt multi-sectoral and all-of-society risk governance structures, with all sectors of the government and stakeholders, including non-governmental actors – particularly

> **The average annual number of deaths and missing persons from disasters decreased from 1.77 per 100,000 people between 2005 and 2014 to 0.82 between 2012 to 2021. We can attribute this positive trend to the expansion of early warning systems"**

representatives of the most vulnerable – represented and involved. This approach is at the heart of the Sendai Framework. It makes sense in a world where every risk is connected and all impacts are cascading.

That said, creating such an inclusive and multi-sectoral approach requires political commitment. Indeed, the best examples came during the Covid-19 pandemic when the heads of state and government established governance structures that brought together all relevant ministries to coordinate containment and response efforts.

We need to see such risk governance arrangements adopted more permanently to better anticipate and mitigate all current and future risks. The health sector can serve as a model. Guidance is available in the 2016 Bangkok Principles for the Implementation of the Health Aspects of the Sendai Framework and the WHO's Health Emergency and Disaster Risk Management Framework. Furthermore, in humanitarian crises, where responding to health emergencies is often a top priority, disaster risk reduction should be a standing agenda item for humanitarian country teams and inter-cluster coordination, following the guidance of the UN Office for Disaster Risk Reduction's checklist for Scaling up Disaster Risk Reduction in Humanitarian Action 2.0.

We have a crucial opportunity now to cement this integration: the negotiations between WHO member states on a global accord on pandemic prevention, preparedness and response. This groundbreaking accord has the potential to ensure that the important lessons of the Covid-19 pandemic are not lost and will be used to prevent future disasters at the scale we experienced.

The pursuit of health is a political choice – and so is the pursuit of better integration between health and disaster risk reduction. Countries must take this up as a political priority to prevent future disasters and avoid reinventing the wheel the next time a global crisis occurs. ∎

MAMI MIZUTORI

Mami Mizutori is the special representative of the United Nations Secretary-General for Disaster Risk Reduction, and head of the UN Office for Disaster Risk Reduction. She served for 27 years in various capacities in Japan's Ministry of Foreign Affairs. Prior to joining the UN, she was executive director of the Sainsbury Institute for the Study of Japanese Arts and Cultures at the University of East Anglia in the United Kingdom.
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Lebanon: reform and sustainability

Lebanon has recently faced one of its most tumultuous times, which has in part triggered a shift in the pattern of infectious diseases. Now, the country is working on its response to climate change and health challenges, with reform and sustainability at the heart of plans

By Firass Abiad, minister of public health, Lebanon

Climate change stands as a predominant and rapidly escalating threat to public health. Its impacts are most evident in countries already wrestling with health and socio-economic challenges. In countries engulfed by multiple, complex crises, health systems encounter heightened strain. This strain is magnified by the cumulative effects of climate change, worsening environmental conditions and migration.

Lebanon, of late, has faced one of its most tumultuous times, characterised by an acute economic crisis, political unrest and social upheaval. The Lebanese currency has plummeted over 90% in value, and a staggering 80% of households now endure multidimensional poverty. The World Bank classifies Lebanon's economic downturn among the 10 most severe global economic crises since the 19th century. An exodus of top-tier professionals, challenged healthcare access and devastating out-of-pocket health expenditures have become alarmingly common. These crises have accentuated the pre-existing inefficiencies within the healthcare system, thereby compromising the response to escalating healthcare demands of a growing population. As a result, equitable care access, especially for the marginalised, has become an uphill battle. Tragically, the health advances made over decades have rapidly

regressed, leading to the deterioration of numerous health metrics.

Triggered by poverty, transnational movements, deteriorating environmental conditions and infrastructural decay, there has been a notable shift in the patterns of infectious diseases in Lebanon. Alarmingly, pathogens such as cholera, once eradicated from the country, resurfaced in 2022, instigating a significant outbreak. This re-emergence underscores the dire need for a holistic strategy. Such a strategy would encompass the strengthening of health systems and disease surveillance, and would also encompass initiatives aimed at tackling the root causes, such as poverty alleviation, sustainable infrastructure development (especially in water and sanitation) and measures for climate change mitigation and adaptation. Lebanon's rapid containment of the cholera outbreak was a testament to a multi-pronged approach, partnership, coordination and multisectoral collaboration.

IMMENSE PRESSURE ON HEALTH CARE

Concurrently, Lebanon's energy crisis has exerted immense pressure on all sectors, including health care. Amid challenges such as acute electricity shortages and soaring fuel costs, the operationality and very existence of healthcare facilities are at stake. Consequently, the urgency for sustainable and climate-adaptive healthcare reforms has escalated. It is heartening to note significant progress in integrating renewable energy into public hospitals and primary healthcare centres, thanks to the concerted efforts of the Lebanese government, international collaborators, funding agencies and local communities.

The recent launch of the Sustainable Energy Strategy for the Healthcare Sector by the Ministry of Public Health epitomises a commitment to a transformative shift towards green energy utilisation and production. The strategy promotes the adoption of solar panels, wind turbines and energy-saving technologies, ensuring a consistent, eco-friendly energy source for healthcare institutions. Using renewable energy, healthcare facilities can uphold critical services, diminish their environmental impact and reinforce climate change mitigation

FIRASS ABIAD

Firass Abiad has been Lebanon's minister of public health since 2021. A surgeon, he previously worked at the American University of Beirut Medical Center since 2010 and was appointed chair of the board of directors at Rafic Hariri University Hospital in 2015. During his tenure at RHUH, he led the efforts to transform the hospital into a leading tertiary hospital that spearheaded Lebanon's response to Covid-19.

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endeavours. Successful strategy implementation can potentially lead to a 15%–30% reduction in electricity consumption by public hospitals and a 50% cut in thermal energy demands. Achieving these targets will streamline operating costs, allowing funds to be redirected to more pressing healthcare needs. Furthermore, Lebanon's pledge to cut greenhouse gas emissions by 30% by 2030 hinges on the amplification of its renewable energy usage.

Embracing telehealth offers an eco-friendly solution, reducing carbon footprints, especially in densely populated regions like Beirut. By curtailing unnecessary commutes to healthcare institutions, telehealth contributes to enhanced air quality and reduced traffic congestion. This approach also lessens medical waste production, addressing another challenge faced by the health sector. Additionally, given the alarming rate of healthcare professionals departing

80%

of Lebanese households endure multidimensional poverty

Lebanon, telehealth serves as a bridge for global collaboration and knowledge exchange.

A NEW NATIONAL HEALTH STRATEGY

The Ministry of Public Health's comprehensive five-year National Health Strategy: Vision 2030 delineates the collective vision to address immediate and long-term health priorities, including those stemming from climate change and environmental degradation. Five pivotal components form the backbone of this strategy: governance, health promotion and disease prevention, health security, universal health coverage, and health system resilience. A prime objective is to counteract climate change impacts on the healthcare sector by forging sustainable strategies and reforms in collaboration with both local and international partners.

In its commitment to universal health coverage, the Sustainable Development Goals and the directives from successive United Nations climate change conferences, the Lebanese Ministry of Public Health emphasises the convergence of public health and climate. Prioritising renewable energy and climate resilience remains integral to these commitments. The end goal? Carving a healthier, sustainable future for the Lebanese people. ∎

Innovation and equity: at the core of future pandemic responses

The ability for us to learn the right lessons from the Covid-19 pandemic will determine our ability to respond to the next pandemic – and we must adopt an evidence-based approach and build consensus on the right measures to take

When the next pandemic hits, the success of our response will depend on how well we react to the lessons learned from Covid-19. The world was ill prepared for the pandemic, costing millions of lives and trillions of dollars in economic loss.[1] Yet, the political interest in pandemic prevention, preparedness and response is already fading.

This presents a clear challenge to the global health community in being heard. But it also makes it even more important that we continue to listen, collaborate and learn about how we can take the shared lessons from Covid-19 and build consensus about what needs to be put in place to strengthen our collective response to the next pandemic.

As discussions continue at the World Health Organization on a new pandemic accord, there are two central objectives that we must align around: how we support innovation and how we deliver equity of access.

THE INNOVATION LESSON

In response to Covid-19, science and innovation delivered. The development of a Covid-19 vaccine was the fastest on record — approved just 326 days after the viral genome sequence of SARS-CoV-2 was published in January 2020. Within a year of approval, more than 11 billion doses of vaccines were delivered. It is estimated that in the first year alone, Covid-19 vaccinations saved 20 million lives.[2]

This was the result of a robust innovation ecosystem that we have put in place over many decades, which has helped drive global health progress and which gave us the strong foundation to respond to Covid-19. The most powerful example of this was the development of mRNA vaccines. mRNA research was for a long time marked by more hope, trials and disappointments than results. Risky investments in mRNA research to treat cancer meant that although never tried before for vaccines, the

technology was ready to be put to the test for tackling Covid-19. It is because of this innovation ecosystem that companies such as Moderna and BioNTech were able to make the case for primarily private investments to push forward the science of mRNA technology, burning money for almost two decades, hoping for a breakthrough. It turned out to be a game-changer, enabling the vaccination of people against Covid-19.

But while the attention is mostly on the successful vaccines, few people are aware that of the 23 mRNA vaccine candidates, only two made it to the finish line. And out of the more than 300 vaccine candidates, less than 5% were successful. Furthermore, more than half of Covid-19 treatments were developed building on research on products previously approved for other indications, meaning companies explored their library of compounds to see which could work against Covid-19. These treatments would have taken more time to develop without the decades of investment in how to tackle other diseases.

Effective vaccines and treatments will again be central to our response to the next pandemic. Recent research by the independent disease forecasting company, Airfinity, estimates that if effective vaccines are rolled out 100 days after the discovery of a new pathogen,

By Thomas Cueni, director-general, IFPMA

the likelihood of a pandemic as deadly as Covid-19 taking place in the next decade drops from 27.5% to 8.1%.[3] That is why it is so concerning that right now, there is a real risk that we inadvertently undermine this ecosystem.

An example of this is the debate over the sharing of pathogens and their genetic information. Rapid, unhindered access to this information was never questioned in the fight against Covid-19. As soon as the sequence of the novel coronavirus and subsequent variants were published online, scientists were able to access this information in real time and start to work on the development of the medical countermeasures. This will be critical against future pandemics. Any move to slow the spread of information through transactional access barriers to pathogens or genetic information must be avoided, if we want to have a chance for an even faster response as set out in the 100 Days Mission.

Another example is the protection of intellectual property, not only critical to incentivise research and innovation, but also critical to facilitate the voluntary partnerships between companies and organisations, which we saw on an unprecedented scale during Covid-19. More than 450 voluntary collaborations were in place to support the scale-up of production of Covid-19 vaccines and treatments.[4] These partnerships went far beyond granting licences, but included knowhow sharing, technology transfer and training of people. By partnering with the companies that have the right expertise and experience alongside a proven track record of quality and safety, it was possible to treble global vaccine production and supply. Such partnerships are based on trust and cannot be coerced. Efforts to introduce compulsory licensing or other measures would fail to deliver the reliable scale up of supply needed.

THE EQUITY LESSON
However, while we saw the triumph of science and record scaling up of vaccines and treatments, there is no denying that when it came to ensuring equity of access to Covid-19 vaccines and treatments, the global healthcare community fell short of its promise to leave no one behind. Although we saw a strong start to equitable rollout through the establishment of COVAX, this was soon undercut by vaccine nationalism and export bans, which, in particular, left people in Africa behind for far too long. We must do better in response to future pandemics.

Last year, the pharmaceutical industry published its own plans to address the failure of equitable access during the Covid-19 pandemic in the Berlin Declaration[5], with a commitment that companies reserve an allocation of real-time production of vaccines, treatments and diagnostics for priority populations in lower-income countries. These commitments were also embraced by the Developing Countries Vaccines Manufacturing Network and the Biotechnology Industry Organization. But for

THOMAS CUENI

Thomas Cueni has led IFPMA since 2017, during which time he has been instrumental in establishing cross-sectoral programmes designed to tackle the biggest global health challenges. This includes establishing the $1 billion AMR Action Fund to support the development of new antibiotics; serving as chair of the AMR Alliance; and being the industry's representative on the Access to COVID-19 Tools Accelerator. Thomas began his career as a journalist, as London correspondent for the *Basler Zeitung* and *Der Bund,* before serving as a Swiss diplomat in Paris (OECD) and Vienna (IAEA, UNIDO). Thomas has a master's degree in economics from the University of Basel and another in politics from the London School of Economics. He also studied at the Geneva Graduate Institute for International Studies.

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this to work, we must see coordinated action by industry, governments and multilateral organisations.

First, we need a social contract. Governments in countries where manufacturing facilities are located need to commit to facilitating the export or import of raw materials and finished products. Trade restrictions and tariffs hamper efforts for equitable rollout. We must see countries make meaningful commitments in this regard.

Second, Covid-19 also highlighted that resilient production capacity, geographical diversification of manufacturing, sustainable supply chains and a network of established trusted partners are a key part of preparations for future pandemics. But this will not happen overnight. We need to understand future demand, create the right environment that attracts sustainable investments, ensure we have a highly skilled workforce, and strengthen regulatory capacities and supply chains.

The ability for us to learn the right lessons from the Covid-19 pandemic will determine our ability to respond to the next. We must take an evidence-based approach and look to build consensus on the measures that both preserve the innovation ecosystem that will deliver vaccines and treatments, alongside practical proposals that will ensure they reach the people who need them. These must be the guiding principles of our plans. ∎

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IFPMA

A new narrative of hope

The effects of climate change on health and well-being can be direct or indirect – but all are devastating, and we have in our hands the power to do more, and do better

By Omnia El Omrani, climate change and health junior policy fellow, Institute of Global Health Innovation, Imperial College London

As a young medical doctor, I witnessed the impacts of climate change on the health of my community. I vividly remember a two-year old girl with asthma and persistent wheezing due to exposure to high levels of air pollution. It had detrimental effects on her growing body and brain, and it prevented her from undergoing the surgery she needed. We had to wait until her overall condition improved.

This is just one anecdote about the rising impacts of climate change on health and well-being. The effects can be direct through deaths and injuries from extreme weather events such as wildfires, flooding and heatwaves, or indirect through air pollution leading to heart and lung diseases, as 9 of 10 people, like this child, breathe in polluted air globally. Climate change also leads to sudden losses in food production and access to food, aggravating hunger and poverty in the most vulnerable countries. Climate-driven flooding overwhelms sanitation systems; droughts prevent access to water, where one in five children around the world currently lack access to safe drinking water. Climate change is worsening inequalities in access to healthcare services, education and decent job opportunities – especially for women and girls, who make up more than 80% of the climate migrant population. Women continue to face increasing gender-based violence and discrimination aggravated by higher temperatures and scarcity of resources.

Climate change is also affecting the mental health of communities. Farmers are dying by suicide, communities are experiencing ongoing distress and post-traumatic stress disorder, and people living with mental health conditions are three times more likely to die during a heatwave. Young people feel distress and despair at the unpredictable climate disasters affecting the future they face. These feelings are heightened by the disconnect between the necessary climate action many young people want and what is being done by their governments and public institutions.

However, action for a safer climate fosters the conditions for a world that supports better health – creating resilient societies with cleaner air, safer energy and infrastructure, access to green spaces, and connected communities. Climate adaptation and mitigation actions are central to protecting health and well-being. For affected communities to adapt and respond to climate threats, integration of and investment in psychological resilience must be prioritised.

URGENT ACTION REQUIRED

The science behind the planetary health crisis makes it clear that urgent, integrated and transformative action is needed across all sectors and disciplines. The health sector is fundamental to adopting an integrated approach, as the first and last line of defence in the face of unprecedented climate impacts, to provide the healthcare services equitably required under all circumstances.

But progress is hindered by several pressing challenges. First, decisions about climate change and health are made in silos. Policymaking and funding are commonly considered independently, ignoring the hidden costs of climate inaction on health and the co-benefits of climate action for health. Second, the experiences of the most affected groups, including youth and women, are persistently sidelined despite their being on the frontline of climate-driven impacts and the widespread calls for environmental justice.

Youth, in particular, have leveraged their activism to hold governments and
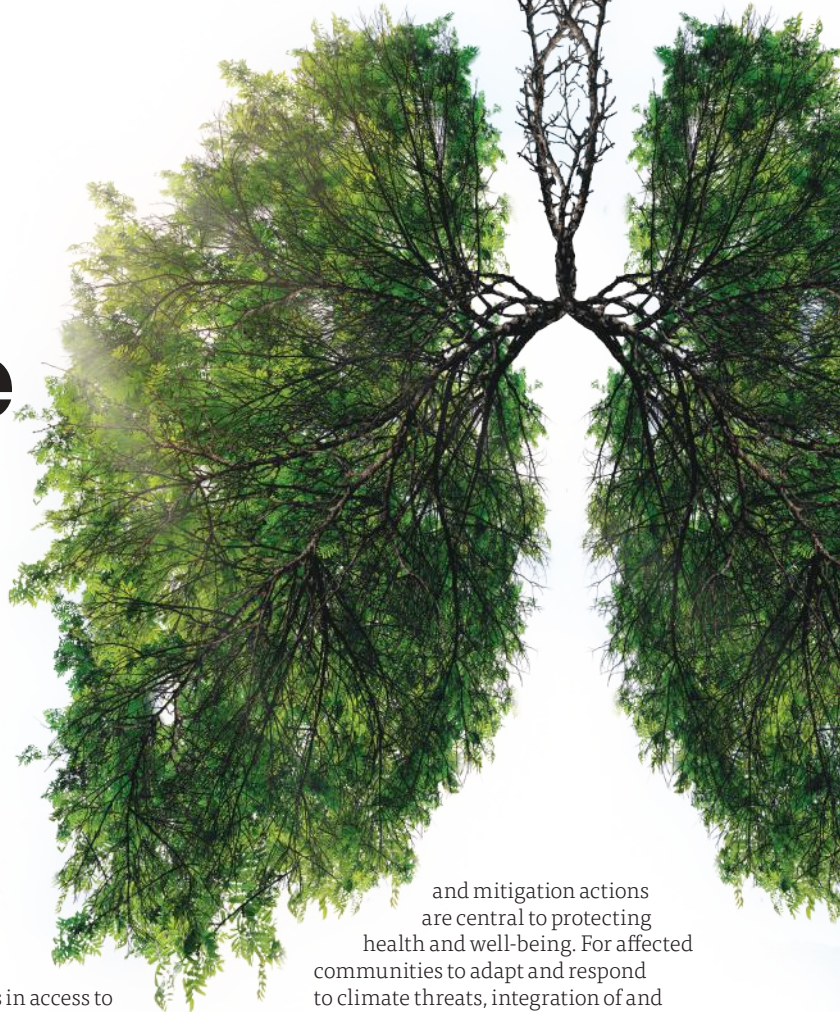
corporations accountable for violating their right to a safe, clean and healthy environment. Moreover, young health professionals are working with their institutions to include climate change in curricula and young practitioners are prescribing connecting with nature to improve patients' mental well-being. They are also catalysing the decarbonisation of their healthcare systems by integrating climate mitigation actions within service delivery, governance and workforce training. Many use their voices in community-led movements to highlight that the climate crisis is a health crisis and that climate action is action for health.

Nevertheless, youth continue to face multiple challenges that restrict their meaningful participation and their identification beyond only beneficiaries or victims of policymakers' decisions and lethargic responses in matters of existential importance. There is a growing need to reorient institutional structures to integrate youth, not as add-ons, but as natural stakeholders in formal roles such as youth advisory groups and councils such as the World Health Organization's Youth Council. Climate and health policies should be grounded in the needs and insights of the most vulnerable youth, including young women, refugees and internally displaced youth in armed conflict. This requires establishing sustainable and intergenerational mechanisms for their participation and also for the emergence of youth-led solutions and implementation pathways.

To respond to this, Egypt's presidency of the United Nations Climate Change Conference (COP27) in 2022 took progressive action to listen to young people and demonstrate that the inclusion of health and intergenerational equity is far from optional. This was exemplified by my appointment as the first official youth envoy of the president of the Conference of the Parties, a critical turning point for meaningful youth engagement in the highest level of climate decision-making. I worked on integrating young people's ideas and perspectives into the design and delivery of COP27 and on facilitating opportunities for diverse youth voices to be heard and valued. A dedicated children and youth pavilion was set up for the first time, strategically positioned in the negotiation zone to empower young delegates to leverage their frontline experiences, intergenerational solidarity and equity-based values at the negotiations, as well as constructive technical and policy inputs.

> **There is a growing need to reorient institutional structures to integrate youth, not as add-ons, but as natural stakeholders in formal roles such as youth advisory groups and councils"**

THE RIGHT TO HEALTH

The COP27 presidency also recognised the right to a clean, healthy and sustainable environment in the Sharm El Sheikh Implementation Plan. This was the first such mention of health in a COP outcome decision. The presidency also established the breakthrough agreement to provide loss and damage funding to the most affected countries in response to the catastrophic impacts of climate-related events.

To further elevate the political profile of the climate-health nexus and respond to the health-related losses and damages communities are experiencing from climate hazards, COP28 in the United Arab Emirates will host the first-ever Health Day in 2023, and an inter-ministerial meeting on climate and health that will bring health ministers together for the first time with ministers of the environment and finance. This presents an opportunity to call attention to the science and evidence-based interventions that protect the health of populations as the climate changes and to reduce carbon emissions with proven benefits to health. In addition, technical assistance and finance mobilisation will be generated for climate and health interventions.

Climate justice and intergenerational equity can be a new 'narrative of hope' and only through intentional integration and collaboration can we address the climate and health emergency and the systemic inequalities my generation is living through. We must connect, listen and work together across silos and generations to build the healthy and secure world we all want and deserve. ∎

OMNIA EL OMRANI

Omnia El Omrani is a climate change and health junior policy fellow at the Institute of Global Health Innovation at Imperial College London. She was appointed the first Youth Envoy for the President of the 27th United Nations Climate Change Conference in 2022, having attended three previous Climate Change Conferences representing the International Federation of Medical Students' Association.
A medical doctor from Egypt, she has served as a commissioner at the Lancet Commissions on Sustainable Healthcare and Post-COVID Population Health, a member of the first Youth Sounding Board of the European Union DG-INTPA, an associate at Women Leaders for Planetary Health and a member of the UNICEF Youth Leaders Program.
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Many for the price of one

We face major challenges to planetary health in the non-communicable disease epidemic and the climate crisis, which are related. Civil society–led NCD/health and climate action movements offer the best hope for improving the health of people and the underlying natural systems on which all our lives and livelihoods depend.

THE CHALLENGE FACING THE CARIBBEAN

NCDs – principally cardiovascular diseases, cancer, diabetes and chronic respiratory diseases – cause approximately 80% of all deaths in the Caribbean. Caribbean countries feature among the top 10 of premature deaths from NCDs in the Americas.

Caribbean countries have a high prevalence of diabetes, hypertension and obesity, with increasing loss of lives, legs, kidney function and sight. NCDs are a major economic burden in the region, costing 5% of gross domestic product in Trinidad and Tobago alone.

NCDs share the modifiable risk factors of tobacco use, harmful use of alcohol, poor diet and physical inactivity, as well as air pollution, easily linked to the climate crisis. These factors reflect human behaviour, but are profoundly influenced by social and environmental determinants, such as poverty,

> Integrating non-communicable disease prevention and climate action can go a long way towards improving planetary health – by supporting the natural systems upon which all our lives depend

By C James Hospedales, founder, EarthMedic and EarthNurse Foundation for Planetary Health

education, gender and where you live, and by commercial forces.

A key determinant is weak regulatory capacity for tobacco, alcohol, food and medicines, although some progress has been made regarding pharmaceuticals by the Caribbean Public Health Agency. The region has an unhealthy food environment with foods high in salt, sugar, fat and calories. There are no labels warning of unhealthy foods. There is widespread marketing to children and limited use of fiscal measures such as taxes on sugary beverages. There is interference from the food industry,

heavy alcohol marketing and fossil fuel–based transport that increases sedentariness. As much as 90% of food in the Caribbean is imported, making trade policy important to a healthier food environment.

And climate change has many adverse impacts on the people of this vulnerable region located in the hurricane belt, small in size and with resource constraints. These ubiquitous, unrelenting impacts affect all sectors, but disproportionately affect the poor, older adults and people with chronic NCDs. For example, Hurricane Maria caused 64 deaths in Puerto Rico in 2017, but over 1,200 excess deaths subsequently, especially in persons with diabetes and heart disease.

Both climate change and NCDs are typified by overconsumption: of food, fossil fuel, tobacco and alcohol, driven by commercial interests. Another link is food and nutrition security, as more frequent storms, drought and damage lead to more consumption of cheap, low-quality imported food, in turn leading to obesity and NCDs. The massive meat industry uses gas and oil to make fertilisers and support mechanised agriculture. Another link is air quality, as heat and drought cause more fires and smoke, and pollution from vehicle emissions trigger asthma and chronic respiratory disease. People grow increasingly inactive, depending on vehicles using fossil fuels.

WHAT IS BEING DONE?

In 2007, Caribbean countries held the first summit of heads of government on NCDs and issued the Port of Spain Declaration with 27 commitments on prevention and control. This was the forerunner to high-level meetings on NCDs at the United Nations in 2012, 2014 and 2018. The Healthy Caribbean Coalition was formed in 2012 with over 100 civil society organisations working to prevent and control NCDs. Governments in the region also worked on strengthening plans and programmes for preventing and controlling NCDs.

Issues under the control of health ministries, such as policies and plans for treatment, showed positive movement. Issues requiring a multi-sector approach or subject to commercial influence hardly improved. Risk factors such as alcohol consumption, unhealthy diets, physical inactivity and obesity increased in adults and children. In 2016–17, CARPHA developed a six-point policy package for healthier food environments to prevent childhood obesity, including front-of-pack labels, reduced marketing of unhealthy foods to children, product reformulation, food chain incentives for fruit and vegetables, and fiscal measures such as taxes on sugar-sweetened beverages. There was very limited progress, given forceful opposition from commercial interests. And little progress has been made on improving green spaces in urban areas or using alternative modes of transport. Similarly, at the global level the world is not on track to achieve the Sustainable Development Goals, including SDG 3 on health.

Caribbean countries were at the forefront at the 2015 Paris Agreement with the cry of "1.5 to stay alive". However, carbon dioxide levels continue to rise as burning of fossil fuels has steadily increased. The world is on track for 2.7°C of warming under current commitments. Fires, drought, floods worldwide in 2023 have led the UN to sound the alarm loudly. Yet the next UN climate conference will be chaired in November 2023 by an oil executive.

With support from the World Health Organization and the European Union, many countries have developed health national adaptation plans for climate change, but health organisations and climate/environment interests largely operate in separate silos. At the regional level, the EarthMedic and EarthNurse Foundation for Planetary Health was founded in 2020 to mobilise health professionals to address the climate crisis. In July 2023, EarthMedic helped launch the Caribbean Health Alliance for Climate Action with five national medical associations and the HCC.

In 2022, the Global Consortium on Climate and Health Education at Columbia University conducted climate and health courses in the Caribbean, to help address large knowledge-action gaps among healthcare professionals. These efforts are increasing the awareness of the impact of climate change on health and NCDs.

WHAT STILL NEEDS TO HAPPEN?

So much can be done. NCD prevention and control movements can join with climate action movements: the HCC, EarthMedic and environmental organisations can come together with the Caribbean Health Alliance for Climate Action.

C JAMES HOSPEDALES

C James Hospedales founded the EarthMedic and EarthNurse Foundation for Planetary Health to mobilise health professionals to address the climate crisis. He chairs the executive committee of the Defeat-NCD Partnership and is a climate and health adviser to the Healthy Caribbean Coalition. He was previously director of the Caribbean Public Health Agency, and coordinator of chronic disease prevention and control at the Pan American Health Organization. He played a key role in the 2007 CARICOM Heads of Government Summit on non-communicable diseases leading to the United Nations High Level Meeting on Non-Communicable Diseases in 2012, 2014 and 2018.

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A Caribbean hub for education could scale up training for health professionals, faculty, students and policymakers, with climate and health as a prerequisite.

Governments should designate some of the divested sugar lands in all the Caribbean countries for community gardens and planting trees for food. This would address the threat of global food shortages caused by climate change and the worsening NCD epidemic, and reduce carbon footprints.

Alternative transport, including biking, walking and rapid mass transport, and urban greening need public health and urban planners to come together. The existing built environment can be used, with co-benefits for public health, tourism and the environment.

Practical measures such as painting roofs with heat-reflective paint and planting trees for shade in schools and homes for the elderly would reduce the risk of heat illness in these two vulnerable populations.

NCDs should be included in national disaster risk reduction plans and responses including the pre-identification of people with NCDs and training for shelter managers.

Commercial interests on health should be tackled head on, and the six-point policy package for healthier food environments should be implemented.

If we can break down all the silos that exist within the silos, we can overcome the challenges caused by NCDs and climate change, and improve the health of the people and the planet on which we depend. ∎

By Jean Kaseya, CEO and
director-general, Africa Centres
for Disease Control and Prevention

A new deal for African health security

Infectious diseases continue to be the major causes of mortality and morbidity in Africa. The impact of known existing, emerging and re-emerging diseases such as malaria, tuberculosis, HIV/AIDS and others are causing suffering and mortality to a wide proportion of populations in low- and middle-income countries in general, and Africa in particular. Over 227 million years of health life have been lost with an annual productivity loss exceeding $800 billion in Africa. With malnutrition a common contributor to illness, the five highest causes of mortality in Africa are acute respiratory infections, HIV/AIDS, diarrhoea, malaria and tuberculosis – being responsible for about 80% of the total infectious disease burden and claiming more than 6 million people every year.

The Covid-19 pandemic significantly affected lives, livelihoods and economies in Africa. It has claimed over 250,000 lives and over 12 million reported cases. The Africa Centres for Disease Control and Prevention led a continental pandemic response by designing appropriate strategies that targeted the unique challenges and diverse epidemiology of the disease.

Africa Centres for Disease Control and Prevention has a vision: to become world class and self-sustaining and position itself in line with universal health coverage, Sustainable Development Goals and the African Union's Agenda 2063. To do so, it is proposing a New Deal

+$800bn
lost in annual
productivity due to
diseases in Africa

>250k
African lives lost to
Covid-19

Despite the challenges, the continent's response was quick and unified, with strong public support for safety measures. It has significantly learned from the experiences of past outbreaks, such as Ebola and polio.

ONE EMERGENCY TO ANOTHER
As the continent emerges from the Covid-19 pandemic, it faces multiple public health emergencies, including emerging and re-emerging infectious diseases such as Ebola virus disease, Marburg virus disease, cholera, meningitis, measles, Mpox, yellow fever, dengue fever and Rift Valley fever. Multiple factors contribute to the rise of emerging infectious diseases in Africa, with more than 100 disease outbreaks reported every year. These outbreaks are exacerbated by the disruption of health services by the Covid-19 pandemic, economic challenges that affect investment in health, changes in climate and weather, changing ecosystems, rapid population growth, rapidly increasing urbanisation, limited access to clean water and sanitation, and social inequality and instability, among other factors. Much remains to be done to achieve zero transmission and eliminate malaria, tuberculosis and

HIV/AIDS in Africa. The ever-increasing challenges and complexity of infectious diseases call for building strong and resilient healthcare systems that improve the quality of primary health services across the continent. Adequate financial support to strengthen public health institutions and laboratories is also critical to prepare, detect and respond effectively to emerging and re-emerging infectious diseases.

Non-communicable diseases such as cancer, cardiovascular diseases and diabetes are significantly increasing in Africa. The proportion of NCD-related deaths increased from 24% in 2019 to 37% in 2020. Africa CDC has developed strategic priorities for NCDs including enhancing capacity to develop and implement policies to prevent, protect and manage them; political advocacy for better financing; workforce development; and increased access to essential technologies, medicines and diagnostics in Africa.

Climate change is among the most significant health threats facing the African continent. With increasing temperatures, environmental and ecological changes, the continental disease profile is changing. The 2023 monsoon flooding in Malawi and Mozambique exacerbated the cholera outbreak, leading to the largest and most deadly outbreak in Malawi. It is critical for Africa to build a climate-resilient health system with the utmost urgency. The unmet needs of sexual and reproductive health, malnutrition, injuries and mental health also remain major health challenges in Africa.

In February 2022, the African Union Assembly of Heads of State and Government elevated Africa CDC to an autonomous public health institution. Despite its early successes, it must improve its operations to fulfil the substantial demands placed upon it. Our vision is for Africa CDC to become world class and self-sustaining. This entails assembling a team of renowned experts and reliable on-the-ground rapid-response units. Adequate funding and efficient resource allocation are crucial. Africa CDC will contribute to strengthening national institutions to detect, prevent and control diseases, aligning with universal health coverage, the Sustainable Development Goals and the AU's Agenda 2063. To achieve this, we propose Africa CDC's New Deal,

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Multiple factors contribute to the rise of emerging infectious diseases in Africa, with more than 100 disease outbreaks reported every year"

JEAN KASEYA

Jean Kaseya is the first director-general of the Africa Centres for Disease Control and Prevention. A Congolese medical doctor with degrees in epidemiology and community health, he has over 25 years of experience in public health. Prior roles include nine years with UNICEF, two years with Gavi, the Vaccine Alliance, as well as work with the World Health Organization leading the development of the meningitis A investment case as well as being senior adviser for emergency response. He has been senior adviser to the president of the Democratic Republic of Congo, head of routine immunisation with the National Expanded Programme on Immunization and chief medical officer.

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focused on governance, performance and accountability. It involves integrating digital technologies and public health intelligence and establishing effective partnerships. It will use performance indicators to ensure transparent and accountable alignment and coordination of interventions and resources.

AN INSTRUMENTAL DEAL

Africa CDC's New Deal will be instrumental to implement the New Public Health Order. Working alongside

a variety of stakeholders, it will integrate the continent's public health assets. To do this, the following actions are necessary.

First, we must enhance the capability to combat infectious diseases by strengthening preparedness and response capacities, risk assessment and disease prevention. This includes establishing common drug-procurement mechanisms, subregional medicines depots and medical supplies.

Second, we must accelerate the digitalisation of biomonitoring, telemedicine and real-time health data management to advance health systems. This will enable equitable access to telemedicine and biomonitoring, and streamline programme management and responsiveness to epidemics.

Third, we must enhance collaboration with public-private partners and African communities across all levels of intervention, for example expanding partnerships to accelerate the digital health transformation in Africa and involving high-level political representatives to advocate for health funding.

Fourth, we must raise awareness among different audiences, including the private sector, governments and community organisations. Diverse communication channels and activities, such as sports, cultural and business, will promote Africa CDC's vision and build trust.

Fifth, we must implement innovative financing mechanisms. Africa CDC has successfully mobilised resources from institutions and private investment for specific projects, employing a blended financing model. Introducing sustainable financing mechanisms, such as an African air tax, can strengthen our autonomy and capacity for action.

Sixth, we must expand the industralisation of health products and technology innovation and manufacturing. Ensuring the supply security of health product commodities of Africa requires the localisation of manufacturing of priority vaccines, therapeutics and diagnostics.

Africa CDC leads the continent in addressing health security challenges. It aims to improve and become more effective, efficient and reliable in supporting AU member states. Africa CDC will integrate the five key actions of the New Public Health Order into the New Deal and thus fulfil its mandate. ∎

Transformation:
supporting a shift from analogue to digital health systems

Among the most severe consequences of the Covid-19 pandemic has been the decline and even regression in global progress towards the Sustainable Development Goals. With poor countries disproportionately affected, the risk of growing inequities is exacerbated, compounded by shrinking fiscal space for health systems strengthening and decreasing global political appetite for health sector investments after multiple years of high pandemic-related expenditures. The onerous task, therefore, of doing more with less is shared universally, as the 2030 deadline looms.

One obvious solution to the complex challenge of improving health system performance to reach the goal of universal health coverage is to use digital technologies to improve efficiency, coordinate care across verticals, strengthen programme performance through trustworthy, real-time data, and focus on the centrality of services that meet people where they are in their health journeys. Digitalisation has arguably been the most important recent shift in key sectors such as banking and education. And digital health – using appropriate technologies to improve the delivery of and access to curative and preventive health services – is rapidly maturing.

GENESIS
In 2019, as it shifted to focus on country priorities and reduce fragmentation, the World Health Organization established the Science Division and its Department of Digital Health and Innovation to meet the growing demands for evidence-based

Digital health can fundamentally shift how we think about primary health care and universal health coverage – but we must be willing to challenge the status quo that has been cemented in decades of practice and reimagine Health For All

By Alain Labrique, director, Digital Health and Innovation, World Health Organization

guidance and technical support. The department developed a comprehensive Global Strategy on Digital Health (2020–2025) to outline key actions required to enable countries to strengthen health systems through evidence-based digital health approaches. The department and its mandate were built on over a decade of technical foundations in eHealth, telemedicine and mHealth – with clear guidance on core building blocks needed for an enabling ecosystem, a consensus taxonomy proposing a shared language for digital health and evidence-based guidelines on digital interventions for health system strengthening. Across six regions, WHO expertise in digital health is being bolstered, as are regional strategies, informed by extensive consultation.

Post-pandemic, one highly sought area of technical support is in shepherding digital health system transformation. Globally, opportunities were missed

to leverage digital health to manage the Covid-19 response because of a lack of the enabling foundations necessary to rapidly develop, adapt and scale digital systems locally. Independent of income status, countries without core infrastructure, policy and legislation, technical architecture, national interoperability standards and workforce capacity were less able to respond using these technologies. One key reason for these gaps was inadequate investment in the enabling environment, with funders preferring the short-term wins and lower risk profiles of time-and-scope–delimited digital projects instead of digital public infrastructure. The value of a more systematic, strategically planned approach has been supported by several country exemplars of robust digital pandemic responses (for example India, Singapore and Rwanda) – where investments in digital architecture such as national identification schema, data governance policies and national interoperability standards have been made for over a decade. These contributed to improved technical capacity to implement systems, and also generated public trust – leading to better engagement and participation. The WHO, in partnership with multiple agencies, is working on a common roadmap to support governments in developing, costing and implementing a digital transformation strategy.

At the recent World Health Assembly, the interim report on the Global Strategy on Digital Health was received with widespread support and encouragement. The rapidly growing global digital health ecosystem requires accelerated action in strengthening capacity to enable equity within and across regions. This means creating a workforce that can advise governments and their populations on effective digital health norms and standards, and ensuring recommended health and data content is available to the health systems and the populations they serve. It means meeting the need for timely, relevant guidance on norms, standards, policies and governance models to foster enabling ecosystems that surround effective digital investments. And it means ensuring that quality-assured technological building blocks are accessible to governments and supporting institutions to build high-performing, user-centred solutions that increase the likelihood of an equitable digital future. Political will, resource allocation and technical capacity are rapidly converging – and appropriate support to governments from the WHO together with partner agencies will catalyse this opportunity.

In August 2023, the WHO launched the Global Initiative on Digital Health, a network of networks to help coordinate, align and amplify best practices across the six WHO regions and partners within and outside the UN system. This work focuses on accelerating the Global Strategy on Digital Health with its primary objective to support member states in developing resource- and maturity-appropriate costed strategies, followed by identifying quality-assured technical support to help establish the necessary policy and governance environment. The initiative will also promote access to vetted building blocks (such as digital public infrastructure and generic digital public goods) to kick-start locally owned and managed solutions. The WHO maintains country-facing technical

ALAIN LABRIQUE

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resources to assist in these processes, from a standardised maturity assessment to the Digital Health Atlas (a national/regional portal for the systematic documentation of digital projects and investments), to a digital clearinghouse that assures the quality of technical products for interoperability and technical compliance to guidelines and best practices.

The WHO also launched, this year, the Global Digital Health Certification Network, assuming custodianship of the European Union's highly successful Digital Documentation of COVID Certificates network – connecting over 80 countries through a brokered transitive trust, allowing individuals to travel with credentialled health certificates freely within and across borders. This important piece of global digital health architecture enables future cross-border uses, including for patient-mediated summary patient records, digital paediatric immunisation cards and even telemedicine.

DIGITALISATION VERSUS TRANSFORMATION

As health moves from an analogue to a digital paradigm, it is important to differentiate digitalisation from transformation. Digitalisation can be interpreted as the migration of extant processes – often with origins in decades-old systems predicated on the many limitations of paper-based documentation, reporting and planning. We must ask whether tomorrow's digital health systems are merely computerised versions of the dysfunctional analogue systems of the past – or have they been reimagined with the possibilities unlocked by a digital reality? When freed from the physical register, patient summaries and future scheduled tasks can be shared across a connected health workforce, enabling timely, continuous care in ways previously impossible. Real-time visibility of programme coverage requires new ways of monitoring and the governance/policy architecture to respond and adapt resource allocation weekly, if not daily.

Digital health can fundamentally shift how we think about primary health care and universal health coverage – but we must be willing to challenge the status quo that has been cemented in decades of practice. Digital transformations have implications for established processes that affect entire ecosystems – political, societal and economic. Disruptive change to large systems is rarely embraced with enthusiasm, given the complexity and unpredictability of downstream impacts. Driven by the strong moral imperative of accelerating progress towards the SDGs and, more importantly, ensuring people have access to the care they need, when and where they need it, we must collectively challenge 'business as usual', and reimagine Health For All. ∎

By Jake Atkinson, campaigns
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Alternative futures for digital health

What would the future of digital health look like if it was created by and for the people, in all our diversity? There's one way to find out – and it involves the participation of diverse health advocates and an intersectional lens

The digital transformation of health holds the potential to revolutionise healthcare delivery, empower patients, strengthen health systems, and spot and prevent the next pandemic before it begins. It has transformed how people access health systems and seek care: Transnational participatory action research by the Digital Health and Rights Project, for example, finds that young people in low- and middle-income countries use smartphones, social media and social chat groups to empower themselves to access and share health information. Digital spaces have also created new possibilities for local innovation and 'borderless' communication. But to make the digital transformation work for all, we need digital health to meet diverse needs – and that requires a long-overdue conversation about how to create more inclusive and democratic forms of digital governance that address the appropriate role of the private sector.

Given its powerful potential, it is unsurprising that global health agencies, philanthropies and development organisations are urging many countries to go 'digital first', and to rapidly pilot and scale up the use of new digital tools and artificial intelligence. But this development has often happened in a fragmented, piecemeal and techno-optimistic fashion, based on diverse partnerships with private enterprises that promote unproven new interventions. In the rush to digitise, evidence-based public health and data and digital governance are too often left as afterthoughts.

A DOUBLE-EDGED SWORD
But by now, it should be clear that the digital transformation is a double-edged sword. Some digital solutions promoted as panaceas during the Covid-19 pandemic have quietly flopped. Access to digital tools, such as smartphones, and the online world are profoundly unequal, especially for women and girls in South Asia and Southern Africa. Globally, an onslaught of human rights violations is being both precipitated and rebuffed, almost in waves, by transformative digital technologies and their use. With every development that can expand access to health or empower more people, connecting them across borders, comes new questions of data security, privacy and algorithmic bias. Cyber-bullying, misinformation and disinformation, online abuse, hate speech and gender-based violence have

forced many women and marginalised or minoritised populations to limit their online presence. Those with the most to gain or lose feel the impacts most sharply: for LGBTQI+ communities, for example, fears of threats, stalking and persecution online remain very real, especially in the 67 countries that criminalise homosexuality.

Most of us seem to have become complacent to these harms, thanks to the fast pace of change, but the digital world in which we live is profoundly shaped by business interests. From the platforms we use to access news and information, to messaging apps we use to connect with family and friends, to our work life, and even dating, shopping and entertainment – for those with access, almost all of daily life now takes place on platforms developed for profit. This includes health: Google now commands over 85% of global online searches for information, creating a near-monopoly on access to health information. Over 60% of the global internet population uses a mobile phone to go online, making much of the world dependent on telecommunications companies to check symptoms or chat with a medical provider. A small number of data-mining giants now command a growing percentage of government contracts. At the core of this trend are the demand for private actors to collect, aggregate and commodify intimate data from every aspect of human life, using this treasure trove to shape new tools for profit.

THE INFLUENCE OF PRIVATE ACTORS

To date, digital health priorities and governance have also been influenced by private actors, in part because of their technocratic expertise. Multi-stakeholder fora at the United Nations and in other global governance spaces are on the rise, with champions saying the presence of the private sector is essential to ensure governance is grounded in pragmatic realities. However, some critics argue multi-stakeholderism that does not recognise power inequalities may also undermine meaningful democracy, with disproportionate power given to private interests.

These realities make it difficult for us to imagine digital spaces for the future that are safe, accessible and human rights–respecting for all. As a first step, rather than homogenising 'beneficiaries', we need to recognise the heterogeneity of populations, and their varying needs and challenges. Using an intersectional lens is critical to understanding how age, gender, religion, geographical location, class, race/ethnicity, economic status, sexual orientation and other political and social factors in different contexts, all impact on the way digital technologies are accessed and utilised. To imagine alternative futures, we also need to broaden traditional biomedical categories of health to acknowledge that the social, economic and political context has an enormous impact on the reach and potential of digital solutions. What would the future of digital health look like if it was created by and for the people, in all our diversity?

A truly rights-based approach to digital technologies in health must be built on the meaningful participation of civil society and diverse, and also 'less visible' communities – including young people – in national and global governance of digital health. Health advocates of all ages must mobilise to promote digital rights, using an intersectional lens that addresses diverse forms of digital inequality as well as the diverse possibilities for new forms of inclusion, solidarity and voice. ∎

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By Anurag Agrawal, dean, Biosciences and Health Research, Trivedi School of Biosciences, Ashoka University

The major health system challenges are a mix of technical problems, leading to fragmented non-interoperable data silos and structural problems, with different goals and mandates among the various actors.

Effective health care requires an effective flow of people, services and associated information through a streamlined sequence of processes. The digital transformation in health care promises to enhance our ability to generate, manage and use such information through information technology and big data analytics. Using the analogy of an information highway, the health informatics challenge extends beyond admitting and collecting tolls from individual vehicles to innovatively measuring traffic flow and other performance

Significant technical and structural inefficiencies plague the world's health systems, but by enabling policies that ease digital health innovation and encourage investment, we can create space for integrated digital strategies that deliver better health care

indicators. It is entirely possible for those managing the highway to share data on performance, bottlenecks, inefficiencies, design issues and the efficacy of interventions without compromising the privacy of vehicle owners. Similarly, although health data itself is private, such that unrestricted public access is not advisable, there should be no such restrictions on data about the efficiency and costs of healthcare processes. Yet there is tremendous resistance to transparency in healthcare system processes, despite the common knowledge that healthcare errors are a leading cause of adverse patient outcomes. Given the burgeoning costs and declining patient satisfaction globally, there is an urgent need to

A plague on health systems

integrate, analyse and make available such information, without hiding behind the shield of health data privacy.

AN IDEAL SYSTEM

An ideal digital health data system should operate at a national scale, mapped to other relevant data such that there can be seamless cross-indexing and inferencing. For example, one could map geo-tagged environmental data such as air or water pollution with population-level health patterns to understand environmental health risks. We have seen important examples of globally important health insights from countries with highly connected national health systems, such as the United Kingdom or Israel. During the initial rollout of Covid-19 vaccines in Israel, the availability of digital data covering most of the population allowed rapid estimates for vaccine efficacy in preventing infections or hospitalisation. In the UK, national health data coupled with SARS-CoV2 genomic surveillance data led to precise estimates of infectivity, virulence and vaccine evasion properties of variants.

Unfortunately, in most instances, data comes in non-interoperable formats, whether in high-income or low- or middle-income countries. This is often by design, either to maintain data hegemony or to increase the dependence of existing clients on solution providers and vendors. This well-known problem needs to be regulated at the national policy level by specifying essential interoperable standards for all important data. Once such standards are in place, it is relatively easy to develop open-source common data model tools that permit federated learning across multiple data. The CDM movement is more difficult in some first-mover countries such as the United States, where health data is already large and heavily fragmented. Second movers, such as India, which underwent a digital transformation in the social and financial spheres before addressing health, have the advantage of being able to create a common national digital strategy that brings together national identification, universal payment interfaces, health insurance, health services, data standards and regulations.

Additional efforts will be needed to overcome structural challenges within a mixed healthcare delivery system. Health is an unalienable right, and a strong public system must exist to meet health needs. However, there must also be encouragement for private investments in health systems to promote innovation and technological advance. From the digital and data perspectives, this demands balancing the needs of individuals, society, entrepreneurs and investors. An ideal ecosystem would integrate both the public and private sectors, with optimisation of public spending in a sector-agnostic fashion with the goal of maximising societal benefit. This requires trust – and the best way to engender such trust is probably a verifiable digital data flow, with adequate safeguards against tampering or misuse.

OVERCOMING FRAGMENTATION

The digital transformation of India is expected to transform health care through such a trusted digital data flow. Its national digital strategy contains an insurance component (Ayushman Bharat) that supports in-patient care at participating private health organisations for all poor and vulnerable families. A verifiable end-to-end digital framework is expected to transparently integrate previously fragmented aspects, ranging from eligibility assessment of beneficiaries to reimbursements to health service providers. Public support for private health care will supplement the limited capacity of public institutions, while also creating viability for private investment in advanced health care. Digital workflows and data informatics are expected to increase efficiency and insights, especially after integration of expanded wellness and preventive care services under the national digital health mission. The use of associated data for the common good, with minimal individual risk, is the subject of forthcoming digital privacy legislation. Planning well is half the battle and this is a good start.

Major technical and structural inefficiencies plague health systems, limiting the benefits of digital transformation. Enabling policies that ease digital health innovation and promote investments, without compromising on fundamental public values, are needed to ensure desired health futures. ∎

> " An ideal digital health data system should operate at a national scale, mapped to other relevant data such that there can be seamless cross-indexing and inferencing"

ANURAG AGRAWAL

Anurag Agrawal is dean of Biosciences and Health Research at the Trivedi School of Biosciences at Ashoka University. After completing graduate medical education at the All India Institute of Medical Sciences in Delhi, he trained in internal medicine, pulmonary disease and critical care at Baylor College of Medicine in Houston, followed by a PhD in physiology from Delhi University. He is interested in a new vision of health and health care seen through the lens of emerging technologies.

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Seamless, simple and speedy

Early digital efforts have been piecemeal, fragmented and siloed, but if harnessed correctly, digital technology and data can accelerate a new era of improved health care for everyone

In the quest to achieve Health For All, health systems aim to deliver everything needed to prevent and treat ill health, affordably and for everyone.

But it has become harder to deliver on these aspirations. First, we know more about the factors that influence health and well-being: the determinants of health are not only biological, behavioural and social, but also digital and commercial. Furthermore, awareness about the environmental determinants of health keeps growing (and changing) as we learn more about the health effects of heavy metals, microplastics, per- and polyfluoroalkyl substances, and other types of pollution, and as the world's climate changes. The World Bank estimates the total cost of lead exposure at 6.9% of global gross domestic product (due to IQ losses and increased cardiovascular disease), higher than the combined cost of ambient and household air pollution with disproportionate effects in low- and middle-income countries. Over 60% of infectious diseases will likely be exacerbated by climatic hazards. The intractable inequities in health are exacerbated by these determinants, which are more prevalent among vulnerable populations and for which services to address them are less accessible – creating a vicious circle where these determinants perniciously grow.

Second, Covid-19 has affected national economies. Its wide-ranging impacts have impeded governments' ability – especially in low-income countries and countries in fragile and conflict situations that need to invest the most in strengthening their health systems – to return to pre-Covid levels of health spending. The efficient use of every cent spent on health is a great priority, especially as governments must – simultaneously – make up lost ground and strengthen health systems to be more resilient to future health emergencies.

Third, the health workforce is struggling. Health workers have suffered immeasurably during the Covid-19 pandemic, resulting in burnout, mental health concerns and high attrition. This has exacerbated staff shortages that were already of concern: the World Health Organization estimates that in just six years, there will be a shortage of 10 million health workers, mainly in low- and middle-income countries.

Fourth, emerging evidence shows the extent to which human systems are linked and integrated. Research has exploded on the human microbiome and its effects on immune function, neurotransmitter production,

By Marelize Görgens, lead, Digital Health Flagship Program, World Bank

neurodegenerative diseases, cardiometabolic diseases, vitamin absorption, arthritis, colorectal cancer, glucose metabolism, frailty, osteoporosis, functional gut disorders and more. Advanced big data analytics enable much of these findings. Yet inequity exists here too: this research has been done mainly in the United States and Europe, with minimal done in Africa. There is a need for more local government leadership and research financing, and more focus on diseases of highest public health importance in Africa.

THE NEED FOR PERSONALISATION
Other areas have also emerged where more integrated thinking and interventions are needed – such as new evidence for reducing tuberculosis incidence and mortality. Tuberculosis has resurfaced as the largest cause of disease burden worldwide. A recent study in India showed that providing a basic food rations package and multivitamins to tuberculosis patients and their immediate families reduced mortality by a whopping 60% and also infections to family members by almost 50%. Populations need different services from in the past, and each person may not respond the same to the exact same intervention, suggesting that personalisation is needed.

Fifth, artificial intelligence holds the promise to accelerate health and drug discoveries, provide personalised disease treatments, deliver new types of diagnostics and health services, make health system administration and financing easier, ease the administrative burden of health workers, and provide new ways to access accurate health information that will help people make decisions for better health.

Health systems face the impossible task of metamorphosising faster, with fewer staff and less resources, at a time of accelerated and expanded scientific discovery and declining trust. Health systems need to quickly assimilate the accelerated pace with which new evidence is generated and, simultaneously, deliver new, more, better, seamless services that reach everyone.

Digital technology and data hold the key to fast-tracking simple and seamless solutions that deliver value exponentially. Digital can help countries address universal health coverage gaps, manage health systems better and deliver care that accommodates the new evidence.

MARELIZE GÖRGENS

Marelize Görgens is the lead of the Digital Health Flagship Program at the World Bank. Armed with expertise in engineering, mathematical modelling, public health, data science and integrative medicine, she first rose to the ranks of director at a global management consulting firm. She then worked for a government ministry in a low-income country to strengthen information systems. She then embraced entrepreneurship in health analytics, collaborated with non-governmental organisations on strategy, and excelled in academia. She has a prolific publications record and serves on the editorial boards of two journals.

🌐 www.worldbank.org/en/topic/health/publication/digital-in-health-unlocking-the-value-for-everyone

Well-chosen, widely available, affordable digital technology with connected, well-governed health data systems – integrated into health systems – can support countries' delivery of the right services to more people with less financial stress. Connected electronic health records and virtual interactions such as telemedicine can bring up to 15% in efficiency gains and free resources for addressing patients' other needs.

Early digital efforts have been piecemeal, fragmented and siloed. The World Bank's recently published Digital-in-Health: Unlocking the Value for Everyone suggests that countries need a new mindset about digital health investments. Digital-in-health can make health personal, contain costs, reduce health differences, help accelerate public health actions and improve conditions for health workers. As in banking and communications, it can also improve efficiency and reduce inequity, provided it is intentionally designed.

To move to the next level of impact, countries need to do three strategic things:

1. Prioritise the digital solutions that respond to people's health needs, are evidence based and are equitable.

2. Connect to deliver new, more, better, seamless health services through leadership and partnership, data governance, and to fill digital infrastructure and health information gaps.

3. Scale to ensure equitable access to all, improve digital skills and literacy, create

synergy with wider digital transformation efforts, nimble partnerships, and support with financing, monitoring and implementation.

There are pragmatic, low-cost aspects of digitalisation to focus on, no matter the maturity of a country's systems, digital infrastructure or financing situation. Setting up health data governance, regulations and standards for interoperability of digital solutions are not costly but will reduce siloed digital solutions and help manage fragmentation. All countries should pursue them.

Over the past decade, the World Bank has invested almost $4 billion in digital health, including in health information systems, digital governance, identification systems and infrastructure. There is significant and growing demand from countries in their journey to bring digital and data into health systems in ways that protect, expand and innovate, acknowledging that each dollar allocated to fortify health systems is also an investment in digitalisation and data utilisation to enhance the effectiveness of health systems for the benefit of all.

Digital works. Covid-19 has shown that countries with higher levels of digital adoption prior to the pandemic had fewer Covid-related deaths and cases per million population. The choices that governments make to invest in digitalisation and data today will move us to Health For All for generations to come, regardless of the health emergencies to come. ∎

A more equitable future for health information

Making high-quality health information accessible to everyone involves meeting people where they are – and YouTube Health is at the vanguard of implementing foundational principles for credible sources of such information

At YouTube, we believe that information is a key determinant of health, and we are dedicated to making high-quality health information accessible to everyone. Over the years, Google and YouTube have been at the vanguard of implementing foundational principles for credible sources of health information,[1,2] launching products to raise authoritative health information, such as health content shelves, health source information panels and knowledge panels.[3,4] We continue advancing our mission and addressing health information disparities by deeply investing in technologies, partnerships and research to increase equitable access to high-quality health information, bring diverse perspectives from underrepresented communities and

By Garth Graham, head, YouTube Health

ensure a responsible approach to tackling medical misinformation.

REIMAGINING RESPONSIBILITY
As we transform how health information is delivered and shared globally, the Covid-19 pandemic highlighted the importance of access to accurate health information. We recognise that medical information, and misinformation, continues to evolve. We have taken important lessons we have learned about the most effective ways to tackle medical misinformation to design a more transparent and robust policy framework to address health topics that are prone to misinformation, now and in the future.[5] One important step towards meeting

people where they are is ensuring that viewers trust the health information they find on YouTube. For example, cancer is one of the leading causes of death worldwide. There is stable consensus among local and global health authorities about safe cancer treatments, yet cancer is a topic that is prone to misinformation. When cancer patients and their loved ones are faced with a diagnosis, they often turn to online spaces to research symptoms, learn about treatment journeys and find community. As we continue to increase and raise engaging and informative cancer-related videos from a range of authoritative sources, we are also removing misinformation that promotes cancer treatments proven to be harmful or ineffective, or content that discourages viewers from seeking professional medical treatment.

INNOVATING ACCESSIBILITY
Effective communication is at the heart of improving people's health. Yet another important step towards meeting people where they are is meeting the language needs of diverse populations. Language barriers are a significant driver of health disparities. Making videos in multiple languages can be labour and resource

GARTH GRAHAM

A cardiologist, researcher and public health expert, Garth Graham joined Google in 2020 as head of YouTube Health. He served in two US administrations as US deputy assistant secretary for health. Garth also served as president of the Aetna Foundation and vice president and chief community health officer at CVS Health.

✕ @YouTube   🌐 health.youtube

intensive, so YouTube is collaborating with trusted health partners to pilot Aloud, our AI-powered dubbing tool[6] to responsibly and efficiently reach global audiences with critical health information at no cost. We plan to continue improving and expanding this tool to help even more health creators unlock authoritative health information that may otherwise be contained to a single language.

BUILDING TRUST
When people turn to platforms like YouTube with health questions, they look not only for high-quality information, but also for messengers and communities with whom they can relate. As part of YouTube Health's ongoing efforts to build partnerships with a wide range of credible, trusted experts across the health industry, we believe that meeting people where they are also means increasing the diversity of voices and perspectives, and connecting with people in ways that are not only scientifically accurate but also representative of who they are. We are excited to continue advancing health equity through our initiative to support health professionals creating high-quality health content highlighting underrepresented communities.[7]

While we recognise that there is more work to be done, we are excited with every step we take towards realising our mission to make high-quality health information accessible to everyone. By partnering with trusted leaders across industries and meeting people where they are, we are confident that together we can and will reimagine how health information is shared to help everyone, everywhere, to live healthier lives. ∎

[1] https://nam.edu/programs/principles-for-defining-and-verifying-the-authority-of-online-providers-of-health-information/

[2] https://cmss.org/wp-content/uploads/2022/10/CMSS-NAM-WHO-Identifying-Credible-Sources_Executive-Summary_Fnl_10.7.2022.pdf

[3] https://blog.youtube/news-and-events/new-ways-licensed-healthcare-professionals-product-feature-application/
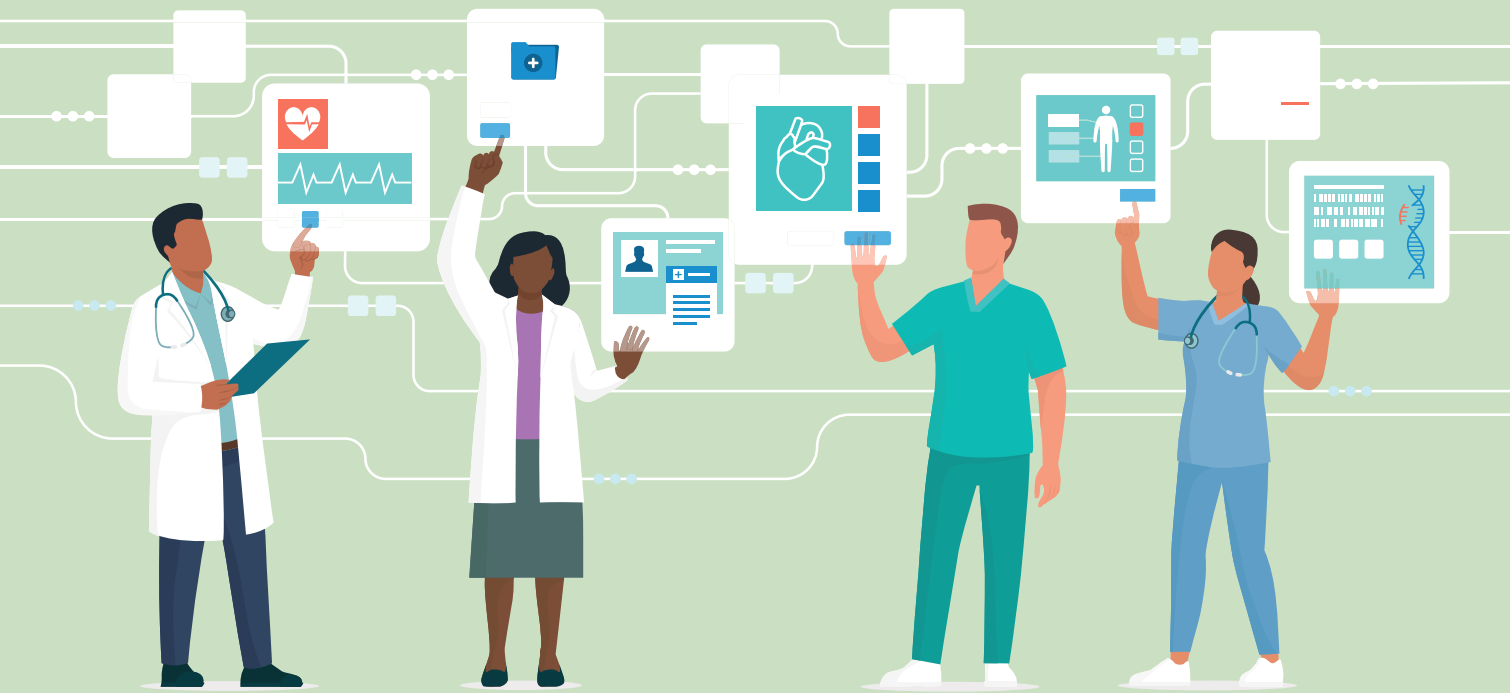
[4] https://blog.google/technology/health/world-health-organization-google-collaboration-health-information/

[5] https://blog.youtube/inside-youtube/a-long-term-vision-for-medical-misinformation-policies/

[6] https://aloud.area120.google.com/

[7] https://blog.youtube/news-and-events/expanding-equitable-access-to-health-information-on-youtube/

Health data: everyone's business

By Mathilde Forslund, executive director, Transform Health

Of all the data generated about us every day, our health data is among the most personal and sensitive. Our interactions online and offline leave a continuous trail that tells a story about our past, current and future health. Data can be used to predict, prevent and even influence our health outcomes. Our health data, when combined with that of others, is also a huge resource for public health. More and better health data can improve policymaking, programmes and resource allocation. However, we need to find ways to maximise the potential of health data to accelerate progress on universal health coverage and other health goals while also ensuring the right safeguards are in place to protect individuals' privacy and rights.

The need for improved health data governance has become even more salient with the rapid transformation of our health systems due to the digital revolution. Exponential increases in the amount of data available presents a double-edged sword. On the one hand, there are huge opportunities to leverage data to improve health outcomes. On the other hand, in the absence of robust governance systems,

We should all have a say in how our health data is collected, managed, used, stored and disposed of, as while exponential increases in the amount of data available present opportunities to improve health outcomes, they also risk data misuse and privacy infringements

there are also risks of missed use (as in missed opportunities to leverage data for public benefit) or, alarmingly, misuse of our data (such as misuse of patient data that leads to large-scale privacy infringements).

Despite the potential benefits and risks, health data remains poorly governed at the national, regional and global levels. Many countries have developed important regulations and policies for data protection and data security but pay insufficient attention to the specific governance considerations required for health data and how to strike the right balance between protecting individual rights and enabling positive use of health data for public benefit. Some governments are taking steps to address this, but the overall landscape is fragmented. There is no consensus among countries on what good (and equitable) health data governance regulation looks like and what the minimum standards should be across public health systems. Nor has there been sufficient discussion or action to learn from the

good practices of countries, which could help strengthen approaches across borders.

FOUNDATION FOR PUBLIC TRUST

Stronger health data governance is needed to lay the foundation for improved public trust in health data systems and to provide the general public with avenues for redress in case they feel their rights are being violated or their data is being misused. This is why Transform Health is calling for a health data governance framework to build consensus and alignment across countries on minimum common regulatory standards for governing health data. Learning from existing good practices and approaches from countries and building on existing norms, standards and principles, a framework would forge agreement on the necessary and optimal regulation and legislation for the effective and equitable governance of health data. In turn, this would support countries in strengthening their national legislation and regulation and also harmonise and support cross-border data flows, with the needed protections in place.

A framework should be developed through an inclusive and consultative process to leverage and reflect the wide perspectives and expertise from across stakeholder groups and experts. Importantly, this process must include civil society so it has a say in how people's data is being collected and used. A framework should also be informed by equity and rights-based principles and build on existing duty obligations and global standards, as well as learnings from countries. In April 2022, Transform Health published a set of Health Data Governance Principles based on the goals of protecting people, promoting health value and prioritising equity. The principles have now been endorsed by more than 150 organisations and governments and provide a strong foundation for the development of a framework.

There is growing political support for this agenda with several governments publicly expressing support for a common health data governance framework, including at this year's 76th World Health Assembly. More than 150 organisations have also called on the World Health Organization to lead the development of a framework, for subsequent adoption by governments at the next World Health Assembly. This issue is also gaining traction at regional levels. In response to the African Union's calls for sector-specific data governance, Transform Health is working with the Africa Centres for Disease Control to establish the new Flagship Initiative on Health Data Governance. The initiative will build consensus and legitimacy on an African Common Position on health data governance and provide tools and technical guidance to support national health data governance approaches on the continent.

MATHILDE FORSLUND

Mathilde is the founding executive director of Transform Health and leads the Enabling Function of the coalition. She has spent most of her career building partnerships — among civil society, the private sector, international organisations and foundations — and setting up coalitions in digital health and nutrition. She served as the coalition director at World Vision's One Goal Campaign: Nutrition For Every Child. She is passionate about championing the rights of young people and women on issues such as data/digital rights and inclusion.

 @mathildeforslun @Trans4m_Health
 transformhealthcoalition.org
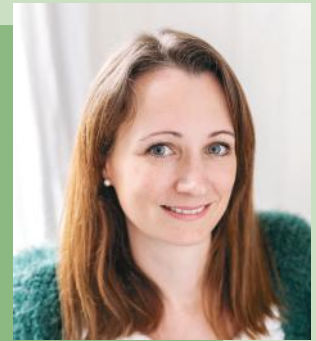
AN IMMINENT START

Given the urgency of the need to strengthen health data governance regulation, it is important that the process to develop a framework starts imminently. Transform Health stands ready to support this process, in particular by facilitating, together with our partners, multi-stakeholder consultations to gather wide insights, expertise and best practices to help inform a framework. As well as pushing for political action to strengthen health data governance, Transform Health is working to raise awareness and mobilise public opinion about health data governance. As part of our MyDataOurHealth campaign, which is driven by community-based organisations, we are engaging individuals on questions of access, control and rights over their health data. We are shifting health data from a technical issue to a personal one by putting individuals in the driving seat and amplifying their stories.

Health data lies at the heart of who we are as individuals, as groups and communities, and as a species. This is even more so in a digital age where large parts of our identities are stored and reflected in disparate and composite data sets. How our health (and health-related) data is collected, managed, used, stored and disposed of is not just the business of governments and technology companies – we all should have a say. Through the inclusive co-creation of a global health data governance framework, combined with greater action at country level to give people more control over their health data, we can realise health for all in the digital age. ∎

> "We need to find ways to maximise the potential of health data to accelerate progress on universal health coverage and other health goals while also ensuring the right safeguards are in place to protect individuals' privacy and rights"

By Melissa
Gasser, PhD
candidate,
University of
Washington

Equity in eHealth: amplifying youth voices in mental health care

While already growing prior to the Covid-19 pandemic, the prevalence of eHealth treatment options (digital health interventions delivered via phone calls, video-conferencing, websites, mobile applications and other technology-based services) has greatly accelerated across healthcare specialisations. The rapid uptake of eHealth illuminates its vast potential to address equity concerns while increasing overall access to mental health care globally. Careful governance and a broad integration of stakeholder involvement at every stage of development and testing are needed, however. Involving youth stakeholders in developing and disseminating eHealth to ensure equity and privacy are prioritised is imperative, not only for youth-focused interventions, but also for mental health care in general.

The rapid uptake of eHealth shines a light on its immense potential to close equity gaps and boost access to mental health care globally – and involving young people in developing and disseminating eHealth can bring broad benefits

ACCESSING CARE
Many individuals in need of mental health care face practical challenges in accessing care, challenges that eHealth treatments can help to reduce or eliminate. The remote nature of eHealth options lessens the costs and time spent on transportation, and increases accessibility for those in rural areas and those without access to transportation. eHealth options can also provide a larger pool of possible providers, depending on local provider licensing regulations. Individuals thus benefit from easier scheduling, reduced waitlists and access to providers in a much larger geographic area than they would be restricted to with in-person health care. This further aids those looking for providers who offer less common specialised treatments, are covered by their health insurer or charge lower session fees. Beyond provider-dependent options such as telehealth, stand-alone eHealth interventions, such as some mobile- and web-based interventions, allow individuals to access them at any time and place as needed. This eliminates scheduling concerns, and further broadens the number of individuals able to access mental health care

through eHealth interventions' greater scalability. eHealth presents additional promise for youth, many of whom are likely to need transportation assistance, appointments outside of a rigid school-day schedule and youth-specific providers, who are likely to be comfortable with using technology to access care.

EHEALTH CHALLENGES

To work towards equity in accessibility, providers, institutions and governments must be mindful of ensuring that those already disadvantaged are not further left behind by the rise of eHealth. The deleterious effects of decreased investment in in-person health care, or digital health options supplanting rather than supplementing existing care options, would disproportionately affect those already less able to access mental health care. Globally, approximately one in three people do not have internet access, a requirement for many eHealth interventions. In addition to reliable internet access, privacy is a significant concern for many individuals, both in terms of access to a private space to engage with mental health care if it involves speaking to a provider, and in terms of data security, especially for eHealth interventions with private companies. In many countries, youth are legally recognised as a vulnerable population and thus protected by additional regulations, which are no less needed in eHealth where regulations are still emerging.
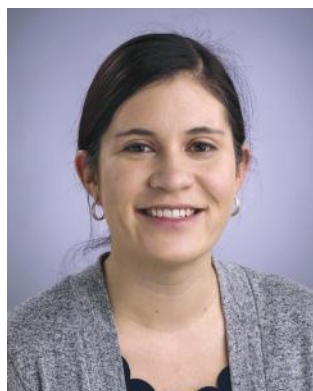
MOMENTUM AND GOVERNANCE

In the continued development of eHealth, stakeholder engagement is critical to centring equity of accessibility and privacy, and ensuring that advances in this area help to close, rather than expand, gaps in mental health care for those who are already disadvantaged. Efforts by eHealth developers to respond to youth stakeholders' concerns about access to care and privacy benefit all those in need of mental health care. Including youth participants in the research process (from needs assessments through dissemination efforts) and groups such as the GHFutures2030 Youth Network (a global group of youth stakeholders dedicated to applying their diverse disciplines to advancing youth priorities involving digital health), intervention developers and governing bodies can improve both the fit and effectiveness of interventions.

Governments can support these priorities through grant requirements to include stakeholders throughout the

" In the continued development of eHealth, stakeholder engagement is critical to centring equity of accessibility and privacy, and ensuring that advances in this area help to close, rather than expand, gaps in mental health care"

research process and encourage health insurance providers or their national healthcare systems to cover or offer more eHealth options that meet these standards. Governments can also take guidance from recommendations with global perspectives, such as the World Health Organization's Global Strategy on Digital Health and a recent report by the Lancet and Financial Times Commission. These include a focus on greater regulation of technology companies to align with these priorities in their products and encouraging transnational cooperation to amplify the effectiveness of new health technologies and standardise regulations. Consent processes and privacy policies (such as data confidentiality and the minimisation of data collection) that address youth needs benefit everyone. International standards for developing and governing eHealth reduces the need for eHealth providers to develop and support distinct product versions and allows easier continuity of use for individuals who are travelling or who move to another country.

Standardisation also can be useful in smaller geographic areas, such as between states in the United States, where national licensure for providers and other shared regulations would produce similar benefits to providers and those in need of mental health care, for example students who reside in one state during the school year and another in the summer.

At this critical juncture, the mental healthcare field and governments globally have the ability and responsibility to respond to the rapid growth of eHealth with enthusiastic support for the integration of youth and other stakeholders at every stage of development, expansion and judicious regulation to bolster and guide the maturing domain of eHealth. ∎
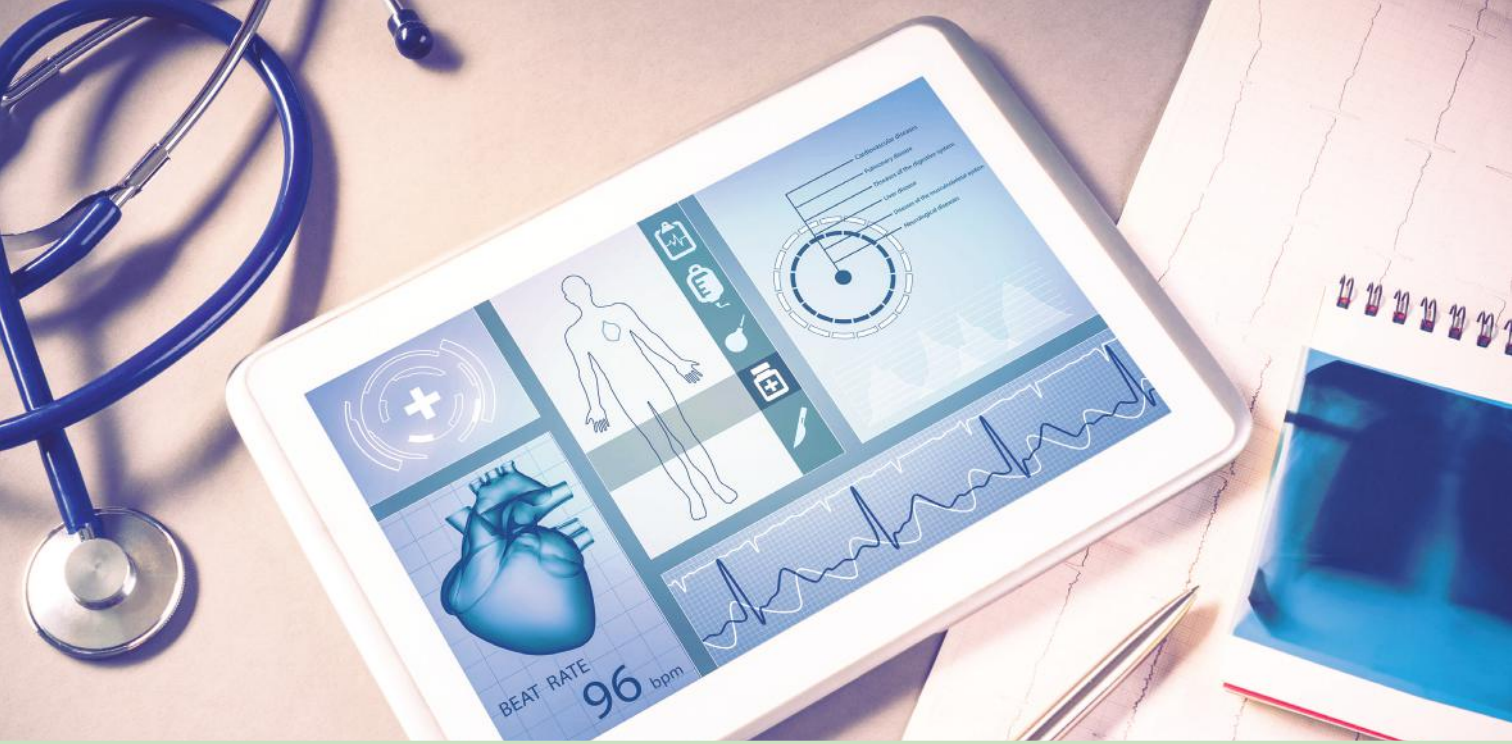

MELISSA GASSER

Melissa Gasser is a PhD candidate in clinical psychology at the University of Washington. Her research focuses on risk-taking behaviour with respect to substance use, especially alcohol, and sexual behaviour. Additionally, she is interested in the integration of eHealth (web- or mobile-based health care) into mental health care to address health disparities among diverse populations in prevention and intervention. Melissa was lead author of "Youth-Focused Design and Regulation in eHealth Can Help Address the Mental Healthcare Crisis," named outstanding article in the Journal of Science Policy & Governance and GHFutures2030 special issue on strengthening youth-centred policy and governance in January 2023.

⊕ governinghealthfutures2030.org

Digitalising Slovenia's healthcare system

Digitalising health systems involves introducing a cultural change, but the work is worthwhile – and Slovenia is a prime example, now with a healthcare system that's gone from fragmented digital support to comprehensive integration

Interview with Kerstin Vesna Petrič, head, Office for Cooperation with WHO, and Alenka Kolar, director-general, Directorate for the Digitalization in Healthcare, Ministry of Health Slovenia, and Hajdi Kosednar, eHealth Manager, Centre for Healthcare Informatics, Public Health Institute of Slovenia

The digitalisation of health systems is about introducing a cultural change: it requires political determination, strong leadership, the engagement of different stakeholders, a good plan and effective communication to ensure acceptance and consensus. Apart from sufficient investments, governance is crucial for implementation. To sustain the change, long-term adjustments based on monitoring and evaluation are needed, as is ownership of the change.

In Slovenia, it took us quite some time to meet these criteria. After years of fragmented and project-based approaches, the digital transformation in health care has become a key political priority. We have started on a journey that will increase the accessibility of high-quality services for our patients, reduce the administrative burden on health workers and speed up development in many fields of health care, as well as shift from fragmented digital support to its comprehensive integration in health care.

Our general success in implementing innovative eHealth solutions in Slovenia was recognised by the European Commission. The Digital Economy and Society Index Report placed Slovenia in sixth place in eHealth Services for 2017.

For this article I have engaged in a conversation with two of my colleagues, Alenka Kolar and Hajdi Kosednar.

What are the key advances Slovenia has made in accelerating and integrating the use of digital technologies in health care?
Alenka Kolar: To accelerate the digital transformation in health care, leadership is important. We created a new directorate within the ministry of health to be responsible for digitalisation. For the sake of transparency, ownership and a coordinated approach, we developed a new digitalisation strategy based on a well-organised process and involved all stakeholders. In addition, comprehensive legislation has been presented to parliament this year to create a digital environment that would focus primarily on the patient and their needs. One of the goals of this new legislation is to ensure that health data is recorded

only once and is owned by the patient. Such a goal requires digitalisation based on appropriate organisation, knowledgeable professionals and empowered patients – which are often neglected. Investing in health experts to order to understand the advantages of digital technologies and investing in patients to use digital solutions offers new possibilities for a healthy society.

Hajdi Kosednar: It is also important to understand that every step matters in digitalisation. In 2008, the ministry launched a digitalisation project to create a core platform for Slovenian eHealth for exchanging and sharing electronic health records. It was one of the largest national projects in information and communications technologies in Slovenian history and was co-financed through the European Social Fund. The National Institute of Public Health assumed the management of the eHealth project solutions in 2015, including ePrescription, eAppointment and the Central Register of Patient Data. It was important to get the project's strategic goals right. Important goals of the project included, of course, access to data in general, as well as the ability and active role of citizens in accessing and using their health data for the benefit of their own health and improving access to health services for those most vulnerable.

What can other countries learn from Slovenia?

AK: The Covid-19 crisis has made it clear that digital health information, available to the right professional at the right time, is the foundation of a patient's health and well-being. Digital solutions should not replace authentic human contact, but many activities are strictly administrative and bureaucratic and should be digitalised with a goal to improve secure and reliable access to all key patient information for all health providers. It is important for good clinical management to have all the patient's medical information in one place, especially where the patient freely chooses a doctor anywhere in the country or even across borders.

HK: All the eHealth solutions in Slovenia are being implemented at the national level. Residents have a health insurance card, with a patient identifier for the use of eHealth solutions. Slovenia has established a centralised national eHealth system that includes a central platform for exchanging electronic health records. All public and private healthcare providers are obliged to participate, and all authorised healthcare professionals can access the data at any point of care. Patients can access their eHealth data safely via web portal and mobile application, by means of electronic identification. Slovenian eHealth assures the exchange of data irrespective of various information technology solutions used by different healthcare providers. Patients have access to all their data processed on the national platform, including patient summaries, ePrescriptions and a variety of healthcare documentation (such as discharge letters and specialist's reports). Parents can access the data on behalf of their children.

What results has Slovenia achieved so far, and what challenges and tasks lie ahead?

HK: The most important achievement is the coverage of the entire population. No patient is left behind. A great example is the implementation of the European Union's Digital COVID Certificate. Standardising data models and technical specifications enables the interoperability of diverse and multi-vendor clinical information systems. However, the development and deployment of new services is constrained by the severe shortage of human resources. Many projects and initiatives cannot be implemented due to limited capacities and there are no specialised experts in digital health. We have a critical need for expertise in developing clinical data models and applications.

AK: We want to solve the lack of ICT staff through a unified data flow, comparable advanced technology and pooling of knowledge. Above all, digitalisation must have adequate financing (approximately 5% of the health service's funding). Investments must be planned and must be made quickly, to take advantage of rapidly developing IT. We must work towards unifying the data structures that are entering the central system. This will improve both the quality of medical treatment and the performance of public health institutions. ∎

KERSTIN VESNA PETRIČ

Kerstin Vesna Petrič is head of the Office for Cooperation with the World Health Organization at the Ministry of Health of Slovenia. She was previously Slovenia's director-general of public health (2019–2022) and head of the Division for Health Promotion and Prevention of Noncommunicable Diseases (2004–2019). From 1998 to 2004 she served as WHO Liaison Officer. She was a member of the WHO Standing Committee of the Regional Committee for Europe from 2016 to 2019. She has been on the WHO's executive board since 2021, and became chair in May 2022.

ALENKA KOLAR

Alenka Kolar became head of information technology at the Ljubljana Institute of Oncology in May 2022 and director-general of the Directorate for Digitalization in Healthcare in Slovenia's Ministry of Health in July 2022. She has served on the board of the University Medical Centre Ljubljana. She has managed the Metrology Laboratory at the Metrology Office, worked in the automotive industry in quality assurance, learned quality and traceability in a pharmaceutical company, worked in a private IT development company and was executive director of information and communications technologies at an energy distribution company.

HAJDI KOSEDNAR

Hajdi Kosednar is a member of the eHealth group at Slovenia's National Institute of Public Health, involved in managing national healthcare digital solutions. She is responsible for national eReferral and eAppointment solutions and the Service Desk for eHealth Solutions. She actively participated in the eHAction project (Joint Action supporting the eHealth Network), and is a member of the Service Desk group within the eHealth Digital Service Infrastructure.

ntegrating fragmented healthcare systems may seem like a lofty dream in a world that feels more muddled than ever. But it is already happening. In the region of the Gulf Cooperation Council, I am fortunate enough to witness these rapid changes first hand.

In Saudi Arabia, for instance, the national Health Sector Transformation Program aims to restructure the health sector into a comprehensive, effective and integrated health system. This ambition stems from the very top, articulated as an overarching mission: Saudi Vision 2030.

Vision 2030 is a transformative economic and social reform blueprint that is among the most ambitious agendas in the world. Nothing will be left untouched, from sport to farming, in a bid to move the Saudi economy away from its current oil dependency.

Under Vision 2030, innovation, financial sustainability and disease prevention are prioritised, while access to health care is being improved. Digital solutions and e-Health services such as telemedicine are being expanded to improve the quality of care. The Health Sector Transformation Program has already delivered successes, such as the Kingdom's effective handling of the Covid-19 pandemic.

With technology and the right commitments, we have the power to dismantle healthcare frontiers and build new systems from the ground up. The possibilities are boundless

The onset of the pandemic disrupted non-communicable disease services, owing to control measures and lockdowns. Such diseases – cardiovascular, in particular – are major public health issues in the Kingdom. The Ministry of Health promptly embarked on medical technologies to ensure continuity, including smartphone apps and social networks, which were used to address public queries and provide virtual health services and support.

One notable initiative, the SEHA Virtual Hospital, was introduced so that patients could consult specialised physicians without having to travel to different parts of the Kingdom. The largest of its kind, the virtual hospital launched with more than 150 hospitals connecting with more than

New healthcare frontiers

By Maliha Hashmi, World Economic Forum Global Future Council Expert

30 specialised health services. By using Lunit INSIGHT CXR technology, it was able to use artificial intelligence to analyse chest X-rays, allowing pilgrims to be treated during this year's Hajj season.

THE CUSP OF A REVOLUTION

We have all been connected globally for years now through social media, so why should health care be any different? We are on the cusp of a revolution that will give rise to new borderless models.

Just as Estonia has helped transform the way we work remotely with its digital nomad-friendly e-Residency program and fintechs are disrupting the way we transfer money, there is a very real need to dismantle frontiers to treat patients.

Imagine a patient in rural Rwanda being treated by doctors in Kigali or specialists in Geneva through a telemedicine service. All of a sudden, complex physical geographies and weak infrastructure become less important.

And the innovations keep coming. The hype over the metaverse has died down since the fanfare of last year, but the underlying technologies including virtual and augmented reality continue to grow in importance. Indeed, venture

MALIHA HASHMI

Maliha Hashmi is a World Economic Forum Global Future Council Expert and a delegate of the Vulnerable 20, and winner of the Forbes Health Leadership Award in 2022. She was named one of the Top Seven Most Talented Female Health Leaders of the Middle East and North Africa region. Committed to bringing positive change, wellness and growth to the Kingdom of Saudi Arabia, she received her doctorate and master's degrees from Harvard and MIT.

capitalists invested $707 million into metaverse projects in the first half of 2023, accounting for 44% of web3 investments. Web3 is a new kind of internet service built using decentralised blockchains, which are the shared ledger systems used by cryptocurrencies.

Today, there is an immense focus on AI. The evolution and use of generative AI through tools such as ChatGPT are surging, to the extent that there is industry pressure to regulate the technology before developing it further.

But technology is only part of the picture. There needs to be the right backing and regulatory environment, especially in the context of digital health. All patients of all backgrounds should have access to health treatments, whether they are in the Sahara or in Singapore.

This is more than compassion; it is the right thing to do. It is also inevitable at some point, given the rapid technological changes. As technology advances, we must ensure that it takes into account everyone's needs, free of any bias or preference.

ALL VIEWS ACTED ON

In the spirit of inclusivity, all stakeholder views must be harnessed and acted on: patients, providers, physicians, payers and, of course, governments. We must all be on the same page, and preferably before the next pandemic comes, through ongoing dialogue – whether these are multilateral talks at the very highest level or industry associations.

Moreover, it is essential to recognise that the future of work, characterised by the ability to work from anywhere for everyone, will not only empower experts to contribute to their own countries but also collaborate globally.

In this intertwined future of work and health care, both domains have the potential to add new dimensions to the ongoing effort of removing healthcare boundaries and creating a healthier, more connected world. The part of humanising technology and the importance of global collaboration in this endeavour cannot be overstated.

As an advocate for change and inclusivity, I hope we can accelerate the conversation today so that we may arrive at new legitimate models or frameworks that we can all agree on, which the world's population so sorely needs.

The possibilities for the future of health care are boundless. It is up to us to shape a healthier and more connected world for all. ∎
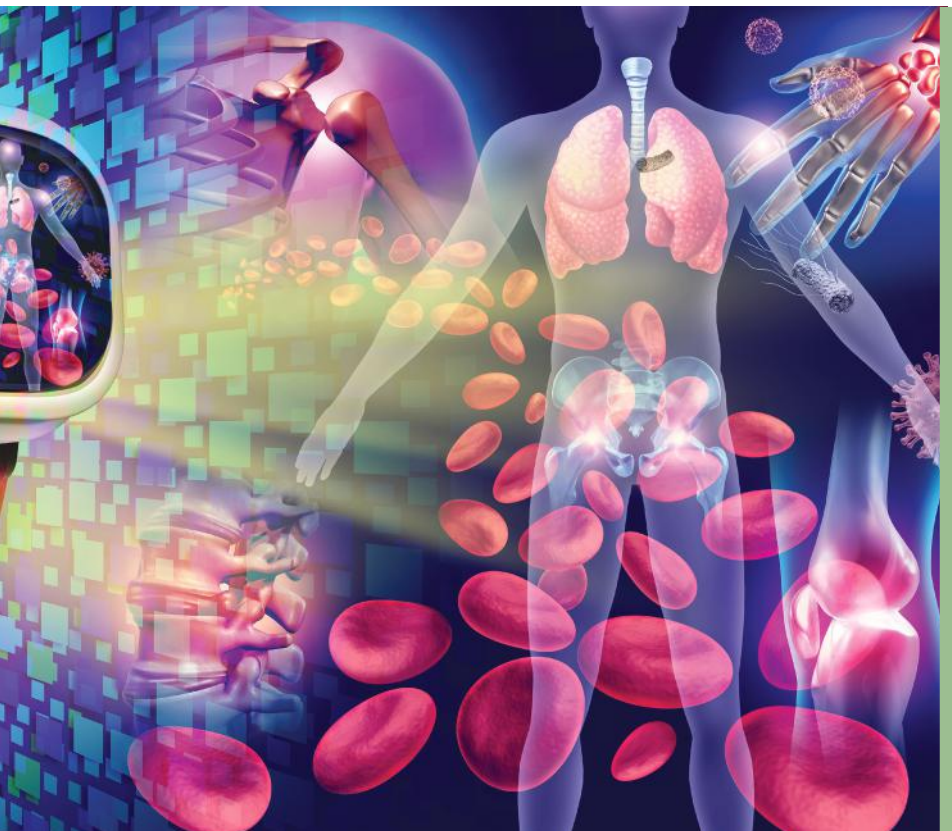
A pact for global pandemic readiness

Last year, the G7 under Germany's presidency introduced the Pact for Pandemic Readiness, which aligns new and existing initiatives to create synergies, maximise outputs and reduce fragmentation – and improve the global landscape for pandemic readiness

By introducing the G7 Pact for Pandemic Readiness in 2022, the G7 decided to strengthen key areas essential for a predictable and rapid response to pandemics, in particular collaborative surveillance and the health emergency workforce.

The G7 Pact for Pandemic Readiness focuses on sustainable action that builds on past and current G7 initiatives while also providing a coordinated contribution of the G7 to strengthen global pandemic readiness. The pact became an integral part of the G7 health ministers' communiqué adopted in Berlin in May 2022. It was subsequently endorsed by their leaders in the communiqué issued at their summit in Elmau in June 2022.

To ensure continuity, current G7 processes have followed up on the G7 Pact for Pandemic Readiness. At their meeting under Japan's 2023 presidency in May, G7 health ministers reiterated their support for increasing networking within and between countries and regions in order to strengthen the health workforce and support early detection, swift containment and timely research sharing in response to future infectious diseases and other health threats.

WHY WAS IT CREATED?
In the wake of the Covid-19 pandemic, a plethora of new initiatives emerged. Following a network approach, the G7 Pact for Pandemic Readiness aims to better align new and existing initiatives to create synergies, maximise outputs, and reduce fragmentation, duplication and redundancy.

To ensure continuous action and implementation of the pact, G7 partners and relevant stakeholders held two technical meetings in Berlin in October 2022. Based on these discussions, the G7 elaborated on and adopted the Roadmap for Practical Cooperation to advance the G7 Pact for Pandemic Readiness in December 2022. Along with 20 specific contributing activities, the roadmap includes four key areas: sustainable and coordinated funding for collaborative surveillance and a public health emergency workforce to prepare the world for future pandemics; a strong health emergency workforce network connected to centres of expertise; up-to-date training programmes for collaborative surveillance and predictable rapid response; and engagement in communities of practice for collaborative surveillance.

By Karl Lauterbach, health minister, Federal Republic of Germany

In September 2022, the Pandemic Fund, hosted by the World Bank, was established to provide a dedicated stream of additional, long-term funding to strengthen preparedness, prevention and response capabilities, particularly in low- and middle-income countries. By aiming to address critical gaps through investments and technical support at the national, regional and global levels, the Pandemic Fund also addresses the four key areas of the G7 Pact – leveraging its goals. In particular, the First Call for Proposals focused on strengthening disease surveillance, laboratory capacity and the public health workforce, thus highlighting the need for action in these areas. The Pandemic Fund has already mobilised $1.6 billion, of which $338 million will flow into 19 projects to strengthen capacity building through the First Call for Proposals. But we must continue to invest in strengthening PPR capacities. I call on partners to contribute to the Pandemic Fund to fill the gaps in pandemic preparedness and response.

The concept of the Global Health Emergency Corps launched at the World Health Assembly in May this year also builds on the aims of the G7 Pact. The GHEC fill gaps through enhanced regional and global solidarity mechanisms to support countries in developing their national capacities. The aim is to be able to call on high-quality, interoperable surge teams and experts when needed.

The launch of the International Pathogen Surveillance Network, in May this year, is another milestone for bringing forward the G7 Pact's key areas, in particular collaborative surveillance. The IPSN is a global network of pathogen genomic actors, hosted by the World Health Organization's Hub for Pandemic and Epidemic Intelligence in Berlin. The hub is predominantly financed and provided with technical support by Germany and other G7 partners. The IPSN's ambitious goal is to give every country access to pathogen genomic sequencing and analytic capacities as part of its public health system.

With regard to the negotiations of the WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response, Germany is advocating for strong content in line with the G7 Pact for Pandemic Readiness. Early investigation of outbreak signals and integrated surveillance to detect new variants and pathogens are of utmost importance. As outlined in the G7 Pact, this requires up-to-date curricula as well as common standards and competencies across countries, reflecting an interdisciplinary approach for pandemic preparedness.

In reforming the International Health Regulations, Germany actively supports better implementation of the core capacities and improved global cooperation as part of the proposed amendments to the IHR. This will have lasting effects on collaborative surveillance as a whole.

The commitment of G7 leaders in 2022 to support at least 100 low- and middle-income countries in implementing the core capacities required in the IHR is another component of the G7 Pact, which aims to stimulate global pandemic preparedness.

ONGOING DISCUSSIONS

By initiating the G7 Pact for Pandemic Readiness in 2022 and bringing forward its implementation, Germany gave an important impulse for making progress in pandemic prevention, preparedness and response more generally. This year, 2023, has brought other key processes such as the high-level meetings on pandemic prevention, preparedness and response and on universal health coverage as well as on tuberculosis at the United Nations General Assembly in September, the ongoing complex negotiations of the WHO convention or agreement, and the discussions on a potential medical countermeasures mechanism. The G7 Pact for Pandemic Readiness, introduced by Germany and agreed upon by the G7 partners during its G7 presidency in 2022, significantly contributes to these ongoing discussions in the global landscape for pandemic readiness. ∎

> **"**
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> **The launch of the International Pathogen Surveillance Network, in May this year, is another milestone for bringing forward the G7 Pact's key areas, in particular collaborative surveillance"**

KARL LAUTERBACH

Karl Lauterbach was appointed Germany's health minister in December 2021. From 2013 to 2020, he was deputy parliamentary party leader of the SPD party, and has been a member of the Bundestag since 2005. Before entering politics, he was director of the Institute for Health Economics and Clinical Epidemiology of the Medical Faculty of the University of Cologne, and was a guest lecturer at the Harvard School of Public Health.

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🌐 bundesgesundheitsministerium.de

Reshaping global health

Cohesion, equity and justice in our health systems can only be achieved by overturning the divisive paradigm of 'donor countries' versus 'recipient countries' – and bringing all voices to the table is essential for our survival and that of our shared planet

I n thinking about global systems, mechanisms, power and equity, I often think of Ursula K Le Guin's philosophical allegory The Ones Who Walk Away from Omelas, where the prosperity of a utopian city relies on the perpetual suffering of a single child. While most of the city's people eventually accept this moral tradeoff as necessary for their communal happiness, some are unable to reconcile this reality and walk away. This is a potent metaphor for the relationship between the Global North and the Global South, particularly low- and middle-income countries, left behind and often treated as a mere inconvenience in global affairs. Proposed partnerships for aid and development ring hollow when the necessary far-reaching reforms that could grant LMICS an equal seat at the global table are rarely implemented. Much like the city of Omelas, the world is content to thrive while silently accepting the deplorable inequities and frameworks that keep LMICs in need. Indeed, maintaining the status quo of LMICs keeps the development industry in business.

The Covid-19 pandemic revealed to me – an African humanitarian and advocate for health, education and girls and women's rights – the stark vulnerabilities of our global and national health systems. Largely resulting from fragmented approaches, political apathy and insufficient collaboration, these burdens pose a risk

By Ayoade Olatunbosun-Alakija, WHO Special Envoy for the Access to COVID-19 Tools Accelerator, and chair, Foundation for Innovative New Diagnostics

to all, not just to LMICs. The risk is not just to our health and well-being but also to the global economy and trade. We have both a moral and economic imperative to rectify these issues. To do so, we must critically address politics, power imbalances, institutional effectiveness, gender equality and inclusivity.

We have talked for too long about analysing the problem and developing the solution. Now is the time for action. Through collaborating, empowering the marginalised and fortifying health systems, we can reshape the global health framework to be fairer and more effective. This is not merely an appeal for justice. This pertains to our survival and that of our shared planet.

Global health is often overshadowed by political and power imbalances catering to influential countries, leaving the vulnerable exposed. Mitigating this requires equitable resource allocation, improved global governance and the use of existing commitments such as the Abuja Declaration to guide our actions.

Gender equality and voices from the Global South must be integral to our efforts. This is crucial for sustainable progress and combating fragmentation. Effective coordination among governments, international organisations, civil society and the private sector is key to overcoming fragmentation and ensuring equitable access to health care.

TAILORED RESPONSES
Responses must be tailored to the context and address the social determinants of health. Empowerment of marginalised groups and their representation in decision-making processes are essential for health equity. Community-led initiatives, as in Ethiopia's and Rwanda's health transformations, attest to the power of this approach.

Involving diverse sectors to promote transparency, accountability and shared responsibility is vital. Nigeria's

experience with polio reaffirms the need for robust community engagement and cooperative action: through training local volunteers and partnering with traditional and religious leaders, my home country saw a shift from vaccine refusal to effective vaccination campaigns and community trust.

To escape the cycle of panic and neglect surrounding pandemics, we must maintain commitment and invest in our existing health systems. Strengthening infrastructure and fostering a culture of proactive planning is key.

The Intergovernmental Negotiating Body is negotiating a pandemic convention or agreement, signalling a major shift towards health security for all. As the process continues, mechanisms such as the Access to COVID-19 Tools Accelerator ensure there is no gap in pandemic preparedness and response as the world remains vigilant against new and existing infectious disease outbreaks.

Maintaining institutional memory, political will and sustained commitment are vital for lasting changes. Learning from past experiences, investing in capacity building and consistently prioritising health in political dialogues are the path forward. But institutions must fundamentally change so that they are authentically driven by the needs of low- and middle-income countries, which necessarily requires their engagement in governance and decision making. Systemic change is needed today.

Now is a moment to rise united. We must pledge unwavering commitment to our shared mission: the vision of a thriving world devoid of health disparities segregated by geographical boundaries. The urgency is not just in the need but in the action – it is time to transform our institutions and models. Merely discussing change will no longer suffice. We must embody it.

Political leadership must unequivocally confront our shared global challenges, casting aside parochial pursuits. The traditional entrapment of insular interests and

AYOADE OLATUNBOSUN-ALAKIJA

Dr Ayoade Alakija currently serves as World Health Organization Special Envoy for the Access to COVID-19 Tools (ACT) Accelerator, chair of the African Vaccine Delivery Alliance and chair of the Foundation for Innovative New Diagnostics (FIND). As a medical doctor with over two decades of experience working around the globe, she is an expert in global health, development and humanitarian relief. She has been a leading voice calling for the urgent reimagining of how the globe should respond more consciously to the inequities exposed by the Covid-19 pandemic.

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institutional rivalries have long hindered our collective well-being. Our topmost goal must remain a world where every individual's safety is guaranteed, regardless of the threat of future pandemics or global health emergencies.

Grand declarations and ornate meetings are futile if we shy away from the grit and grime of backstage work – from battling to bridge divides to overturning the status quo, work that achieves much more than abstract grandstanding. These endeavours will edge us closer to attaining true equity in the global health architecture and justice universally. The very foundations of the institutions currently leading many interventions must be radically reformed. We must be unafraid to rebuild from the ground up, discarding the debris of outdated structures and ingrained inequities. We must build institutions that mirror the world we now live in and not the world of the 1950s.

ACHIEVING AUTHENTIC DIVERSITY

While we applaud diversity in boardrooms, it is not enough to merely seat a Black or Brown individual at the helm of an institution that has yet to critically examine its own misuse of power and discrimination against individuals from the Global South. True diversity and inclusion cannot be achieved through 'black or brown washing' an institution that remains stained by deep-seated inequalities. We must remain vigilant in addressing institutional racism

that resists diversity in boardrooms and staffrooms. Authentic diversity must be fostered at the individual and organisational levels through dedicated and committed leadership and role models. Failure to ensure such diversity will continue to contribute to fragmentation. As long as overt racism still exists, we will never achieve collective security and health for all.

The divisive paradigm of 'donor countries' versus 'recipient countries' must be overturned. We must instead understand that the possession of resources should not be the determinant of the volume of a country's voice in tackling issues and taking decisions that affect us all. The most vulnerable individuals often dwell in countries that lack wealth, but their stories, their plights, their solutions should not be silenced.

Inspired by those who chose to abandon Omelas, rejecting happiness built on the torment of a single child, we too must be brave enough to shatter the chains of the status quo. We cannot tolerate a world that flourishes on the unjust subjugation of the less fortunate. We must undertake the solitary, challenging journey towards a world where everyone, regardless of colour, wealth or location, has an equal seat at the global table. This is our moral and economic imperative. It is a daunting journey, but a necessary one. Only then can we truly say we are navigating towards an equitable and just global health framework that leaves no one trailing behind. ∎

The Pandemic Fund, a testament to multilateralism

There is no magic bullet when it comes to public health, but we do know there is an urgent need to step up investments in health systems if we are to build a healthier and safer world

By M Chatib Basri, co-chair, Pandemic Fund

One sobering message we received from Covid-19 was that the world was unprepared for a pandemic. The pandemic has taught us that investing in health is critical. Health is more than just a consumer item; it is an investment in human activity. When the healthcare system failed, the economy came to a halt. We are grateful that we are surviving the Covid-19 pandemic, yet so many people have died. We are indeed returning to a more normal way of life, but a pandemic could strike again at any time. We must brace ourselves. We must prepare ourselves better. Preventive, preparedness and response activities are urgently required. Funding is required for pandemic preparation, response and prevention – PPR.

Covid-19 has demonstrated the fragility of the pandemic financing mechanism. Existing global financing is inadequate to protect against pandemics. Moreover, finance is fragmented, compartmentalised, inefficient, ad hoc and unpredictable. Prevention and preparedness financing is particularly inadequate and uneven, and focused on individual countries.

Given this context, there is a need to increase funds for existing global health organisations. The World Health Organization is important in global health security, but it is not a financial agency. We thus require tight collaboration between it and the World Bank and other multilateral development banks and global health financing institutions. Under Indonesia's 2022 presidency, in Bali the G20 reached an accord and resolved to create a pandemic fund. The World Bank is hosting this fund, with strong technical support from the WHO. The G20's action is significant. Thanks must go to the G20 members, particularly Indonesia and Italy, which suggested this effort during their respective presidencies, as well as donor countries, the World Bank and the WHO, which have worked hard and provided assistance.

A MILESTONE

The Pandemic Fund is a milestone in the international community's efforts to address the fault lines and financing gaps that exist for pandemic PPR. For the first time the international community has come together on a mechanism for investing in PPR in developing countries. It is a testament to multilateralism.

The Pandemic Fund provides a dedicated stream of additional, long-term funding for critical PPR functions in low- and middle-income countries,

through investments and technical support at national, regional and global levels. It is expected to support and reinforce capacity building and implementation of PPR under the International Health Regulations and other internationally endorsed legal frameworks, consistent with a One Health approach. It plays a unique role in making the world safer. Investing in pandemic PPR is a global public good, with benefits that transcend borders. Every dollar that we invest now in strengthening PPR in low- and middle-income countries will save lives and financial costs for the world for years to come. In the face of multiple crises and competing priorities, this new PPR fund will help the international community focus on sustained financing for this agenda. Moreover, it will encourage countries to prioritise PPR and increase their own efforts.

The Pandemic Fund's robust governance and operational structure place it on a firm footing for successful operationalisation. Let me mention a few key features.

First, its governance is inclusive. It balances representation from contributors and co-investors (recipients and potential recipient countries), and it provides a strong voice for civil society. Its board has nine voting seats for sovereign contributors, nine for sovereign co-investors, one for non-sovereign contributors and two for civil society organisations – one for the Global South and another for the Global North. The G20 presidency and chair of the Technical Advisory Panel are non-voting members. Implementing entities participate as observers.

Second, the operating structure has the flexibility to deliver resources to countries and regions through existing institutions engaged in financing PPR. Those include the World Bank, the African Development Bank, the Asian Development Bank, the Asian Infrastructure Investment Bank, the European Investment Bank, the Inter-American Development Bank and the International Finance Corporation, plus the WHO, UNICEF and the Food and Agriculture Organization, as well as the Global Fund, the Coalition for Epidemic Preparedness Innovation and Gavi, the Vaccine Alliance. This structure allows the fund's resources to complement the work of these institutions, drawing on comparative advantages, and complement the work of countries themselves.

Third, the fund's structure reflects high standards of transparency and accountability, and the necessary safeguards to avoid conflicts of interest.

Much has been achieved in a short period of time. Since its inaugural meeting in September 2022, good progress has been made across multiple areas.

The Pandemic Fund has already raised $2 billion in seed capital from 25 contributors and began quickly awarding grants to projects through its first call for proposals. In July 2023, it allocated funds amounting to $338 million for 37 countries, which mobilised $2 billion in additional financing; in other words, every dollar awarded catalysed $6 in additional resources from implementing entities and recipient governments.

Incoming proposals for grants from low- and middle-income countries have reached a value of $2.6 billion, against an announced envelope of $300–350 million for the first call. The need for PPR funds is very large. Therefore, the Pandemic Fund is preparing a second call for proposals. The G20 New Delhi Leaders' Declaration in September 2023 supported the idea that this second call be carried out immediately, demonstrating strong support for the fund.

AN OPPORTUNITY FOR NEW METHODS
The Pandemic Fund is a real opportunity to do things differently and help countries, regions and the world mitigate the risk of future disease outbreaks, building on what we have learned from Covid – from our successes as well as our mistakes.

There is no magic bullet when it comes to public health. Covid has shown us, though, that there is an urgent need to step up investments in health systems and PPR capacities at all levels. At the country level, critical needs include building disease surveillance capacity; laboratories; public health workforce capacities; emergency communication, coordination and management; and community engagement. These investments must be sustained.

Equally, we must build regional and global capacity for PPR. Support at regional and global levels can cut across multiple domains, including surveillance, reporting and information sharing; shared public health assets; regulatory harmonisation; enhanced regional public health workforce capacity; and capacity for coordinated development, procurement, distribution and deployment of countermeasures and essential medical supplies.

With adequate funding, the Pandemic Fund will be key to reducing risks from epidemics and pandemics in the most vulnerable parts of the world, contributing to a healthier and safer world. ∎

> **The Pandemic Fund has already raised $2 billion in seed capital from 25 contributors and began quickly awarding grants to projects through its first call for proposals"**

MUHAMAD CHATIB BASRI

Muhamad Chatib Basri is co-chair of the Pandemic Fund. He is a former finance minister of Indonesia and chaired the Indonesian Investment Coordinating Board. He also serves on the Governing Board of the Lee Kuan Yew School of Public Policy at the National University of Singapore and the Independent High-Level Expert Group on Climate Finance for COP27 and 28. He is now chair of both PT Bank Mandiri and PT XL-Axiata. He also teaches at the Department of Economics, University of Indonesia.
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Tackling it together: for a unified pandemic response

To achieve a unified global pandemic response, there are several strategic policy considerations that can facilitate a transition to cohesive, coordinated, transparent, flexible and local responses that will truly take us from fragmentation to integration

The Covid-19 pandemic has been an unprecedented global health crisis, resulting in millions of deaths and severe societal and economic disruptions worldwide. The pandemic exposed major gaps, inequities and fragmentation in global health governance, financing and technical infrastructure for pandemic preparedness and response.

In recognition of these systemic weaknesses, a multitude of global and regional initiatives has been launched over the past two years to strengthen mechanisms for preventing, detecting and responding to future pandemic threats. Key proposals include an international legal instrument, a 'pandemic accord', amendments to the International Health Regulations, a pandemic fund and similar regional efforts.

However, there is a risk that these fragmented initiatives may lead to duplication, inconsistencies, high transaction costs and continued inequities unless they align properly within a coherent global health architecture. The strategic integration of these various efforts is critical to develop a truly effective, equitable global system for pandemic preparedness and response.

Key strategic considerations should focus on priorities such as governance, financing, access to medical countermeasures, accountability mechanisms and multisectoral collaboration.

THE CURRENT LANDSCAPE

Since the onset of the Covid-19 pandemic in early 2020, several proposals have been developed at both the global and regional level to strengthen capacities for pandemic prevention, preparedness and response.

One key global initiative underway is the pandemic accord. An intergovernmental negotiating body is developing this new international instrument focused on better cooperation, solidarity and equity in future pandemic responses.

Another initiative is amending the IHR, last revised in 2005. A working group is reviewing potential amendments to fix

By Precious Matsoso, co-chair, Intergovernmental Negotiating Body for the Pandemic Accord, and Elil Renganathan, professor of public health and policy, Sunway University

inadequacies exposed during Covid-19, such as timely information sharing, travel measures and equitable access to medical countermeasures.

The United Nations High Level Meeting in New York in September 2023 sought political commitment at the level of heads of state and government to strengthen multisectoral pandemic prevention, preparedness and response, setting the tone for the proposed pandemic accord and IHR amendments.

And the G20 and World Bank have established a financial intermediary fund to provide long-term, scalable and sustainable financing for pandemic preparedness, with a focus on low- and middle-income countries.

STRATEGIC POLICY CONSIDERATIONS

The diversity of these initiatives reflects a growing momentum to address the gaps revealed by Covid-19. However, careful coordination is needed to transition into a truly unified, equitable and effective global pandemic response architecture. The following strategic policy considerations can facilitate this transition by promoting synergies, reducing duplication and incoherence, and keeping equity at the centre.

1. Ensure complementarity between global and regional instruments. Identify interlinkages between the proposed pandemic accord, IHR amendments, G20/World Bank initiatives, UN political declarations and efforts by regional entities. Harmonise and create synergies between global and regional initiatives to increase policy coherence and political momentum and reduce duplication. Global instruments should provide overarching principles and standards flexible enough to build

on regional capacities and priorities. Regional instruments can implement and operationalise global commitments.

2. Prioritise equity in access to pandemic health products and health systems capacities. New international instruments should have equity and solidarity as core principles. Equitable access to vaccines, treatments, diagnostics, personal protective equipment and health personnel must be ensured, particularly for low-income countries. Legally binding provisions could cover equitable technology and knowledge transfer to boost regional and local manufacturing capacities, including through pooling intellectual property rights and providing incentives for technology sharing. Commitments must go beyond access to boost national public health capacities, health and social safety nets, and community level action, with international support aligned to national plans.

3. Establish sustainable and coordinated financing mechanisms. Predictable, coordinated financing is essential for equitable pandemic prevention, preparedness and response capacities worldwide. Initiatives such as the G20 Joint Finance-Health Task Force should be integrated within the broader pandemic response architecture. Humanitarian and development assistance for health should be coordinated with domestic health spending to maximise impact and build sustainable capacities.

4. Adopt whole-of-government and whole-of-society approaches. Pandemic response requires unprecedented collaboration beyond just the health sector, including coordination across ministries of finance, security, transportation and foreign affairs. Legal instruments and national commitments must engage relevant government stakeholders, while also tapping into the capacities of civil society, private sector and local communities. A coordinated multisectoral response should be institutionalised.

5. Develop accountability mechanisms for transparency. Independent accountability mechanisms strengthen capabilities for pandemic preparedness and response through transparent evaluation and learning. Legally binding commitments should promote accountability mechanisms and ensure action on recommendations. Accountability processes should be non-punitive and grounded in principles of transparency, learning and continuous improvement.

6. Balance binding and voluntary instruments for flexibility. Overemphasising legally binding elements may reduce political support and flexibility. The right

PRECIOUS MATSOSO

Precious Matsoso is director of the Health Regulatory Science Platform at the University of the Witwatersrand and adjunct professor at the University of Sunway. She co-chairs the Intergovernmental Negotiating Body for the Pandemic Accord and was on the Independent Panel for Pandemic Preparedness and Response. She was director-general of the South African National Department of Health. She chaired the World Health Organization's Executive Board and the Independent Oversight and Advisory Committee for the WHO Health Emergencies Programme, and was a member of the United Nations High-Level Panel on Access to Health Technologies.

ELIL RENGANATHAN

Elil Renganathan is a professor of public health and policy at Sunway University in Malaysia. He is a member of the Advisory Council for Healthcare Reform in Malaysia, a member of the Independent Evaluation Panel of the Global Fund to Fight AIDS, Tuberculosis and Malaria, and head of the secretariat of the Panel for a Global Public Health Convention. He has held senior positions in global health, including leadership and global roles at the World Health Organization.

balance is needed between binding and voluntary components. Binding agreements may be most feasible and impactful for foundational principles such as equity, transparency, solidarity and cooperation. Specific technical provisions could be maintained as voluntary standards and best practices, especially during a pandemic.

7. Organise thematic negotiations for coherence. The pandemic response architecture incorporates diverse technical issues. Organising negotiations according to thematic areas such as health systems, economic resilience and access to countermeasures can promote more focused progress. Clustering related technical elements can help develop a more coherent framework and architecture across the instruments.

8. Regional leadership and localisation. Global agreements and initiatives must empower regional and local leadership while strengthening national capacities. One-size-fits-all centralisation often undermines response agility. Legal instruments should recognise regional entities and provide avenues for decentralised regional coordination and financing under national oversight.

The Covid-19 pandemic has triggered a rare alignment of political will for strengthening global pandemic prevention, preparedness and response capacities. However, this opportunity could be squandered by fragmented initiatives operating in silos. It is critical to strategically integrate ongoing global and regional proposals into a unified pandemic response architecture to prepare the world to manage future crises equitably and effectively.

The considerations outlined here aim to promote the level of policy coherence, coordination, transparency, flexibility and localisation needed to transition from the current fragmentation into a truly integrated, equitable and multisectoral approach to pandemic prevention, preparedness and response. With continued political commitment, strategic focus and collective action, we have an opportunity not just to tweak existing mechanisms, but also to truly reform and transform the global health system to build resilience against future threats. The window of opportunity is narrow, so urgent action is needed to harmonise and synergise the current landscape of initiatives towards integrated pandemic prevention, preparedness and response capacities worldwide. ■

Trust during pandemics:
a critical determinant of successful response

Public trust in health authorities is essential when it comes to the rapid, effective behaviour adaptations that may be required in the face of an epidemic or pandemic – and several factors can facilitate a high-trust environment

By Sylvie Briand, director, Epidemic and Pandemic Preparedness and Prevention, and Sarah Hess, technical officer, Health Emergencies Programme, World Health Organization

Epidemics and pandemics are characterised by high levels of social and economic disruption. They can destabilise the health sector due to the rapid demand for care and generate fear and uncertainty that can affect the entire social fabric of society.

Epidemics and pandemics are dynamic crises and non-linear in nature. During the Covid-19 pandemic, changes in the virus produced different variants that were associated with 'pandemic waves'.

To control epidemics and pandemics, people must adopt temporary new behaviour such as wearing masks, getting vaccinated and self-isolating when symptomatic. It may also be necessary to change the recommended behaviour during the event in response to emerging knowledge about the disease or the risk associated with it or as medical interventions become available. The constant need for individuals and institutions to adapt to changing risks contributes to higher levels of uncertainty during epidemics and pandemics and the risk of further destabilisation of existing systems.

To ensure rapid behaviour change, the population must trust that the recommendations from the health authorities are relevant, commensurate with the risk and are ultimately to protect their health. Trust in health authorities is therefore an essential component of an efficient and successful epidemic or pandemic response.

But trust can be lost easily during a crisis. Many health authorities tasked with managing the Covid-19 pandemic response experienced a loss of trust. This reduced people's tolerance of the recommended measures and their compliance with those measures, thereby reducing their effectiveness and further affecting levels of trust in the health authorities. Once this cyclical nature of mistrust starts, it is difficult to counter.

Fostering trust in health authorities to enable a successful epidemic or pandemic response requires efforts and investments prior to the crisis. It is difficult to build trust during a crisis, so these efforts should be embedded within pandemic preparedness planning. It is standard practice for countries to strengthen their surveillance system, their vaccine manufacturing system, their

health system – and more – as part of their preparedness efforts; however, the trust component is often not considered, despite its potential for increasing the 'return on investment' in standard pandemic preparedness capacities. Unprecedented efforts to develop and produce a vaccine for Covid-19 were marred by widespread mistrust in many parts of the world. This mistrust has crept into vaccination in general and now vaccine-preventable diseases are re-emerging in some places.

INFLUENCING FACTORS

Several factors can facilitate a high trust environment.

First, the uptake of public health and social measures depends upon the degree to which the population understands them; the relevance of these measures to the population and the perceived risk; and the feasibility of implementing the measures in different settings. It is therefore important to ensure that people understand the scientific rationale behind these measures, through effective science communication – an important strategy to build trust during crises. Effective science communication includes messaging that resonates with and responds to people's concerns. To enable this, it is critical to listen in real time to people's concerns and questions through both online and offline social listening. Tools such as Early AI-supported Response with Social Listening – EARS – have been developed to enable health authorities to analyse social media conversations while respecting individual privacy and ethical principles. Social listening can expose topics of interest and sentiments associated with conversations such as anger or anxiety. If anxiety emerges as a dominant sentiment, health authorities can respond with reassuring messaging that addresses uncertainty and concerns. This approach is more effective in promoting uptake of public health and social measures and in increasing trust in the health authority's capacities to manage the crisis.

Second, it is crucial to understand and effectively navigate the dynamic information ecosystem that continues to change with the technological revolution and the expansion of social media platforms. More than 50% of the world's population uses the internet and each individual is part of multiple communities existing in both a digital and a physical world. Health authorities need to understand these digital communities and the way information, including mis- and disinformation, spreads. This understanding will inform the adaptation of crisis communication to the complexity, norms and rules of the new information ecosystem, including the adaptation of messages to new formats and a different speed and frequency of communication.

Third, in the context of epidemics and pandemics, scientific knowledge constantly evolves, rendering science translation an extremely challenging task. As new evidence about the disease or virus surfaces, recommendations may need to be changed and public health and social measures revised. If these changes are not accompanied by clear, transparent communication and the uncertainty surrounding the evidence not acknowledged, then trust in science and in the scientific process of knowledge generation may be undermined.

Fourth, it is critical for health authorities to understand the culture and values of communities and to acknowledge the heterogeneity within national contexts of specific sub-cultures. Crisis communication and interventions during crises are often embedded in the predominant medical paradigm, which may be misaligned with or undermine local values and beliefs. Meaningful dialogue can foster mutual understanding and respect between the health authorities and communities; in this way interventions can be adapted or co-developed to accommodate different cultures and settings. This will make it easier to maintain trust during crises.

Fifth, in most parts of the world, healthcare workers are seen as trusted figures, with the legitimacy and responsibility to protect people's health. However, in many health crises, this trust-building function of healthcare workers is neither leveraged nor capacitated. Healthcare workers require additional training, encouragement and recognition to deliver on this additional function and responsibility.

At the end of the acute phase of the Covid-19 pandemic, a period to reflect on the importance of trust in epidemic and pandemic preparedness and response is needed. Efforts commensurate with the importance of trust are required to build capacities to increase and maintain trust as an essential component of future pandemic response. ∎

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Health surveillance: the bedrock of health security

Global health security relies on a foundation of robust national and regional surveillance systems, and the World Health Organization's new concept of collaborative surveillance aims to strengthen the global health architecture

By Chikwe Ihekweazu, Samuel Mbuthia and Mala Kumar, WHO Open Source Programme Office, WHO Hub for Pandemic and Epidemic Intelligence

The Covid-19 pandemic and other health emergencies have revealed that in the realm of global health security, the bedrock lies in the robustness of national and regional surveillance systems. Acknowledging this, the World Health Organization launched the concept of collaborative surveillance in May 2023. This approach aims to boost both surveillance capabilities and collaboration, not just within the health sector, but also extending beyond it. The goal is to enhance our understanding of public health matters and provide better evidence for making informed decisions and taking effective actions. It is a key element within the WHO's framework to strengthen the global architecture for health emergency prevention, preparedness, response and resilience.

A REIMAGINED WORLD

With the implementation of collaborative surveillance, we reimagine a world where decision makers can leverage public health intelligence across geographies, sectors and disease outbreaks. This could empower national, regional and global institutions to detect emerging threats, communicate effectively, respond rapidly and refine strategies continually. At its core, collaborative surveillance can reduce the fragmentation of surveillance systems, fostering interconnectedness among data sources and solutions.

During the Covid-19 pandemic, it became evident that harnessing established solutions and swiftly tailoring them in order to identify and control outbreaks was essential. Minimising repetitive work holds great significance in our response to pandemics. The time allocated to duplicative tasks might impede sharing knowledge, distributing resources, providing medical

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aid and performing other vital actions. Ultimately, this could significantly affect our ability to effectively respond to local outbreaks, epidemics or even pandemics.

Harnessing the power of open source solutions became a promising intervention, proving to be adaptable and effective for the monitoring, surveillance, detection and prevention of Covid-19. Among these solutions, CommCare and the Community Health Toolkit were rapidly customised to align with pandemic needs. They did not reinvent the wheel but rather built upon past experiences, including the Ebola outbreaks in West Africa. Another exemplar, the Surveillance Outbreak Response Management and Analysis System, was quickly adapted by integrating a Covid-19 disease module. This was made available to countries that already had SORMAS as part of their surveillance infrastructure.

One of our key objectives at the WHO Hub for Pandemic and Epidemic Intelligence, aligned with the WHO Global Strategy on Digital Health 2020–2025, is to promote global collaboration and sharing of digital health knowledge and expertise.

Characterised by open accessibility to source code and a collaborative development approach, open source solutions promise inclusivity for software developers worldwide. This approach encourages developers from diverse parts of the world to contribute to locally and globally adopted digital solutions, promoting adaptability and enhanced support services. Embracing open source provides pathways for collaborative innovation, underscoring the potential for equitable growth across countries.

FOR SUSTAINABLE PROGRESS
In the context of a rapidly evolving world with increasing risks of health emergencies, interoperability and technology reuse stand as keystones for sustainable progress in digital health. Interoperability standards enable the seamless data exchange across disparate systems, embedding digital health solutions into existing technological ecosystems and securing their versatility across different contexts.

The WHO Hub for Pandemic and Epidemic Intelligence, embedded in the WHO Health Emergencies Programme, launched the first Open Source Programme Office in the United Nations system. Our goal is to champion the development and adoption of open source solutions for pandemic and epidemic responses. The OSPO steers the course by offering open source collaboration frameworks, advisory services for building open source contributor communities, and managing potential open source software-associated risks.

In developing and promoting environments that encourage collaboration among innovators and experts, it is important that we break down existing barriers and unite fragmented endeavours within the realm of pandemic and epidemic intelligence. Only through such multifaceted collaboration, which includes using open source solutions, can we ensure the seamless integration of pandemic and epidemic response systems into the existing framework of health systems. This united front is part of our commitment to global health security. ∎
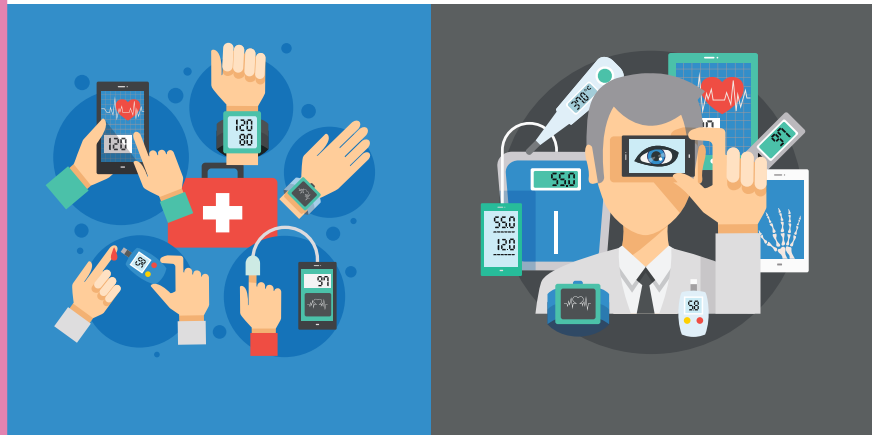
A 100-day mission

A transformation response to future pandemics envisions developing new vaccines against almost any conceivable viral threat within as little as three months from threat recognition – ensuring equitable vaccine access and a world prepared for almost any viral outbreak

The Covid-19 pandemic has reshaped our world in unimaginable ways, emphasising the critical importance of global collaboration and equitable vaccine access. The goals of initiatives such as COVAX were commendable, and the result was, in fact, historic, even in the face of considerable obstacles. It is now a moment to reflect on the issues relating to research and development in vaccines against emerging infectious diseases and access to those vaccines, to discuss the role of the Coalition for Epidemic Preparedness Innovations, and to highlight the urgency of adapting our strategies to combat evolving pandemic threats. Ultimately, the 100 Days Mission is vital for the world to be able to address two critical needs: speed and access.

The accelerated development of Covid-19 vaccines stands as a remarkable scientific achievement. However, their deployment lays bare the stark disparities in vaccine access across the globe. To this day, low- and middle-income countries face significantly lower vaccination rates than high-income countries, due to a host of challenges. As of October 2022, vaccination coverage in low-income countries stood at just 25%; only a quarter of the

population had received at least one vaccine dose. In stark contrast, in high-income countries that rate stood at 72%.

ADDRESSING INEQUITY

Addressing vaccine access inequity requires a deep understanding of its root causes. Manufacturing inequity was an initial stumbling block. Although COVAX reduced the gap of first access between high-income countries and low- and middle-income countries to a historic 66 days, the concentration of vaccine production in India and a few high-income countries, combined with vaccine nationalism, led to supply shortages, and delayed access for low- and middle-income countries at the expense of global health security. Competition for vaccine supplies, as well as competition between countries and initiatives such as COVAX, clearly hindered equitable distribution and exacerbated disparities. Distribution and absorption capacity challenges compounded these problems, with logistical hurdles such as cold chain requirements and remote transportation impeding timely vaccine delivery.

The absence of a pre-existing and well-established global collaborative mechanism for equitable vaccine manufacturing and access meant that initiatives like COVAX had to be constructed hastily during the pandemic's most acute phase. This fragmented approach clearly exposed the need for a more cohesive, proactive and coordinated strategy for pandemic preparedness.

Throughout the pandemic, CEPI was pivotal in advancing accelerated vaccine R&D and equitable access. CEPI's funding and facilitation of Covid-19 vaccine development expedited the creation of multiple vaccine candidates. CEPI remains committed to investing in broadly acting vaccines

By Oyeronke Oyebanji, chief of staff for policy and partnerships, and Frederik Kristensen, deputy CEO, Coalition for Epidemic Preparedness Innovations

OYERONKE OYEBANJI

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FREDERIK KRISTENSEN

Frederik Kristensen joined the Coalition for Epidemic Preparedness Innovations as senior medical officer when it was established in 2016, and was appointed deputy CEO in 2018. He also served as director of resource mobilisation and director for people, policy and planning. He was previously a senior adviser on innovation at the World Health Organization in the family, women's and children's health cluster. He has previous experience with the Norwegian Agency for Development Cooperation, hospital management and the pharmaceutical industry.

against betacoronaviruses and other pathogens, ensuring preparedness for potential future outbreaks. However, challenges hindering equitable access to Covid-19 vaccines persist. CEPI's potential to succeed in its mission to enable speed and access is threatened by the complex landscape of vaccine manufacturing and distribution.

Emerging infectious diseases are sending us multiple warnings that another Disease X is out there. From the outbreak of severe acute respiratory syndrome in 2002 to the H5N1 'bird flu' in 2004, the H1N1 'swine flu' in 2009, the Middle East respiratory syndrome in 2012, the Ebola crisis of 2014, the Zika outbreak in 2015 and, most recently, the global impact of Covid-19 – these events are occurring with increasing frequency. They are a constant reminder of the threats of pandemics and epidemics. Covid-19 is our most recent wake-up call and highlights the need to adapt our strategies for future threats. Vaccine research, development, manufacturing and distribution must remain at the forefront of our preparedness efforts.

CEPI's 100 Days Mission, endorsed by the leaders of all G7 and G20 members, offers a transformative response to future pandemics. This mission envisions developing new vaccines against almost any conceivable viral threat within as little as three months from threat recognition. The mission, integrated into the G7's similar 100-day ambitions, emphasises the urgent need for innovation in developing safe, effective and affordable diagnostics, therapeutics and vaccines in future health crises, including by addressing issues relating to manufacturing and delivery.

The urgency of such a mission cannot be overstated. A 100-day timeline for Covid-19 vaccine development would have saved countless lives and trillions of dollars. Achieving this goal would offer the world a real chance of containing outbreaks before they escalate into global pandemics. The mission is a critical springboard for enhancing global preparedness against ongoing and future threats.

CEPI's 100 Days Mission places equity at its core. However, rapid and equitable vaccine access can only succeed within a system reconfigured to deliver such equity effectively. One building block for achieving this could be stronger regional leadership and coordination of R&D and manufacturing for relevant diseases, facilitating efficient and localised responses to emerging threats. Furthermore, innovations such as a global vaccine library, prepositioning information, tools and products can also be transformative and expedite vaccine development.

FORGING PARTNERSHIPS

There is urgency in forging partnerships at global, regional and national levels for pandemic preparedness. Partnerships have already contributed – and have the potential to contribute more – to creating a more interconnected and collaborative global health ecosystem. The establishment of an animal model, a centralised laboratory and manufacturing networks could facilitate resource sharing, expedite research progress and enhance access. CEPI's commitment to equitable vaccine distribution aligns with the moral imperative of ensuring that new medical countermeasures, including vaccines, are accessible to all, particularly vulnerable people in low- and middle-income countries.

The world remains at risk of a Disease X of far greater severity than Covid-19. International cooperation must transition from high-level political commitments to concrete actions. The political declaration of the United Nations General Assembly High-Level Meeting on Pandemic Prevention, Preparedness and Response has been disappointing in this regard. The ongoing negotiations for the pandemic accord present a unique opportunity to address the issue. Concrete steps forward by the International Negotiating Body could involve enhancing and solidifying equitable access commitments for public funding in R&D as well as developing the normative framework for a truly collaborative global vaccine library.

Covid-19 has forcefully reminded us of the critical importance of global collaboration and equitable vaccine access. Scientific innovations and strengthened partnerships are integral to the 100 Days Mission. By addressing the root causes of inequity and placing global preparedness at the forefront, we have a historic opportunity to create a more resilient and fairer world capable of confronting the ever-present threats of epidemics and pandemics. ∎

Unlocking health for all

Investments that prioritise making people truly matter are the key to unlocking health for all and achieving the Sustainable Development Goals, and progress is being made across Europe towards well-being economies

By Hans Henri P Kluge, director, World Health Organization's Regional Office for Europe

Charles Dickens said "science mattered when it transformed lives by curing disease or cleaning streets". More than 150 years later, the science on how our social circumstances drive health inequities is irrefutable. We know the importance of people feeling that they genuinely matter, as feeling otherwise can be a key driver of inequality in health outcomes.

With growing pressure to accelerate progress on delivering the Sustainable Development Goals by 2030, addressing the issue of 'mattering' is key for SDG 10 to reduce inequalities – which in turn is connected to achieving SDG 3 to ensure healthy lives and promote well-being for all, at all ages.

Yet, according to the World Health Organization's recent Transforming the Health and Social Equity Landscape, inequities are widening, with devastating implications. Between 2019 and 2023 the European region saw 600,000 excess deaths due to low investment in health systems and low human development. The WHO analysis also finds widening gaps in trust, due to people not benefiting from government policies. These findings underscore that health, equity and economic factors are inextricably connected, with social capital the foundation of prosperous and fair societies. This analysis reinforces why societies and economies must focus first and foremost on people and the planet.

A SENSE OF MATTERING

People's sense of mattering and well-being is linked with being treated with dignity and respect. This simple truth has profound implications. Across Europe 81% of people believe that governments should prioritise reducing inequities. And the WHO's analysis shows health equity must be central in all policies for people to feel they are valued.

The analysis highlighted five main opportunities to deliver trust, health equity and prosperity: investing in young people, investing in responsive social and health protection systems, engaging communities in decision making, making sure that green and digital transitions are equity-proofed, and distributing health and social care resources equitably to enable people to live in dignity.

These policy solutions show how public investment can contribute significantly to rebuilding European solidarity by listening to and working with diverse groups affected by widening social and economic insecurities, exacerbated by the multiple and often overlapping crises of our times – from the Covid-19 pandemic to protracted conflicts to the ever-mounting climate crisis. The evidence that climate change is also a health emergency becomes even more overwhelming as human catastrophes of fires, floods and heat-related deaths increase.

This is why the WHO Regional Office for Europe is championing well-being economies, where all public and private investment delivers human, social, economic and planetary well-being. The concept of well-being economies may not be new, but it has a new-found urgency given current regional and global circumstances.

The need to invest in solidarity-based policies and embed health within economic and business frameworks were strong key messages from the Pan-European Commission on Health and Sustainable Development. This message is increasingly being taken up in diverse sectors including finance. Mark Carney, former governor of the Bank of England and the United Nations

81%

of people in Europe believe that governments should prioritise reducing inequities

Special Envoy for Climate Action and Finance, has highlighted why markets must be shaped to deliver equity, social capital and sustainability. Investors with assets worth over $5 trillion have pledged to embed health in their investment decisions.

Yet more needs to be done to ensure the health component is clearly situated alongside the environmental, social, governance elements (from ESG to ESHG).

COMMITTED TO WELL-BEING

Countries in the WHO European Region have been showing how a commitment to well-being across government can be used to deliver fairer, more prosperous societies. Indeed, investing in well-being also delivers better performance on traditional measures of economic performance. Since the 2008 global financial crisis, Iceland has invested in supporting people with high levels of debt or low income, and has seen growth in gross domestic product often above 4% and low unemployment. It recently connected its fiscal strategy with well-being priorities. Many more countries are using indicators of well-being that go beyond pure GDP to measure progress. Indicators include measures of mental well-being, trust, living wages, circular economies and balanced development as key markers of successful societies. Luxembourg recently used its index of welfare and the WHO's model of a well-being economy to set out a future vision for its health system.

This growing movement towards well-being economies recognises the significant contributions that health, well-being and equity make to economies and society. Significantly, addressing health inequities across most EU countries would also reduce the nearly €1 trillion in avoidable welfare losses each year. Fairer, more cohesive well-being economies are critical to securing more stable societies and delivering more effective public policies. The benefits of better health and well-being multiply across the SDGs. Poor health costs the United Kingdom over £100 billion annually, related to absence from work and inability to work. Health services have a high employment multiplier effect and are more resilient to economic shocks than other sectors.

It is therefore encouraging that the health, finance and economy sectors increasingly find common ground on shared well-being priorities and challenges. In June 2023, the WHO Regional Office for Europe partnered with the Bank of Italy and Italian National Institute of Health to convene central banks, finance and health officials along with leading experts – with the aim of creating healthy and fiscally resilient societies. The first meeting focused on modelling the fiscal implications of improving youth mental health and inclusion and the costs of inaction; future areas of focus include ageing and regional inequalities. Already innovative modelling is connecting health and the economy and this can be built in to enable policymaking for healthy, financially resilient societies.

These developments are leading into the Summit of the Future 2024, driving a surge in financing for sustainable, prosperous and healthy lives. Countries must consider measuring progress beyond GDP to include well-being, equity, trust and cohesion, and ensure the interests of the coming generations are included in decisions. Health, equity and well-being are vital leverage points for delivering the broader SDGs.

FOR PEOPLE TO THRIVE

We need to invest to create secure lives where people can thrive, be healthy and play a meaningful role in society. This includes innovative social protection that transforms the lives of those falling behind, leveraging the health equity and technological gains from green and digital investments, and using employment, education and procurement policies to deliver social value and better places where people live, work and learn.

We can achieve this by using new instruments to unlock the health equity and well-being dividends from public and private investments, including using the full potential of windfall taxes and wealth taxes, debt swaps and social bonds. It also means involving people in decision-making – this has been linked to lower inequalities in life expectancy, alongside greater trust in governments and innovation.

Integrating well-being, equity and healthy societies into government investments is no longer optional. It is essential for a more inclusive and sustainable future, where people matter. The challenges we face are significant, formidable, even overwhelming. However, to paraphrase Dickens, "these are the best of times, these are the worst of times" – the forecast depends on how one views both challenge and opportunity.

With political determination, through relentlessly focusing on delivering health and well-being for all, and ensuring people's needs and voices are at the heart of our approach – making people truly matter – we can together unlock progress on Health For All, the vision that underpins the WHO, and through Health For All achieve wider gains across the SDGs. ∎

HANS HENRI P KLUGE

Hans Henri P Kluge has been World Health Organization Regional Director for Europe since 2020. He leads the implementation of the European Programme of Work 2020–2025. A native of Belgium with over 25 years' experience in medical practice and public health, he joined the WHO in 1999 as project manager in the Russian Federation. After serving as medical officer and team lead in Myanmar between 2004 and 2009, he moved to the Regional Office for Europe, and the following year was appointed director of the Division of Health Systems and Public Health.

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Health care away from home

Ensuring refugees have access to health care is a complex challenge. Global solidarity and investment are needed to equip often overstretched health care to ensure that adequate health services can be accessible and provided to all

How has forcible displacement grown, and thus affected the unequal health burdens of refugees and their communities?
At the end of 2022, 108.4 million people were forcibly displaced from their homes and communities due to conflict, violence, human rights violations and, increasingly, the consequences of climate change. This is a staggering figure. It heightens the urgency for immediate, collective action to alleviate the causes and impacts of displacement. Forcibly displaced populations face significant hazards on their journeys, including risks to their health and well-being, which are affected by their underlying health and nutrition status.

Interview with Raouf Mazou, assistant high commissioner for operations, United Nations High Commission for Refugees

Before displacement, many refugees live in countries experiencing humanitarian crises. During the journey out of their country, refugees may face harsh or dangerous conditions that have severe consequences for their physical and psychological well-being. Arriving in their new host country, refugees often do not have access to affordable health services. Global solidarity and investment are needed to equip often overstretched health services to ensure that adequate health services can be accessible and provided to all.

**How does the United Nations High Commission for Refugees help improve their health and well-being?**
UNHCR's public health strategy aims to foster the conditions, collaborations and approaches that enable refugees to access health care and essential health services with the aim of ensuring universal health coverage. Working with national health systems, including with partners such as the World Health Organization, to meet the needs of both refugees and affected host communities has always been part of UNHCR's approach to health. This strategy is in line with the Global Compact on Refugees and the 2030 Agenda for Sustainable Development.

More than 70% of refugees live in low- and middle-income countries where national public health systems may be

RAOUF MAZOU

Raouf Mazou became assistant high commissioner for operations of the United Nations High Commission for Refugees in February 2020. He was previously the director of the Africa Bureau in 2019 and the UNHCR Representative in Kenya for over five years, having been a deputy director in the Africa Bureau for four years. Having served UNHCR for more than 30 years, in the Great Lakes Region and West Africa, as well as the East and Horn of Africa, he has also served as deputy director of the Division of Operations Support and head of the Emergency and Security Service.

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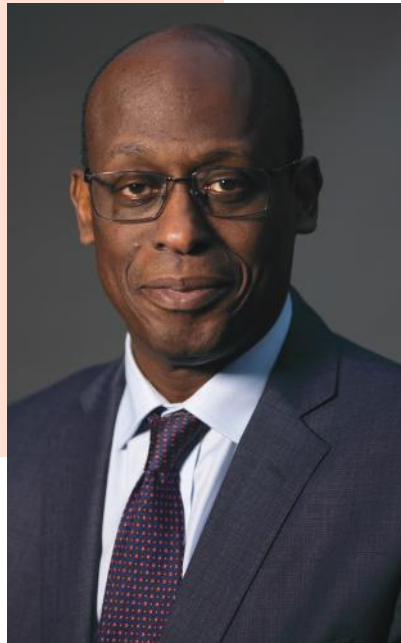
under-resourced and overburdened. With more and more refugees living outside of camp settings, particularly in middle-income countries, the necessity to strive for integration and inclusion has become increasingly relevant.

What progress has been made?

Significant progress has been realised in ensuring access to health services for the refugees and host communities. During the Covid-19 pandemic, UNHCR provided significant support in terms of personal protective equipment, medicines, oxygen, laboratory capacity and the rehabilitation of health facilities. This required significant financial resources that were successfully mobilised through Covid-19 appeals. Investments in maintaining continuity of care during the pandemic were partially successful in certain areas, for example within maternal care high rates (over 92%) of assisted deliveries were maintained. Unfortunately, overall access to health care declined at the height of the pandemic, increasing again in 2022 with over 9 million consultations (8.21 million refugees and 1.15 million nationals) in UNHCR-supported facilities, a 19% increase from 2021. Sustained advocacy including for including refugees in the roll-out of national Covid-19 vaccinations resulted in over 6 million people receiving at least one dose of vaccine in 153 countries. UNHCR continues to ensure access to healthcare services and care for those who may be infected and ensure inclusion in national vaccination programmes.

HIV/AIDS remains a considerable health challenge in refugee settings. UNHCR is working closely with the UN family as a united front in combating this major public health concern. A key part of this endeavour is UNHCR's role in UNAIDS, which brings together the efforts and resources of 11 UN system organisations to unite the world against AIDS. As co-convener (together with the World Food Programme) of the HIV Services in Humanitarian Emergencies initiative, UNHCR continues to promote equity and inclusion in national HIV programmes. As a result, access to antiretroviral therapy has expanded, reaching 31,262 refugees, compared to 21,145 in 2021.

Another advance is the significant inroads made in ensuring refugee access to mental health care, which is essential as they are exposed to a range of stressors at every stage of their displacement. These include exposure to violence, separation from or loss of loved ones, poor living conditions, poverty, food insecurity, loss of livelihoods and means of survival, physical injuries and illnesses, and a lack of access to essential services. Therefore, UNHCR has partnered in an interagency development of the Mental Health and Psychosocial Support Minimum Service Package, which facilitates planning, coordinating, implementing and evaluating humanitarian activities in health, protection, education and other sectors.

What tasks and challenges remain?

A combination of conflicts, displacement, post-pandemic economic shocks and climate change have affected the ability of forcibly displaced and stateless people to meet their basic needs. Over the past year, the UNHCR health information system has noted several worrying trends, including an increase in child mortality rates (an indicator of access to and quality of health care), a drop in vaccination coverage among children, increasing reports of malaria, dengue and cholera (also climate-related diseases), a higher prevalence of malnutrition, and a greater need for mental health and psychosocial support services.

Many refugees have proven professional competencies and are willing to contribute to host medical systems. In this way, they can show their solidarity, and give back to the communities sheltering them. As most health-related professions are tightly regulated, national health authorities need to give the necessary approvals, which is often a time consuming and complicated process.

The inclusion of refugees in national social health protection systems has also been challenging. Even where conditions are favourable, financing remains a major constraint, with UNHCR required to support refugees' premiums in contributory schemes, posing sustainability challenges due to the finite nature of humanitarian financing. Enhanced engagement with and support from development actors are needed to achieve sustainable inclusion. UNHCR health responses remain underfunded (unmet needs for health in 2022 amounted to $236 million or 41% of the health budget) and are paradoxically proportionally less funded in operations with greater needs.

The upcoming Global Refugee Forum in December provides an opportunity for the international community to rally together to overcome these challenges. To this end, the WHO and UNHCR have convened the Group of Friends of Health for Refugees and Host Communities composed of states, individuals, the private sector, non-governmental organisations and international organisations. It aims to mobilise high quality pledges and contributions to be announced at the forum, with the aim of fostering sustainable access to affordable, quality health services for refugees and host communities to achieve lasting change. ■

A social justice approach to health

Policymakers need to make health a political priority by taking a social justice approach to investments in health and care – and the ILO is developing a coalition that encourages a wide range of multilateral bodies and stakeholders to do just that

Health is a basic human right. It is an essential requirement for the achievement of decent work and a fulfilling life. However, health goes far beyond having access to health care that is timely, affordable and acceptable. It also relates to factors that ensure our overall well-being. These include access to safe drinking water and sanitation, safe food, adequate nutrition and housing, healthy working and environmental conditions, health education and information, income and social protection, and gender equality. Other important dimensions of health and well-being relate to income security

By Gilbert F Houngbo, director-general, International Labour Organization

when people are sick, and health care without hardship – as outlined in the International Labour Organization's social security conventions.

Despite progress in past decades, disparities and inequities in health persist, many of which are linked to the conditions in which people are born, grow, work, live and age. These are the social determinants of health, which influence the health outcomes of individuals and communities. These inequities have been exacerbated by the Covid-19 pandemic and the multiple and interconnected crises we are currently facing – climate change, conflicts and global cost of living challenges.

For these reasons, we need a social justice approach to health that addresses inequalities, achieves more inclusive and sustainable socio-economic development, ensures healthy lives and promotes well-being for all, as set out in Sustainable Development Goal 3.

The ILO promotes social justice in health through its decent work mandate. Its work on social protection, occupational safety and health, and decent working conditions for healthcare workers are key areas.

A CRUCIAL STEP

Extending social protection to all is a crucial step towards achieving health equity and access to adequate health

care without hardship. It ensures a level of income that allows people to live a healthy life in dignity. Yet four billion people still lack any kind of social protection. When health emergencies occur, many people – often the poorest of the poor – risk falling further into poverty because of unanticipated health spending. Even essential everyday health expenses can push families and vulnerable populations over the edge financially, particularly in rural areas. High health costs, combined with inadequate income security often lead them to forgo vital health care, reinforcing a vicious cycle of poverty and ill health.

In his 2021 report, Our Common Agenda, United Nations secretary-general António Guterres committed the UN system to promote and sustain universal social protection floors, including universal health coverage. The objectives, functions and principles of social protection systems are grounded in a series of ILO international labour standards. The ILO is also proud to lead work on social protection through the Global Accelerator on Jobs and Social Protection for Just Transitions, launched in September 2021 by the secretary-general.

Every year, around 2.9 million workers die due to occupational accidents and diseases, and at least 402 million people suffer from

GILBERT F HOUNGBO

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non-fatal occupational injuries. Estimates by the ILO and the World Health Organization indicate that work-related diseases are responsible for 81% of all work-related deaths. Occupational safety and health policies developed through social dialogue and backed by well-resourced labour institutions are essential for the protection of life and health at work. An important step forward was the decision by the International Labour Conference in 2022 to include a safe and healthy working environment in the ILO's framework of fundamental principles and rights at work.

Health services cannot be delivered without enough adequately trained, supported and protected health and care workers. Yet there is an unequal distribution of health workers globally and within countries. In low-income countries, health workforce shortages are as high as 84%, while the shortage in upper-middle-income countries is around 23%. In some Asian and African countries, almost 90% of the population does not have access to health care. Labour force survey data from 56 countries has shown that the majority of health and social care workers live in urban areas, and almost half of the world's population lives in rural areas.

Many countries face severe challenges in the recruitment, deployment and retention of health and care workers. Dissatisfaction with working conditions due to low wages, insufficient resourcing, work overload, long hours, unsafe working environments, exposure to violence and harassment, stress, burn-out, limited access to social protection and weak career prospects have led to high turnover and attrition rates of health workers in many countries. The health sector has been significantly disrupted by the Covid-19 pandemic. This has demonstrated the need for increased sustainable investments in health systems, including in decent working conditions for health and care workers.

A VITAL CONTRIBUTION
In 2016, the UN High-Level Commission on Health Employment and Economic Growth recognised the vital contribution of the health sector to economies, investments and job creation, especially for youth and women. The ILO, WHO and the Organisation for Economic Co-operation and Development are working together on the Working for Health programme and its Multi-Partner Trust Fund, to provide assistance to countries, social partners and key stakeholders, so they can develop strategies to scale up health workforce investments based on improved health labour market data, multi-stakeholder involvement and social dialogue.

Policymakers need to make health a political priority by taking a social justice approach to investments in health and care. This includes investments in social protection, occupational safety and health, and decent work for health and care workers. They need to promote policies that ensure access to affordable and high-quality care for all. It is not only for the ILO to advocate such policies and to take action within the scope of its own mandate – it is a shared responsibility across the UN system and its constituents. For this reason, the ILO is developing a Global Coalition for Social Justice, which will bring together a wide range of multilateral bodies and stakeholders to position social justice as a global policy imperative, through strengthened cooperation and policy coherence. I firmly believe that such a coalition can enable the international system to better help countries tackle policy areas where social justice is lacking, so we can make good health and well-being a reality for all. ∎

Defining the future of global health

By José Manuel Barroso, board chair, Gavi, the Vaccine Alliance and former president, European Commission

Collaboration, not competition, must shape our future health systems, and an integrated approach to global health will help us banish silos forever

In February 2022, a year and a half after Africa was declared free of polio, a case of paralytic polio was confirmed in Malawi. The country and its neighbours responded by increasing surveillance and launching immunisation campaigns. To support these efforts, Tanzania needed additional vaccine carriers – containers to keep vaccines refrigerated during transportation.

The country had already requested 3,000 carriers to support the delivery of Covid-19 vaccines. So Tanzania's Ministry of Health rapidly coordinated with Gavi, the Vaccine Alliance and UNICEF, arranging for 1,000 of these vaccine carriers to be redeployed for use in the polio campaign, with the cost of airlifting them covered by the buffer built into the country's COVAX agreement.

This is what integration looks like, and it could be a game changer in boosting immunisation coverage across the Global South.

Covid-19 clearly demonstrated the importance of vaccines in controlling infectious diseases. But at the same time, the disruption caused by the pandemic led to a dangerous backsliding of routine immunisation programmes that prevent other global killers such as measles.

We need to get these programmes back on track. Integrating the huge amount of resources, workforce and innovation that went into fighting the pandemic into these routine services needs to be our priority.

This means building on the healthcare infrastructure that was so quickly established during the Covid-19 pandemic, to deliver routine immunisations more effectively.

Tanzania's polio campaign is a great example of how existing equipment, vaccines or health services can be leveraged to save money and ensure that missed opportunities for vaccination are reduced.

REPURPOSING TOOLS

It also means repurposing tools such as digital health apps and data visualisation dashboards to aid planning and data management for other immunisation programmes. Relationships established with community and religious leaders in the context of Covid-19 could be further leveraged to improve health literacy and awareness about the importance of other vaccines.

Integration in health care can also go further than just immunisation. Framing vaccination appointments as opportunities to deliver additional healthcare services could not only boost Covid-19 vaccine uptake but strengthen public health more broadly. It could also cut out some of the administrative burdens associated with these programmes.

For instance, pregnant women attending clinics to receive Covid-19 and influenza vaccines could be offered family planning and nutrition advice, bed nets for malaria prevention, or screened for non-communicable diseases such as diabetes at the same time. If they are accompanied by infants or older children, this could also provide an opportunity to catch up on earlier missed vaccinations and interventions such as nutritional screening, vitamin A supplementation or deworming.

For too many years, disease programmes have operated in silos, competing for funding, human resources and the political will to see them through. So have many of the global organisations tasked with delivering them.

The COVAX initiative developed during the Covid-19 pandemic, which brought together Gavi, the World Health Organization, the Coalition for Epidemic Preparedness Innovations, UNICEF as well as governments, non-governmental organisations and vaccine manufacturers, has demonstrated an alternative way of working – one with information sharing, communication and partnership at its core. With almost 2 billion vaccine doses delivered, and an estimated 2.7 million deaths averted due to the initiative, COVAX illustrates the power of taking an integrative approach to global health challenges.

This is also what Gavi – the organisation I proudly chair – is all about. As an alliance, partnership is at the core of what we do. Working together means we can amplify the strengths of all our partners, drawing upon the pre-existing expertise, resources, stakeholder relationships and infrastructure built up over decades of collaboration with governments to deliver vaccines equitably and affordably.

Strengthening these competencies will be crucial to ensure ongoing progress towards meeting global public health goals, particularly in the face of mounting threats from climate change, environmental degradation and political conflict. It should also leave the world better prepared for future pandemics when they come.

THE GAPS EXPOSED

However, Covid-19 and other pandemics have also exposed gaps that need addressing. Although COVAX was able deliver Covid-19 vaccines to low-income countries within 39 days of people in high-income countries first receiving them, most early doses still went to the wealthiest countries, with many of their citizens having received a third or fourth dose before hundreds of millions of people in lower-income countries had received their first.

The reasons for this are complex, but what these events have exposed is an urgent need to further diversify global vaccine manufacturing, particularly in Africa. This is why Gavi and its partners are now working closely with the African Union and the Africa Centres for Disease Control and Prevention on a strategy to expand manufacturing capacity on the continent.

Doing so would not only reduce reliance on vaccine imports during health emergencies. It could also establish regional supplies of essential vaccines against other diseases such as measles, rubella, malaria and cholera, for which there is likely to be a long-term demand, strengthening the health and resilience of these vaccine markets.

Like COVAX and the efforts to integrate Covid-19 and routine immunisation, supporting vaccine manufacturing in Africa is about building resilience through the pooling of expertise and resources, and creating facilities that could be repurposed at times of need. If Africa has widespread and diverse manufacturing facilities, some could be rapidly redeployed to produce pandemic vaccines when the need arises.

At the core of integration is a shared vision of what global health should be: a world where everybody is protected. ∎

> **"**
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> **With almost 2 billion [Covid-19] vaccine doses delivered, and an estimated 2.7 million deaths averted due to the initiative, COVAX illustrates the power of taking an integrative approach to global health challenges"**

JOSÉ MANUEL BARROSO

José Manuel Barroso was appointed chair of the board of Gavi, the Vaccine Alliance in January 2021. He served as prime minister of Portugal from 2002 to 2004 and as president of the European Commission from 2004 to 2014. He holds a master's degree in law from the University of Lisbon, as well as a master's in economic and social sciences/political science from the University of Geneva. He also holds a post-graduate diploma from the University Institute of European Studies in Geneva, and lectures at many renowned universities in Europe and the United States.

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Struggling to heal:

Egypt's health initiatives in the face of health burdens

Despite numerous health burdens, many of which intensified due to Covid-19, Egypt is dedicated to improving its healthcare system – and it has made progress in modernisation, quality, access and reach

By Khaled Abdel Ghaffar, minister of health and population, Egypt

One common fundamental principle that drives healthcare systems globally is the aim to offer affordable and high-quality health care. However, providing this access has become increasingly difficult due to various factors, including the evolving nature of disease epidemiology, the growing burden of non-communicable diseases, population ageing, and the rising costs associated with innovative diagnoses and treatments. Healthcare systems are faced with delivering optimal care while also ensuring the long-term sustainability of their systems.

The challenges have become more intense due to Covid-19, which has escalated the difficulties faced by governments and healthcare systems. They have had to allocate substantial resources to combating the pandemic, leading to gaps in providing vital healthcare services for other diseases. Numerous diseases that were already high priorities have suffered from neglect, inadequate funding and insufficient supplies as a result of the pandemic. Consequently, the health workforce has been overwhelmed while trying to address these neglected diseases.

Now is a moment to reflect on the lessons learned from the pandemic and to look to the future challenges that may affect vulnerable groups, particularly older individuals and aged populations who often have multiple chronic and complex health conditions, which necessitate more frequent and costly interventions. As a result, there will be increased demand for healthcare services and resources, while a decrease in qualified health workers and caregivers is anticipated. Growing elderly populations strain healthcare resources, and call for necessary changes in healthcare policies and practices.

21ST-CENTURY SYSTEMS
In addition, healthcare systems in the 21st century confront a range of critical challenges, including financing, recruitment and retention, and digitalisation. Financing is a major concern due to the escalating healthcare costs that outpace economic growth. There is a significant discrepancy between rising demand and limited access to quality services. Providing universal coverage and delivering quality care become arduous tasks for many countries. Equally important is the issue of recruitment and retention: there exists a shortage of competent and motivated health professionals, particularly in rural and remote regions. Moreover, burnout, stress and low morale plague numerous practitioners in the field. And digitalisation poses yet another challenge that necessitates investment in new technologies, data systems and cybersecurity measures. These advances are crucial for enhancing efficiency, effectiveness and patient outcomes, while adapting to evolving consumer expectations as well as regulatory frameworks.

To tackle these challenges effectively, development goals have served as the inspiration for nearly 100 global health initiatives over the past two decades. These initiatives involve public-private partnerships and international cooperation among governments, international organisations and civil society. Their objective is to combat the spread of diseases, enhance healthcare systems, address imbalances and expedite progress towards achieving those goals.

In recent years, Egypt has achieved significant progress in its healthcare system. It has been actively working

towards achieving universal health coverage, implementing early detection and mass screening programmes, and devising a forward-thinking blueprint for its healthcare system.

Egypt's Ministry of Health and Population has introduced a groundbreaking health service package called the 100 Million Healthy Lives initiatives under a robust presidential plan. The services provided by these initiatives cover the entire life journey, starting from prenatal care to neonatal, childhood, adulthood and geriatric stages. This innovative approach represents a new way to address public health, considering various factors that influence individual and community well-being. The aim is to enhance population health indicators by tackling both individual and community risk factors. These initiatives save lives, and also help reduce the long-term healthcare and economic burdens. By prioritising such efforts, Egypt is making remarkable strides in lowering rates of illness and death, ultimately resulting in improved overall health and well-being for its citizens.

The main goal is to improve various health indicators such as malnutrition, disability, morbidity and mortality rates. In under five years, these initiatives have provided over 130 million services to more than 90 million Egyptians and non-Egyptians, including migrants and refugees. Services encompass screening, early detection and treatment for various health conditions such as hepatitis C, anaemia, obesity and stunting, as well as cancer (such as liver, breast, lung, colorectal, cervical and prostate cancer). Additionally, initiatives address genetic and hereditary diseases along with vertically and sexually transmitted diseases. They also aim to tackle non-communicable diseases including diabetes mellitus, hypertension, dyslipidaemia and renal impairment, alongside neonatal hearing impairment. The collective efforts of various concentrated public health interventions have resulted in the elimination of hepatitis C and a substantial reduction in maternal and neonatal mortality rates, as well as mortality rates for children under one and under five. Additionally, there has been a notable improvement in malnutrition indicators, particularly among school children. The rates of early detection for cancer cases have also improved significantly. These

achievements have further contributed to an increase in healthy life expectancy at birth from an average of 61.2 years in 2000 to an average of 63 years in 2019.

AMBITIOUS INITIATIVES

These ambitious unprecedented initiatives were aligned with the national health strategies aiming for universal health coverage, expanded primary health care, enhanced prevention, preparedness and response for health security, and improved health equity, governance, leadership and accountability.

Egypt's journey towards achieving universal health coverage highlights its commitment to ensuring equitable access to quality healthcare services for all citizens. By investing in infrastructure development, expanding health insurance programmes, emphasising primary care services and improving quality standards within the sector, full implementation is expected to cover all the Egyptian governorates by 2030.

In recognising that strong primary health care is essential for efficient, cost-effective service delivery, Egypt has focused on expanding primary care centres throughout the country, including more than 5,000 such centres. This approach ensures that preventive measures are prioritised while reducing reliance on costly tertiary care institutions for basic medical needs.

With regards to health security, Egypt is adopting proactive measures such as establishing surveillance systems, public awareness campaigns and strengthening healthcare infrastructure capacity while engaging with international partners for effectively managing future health crises.

Enhancing health equity requires a multidimensional approach that addresses governance, leadership and accountability in healthcare

> **"The main goal is to improve various health indicators such as malnutrition, disability, morbidity and mortality rates. In under five years, these initiatives have provided over 130 million services to more than 90 million Egyptians and non-Egyptians, including migrants and refugees"**

systems. Researchers can contribute significantly by identifying barriers and proposing evidence-based strategies for achieving equitable access to quality care. By collaborating with stakeholders and advocating for policy changes based on their findings, researchers actively contribute to building more equitable healthcare systems worldwide.

ACCESS TO QUALITY CARE

Despite numerous health burdens, Egypt has shown commendable dedication to improving its healthcare system. Through initiatives focused on expanding healthcare infrastructure, disease prevention, maternal and child health, universal health coverage and mental health support, Egypt is striving to ensure that its citizens have access to quality healthcare services and that the country achieves long-term success in improving the country's overall health outcomes. ∎
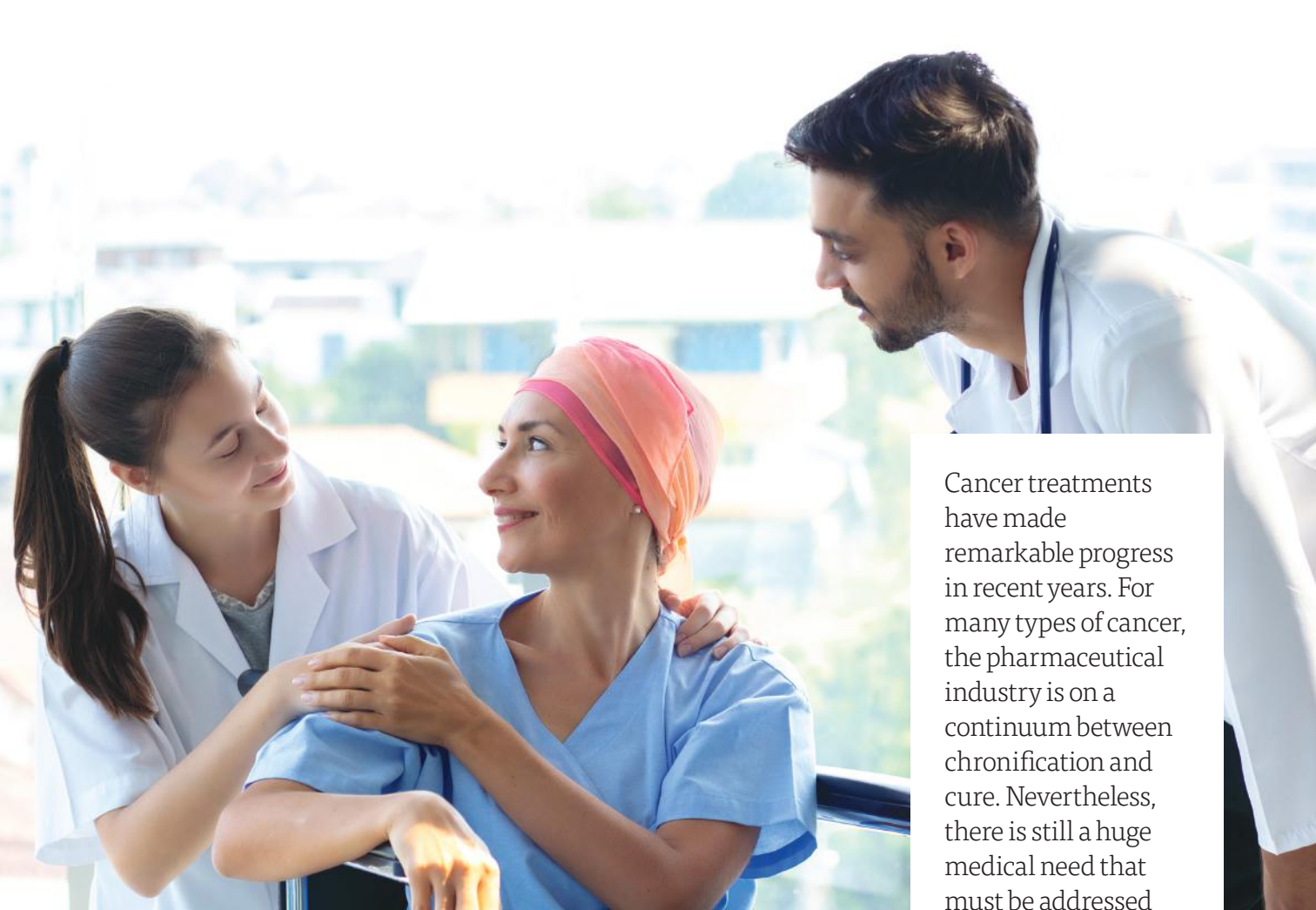

KHALED ABDEL GHAFFAR

Khaled Abdel Ghaffar was appointed Egypt's minister of health and population in August 2022 after serving as interim minister since 2021. He was previously minister of higher education and scientific research from 2017 to 2022. Before his first ministerial appointment, he was dean of the Faculty of Dentistry at Ain Shams University and the vice president of graduate studies and research, as well as head of the Department of Oral Medicine, Periodontics, Diagnostics and Radiology.

Cancer treatments have made remarkable progress in recent years. For many types of cancer, the pharmaceutical industry is on a continuum between chronification and cure. Nevertheless, there is still a huge medical need that must be addressed

Tackling the global burden of cancer

By Markus Kosch, head of oncology, Europe and Canada, Daiichi Sankyo

ancer is one of the biggest medical challenges worldwide. When we look at the mortality and number of cases, the global significance becomes even clearer. In 2020, there were almost 10 million cancer deaths and more than 19 million new cases. Globally, one in six deaths is caused by cancer,[1] and the burden of cancer increases in ageing societies. In Europe, the number of lives lost to cancer is expected to rise by more than 24% between 2020 and 2035, making cancer the leading disease-related cause of death.[2] In addition, the Covid-19 pandemic, lockdown restrictions and the overall disruption to daily life resulted in the cancellation of medical examinations and early detection screenings. As a result, more patients are diagnosed at an advanced disease stage, which often means a reduced chance for curative treatment.[3]

This is particularly noticeable in breast cancer, the world's most prevalent cancer type, with more than two million new cases diagnosed worldwide yearly and more than 500,000 in Europe alone.[4] It is estimated that one in seven women in the EU will develop breast cancer before the age of 74.[5]

Early detection of breast cancer can increase the chances of successful treatment and survival. It also means that treatments may be less aggressive and have fewer side effects.[6] European data in pre-Covid Europe show that early detection

programmes prevent more than 20,000 breast cancer deaths every year.[7]

In recent years, we have seen remarkable medical progress. This includes highly effective new treatments for advanced disease stages that can provide long-term disease control. Progress in surgery, radiotherapy, immunotherapy, targeted therapies and genetic testing enables physicians to target and treat breast cancer more precisely, thus significantly improving patient outcomes and quality of life.

Advancing medical progress is a major challenge. Another is access; the latter is key to ensuring that medical advances improve the lives of as many women with cancer as possible. It is up to all of us – pharma companies, regulators, medical authorities and healthcare professionals – to create a framework that provides timely access to innovation and optimal support for people living with cancer.

Due to a lack of medical infrastructure and universal health coverage in some parts of the world, cancer patients do not receive the best possible care, and global survival rates reflect these differences. Five-year post-diagnosis breast cancer survival rates range from more than 90% in high-income countries to 66% in India and 40% in South Africa.[8]

PREVENTION AND COLLABORATION

In this context, it is important to point out the significance of prevention and early detection. As the World Health Organization states, prevention offers the most cost-effective long-term strategy for the control of cancer.[9] The German initiative Vision Zero emphasises prevention and aims to eliminate all preventable cancer-related deaths.[10] The family medical history also plays a role since 5–10% of breast cancer cases are thought to be hereditary.[11] Understanding a family medical history can help with early detection by providing information to better assess an individual's cancer risk.

Another powerful tool against cancer is collaboration and health literacy. Academia, life sciences companies, policymakers and patient groups need to pull together to provide the best possible cancer care. At Daiichi Sankyo, we believe that the standard of cancer care can be fundamentally improved by collaborating with like-minded organisations, care groups and individuals who share our passion and commitment to protecting lives and advancing cancer research. Despite significant progress in oncology research, there remain vast areas of unmet needs. We rely on exchanging ideas with other stakeholders, such as patient groups, to better understand how we can meet their needs and expectations. And we understand that dealing with cancer is an existential challenge for patients and their families. Cancer strongly impacted my life when my father died of colon cancer. I was a 21-year-old medical student at the time, and to this day, that experience remains a source of motivation for my oncology work.

Successful research is essential for continued medical progress. Another crucial element is speed. I believe that pharma companies, regulatory bodies and reimbursement institutions must work to keep pace with scientific innovations. A recent study by the European

MARKUS KOSCH

Markus Kosch is head of oncology for Europe and Canada at Daiichi Sankyo. He obtained his medical degree from the University of Münster, Germany, where he still teaches as a professor of medicine. He worked at the University Hospital Münster until 2005 in the areas of internal medicine, intensive care and oncology. He has more than 15 years of experience in the pharmaceutical industry and is a founding member of the Vision Zero cancer prevention initiative.

Federation of Pharmaceutical Industries and Associations shows us that there is still room for improvement: in 2022, the average duration from approval to access for new oncology drugs in the EU was 526 days.[12] For patients with cancer, particularly those in an advanced tumour stage, every day counts.

I have learned there are many ways to improve how we manage cancer. Above all, it takes determination. A clear focus is needed to ensure that cancer care is a top priority for societies. We might be far away from a world without cancer deaths, but I strongly believe that with ongoing research, new treatments and intensive collaboration, cancer can be a chronic or cured condition for many patients. Let's work together to create a new reality where cancer is less of a burden for patients, their loved ones and society. ■

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Daiichi-Sankyo

The impact of globalisation on the health of at-risk populations

By Ernest C Madu, chair, Heart Institute of the Caribbean and HIC Heart Hospital

Globalisation disproportionately affects at-risk populations, but it also has significant potential to create value for these groups

While globalisation presents great opportunities for economic growth, technological advancement and cultural exchange, it also poses significant risks and challenges for vulnerable and at-risk populations. It has connected countries, cultures and economies, bringing both benefits and challenges. At-risk populations, including marginalised communities and vulnerable groups, are disproportionately affected by globalisation. It can provide access to economic growth, medical advances, cultural exchanges and advocacy – yet it can also exacerbate health disparities, environmental degradation, socio-economic displacement and the spread of infectious diseases.

Globalisation can widen health disparities among at-risk populations due to income inequalities and uneven distribution of resources and opportunities. Limited access to quality health care, education and nutritious food contributes to poorer health outcomes within these populations. Rural communities, especially in developing countries, can experience significant impacts from globalisation. Agricultural liberalisation, changes in land use and competition from global markets may threaten traditional farming practices and livelihoods. Unequal power dynamics in global value chains may lead to exploitative labour practices, job insecurity, land dispossession and unequal distribution of benefits. Lack of access to essential services, such as health care, clean water, power supply, education and infrastructure, further marginalises rural communities.

Rapid urbanisation presents challenges for the urban poor. Increased migration to cities in search of economic opportunities can result in overcrowded slums, inadequate housing and limited access to basic services such as clean water, sanitation and health care. The urban poor often face precarious employment conditions, informal work, irregular and unpredictable income, and lack of social protection, leading to higher vulnerability to health risks, poverty and marginalisation.

SUSTAINABILITY ISSUES

Environmental degradation is another area of significant concern with globalisation. An
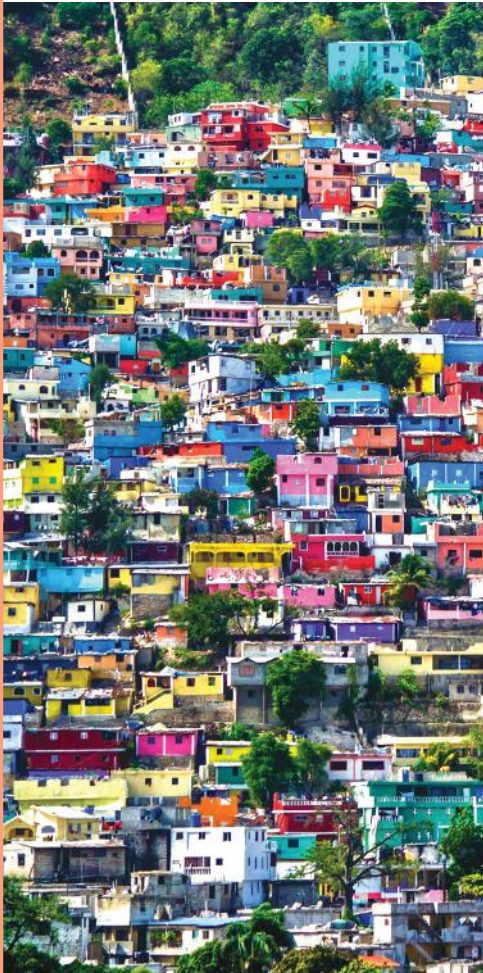
unwelcome outcome of industrialisation and production is environmental degradation and pollution, which create sustainability issues. At-risk populations living near manufacturing factories and extractive industries or in environmentally vulnerable regions face health risks from pollution, deforestation and climate change. Many such marginalised communities dependent on fishing and farming often face severe stress to livelihoods from unchecked environmental degradation, which further deepens inequalities and marginalisation that result in increased health disparities and limited access to health care.

The spread of infectious diseases is an unfortunate outcome of global travel and trade, as perfectly illustrated by the global Covid-19 pandemic. At-risk populations with limited access to health care and preventive measures are particularly vulnerable, and the availability and affordability of essential medications and vaccines may be hindered.

Despite these unsavoury outcomes, globalisation has significant potential to create value for at-risk populations. It opens up new avenues for economic participation and growth. Marginalised communities, such as ethnic minorities, Indigenous peoples, women, urban poor and rural populations, can access global markets, trade networks and investment opportunities. This enables them to engage in entrepreneurial activities, expand their businesses and increase their income. Additionally, globalisation can lead to jobs and industries created in previously underserved areas, fostering economic development and reducing poverty.

Globalisation enables the rapid dissemination of medical knowledge, scientific advances, technology and expertise, benefiting at-risk populations. Improved access to life-saving drugs, diagnostic tools and treatment options can enhance health outcomes. Global collaborations address major communicable diseases such as HIV/AIDS, malaria and tuberculosis and major non-communicable diseases such as cancer and heart disease, which are rising at exponentially higher rates in developing countries and among the most vulnerable populations.

Furthermore, globalisation promotes cultural exchanges and the recognition of diverse cultural identities. Marginalised communities often possess unique cultural traditions, knowledge systems and artistic expressions that can be shared and celebrated on a global scale. Increased cultural interactions through tourism, media and cultural exchange programmes foster cross-cultural understanding, appreciation and respect. This recognition helps marginalised communities preserve and revitalise their cultural heritage, enhancing their sense of identity and pride – which

> **The value of globalisation as a framework for amplifying the voices of at-risk populations through social media, international networks and advocacy platforms is often not appreciated"**

ERNEST MADU

Ernest Madu, MD, FACC, is a senior consultant cardiologist and the chair of the Heart Institute of the Caribbean and HIC Heart Hospital in Kingston, Jamaica. An internationally recognised cardiologist and clinical investigator, he is an expert in healthcare innovation and health systems transformation.
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are essential for health and wellness.

Globalisation promotes the growth of multinational and multicultural organisations and initiatives aimed at improving the health of at-risk populations. Essential healthcare services, clean water, sanitation facilities and nutrition programmes may be provided through these multicultural and multinational engagements.

MEASURABLE VALUE
The value of globalisation as a framework for amplifying the voices of at-risk populations through social media, international networks and advocacy platforms is often not appreciated. Activists and grassroots organisations raise awareness about health inequalities, demand policy changes, and hold governments and corporations accountable. This increased visibility can lead to improved health policies and targeted interventions.

The impact of globalisation on the health of at-risk populations is multifaceted. Although it can exacerbate health disparities, environmental degradation and the spread of infectious diseases, globalisation also offers opportunities for improved access to economic opportunities, medical advances, cultural exchanges and advocacy. Prioritising equitable resource distribution, sustainable development and inclusive policies is crucial in harnessing the potential of globalisation to enable positive health outcomes. By addressing negative impacts and building on positive aspects, it is possible to create a globalised world that promotes the health and well-being of at-risk populations and the potential for global solidarity and collaboration to address common challenges. ∎

Interview with Kolinda
Grabar-Kitarović and Joy Phumaphi,
co-chairs, Global Preparedness
Monitoring Board

A gender-equal health *system*

Gender inequality has far-reaching impacts on
health care, and only by achieving equity can we
build preparedness for future health crises

**The Global Preparedness
Monitoring Board has long
advocated for improved
equity in access to health care.
What role does gender play in
current inequities?**
Joy Phumaphi: We know that,
as with all inequalities and
inequities, health inequality is
intersectional. Even before the
pandemic, in 2019 the World

Health Organization outlined
the ways that gender inequalities
intersect with socio-economic,
geographic and cultural factors
to create structural barriers to
women accessing health care.
We also know that the increasing
cost of accessing health care
in many countries is adding
yet another barrier for many
women, with the United Nations

estimating that women still only make 77 cents for every dollar earned by a man. Rising healthcare costs expose gender inequality, and further exacerbate inequities in both access and outcomes. This burden, of course, falls disproportionately on women in the Global South, who are the farmers, the small- and medium-sized enterprise workers, and the caregivers. This is why the work of advocating for gender equity and the addressing of inequalities in healthcare spending globally is so critical.

How did the Covid-19 pandemic illustrate gender imbalances within health care and beyond?
Kolinda Grabar-Kitarović: Covid-19 put a spotlight on the inequalities and inequities that already existed. It acted as a negative catalyst not only by disproportionately exposing women to the effects of the pandemic but also by reversing and in some cases wiping out decades of progress that we had made in addressing both gender equality and other areas that excessively affect women, such as eradicating poverty and improving access to education.

In so many cases, women were the first responders in the health sector and were exposed to the pandemic first and thus contracted the disease more often. But the pandemic also affected socio-economic issues other than health. Women were more affected by unemployment or had to reduce their paid work hours to care for their children. Given all this, it is notable that there is a lack of clear, globally consistent data on the gender impacts of Covid-19 across all aspects of health and well-being – data that would be incredibly valuable for ensuring that we are better prepared for future pandemics and health emergencies. This is something that the GPMB focused on as we developed our Monitoring Framework.

How does the GPMB Monitoring Framework for Preparedness incorporate gender inequality into its assessments?
JP: Well, we can all agree that a key lesson that we learned during Covid-19 is that the traditional measures of a country's preparedness for pandemics or other health emergencies typically

KOLINDA GRABAR-KITAROVIĆ

Kolinda Grabar-Kitarović co-chairs the Global Preparedness Monitoring Board. The first woman president of Croatia, from 2015 to 2020, she has also served as foreign minister, again the first woman in the position. She was appointed Croatia's ambassador to the United States, and was the first woman assistant secretary-general and member of the North Atlantic Treaty Organization Senior Leadership. She is a Women Political Leaders Global Ambassador for Immunization, a member of the High-Level Advisory Council for the High Representative for the UN Alliance of Civilizations, and chair emerita of the Council of Women World Leaders.
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JOY PHUMAPHI

Joy Phumaphi, former health minister for Botswana, co-chairs the Global Preparedness Monitoring Board. She is also executive secretary of the African Leaders Malaria Alliance and co-chairs the Global Partnership and Fund to End Violence Against Children and the Lancet pathfinder commission on climate change and health. She co-chaired the United Nations Secretary General's Independent Accountability Panel for Every Woman, Every Child, Every Adolescent. She was also interim co-CEO of the Clinton Health Access Initiative. She was a member of the UN High-Level Panel on Global Response to Health Crises and has served as a member of the UN Reference Group on Economics, and a UN Commissioner on HIV/AIDS and Governance.
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underestimated the importance of social and economic factors that should have been obvious, including those related to gender. In developing the GPMB Monitoring Framework we applied these lessons, integrating them into the framework, which uses over 90 indicators across the three dimensions of risk: prevention, preparedness and resilience, and impact.

Multiple indicators focus on gender equality, including a focus on the impact of health emergencies on women, youth, and other vulnerable and marginalised groups. The framework also assesses whether global decision-making bodies for pandemic prevention, preparedness and response are gender equal and gender sensitive. For too long the critical decisions in global health have been made by organisations that are too far removed from those whom they are supposed to be serving.

What would a truly gender-equal global health system look like?
KGK: When we talk about gender equality, it's important to recognise that it does not benefit just women. It benefits societies overall. Therefore, a gender-equal global health system would benefit entire communities, countries and the entire state of global affairs.

I believe that the first step must be to recognise the vital role played by the millions of women who provide health and social care in communities across the globe. As the GPMB has highlighted, 70% of this workforce are women, yet their contributions are undervalued and understated and they are underrepresented in decision-making bodies.

We need more women at the decision-making table. If we look at the available data on the participation of women in peace processes, we know that involving women makes these processes much more likely to succeed in the long term. Why should the same not apply to health crises and pandemics?

In addition to including women in decision making, it is also crucial to empower women personally to make decisions for themselves about their own health, and the health and well-being of their families, their communities and their countries. ∎

Empowering communities worldwide: the Global Contraception Atlas

A promising new initiative is shining a light on contraception, providing a comprehensive and interactive resource that serves as a rallying point, showing how far we've come and the work left to do

By Neil Datta,
executive director, European Parliamentary
Forum for Sexual and Reproductive Rights

As the World Health Summit meets in Berlin this October, a promising initiative will take centre stage to shine a light on a crucial aspect of public health: contraception. The Global Contraception Policy Atlas is a comprehensive and interactive resource, an innovative tool that not only highlights progress but also identifies gaps, enabling policymakers and healthcare professionals to make informed decisions that can reshape the future of reproductive health.

Access to modern contraception is not just a matter of personal choice. It is a fundamental human right that underpins public health, gender equality and socio-economic development. In a world projected to reach a population of 8 billion people by 2023, it is vital to understand and respond to the diverse needs of individuals and communities.

Today an estimated 257 million women in developing regions who want to avoid pregnancy are not using safe and effective family planning methods, for reasons ranging from lack of access to information or services to lack of support from their partners or communities. Considering this, the European Parliamentary Forum for Sexual and Reproductive Rights, with the support of regional stakeholders and partners, decided to investigate how public authorities perform in policies, funding and access to information on contraception. This in-depth research became the Global Contraception Policy Atlas: a document that maps and benchmarks the performance of countries' political leadership on family planning. It also provides concrete recommendations for improvement in six regions: Latin America and the Caribbean, Middle East and North Africa, Europe, Africa, Asia-Pacific and Canada – for a total of 189 countries, 118 indicators and 3,643 data points.

One of the most compelling features of the atlas is its interactive map, which provides a visual representation of contraceptive access and use across countries and regions. The new website at www.srhrpolicyhub.org enables users to interact, compare and download all the data gathered through an innovative and engaging interface. This real-time tool enables users to delve into specific data points, including contraceptive methods preferred in different areas and barriers preventing individuals from accessing reliable family planning services, thereby offering valuable insights that can guide policymakers and civil society.

KEY FINDINGS

Access to family planning should be a key concern of governments to empower citizens to plan their families and lives. Yet the Global Contraception Policy Atlas reveals a very uneven picture across

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the regions and countries, showing that more needs to be done to ensure sexual and reproductive health for all.

The atlas shows that today only 16 countries worldwide score highly (dark green), and the majority of countries score medium (47 countries, yellow) or very low (40, red). The global research also reveals wide regional disparities in terms of contraceptive policies.

The atlas highlights that national legislation should provide the right to access a wide range of contraceptives. In addition, public health institutions should ensure accessible online information on a broad range of modern and effective contraception, including long-acting reversible contraceptives, such as intrauterine devices or implants, emergency contraception, and where to obtain them. Moreover, public institutions should improve transparency and accountability by creating a dedicated budget line for family planning and contraceptive procurement and making its disbursements transparent.

Ultimately, the atlas aims to guide policies by engaging decision makers, civil society, media and the public. It emphasises the policies' impacts on real outcomes, encouraging improvements for better services for sexual health and reproductive rights.

The atlas serves as a rallying point. A visual representation of how far we have come, it reminds us of the work we still need to do. Contraception is a cross-cutting issue that intersects with public health, education, gender equality and economic development. Leading the way to a healthier, more equitable world requires collaborative action and inclusive thinking. ∎

NEIL DATTA

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