




# No Time to Gamble

Leaders Must Unite to Prevent Pandemics

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*In a world beset by complex problems, averting another pandemic is one challenge that can be solved. Why would leaders make any other choice?*



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## Abbreviations

<b>100DM</b> .....	100 Days Mission
<b>ACT-A</b> .....	Access to COVID-19 Tools Accelerator
<b>Africa CDC</b> ....	Africa Centres for Disease Control and Prevention
<b>AU</b> .....	African Union
<b>BARDA</b> .....	Biomedical Advanced Research and Development Authority
<b>CEPI</b> .....	Coalition for Epidemic Preparedness Innovations
<b>COP</b> .....	Conference of the Parties
<b>CSOs</b> .....	civil society organisations
<b>DPM</b> .....	dynamic preparedness metrics
<b>DRC</b> .....	Democratic Republic of the Congo
<b>FAO</b> .....	Food and Agriculture Organization of the United Nations
<b>G20</b> .....	Group of 20 industrialised and emerging-market nations
<b>G7</b> .....	Group of Seven leading industrialised nations
<b>GPMB</b> .....	Global Preparedness Monitoring Board
<b>HEPR</b> .....	Health Emergency Preparedness, Response and Resilience
<b>HIC</b> .....	high-income countries
<b>IFIs</b> .....	International Financial Institutions
<b>IHR</b> .....	International Health Regulations
<b>IMF</b> .....	International Monetary Fund
<b>INB</b> .....	Intergovernmental Negotiating Body
<b>IP</b> .....	intellectual property
<b>IPCC</b> .....	Intergovernmental Panel on Climate Change
<b>JEE</b> .....	Joint External Evaluation
<b>LMICs</b> .....	low- and middle-income countries
<b>MCMs</b> .....	medical countermeasures
<b>mRNA</b> .....	messenger RNA
<b>NAPHS</b> .....	National Action Plan for Health Security
<b>ODA</b> .....	official development assistance
<b>PABS</b> .....	pathogen access and benefit sharing
<b>PHEIC</b> .....	public health emergency of international concern
<b>PPR</b> .....	prevention, preparedness and response
<b>PRET</b> .....	Preparedness and Resilience for Emerging Threats initiative
<b>R&amp;D</b> .....	research and development
<b>SARS</b> .....	severe acute respiratory syndrome
<b>SARS-CoV-2</b> ..	the virus that causes COVID-19
<b>SPAR</b> .....	States Parties Self-Assessment Annual Reporting tool
<b>U.S. CDC</b> .....	U.S. Centers for Disease Control and Prevention
<b>UNGA</b> .....	United Nations General Assembly
<b>WHA</b> .....	World Health Assembly
<b>WHO</b> .....	World Health Organization



## Foreword by Her Excellency Ellen Johnson Sirleaf and The Right Honourable Helen Clark

In May 2021, the Independent Panel for Pandemic Preparedness and Response presented a package of evidence-based recommendations to the World Health Assembly that was urgent, ambitious, and practical. Our goal was to make COVID-19 the last pandemic of such devastation. At the current rate of change, it will not be.

The world now marks time as “before” and “after” the pandemic. Many want to forget the pandemic itself and block the collective trauma. Yet we cannot afford to forget.

Government leaders may have turned their attention to other issues, but they must not neglect their responsibility to act now and unite to safeguard the public and prevent future pandemics.

A pandemic threat can emerge at any time, in any country. Today dangerous disease outbreaks are occurring around the globe: for example, avian influenza A (H5N1) is infecting more mammals, including domestic cattle. There is a scramble now to diagnose human cases and to purchase vaccines in case the worst happens and H5N1 begins to transmit from person to person. A deadlier new form of mpox has led to child deaths in the Democratic Republic of the Congo, where there is no access to vaccine. A new pandemic threat, “Disease X,” could emerge at any time. Every day that preparation for a new threat is delayed is a dangerous gamble.

There is recent cause for some optimism concerning the rules for pandemic preparedness and response. On June 1, 2024, after many challenging days and nights of negotiation, the World Health Assembly adopted amendments to the International Health Regulations (IHR). These amendments won’t immediately make the world’s population safer. They will be meaningful only when Member States and the World Health Organization fully invest in and abide by them. However, in a fractious world, countries demonstrated that multilateralism could still deliver and unite us against existential threats. Member States must now prioritise negotiation and adoption of a pandemic agreement—with equity at its heart—that will complement the IHR. This should happen before the end of 2024.

Discussions in Geneva are essential but must not hold up actions to prepare for the next pandemic threat. While three years is a short time in multilateral negotiations, it is a dangerously long time to leave gaping holes in the national, regional, and international systems meant to protect 8 billion people from a new pandemic.

In our main report to the World Health Assembly in May 2021, [\*COVID-19: Make it the Last Pandemic\*](#), we recommended a coherent and urgent package of change. Leaders, however, have too often looked the other way and towards issues of immediate interest to their electorates. They are unfortunately gambling with our future.

Today the world is not investing in pandemic preparedness and response at anywhere near the scale or speed necessary. Despite multiple initiatives and discussions, there is still no efficient, equitable, end-to-end platform for medical countermeasures on which low- and middle-income countries can rely. Based on assessments, it's difficult to say if countries are prepared or not for the next pandemic threat. Furthermore, tools and metrics still lack the rigour and comprehensiveness to identify and address pandemic vulnerabilities and risks. There is far too little accountability within the international system. There is a dangerous gap in trust between countries, within countries, and within communities that will allow pathogens to sail through.

There is a path that political leaders can choose, however, to transform their countries and the world into a safer place for their citizens today and for generations to come. It is a matter of building reciprocal trust, and it is in the interest of every country to do so. The unpredictability of pathogen emergence means every country must both rely on and support its global neighbours to be prepared.

All governments, of all income brackets, can apply lessons from COVID-19, invest in multisectoral capabilities, and update their plans to identify and manage the next pandemic threat. Governments can work much more closely with communities to understand and address inequities, vulnerability, and risks, and to rebuild trust.

The international community can take steps to transform international financing to support low- and middle-income countries to help bridge the gaps in domestic finances. Modern digital tools in the hands of community workers can transform disease surveillance across human, environmental, and animal health. Leaders can choose to manage

outbreak and pandemic tools as part of the global commons. The World Health Organization can focus its efforts on ensuring the very best technical advice and support.

Pandemic preparedness and response are not for public health experts alone. There remains an essential role for political leaders at the highest level. Such leadership has been missing, but it can be advanced through various avenues, including the United Nations General Assembly, and specifically the upcoming Summit of the Future. We also call for a group of champion leaders to emerge and advocate to close the gaps in the international system and help to activate a response in times of crisis.

The solutions lie in political will to overcome trust deficits, leadership, and accountability. Statements from the G7 and G20 are important, but they are not enough. A pandemic agreement and strengthened IHR are not enough. The world needs leadership at the highest-level to turn statements and recommendations into systems and actions that protect people.

**This isn't a problem for future governments. It is not a theoretical exercise. It is a problem for which we have direct lived experience in the most recent of pasts and for which actions need to happen now.**

Lack of preparation risks the lives and livelihoods of the 8 billion people on this planet, including the children and grandchildren of leaders who today could instead make a choice to protect them. This is not the time to gamble. Inaction is a dangerous political choice.



**Rt Hon. Helen Clark**



**H.E. Ellen Johnson Sirleaf**

Former Co-Chairs of the Independent Panel for Pandemic Preparedness and Response



## Executive summary: a package only partly opened

In May 2021, the Independent Panel for Pandemic Preparedness and Response presented a comprehensive package of evidence-based recommendations to the World Health Assembly (WHA). The aim was to make COVID-19 the last pandemic of such devastation. Since then, despite much discussion and debate, and some progress, a lack of political leadership and a fraught and fractious multilateral system have hindered full implementation of these recommendations. This latest report evaluates the status of pandemic preparedness and response reforms and charts a path forward towards protecting all people around the world from future pandemic threats.

### Complacency: the enemy of preparedness

The COVID-19 pandemic has left an indelible mark on the world. There is frequent citing of the 7 million deaths reported to the World Health Organization (WHO),<sup>1</sup> but **the true number of excess deaths since the onset of COVID-19 is estimated to exceed 28 million.**<sup>2</sup> The immediate impact of the pandemic was felt differently within and between countries and communities, and so too its legacy continues to take an uneven toll, socially and economically.

**Three years after we presented our main recommendations, despite some progress, the world remains unprepared to stop an outbreak from becoming a pandemic.** High-level political momentum has waned, and leaders have shifted their focus to more politically pressing issues. Countries, now more indebted and facing higher interest rates than before the pandemic, are not investing the domestic resources required for preparedness and response, while international finance remains insufficient. The World Health Assembly's adoption of amendments to the International Health Regulations (IHR) however, provides some cause for optimism as does the Assembly's support for more unearmarked funding for WHO. There is also notable regional progress on strategies and commitments, systems for surveillance, and efforts towards diversifying manufacturing of countermeasures.

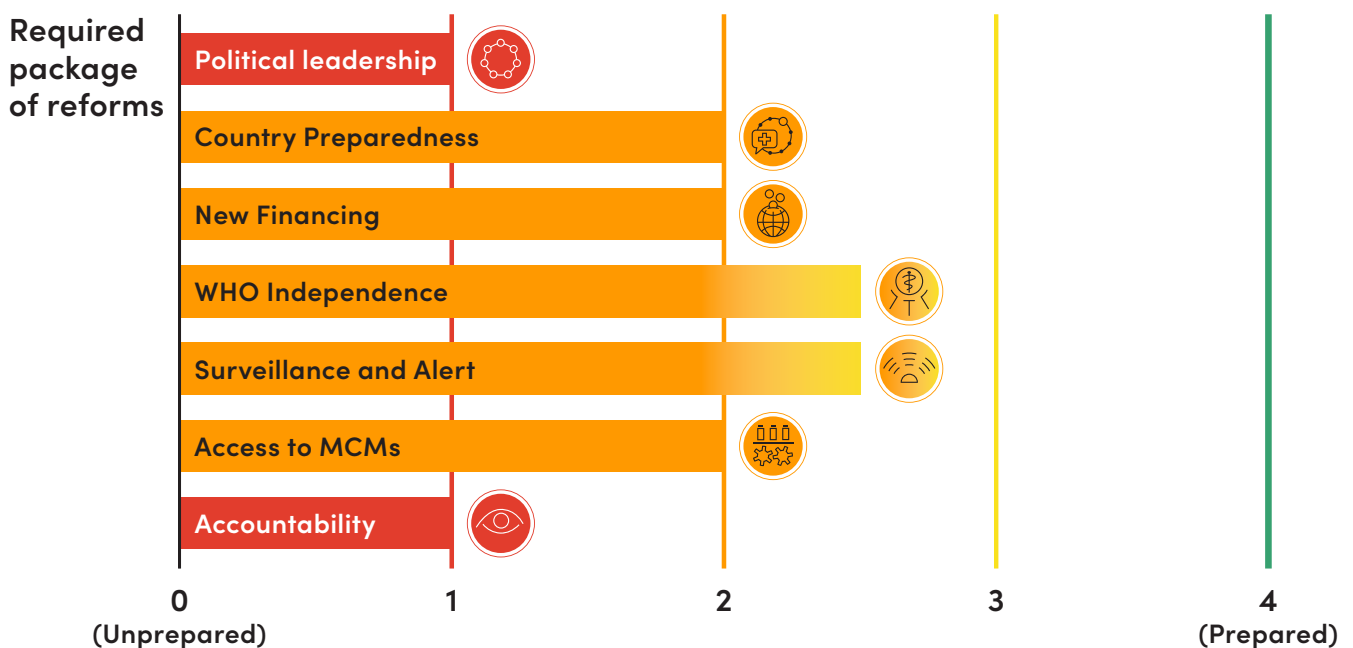


Yet these positive moves are not nearly advanced enough or at the scale required. Nor do they focus sufficiently on research and development to build regional resilience or connect enough to one another and to a global system. Too many dangerous gaps and vulnerabilities remain, and pathogens have ample opportunity to spill over, slip through, and spread fast.

Much time, effort, and money have been spent negotiating a pandemic agreement in Geneva, and this process is now set to continue, possibly until May 2025. A new agreement must be successfully concluded. But the world can't wait for its adoption or for the ratification required from 60 countries—an effort that could take three or more years. There must be action now—to close the gaps that put 8 billion people at risk of a new pandemic. The recent jump of the avian H5N1 virus to more mammals—including new human cases transmitted from cattle in the United States—portends an influenza pandemic the world is nowhere near ready to manage.

In this report we present the progress made in relation to our 2021 recommendations. We do this because the world cannot afford to shelve these recommendations as it has for too many reports that assessed deadly outbreaks of the past, including the 2013–2016 Ebola epidemic that killed more than 11,000 people in West Africa.<sup>3</sup> Most importantly we do this because governments, working with one another, with communities, international and regional organisations, and development banks, can take ambitious but doable actions that can detect outbreaks in animals and in people, alert the world, and stop the outbreaks before they spread across borders and around the globe once again.

## 2024: The world is not ready for a new pandemic threat

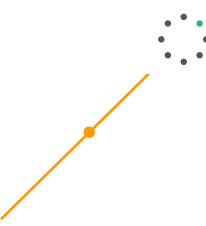


## Charting the path forward

**There is no substitute for political commitment from Presidents and Prime Ministers.** The global health threats council recommended by the Independent Panel for Pandemic Preparedness and Response to ensure sustained political commitment has not materialised. More and more however, we hear that sustained political commitment at the highest level is the missing ingredient. If a formal council is not created, we believe that an active group of champion leaders should come together to advocate for pandemic preparedness and response to be prioritised. These leaders can help to build trust and support the finalising of a strong pandemic agreement and its ratification, advocate for sustained preparedness and surge funding, and push for regional capacities in research, development, manufacturing, and distribution. Incorporating pandemic preparedness within the UN Secretary-General's proposed emergency platform for complex shocks also presents a near-term opportunity. A Conference of the Parties (COP), if established through an eventual pandemic agreement, should mandate the regular engagement of Heads of State and Government as a means of cementing sustained multisectoral and multilateral commitment to stop outbreaks before they become pandemics.

**Pandemic preparedness starts with strong country leadership, investment, and systems.** In an interconnected world where 100,000 commercial flights land every day, we are only as safe as the weakest link in the chain. National policies and investments in communities, systems, and capacities are the first line of defence. Based on existing tools and assessments, it is not clear how many countries have integrated the lessons from COVID-19 into their national plans.

Through the States Parties Self-Assessment Annual Reporting tool (SPAR), WHO tracks the existence and degree of implementation of all-hazard health emergency plans, but not National Action Plans for Health Security (NAPHS). The shortcoming of country self-reporting, coupled with the limited number of Joint External Evaluations (JEEs) and simulation exercises and lack of a global peer-review mechanism implemented at scale, leaves large uncertainties over country-level preparedness. The world needs to be able to urgently and transparently see which countries are ready and which need more support. WHO's new preparedness metrics also require independent validation.



*Too many dangerous gaps and vulnerabilities remain, and pathogens have ample opportunity to spill over, slip through, and spread fast.*

Connected global, regional, and national mechanisms for managing mis- and disinformation are essential and must be far better resourced than the purposeful well-funded campaigns currently feeding skeptics and conspiracy theorists. For pandemics, and for overall social cohesion to face any emergency, governments must invest in evidence-based, meaningful community and civil society engagement in outbreak and pandemic planning. One place to start is to ensure the inclusion of civil society organisations (CSOs) in the governance of the national authority now recommended in the amended International Health Regulations.<sup>4</sup>

**Without financial investment in public goods, there is no pandemic preparedness or response.** Domestic and international investments in pandemic preparedness have been difficult to track. However, in 2019, after the West Africa Ebola outbreak and before COVID-19, just \$374 million of official development assistance (ODA) for health—less than 1% of ODA—was spent on pandemic preparedness.<sup>5</sup> It was nowhere near enough.

Assessments, including our own, show that in addition to much greater domestic investment, \$10–15 billion more in international financing is needed annually to fill the gaps in pandemic preparedness in low- and middle-income countries. This does not include investments in One Health, which would require an added \$10.3–11.5 billion annually to raise public veterinary standards, improve farm biosecurity and decrease deforestation in high-risk countries.<sup>6</sup> Ministries of Finance should consider these investments as a global public good to enhance national and global stability, and they must not siphon funds from existing ODA. To avoid further fragmentation of the pandemic preparedness and response funding landscape, we recommend transforming The Pandemic Fund into a non-ODA finance modality where all governments contribute based on a formula according to their ability to pay, supporting both preparedness efforts and immediate response needs including to pay for the countermeasures countries will need to stop outbreaks and mitigate the impact of pandemics.

**An authoritative and independent WHO is essential to the global health and international ecosystem.** To strengthen WHO's authority, integrity, and independence, its focus should be on high-quality normative and technical work, not just during emergencies but also for preparedness purposes. Member States must make progress on reforming WHO finances as per the 2023 WHA resolution,<sup>7</sup> make definitive steps towards non-earmarked funding, and fulfil the needs of the Investment Round so that WHO can predictably plan staffing and programming as per the 14th General Programme of Work.<sup>8</sup> In return, WHO must enhance the provision of high-quality technical advice and support to countries and regions and improve accountability for spending and results.

We note with concern that operational spending on emergencies is now eclipsing WHO's normative and technical work, including for the distribution of supplies. Other organisations better equipped should

be charged to pursue those tasks, or Member States might consider splitting WHO into two entities and creating a new operational ‘World Health Emergencies Programme.’ Finally, though WHO is a partner within the international system, it cannot always be the sole leader. Multisectoral actions to plan for and prevent the many potential impacts of outbreaks—in education, employment, trade, transport, and many more areas—are essential and not a job for WHO alone.

**There should be no delays to early warning. Governments and WHO should immediately plan to adhere to the amendments to the IHR to improve detection, validation, and global alert and response,** and they should contribute to a more equitable system backed by reliable finance. In 2020, many government officials did not respond to the COVID-19 public health emergency of international concern, or PHEIC, which they misinterpreted as a bureaucratic acronym rather than a call to action. WHO should therefore implement a communications strategy to educate stakeholders and the public about the actions required when the Director-General determines a PHEIC or a pandemic emergency.

**The ideal situation is that if the surveillance and alert jobs are properly resourced and done well, the WHO Director-General will rarely have to determine another PHEIC or a pandemic emergency in the future.** Countries should equip communities to be full partners in disease surveillance and should supply and sustain the handheld tools that can speed up reporting by several days. Disease surveillance extends beyond people and a One Health approach, while more expensive, is essential. Veterinarians, farmers, forestry and wildlife professionals, hunters, and market managers and sellers need to be equipped with training and tools. Surveillance reporting and data systems must be linked up, and measures must be in place to cover loss of income.

**Medical countermeasures are a global common good.** The inequities in access to medical countermeasures (MCMs) during COVID-19 have left a lasting painful moral stain, and the resulting mistrust has affected negotiation of a pandemic agreement. All countries need a system they can rely on to provide vaccines, tests, or treatments at speed when needed. MCMs are often developed with significant public funding, are essential public health tools to stop outbreaks from becoming pandemics and must be managed as part of the global health commons during emergency outbreaks and pandemics. **Public benefits should be tied to public funding and to technology and knowledge sharing, and they should ensure equitable access for public health outcomes.** Work must be accelerated now, and an eventual pandemic agreement should codify support for a pre-negotiated, end-to-end ecosystem for MCMs. This ecosystem should include regional R&D hubs that are linked to clinical trial platforms and local manufacturing and are capable of developing and distributing products tailored to stop new outbreaks. Fit-for-purpose regional financing must support this ecosystem, with public finance stipulating the need for collaboration

and knowledge sharing for public benefit. Moreover, vaccines are one of several tools required to contain a public health emergency, and investment in diagnostics and treatments must also be commensurate.

**Accountability should be strengthened in the international system, between countries, citizens, and neighbours.** In a fractious, polarised and less trusting world, accountability is not a popular concept. Yet the only way to help ensure that the world is prepared to face pandemic threats is for the international system, and for countries, to deliver on and be accountable for their commitments. This requires independent monitoring.

Accountability measures are weak to nonexistent in the text proposed so far for the pandemic agreement and in the IHR amendments. To strengthen accountability to preparedness, a wholly independent monitoring mechanism is needed. This mechanism could be a fully independent and well-resourced Global Preparedness Monitoring Board (GPMB) or a new entity modelled on the Intergovernmental Panel on Climate Change (IPCC). This mechanism could eventually become the implementation and compliance committee reporting to the Conference of the Parties of a potential pandemic agreement. The implementation committee to be formed according to the IHR amendments should also expand the mandate to include compliance. These mechanisms require sustained political support, robust procedures, an independent secretariat, and adequate financing. In addition, looking ahead to the 2026 High-Level Meeting on Pandemic Prevention, Preparedness and Response, a multisectoral civil society engagement mechanism should be established now to help ensure accountability to the world's citizens.

## **No time to gamble**

People are exhausted from COVID-19, and national finances are stretched—the world cannot afford another pandemic. In fact, the next threat may bring something much worse. The good news is that we can be ready for it. While pandemic threats are inevitable, pandemics are not.

**We continue to believe that with collective vision, political will to overcome deficits in trust, leadership, accountability, and investment, COVID-19 can be the last pandemic of such devastation. The question for governments today is: why gamble with your children's and grandchildren's health and wellbeing? What kind of choice is that?**

## **Pandemic preparedness and response must remain on the political agendas of Heads of States and Governments.**

Over the next 12 months, we believe that the following priority actions can strengthen pandemic preparedness and response, as well as help to transform a system that remains largely stuck in a pre-2020 status quo:

- ▶ **July 2024: The pandemic agreement INB process resumes with new ways of working, and inclusion of independent experts including civil society.**
- ▶ **September 2024 UNGA: A Champions Group to Prevent Pandemics is formed and declares their commitment to continued advocacy, including to a successful pandemic agreement, to finance and equitable access to countermeasures; and to rally a strong response in times of health crises.**
- ▶ **September 2024 UNGA: The Summit of the Future agrees a new Emergency Platform for complex global shocks as part of the Pact for the Future. The Emergency Platform should expand to include emergency preparedness.**
- ▶ **October 2024: The Global Preparedness Monitoring Board is made fully independent and de-linked from WHO; or a new independent pandemic preparedness and response monitoring panel like the IPCC should be established.**
- ▶ **November 2024 G20: Full replenishment of The Pandemic Fund of non-ODA funds; and South Africa G20 2025 prioritises converting The Pandemic Fund into a preparedness and surge mechanism with a global public investment model.**
- ▶ **November 2024 G20: Brazil, South Africa and other middle-income countries use opportunities such as the G20 to negotiate to move away from a charity model for medical countermeasures access, and towards one of regional innovation centred on resilience, knowledge and technology sharing.**
- ▶ **November G20: Member States must meet milestones for WHO's Investment Round and repledge to meet targets for unearmarked funding.**
- ▶ **January 2025 WHO Executive Board: WHO Members States to initiate a one-term approach for the Director-General and Regional Directors, and WHO to actively work with Member States to depoliticize senior appointments.**
- ▶ **June 2025: The amended International Health Regulations come into force and are fully implemented, including new multisectoral National Authorities with CSO engagement. WHO to begin publishing annual reports on country preparedness against its new benchmarks.**



## COVID-19's long spiky tail in a fraught geopolitical landscape

We had been repeatedly warned about a likely pandemic since the SARS outbreak in 2003. As recently as October 2019, the GPMB warned that “the world was at acute risk for devastating regional or global disease epidemics or pandemics that not only cause loss of life but upend economies and create social chaos.”<sup>9</sup>

And yet, just three months later, COVID-19 arrived at great global shock. Early 2020 images of overwhelmed health care workers and makeshift morgues forecast the devastation to come. Officially the pandemic has killed over 7 million people since early 2020, with about half of those deaths since the release of the Independent Panel’s main report in May 2021. However, 7 million is a significant undercount. Today, after four years, the number of excess deaths since the emergence of COVID-19 is estimated at 28.5 million.<sup>2,10</sup> The pandemic propelled the world into the fastest economic decline since World War II and the largest simultaneous contraction of national economies since the Great Depression with lasting impacts felt across all parts of society.

*“I think about COVID constantly, because it feels to me like it's had a long tail, which doesn't only relate to the pandemic but our ability to tackle big problems collectively.”*

— Jacinda Ardern,  
former Prime Minister  
of New Zealand,  
in conversation,  
May 7, 2024

For the first time since global life expectancy has been tracked, it dropped—by 1.8 years between 2019 and 2021.<sup>11</sup> In some middle-income countries with high rates of excess mortality, such as Brazil and India, the majority of deaths occurred in the 40–59 age group, with those dying on average 19 years earlier than expected in Brazil.<sup>12,13</sup> An estimated 10.5 million children, mainly in the Americas and Southeast Asia, lost a parent or primary caregiver to COVID-19, making their care now a greater responsibility for a single parent, other family members, or social services.<sup>14</sup>

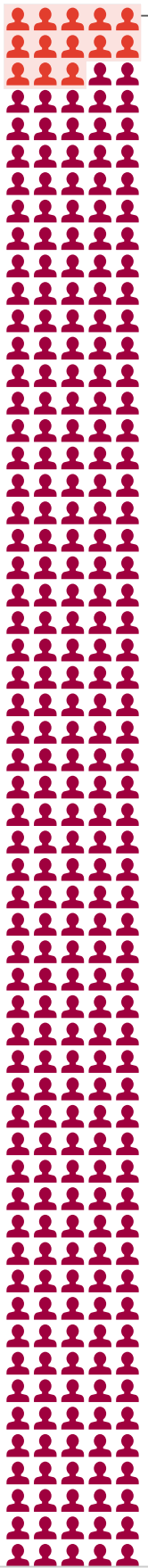
The health impacts of COVID-19 were not equal. Individuals living with cardiovascular disease, COPD, obesity, and other preexisting conditions were up to seven times as likely to experience a severe infection as those without such conditions.<sup>15</sup> Mortality was higher amongst poor and marginalised populations as evidenced in studies in Brazil, France, India, Peru, and the United States.<sup>16</sup>

The pandemic also leaves a legacy of long COVID survivors who suffer the consequences months or years after the initial infection, affecting their quality of life, and with knock-on effects for caregivers and on labor force participation.<sup>17</sup> One estimate puts the lifetime costs of long COVID in the United States at \$3.7 trillion across the life course.<sup>18,19</sup> Many children and adolescents are reporting worsened mental health, including those who will bear lifelong scars from witnessing and experiencing domestic violence during lockdowns.<sup>20</sup>

# COVID's lasting legacy

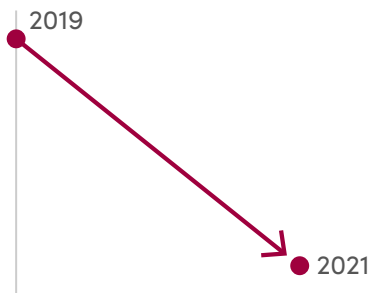
28.5 million excess deaths<sup>(i)</sup>

10.5 million children lost a parent or caregiver<sup>(ii)</sup>

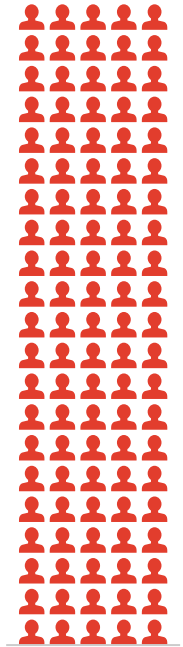
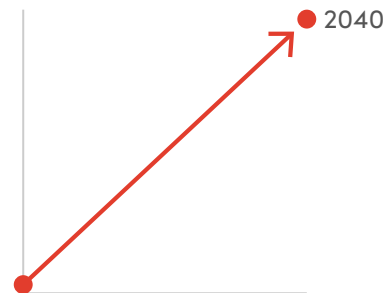


1.3 million due to vaccine inequities<sup>(iii)</sup>

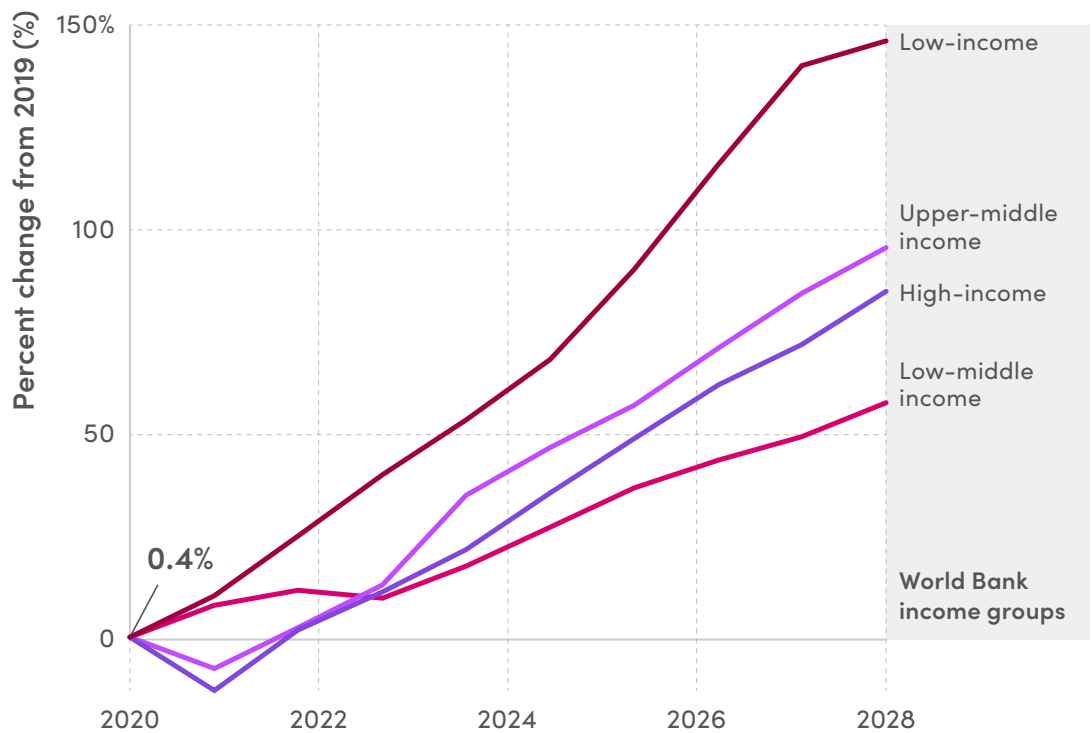
1.8 year drop in global life expectancy<sup>(iv)</sup>



US\$1.6 trillion cost of learning losses to the world economy<sup>(v)</sup>



Increase in interest payments for countries relative to 2019<sup>(vi), (vii)</sup>



Sources:

- (i) [The Economist](#)<sup>2</sup>
- (ii) [Hillis S et al.](#)<sup>14</sup>
- (iii) [Moore S et al.](#)<sup>23</sup>
- (iv) [WHO](#)<sup>11</sup>

(v) [Bryant J et al.](#)<sup>20</sup>

(vi) Adapted from [IHME](#)<sup>30</sup>

(vii) Interest payments are calculated as general government primary net lending/borrowing minus general government net lending/borrowing.

👤 = 100,000




Beyond long COVID and the mental health impacts, COVID-19 leaves a legacy of less healthy populations with evidence of increased childhood obesity and reduced physical activity in studies conducted in Australia, India, the United Kingdom, the United States, and elsewhere.<sup>21</sup> This leaves millions of children at risk of noncommunicable diseases and in poorer health should another pandemic occur.

Vaccination has been essential to reduce illness and death associated with COVID-19. However, inequities in vaccine access leave a lasting moral stain, with one study estimating that 1.3 million people in low- and middle-income countries would not have died had vaccines been equitably shared.<sup>22</sup> Vaccine inequity has also degraded trust between wealthier and less wealthy countries, which itself has led to serious roadblocks in pandemic agreement negotiations.

Organised resistance to WHO and the pandemic agreement has resulted in disinformation about the agreement itself, the safety and efficacy of vaccines, and questioning of science, government, and the legitimacy of international organisations. This year alone, political choices in many countries are far more polarised than before the pandemic and have manifested in funded campaigns to discredit vaccines and to deliberately misinform people about the purpose and authority of the pandemic agreement.<sup>23</sup>

The social costs of COVID-19 are difficult to measure but are felt everywhere. Placing an exact price tag on the pandemic is equally challenging, not least because the economic impacts were so broad ranging and have become so deeply rooted. The International Monetary Fund (IMF) estimates a global loss of \$3.3 trillion of economic output since 2020,<sup>24</sup> while other estimates place the cost at \$14 trillion by the end of 2023 just for the United States.<sup>25</sup> For children and young people, learning losses alone are estimated to cost the world economy \$1.6 trillion by 2040.<sup>20</sup>

No country escaped the economic hit. While absolute direct health impacts and their financial costs were greatest in high-income countries, the socioeconomic impacts and indirect health effects were greater in low- and middle-income countries. Existing socioeconomic inequalities were amplified, such as more women experiencing job losses than men (4.2% vs. 3%).<sup>26</sup>



*For leaders, the overriding lesson must be this: the cost of responding to a pandemic is enormously greater than the cost of preventing and preparing for one.*

To manage the pandemic, countries of all income levels were forced to take on more debt. Now, they are paying back that debt at higher interest rates, rising from 0.4% in 2020 to 5% in 2023.<sup>27</sup> This comes at a time of large shifts in the economic landscape. In 2022, global net financial transfers to developing countries fell to their lowest levels since the global financial crisis and are projected to turn negative by the end of this year.<sup>28</sup> Low-income countries are suffering most, as are their health budgets, pushing more people to pay out of pocket for health care. In tandem, official development assistance for health has dropped.<sup>29</sup>

As time passes, the economic impacts of COVID-19 become less acutely visible, yet they remain a pervasive and entrenched legacy of the pandemic.

## Lurking threats

COVID-19 was not the first pandemic and will not be the last pandemic threat.<sup>30,31,32</sup> Modelling suggests a 1-in-2 chance that the world will experience a pandemic of similar magnitude to COVID-19 in the next 25 years.<sup>33</sup> Since the launch of the Independent Panel's original report in May 2021, the WHO has published some 190 Disease Outbreak News notifications of acute public health events. In 2024 alone the world is facing significant outbreaks of dengue, cholera, measles, and mpox, and the alarming evidence of the highly pathogenic avian influenza H5N1 spilling over into cats, foxes, mink, marine mammals, livestock, and other mammals, with new human cases in Australia, Cambodia, and the United States.<sup>34</sup> More than 9 million people living with HIV have not yet accessed treatment.<sup>35</sup> Silent but ever-present, antimicrobial resistance is another grave risk to humanity this century.<sup>36</sup> The risks are multiplying, in large part because of climate change, deforestation, and biodiversity loss,<sup>37</sup> but also as a result of increased biosecurity risks of engineered viruses through both synthetic biology and artificial intelligence.<sup>38,39</sup>

***“This H5N1 outbreak is a warning. The report of respiratory symptoms is not a good sign, and this is not a good way to prevent a pandemic.”***

*– Dr. Rick Bright, a virologist and former head of the Biomedical Advanced Research and Development Authority<sup>61</sup>*

The world cannot afford another pandemic. People—particularly the health workforce, which was already suffering a 15 million shortfall globally pre-COVID—are exhausted.<sup>40</sup> There is little evidence that most governments have prepared social and economic contingency plans. Perhaps most challenging of all would be to bring people together again. Countries and societies, more divided since the pandemic, would be less likely to join in solidarity to help one another, follow public health advice, and unify against a common threat.

The good news is that we don't have to face another pandemic. While pandemic threats are inevitable, pandemics are a political choice. This is not a time to gamble. With committed leadership and action at the highest level, the world can be safer, more resilient, and more prepared when the next threat arrives.

## BOX 1. Stopping outbreaks before they become pandemics

**Everyday, local public health workers are responding to outbreaks before they make headlines, and stopping outbreaks before they become the next epidemic or pandemic.<sup>41</sup>**

When untreated, cholera can be rapidly fatal—but simple measures including vaccination and antibiotics can curb it. In the Democratic Republic of the Congo, a collaboration between provincial and regional authorities with Médecins Sans Frontières, the London School of Hygiene and Tropical Medicine and UNICEF is piloting and scaling interventions that aim to stop a cholera outbreak before it can spread through communities, using ‘case area’ targeted interventions. The strategy starts with a local health worker equipped to identify the symptoms of cholera, and to use a rapid diagnostic test to confirm a case. This triggers a rapid response, whereby community health workers work to map the household and those surrounding it. Within days of the first detected case, they then deliver packages of hygiene interventions and oral cholera vaccines, plus prophylactic antibiotics to

those at highest risk, with a goal of suppressing onward transmission.<sup>42</sup> Haiti and Ethiopia are using similar responses. Key to success is working with communities to be active participants in response, and having tools like tests and treatments pre-positioned locally.

During December 2021, public health officials from the National Health Surveillance Agency of Brazil in Rio de Janeiro received alarming reports that passengers and crew on a soon-to-dock cruise ship were ill with Influenza A. Influenza is a highly-contagious and sometimes fatal respiratory illness. To stop its spread into Brazil, authorities set up an Emergency Operations Centre. Field epidemiologists boarded the ship, identified and isolated people who were sick. They also established nonpharmaceutical measures such as masking and social distancing. Within 10 days the outbreak was over. The Brazilian experience managing public health while hosting the 2016 Olympics, combined with clear guidelines and regulations led to the rapid and effective response on the ship, which ultimately saving lives.<sup>43</sup>





## Implementation of the panel's recommendations: a dangerous lack of progress

The Independent Panel carefully studied and analysed the reasons COVID-19 rapidly engulfed the world and resulted in such terrible damage. The Independent Panel identified key gaps in the international system for pandemic preparedness and response and recommended **a package of actions required** to transform the system and make the world much safer from future pandemic threats.

We envisioned a world where outbreaks are stopped before they become pandemics and where all countries have access to the tools and funds needed to mitigate pandemic threats and keep their citizens protected. We underscored that pathogens are apolitical and can cross borders in hours and days, that all countries must be prepared for them, and that only global collaboration can truly contain them.

The global lived experience of the most devastating pandemic in a century should have provided leaders with the impetus for change. And while there has been some progress, including in regions, the package of recommendations remains hazardously far from being fully implemented.

This chapter highlights the reasons the Independent Panel made its specific recommendations in May 2021, takes stock of the progress and gaps in their implementation, and charts ways that leaders can put the world back on track to making COVID-19 the last pandemic of such devastation.



*Today the world is still dangerously unprepared for when the next pandemic threat arises—and that could be any day.*



## Highest-level political leadership

### GRADE: CODE RED

During the height of the pandemic, Heads of States led their national responses, and some engaged key cabinet members across ministries to harness a multisectoral response. Later, on the world stage, leaders eventually came together in a series of U.S.-initiated high-level summits to address the transnational issues of COVID-19, both in terms of health and the economy. The call for a pandemic treaty was spearheaded by a group of 27 leaders from all regions, led in particular by the European Union in collaboration with WHO.<sup>44</sup> The public health and economic actions of proactive leaders protected lives, helped to ensure funds and supplies were somewhat more evenly shared, and triggered the global collaboration that must still lead to a once-in-a-generation treaty. We need that cross-regional leadership today.

Today, more engaged high-level leadership, united with a common purpose to combat the existential threat of a pandemic, is badly needed to more cohesively negotiate the tensions and strike the balance between globalist policymaking focused on the global common good and the reality that national interests are often prioritised over global concerns.<sup>45</sup> Yet most of the work so far to set a new path forward through a pandemic agreement has been left to the technical teams within Ministries of Health and health organisations.

As half of the world's population goes to the polls this year, leaders are working to create manifestos and attract voters, and pandemic readiness is not on the list. Scarred by the pandemic's legacy, voters share a collective trauma-blocking, and so leaders have shifted their messages to what voters want to hear, not to mention competing priorities of climate change, inflation, and ongoing responses to wars. This is a dangerous gamble. While not addressing the major gaps exposed by COVID-19 might serve short-term interests, not addressing these gaps is a future political failure for which governments will have to pay extensively and be held accountable.

## What did the Independent Panel recommend and why?

In 2021, the Independent Panel detailed the lack of political will and leadership for early coordinated international efforts to end COVID-19, and later a lackluster global strategy to reform pandemic preparedness and response. We underscored the importance of a whole-of-system, whole-of-society engagement in both global health crises and the governance reforms going forward to ensure that all relevant sectors and organisations are embedded in decision-making and operationalisation for pandemic preparedness and response.

The Independent Panel made three key recommendations for sustained highest-level political commitment for a transformed pandemic governance architecture:

### The Independent Panel's 2021 recommendations:

- ▶ Create a **global health threats council** with head of state leadership to ensure political commitment, promote cooperation, and increase accountability. This evolved into a call for a high-level political body to be a “motivator and diplomatic facilitator,” which could link to or be part of the UN Secretary-General’s proposed Emergency Platform for complex global shocks.
- ▶ Adopt a **Pandemic Framework Convention** within six months under Article 19 of the WHO Constitution to complement the IHR and to be facilitated by WHO with the clear involvement of the highest levels of government, scientific experts, and civil society.
- ▶ Adopt a **Political Declaration by Heads of State and Government at the UN General Assembly**.

## Progress to date

The UN General-Assembly held a High-Level Meeting on Pandemic Prevention, Preparedness and Response at the UN General Assembly. This took place in September 2023, though the Independent Panel had urged that it be held in 2021, to capture the momentum at the time to address pandemic threats.

Twelve states sponsored a resolution to hold the meeting with a further 117 voting in favour,<sup>46</sup> offering hope of potential for high-level engagement and commitment of how governments and the multilateral system could enact necessary decisions. The resulting UN political declaration on pandemic prevention, preparedness and response was the first of its kind and, while not binding, it could have set the stage for ongoing political leadership and commitment to the pandemic agreement. Instead, it fell short in aspiration and lacked commitment and decisions on needed reforms of the international system at large.<sup>47</sup> Only 13 Heads of State or Government participated.<sup>48</sup> The declaration’s

scope was largely confined to treating pandemic threats as an issue for the health sector alone, and it essentially referred the discussion—and responsibility—back to Geneva.

The next High-Level Meeting on Pandemic Prevention, Preparedness and Response is scheduled for 2026 in New York, where progress can again be assessed.

**A framework convention to complement amended IHR could set the rules for pandemic preparedness and response.** WHO Member States decided to negotiate a pandemic treaty at a heralded World Health Assembly Special Session that culminated on Dec. 1, 2021. The decision was to adopt the now-called pandemic agreement by the 77th WHA, in May 2024. Despite efforts, agreement was not reached in time and stalled over sticky issues including of One Health and equity. The WHA decided to give the negotiating body an additional year to reach agreement by the 78th WHA, with potential for a WHA Special Session if agreement is reached earlier.

The zero draft was introduced on Jan. 31, 2023,<sup>54</sup> and held promise of transformative change, particularly on the issue of equity, which Member States had agreed should be at the heart of the agreement. Since then, iterative texts have watered down the ambition and revealed core tensions between regions and countries that house thriving research, development, and manufacturing of goods such as vaccines, and those that do not.

## BOX 2. Reform politics in a fractured world

**COVID-19 exposed the range of governance limitations and created an immediate political incentive to enhance global cooperation for pandemic preparedness and response.**<sup>49</sup> But the various political summits and process that followed, from the G7 Carbis Bay meeting<sup>50</sup> to the Global COVID-19 Summit,<sup>51</sup> and the Global Pandemic Preparedness Summit,<sup>52</sup> focused primarily on how to better get COVID-19 vaccines to market and into people's arms, on more diversified manufacturing, and on commitments to development of vaccines and advance scientific readiness for emerging pathogens in the future. Mostly absent from these discussions was an appreciation of the political hurdles to achieve prevention, preparedness and response (PPR) and its associated reforms.

Multiple processes commenced in parallel, from amendments to the International Health Regulations and negotiation of a new political treaty, to a high-level meeting at the UN General Assembly. While demonstrating the appearance of political interest in supporting meaningful PPR reform, these multiple parallel processes in fact

reflect a polarised multilateral community, with states seeking to forum-shift issues between locations of governance in search of better outcomes for themselves, rather than better outcomes for PPR for the global population.<sup>53</sup> Moreover, failure to find resolutions to geopolitical and humanitarian crises within multilateral forums has further weakened an already fading multilateral system.

Governments are more and more looking for regional, unilateral, or bilateral solutions rather than seeking international agreements that do not service their needs. Yet this ignores the reality that each layer, from the local community to the global and everything in between, must at once be protected and connected to form a cohesive system that stops an outbreak from becoming a pandemic.

What is urgently needed is a collective political and systemic vision for what is required and a common agenda to deliver on this. Such a vision can come from only Heads of State and Government.


Negotiators had decried the process, which resulted in actual textual negotiations beginning as late as March 2024, and had questioned how and why certain texts had been included or not. Substantive differences over implementation and financing of One Health and agreeing principles of a pathogen access and benefit sharing (PABS) system, including on the percentage of product to be made available to low- and middle-income countries (LMICs), led to standoffs, late nights, and ultimately the decision to negotiate for up to one more year.

**Member States must continue to work towards a pandemic agreement before the end of this year. The IHR amendments process underscored the importance of building trust between all parties. Given the challenges with the pandemic agreement process thus far, new working methods and more accommodation of independent experts, including civil society, should be the way forward.** Where there is still not consensus on the texts, negotiators must work towards strong commitments to equitable access to countermeasures including through technology and knowledge sharing. A One Health approach, including financing for it, is essential for pandemic prevention and preparedness. The pathogen access and benefit sharing (PABS) provisions must favour public health outcomes and establish clear targets for sharing that are fair and will protect priority populations in every country. Clarity on financing is essential; the lack of it remains an enormous impediment to pandemic preparedness and to surge needs in a response. Finally, the pandemic agreement must include provisions to monitor implementation and compliance.

More positively, a Working Group to amend the IHR started its work in November 2022. There were early signs that the IHR amendments would include stricter information-sharing rules, amongst other changes. Negotiators worked until the last hours of the 77th World Health Assembly and adopted the agreement to cheers and applause. The amendments extended to equity and finance, which are more fully discussed in the surveillance section of this report.

### **Global Health Threats Council**

The Independent Panel was not the first to recommend a high-level political function to maintain momentum and advocate for change for pandemic preparedness and response. The Independent Panel called it a global health threats council, similar to previous proposals after the Ebola outbreak in West Africa.<sup>55</sup>



*To be effective, the UNGA Emergency Platform must not be only a last line of defence during crises, but a catalyst for filling the gaps across sectors and UN institutions in global preparedness.*



In the absence of high-level political leadership and a group of governments championing it, the global health threats council has never materialised. It was incorrectly assumed that the council should be based in New York, whereas the Independent Panel had been clear that it could be based in Geneva but established by the UNGA. Unfortunately, there was a sense that a new body would detract from WHO's directing and coordinating authority in the international spread of disease and may have been untenable to service for smaller delegations. This was never the intention or suggestion.

We continue to believe that the lack of such a council has led to the near total absence of political leadership and that this is reflected in the failure to negotiate an effective pandemic agreement by the May 2024 deadline or to secure the finance necessary to invest in making the world better prepared for pandemic threats.

### Leadership: the way forward

Political leadership for PPR is essential for two reasons. First, it engenders momentum for preparedness and maintains focus on addressing the gaps that make us all vulnerable to future threats. Second, it ensures that there is a structure for cooperation at a time of an emerging pathogen to seek effective international collaboration to limit the spread and impact of disease.

In other words, only political leadership can break the cycle of panic and neglect now associated with outbreaks and pandemics, after many decades of such cycles.

Pandemic readiness is essential to national and global stability. Governments must think beyond their borders and beyond their short-term political goals. Pathogens can emerge any time, anywhere, are apolitical, and require no passport.

Pandemic leadership also requires leadership through the multilateral system. The UN Secretary-General can convene and promote collaboration amongst Member States, international organisations, institutions, civil society and the private sector in response to transnational emergencies. The UN Summit of the Future in September 2024 is expected to adopt a Pact for the Future, which in turn is considering the creation of emergency platforms for complex global shocks.<sup>56</sup> This platform would not detract from WHO's role to coordinate the health aspects of pandemic emergencies but would bring together stakeholders with clear protocols to mitigate the economic and social consequences. We encourage the Secretary-General to also consider the role this platform could play in whole-of-government/whole-of-society pandemic preparedness.

*“As we navigate the complexities of future pandemics, strong and decisive leadership will be essential for shaping a more resilient and prepared world.”*

– Sheikh Hasina,  
Prime Minister  
of Bangladesh,  
May 8, 2024



## Political leadership: the way forward

### 1. Establish a group of champion leaders who make pandemic preparedness and response a priority

Pandemic preparedness needs sustained support at the highest levels, and for this a group of high-level champions is essential. Current, former, and future senior leaders can engage across a broad spectrum of politics, sectors, and society to make clear why pandemic reforms are so critical, help advocate for a reformed and fully funded international system, provide a voice of reason in fraught and fractious discussions, and counter the mis- and disinformation that seek to block progress for the common good.

A Champions Group to Prevent Pandemics could begin its work with support for the negotiation and ratification of an eventual pandemic agreement, working alongside legislators to promote the value in the treaty and mobilising the funds required for preparedness and response. This includes funds for the research, development, and manufacturing hubs required in every region to ensure that the right tools are available in the right places at the right time to stop outbreaks from becoming pandemics.

### 2. Resume the INB pandemic agreement INB process with new ways of working, with inclusion of independent experts including civil society. It should work systematically to commit to an agreement by Dec. 1, 2024, that complements the IHR and fills the remaining gaps, including provisions on technology and knowledge transform that guarantee equitable access to pandemic countermeasures for public health outcomes. It must also effectively address One Health, pathogen access and benefit sharing, preparedness and surge finance, and independent monitoring and compliance.

### 3. Incorporate pandemic preparedness and response within the Emergency Platform at the Summit of the Future

The Emergency Platform has been proposed by the UN Secretary-General as a means of strengthening international response to complex global shocks. This provides an opportunity to leverage the convening and unifying power of the UN system to strengthen political commitment to pandemic preparedness and response. To be effective, the Emergency Platform must not be only a last line of defence during crises, but a catalyst for filling the gaps across sectors and UN institutions in global preparedness.

### 4. Advocate for regular engagement within the Conference of the Parties by Heads of State and Government

As with climate convention, an eventual pandemic agreement COP must include regular engagements at the Heads of State and Government level to reflect that preventing and responding to pandemics requires whole-of-government attention. The current pandemic agreement text reads that Heads of State and Government would be involved in extraordinary sessions only on an as-needed basis, which is akin to gathering leaders to respond to a crisis rather than to lead and prevent a crisis to begin with.

### BOX 3. **Emerging threats, inadequate responses: failing to apply the lessons of COVID-19**

**In the Democratic Republic of the Congo (DRC) multiple outbreaks of clade I mpox are ongoing.** This variant has a much higher case fatality rate than the clade II variant that caused an epidemic that emerged in Nigeria and triggered a PHEIC declaration in 2022, when it spread in middle- and high-income countries, particularly amongst men who have sex with men. At that time, community mobilisation using the lessons of HIV, successful communications messaging, and a vaccination campaign put an end to the global emergency within 10 months.<sup>57</sup>

Today there are over 20,000 suspected cases of the clade I variant in the DRC and 1,000 deaths—the vast majority of these (85%) being children under 15.<sup>58</sup> There is also evidence of a variant with sustained heterosexual transmission amongst sex workers in the eastern DRC.<sup>59</sup> Despite this threat, only two laboratories in the country can diagnose mpox. While stockpiles of vaccine exist in several high-income countries, at the time of writing they are not available for outbreak control in the DRC. Administrative, financial, regulatory, and political hurdles mean that outbreaks are not being stopped when and where they occur.<sup>60</sup> The situation is a stark reminder that binding global

commitments are essential and that every region should have capacity including finance to develop, manufacture, and distribute countermeasures aimed at protecting people from and containing local disease threats.

**Simultaneously in the United States increasing cases of highly pathogenic avian H5N1 influenza are being reported in mammals, including dairy cattle.** While effective monitoring of farmworkers has proven unnecessarily challenging,<sup>61</sup> several cases have been identified in people, and there is a real threat that human-to-human transmission could become established. Such an influenza pandemic could potentially kill millions of people within months.<sup>62</sup> The highly concerning bridled response thus far highlights the weaknesses in One Health preparedness and response, with competing interests and approaches from animal health, agriculture, public health, and industry perspectives, and a lack of country coordination and prioritisation of health security.<sup>63</sup> If nothing happens, we will have been lucky—and if something does happen, we will once more have failed to prevent an outbreak from becoming a devastating pandemic, despite knowing in advance what should be done.





## Strengthening country preparedness

### GRADE: CODE ORANGE

The COVID-19 pandemic exposed cracks, and in some cases gulfs, in country-level pandemic preparedness. The wait-and-see approach by many to the PHEIC and the absence of multisectoral, cross-government planning, surge plans, rapidly deployable human resources and stockpiles, and pre-positioning of essential supplies were evident in almost all countries. This set off global competition for personal protective equipment, oxygen, and other supplies, favouring countries that could organise fastest and pay the most. Governments scrambled to align messages, begin new social protection programmes, dramatically rearrange education for young people, and establish guidelines on how to protect essential workers or facilitate work from home.

Prior perceptions of country preparedness were cast aside, with assessments largely failing to predict actual responses. This was in part because of a narrowly defined view of preparedness that neglected key information, including how best to protect vulnerable populations. Plans for adopting major policy measures such as school closures and managing the financial impacts of the pandemic were absent in many countries.

There were also positive lessons. Countries that had learned from previous outbreaks and had well-defined plans took timely action through whole-of government and whole-of-society approaches, were led by scientific guidance, and engaged meaningfully with communities. These countries fared better.<sup>64</sup>

### What did the Independent Panel recommend and why?

**In 2021 the Independent Panel lamented the lack of national preparedness that kept many countries from acting in time to get ahead of the pandemic.** Citizens of countries that implemented measures too late faced all the costs, but critically, none of the benefits of early containment, giving rise to a vicious cycle with health repeatedly pitted against the economy. Conversely, high-performing countries developed partnerships on multiple levels within and outside of government, communicated consistently and transparently, and engaged with community health care workers, community leaders, and the private sector.

COVID-19 emphatically demonstrated the interconnectedness of social, economic, environmental, and political factors in society. **The Independent Panel set out a range of recommendations to monitor and address blind spots in country-level preparedness and to support a paradigm shift towards resilient, equitable, and inclusive systems for pandemic preparedness and response.**

## The Independent Panel's 2021 recommendations:

- ▶ WHO to set new and **measurable targets and benchmarks** for pandemic preparedness and response capacities and requiring all countries to update national plans against those benchmarks.
- ▶ WHO to **formalize universal periodic peer reviews** of national pandemic preparedness and response capacities, and for **multisectoral active simulation exercises** to be conducted yearly to ensure continuous risk assessment and follow-up action.
- ▶ Countries to **appoint national pandemic coordinators accountable to the highest levels of government**, with a mandate to drive whole-of-government coordination for both preparedness and response.
- ▶ Countries to **strengthen the engagement of local communities** as key actors in pandemic preparedness and response and to **invest in and coordinate risk communications policies and strategies** that ensure timeliness, transparency, and accountability; and work with marginalised communities to build enduring trust.
- ▶ IMF to **incorporate pandemic preparedness assessment**, including an evaluation of the economic policy response plans, into the Article IV consultation with member countries.
- ▶ **Increase the threshold of national health and social investments** to build resilient health and social protection systems.

### Progress to date

**What have countries learned from COVID-19, and how are they applying those lessons?** Several countries took the step of launching commissions or inquiries. Some of these have concluded, while others remain ongoing. The different approaches, mandates, and levels of transparency make tracking these reviews and their outcomes very difficult. More importantly, how the outcomes have changed pandemic preparedness and response practices is currently not clear.

The WHO offers several tools to plan and monitor preparedness—so many tools, in fact, that assessment of their effectiveness is challenging.

Tracking of national plans, such as NAPHS (National Action Plan for Health Security), and respiratory pathogen pandemic preparedness plans is difficult. Member States voluntarily share information on NAPHS, and as of November 2023, 115 plans covering 87 countries were completed.<sup>65</sup> Of these, 37 NAPHS were completed since 2022 (and 43 since 2021).<sup>66</sup> While these plans provide opportunities to integrate the lessons from the COVID-19 response, it's not clear how many have done so, and assessing this is a challenge given that very few plans (15 of the 115 completed) have been published.

WHO has also set the target of 80% of Member States to update their respiratory pathogen pandemic preparedness plans by 2031 to account

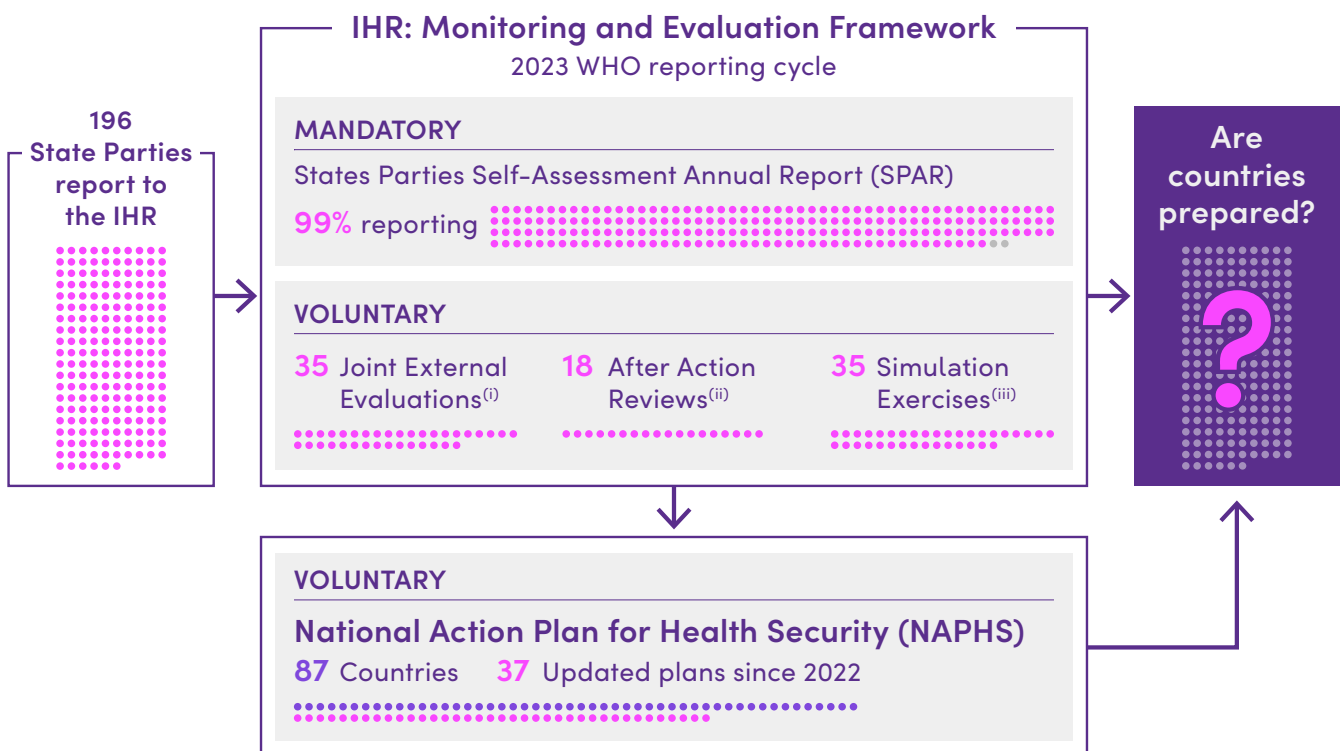
for the lessons of COVID-19.<sup>67</sup> When WHO surveyed Member States in 2019, 92 reported having a plan, but 48% of these had been developed earlier and had not been updated since the 2009 influenza epidemic.<sup>68</sup> The Pandemic Influenza Preparedness Framework progress reporting of June 2023 provides information for 65 countries, seven of which had written or revised plans since January 2022,<sup>69</sup> but at the global level, it is not clear how many countries have developed or updated their plans.

**In December 2023, the WHO published revised benchmarks to support countries to strengthen IHR and Health Emergency Preparedness, Response and Resilience (HEPR) capacities.<sup>70</sup>** The revised benchmarks incorporate lessons from COVID-19, align with the latest SPAR and JEE tools, and include benchmarks to address HEPR capacities beyond the scope of the IHR.

In 2024, preparedness monitoring globally still largely relies on the following self-assessment and peer-monitoring tools:

- States Parties Self-Assessment Annual Reporting (SPAR), the mandatory self-assessment component of the IHR.
- The Joint External Evaluation, a voluntary peer-to-peer model intended to identify the most critical gaps in countries' human and animal health systems.
- After-action reviews.

## Are countries prepared?



(i) every 4–5 years; (ii) within 3 months of a public health event; (iii) regularly

For the 2023 reporting cycle, 99% of Member States submitted their SPAR report. It was the highest-ever submission rate. Thirty-five countries had undertaken JEEs,<sup>71</sup> and 18 after-action reviews were conducted.<sup>72</sup> While these are the mainstay for assessing national capacities, COVID-19 highlighted shortcomings in the current tools and approaches, including limited focus on outbreak prevention and lack of a reliable and transparent independent monitoring system.<sup>73</sup>

The Independent Panel called for **universal periodic peer review of national plans and capabilities**, as a means of promoting intercountry learnings accountability. The Universal Health and Preparedness Review has since been launched as a pilot. The voluntary, peer-review mechanism led by Member States is intended to ensure a whole-of-government and whole-of-society approach and ideally is convened by the Head of State or Government. In the pilot stage, five countries undertook country assessments, with 10 more countries lined up for the coming year. In February 2024, WHO held its first global peer review of three states' national review findings.<sup>74</sup> While this represents progress, the future of universal peer review is unclear. Previous language proposing a peer-review mechanism in the pandemic agreement was deleted from the draft submitted to the 77th WHA. We continue to believe that peer review, based on the right indicators and conducted in the spirit of supporting countries to improve, is an essential mechanism to provide mutual assurance amongst countries in their overall pandemic readiness. Member States may wish to consider conducting regional peer reviews to lessen the focus on single countries.

The WHO also developed **dynamic preparedness metrics (DPM)** in May 2022 that account for wider population vulnerabilities, with the goal of enabling a more holistic assessment of country preparedness.<sup>75</sup> The DPM aims to support countries by identifying current and changing capacity gaps and devising actions to address these, but will rely on high-quality data and modelling to function effectively.<sup>72</sup> The metrics have not yet been validated.

The GPMB, composed of diverse expertise amongst its members, should be commended for its attempts to widen preparedness indicators for the monitoring board's last report.<sup>76</sup> Yet the Secretariat sits within and reports to WHO, and so in its current form, the GMPB does not address the gap in independent monitoring. Academic endeavours are also underway to support the development of new frameworks and metrics; one such example, the NUS-Lancet PRIME [Pandemic Readiness, Implementation, Monitoring, and Evaluation] Commission, will report its findings in May 2026.<sup>77</sup>

The Independent Panel also recommended **yearly multisectoral active simulation exercises**. Thirty-five simulation exercises, including tabletop exercises and drills, functional exercises, and field exercises, were

conducted in 2023. The WHO Preparedness and Resilience for Emerging Threats initiative, launched in 2023, also includes a tabletop simulation exercise specifically focusing on respiratory pathogen pandemics; as of December 2023, seven countries had undertaken this.

In regard to the **appointment of national pandemic coordinators accountable to the highest levels of government**, the amended IHR has recommended a national IHR authority be created to coordinate IHR implementation. These new authorities should include multisectoral representation and report to the Office of the Head of State or Government to ensure multisectoral planning and oversight.

While some efforts have been made to **strengthen the meaningful engagement of communities**, more investment is needed<sup>78</sup> as most initiatives and platforms have not moved beyond the pilot stage.<sup>75</sup> Further, greater emphasis must be placed on information ecosystems,<sup>79</sup> and specifically mainstreaming the management of mis- and disinformation into prevention, preparedness, and response, underpinned by legislation, regulation, and enforcement. **There is currently no tracking of national or global investments into risk communications or into community engagement.**

**The Independent Panel also recommended that the IMF Article IV consultations** routinely include a pandemic preparedness assessment, including evaluating economic response plans. No meaningful discussions have taken place on this, with pandemics referenced in reports only through the lens of the post COVID-19 economic recovery.

**In summary**, numerous efforts—possibly too many—are underway to measure and address the gaps and shortcomings of previous pandemic preparedness assessments and metrics, including by taking a more holistic view of country risks and what is required to respond to these. Yet most of these initiatives are difficult to follow or remain at the pilot phase with further validation required.

**So, are countries ready for the next pandemic crisis? The currently available patchwork of information, including across the many WHO dashboards, makes this a question we struggle to fully answer.**

## **The way forward**

In 2021, the Independent Panel noted the acutely political nature of delivering resilient, equitable, and inclusive national systems and capacities for pandemic preparedness and response. **Countries are collectively only as safe as the weakest link in the chain, and there remains a strong mutual interest to strengthen preparedness across all countries.**





## Country preparedness: the way forward

### 1. Track and transparently document country preparedness plans and actual implementation

As of 2024, we do not know how many countries have updated their pandemic plans to reflect the learnings of COVID-19, nor do we know the level of implementation of these plans. The WHO should provide annual and transparent tracking on country preparedness plans based on the updated benchmarks using existing tools, such as NAPHS and JEEs (updated to reflect the latest IHR amendments). This information should be publicly reported in an easily understood format and readily accessible on a modern website and on handheld device applications.

### 2. Validate new whole-of-society preparedness metrics

New preparedness metrics should be independently validated—such as through an independent monitoring board or through academic endeavours—to determine if they fill gaps in existing preparedness assessments as they intend to do. These metrics must go beyond standard health preparedness, to look at risks and vulnerabilities from a whole-of-society perspective, providing a unified framework for assessing risks and preparedness across borders and regions.

### 3. Rapidly move from pilot to scale with a robust peer-review mechanism

Efforts to establish a global peer-review mechanism are notable, yet this will only bridge a gap in the preparedness assessment landscape if universally applied with the engagement of all countries and their leaders, bring significant added value to existing tools and data, and lead to meaningful improvements in preparedness.

### 4. Mainstream disinformation management into pandemic preparedness including prioritising establishment of a global mechanism

The management of disinformation in future health emergencies will be critical, and major investments to understand and counter it must be made today. A modern global mechanism linked to regions and countries is essential. This will require investment and collaboration across sectors, from governments and regulators to social and traditional media companies and the public.

### 5. Ensure community engagement in health emergency governance

Engagement mechanisms need to be developed, and where in place strengthened, to allow the meaningful engagement of communities and civil society within the development and implementation of pandemic preparedness plans and policies at all levels. Civil society must be made members of the new national IHR authority now required by the IHR amendments.

## BOX 4. Civil society's views on progress: not enough

Civil society engagement in governance of pandemic preparedness and response is essential by providing community, national, regional, and global expertise, mobilisation, and accountability.

**We asked civil society leaders what progress they were observing in reforms to the system, based on the package of the Independent Panel's recommendations.** Consultation included informal conversations and a more formal collection of views through an open survey that was widely promoted in May 2024. We received 62 responses from individuals and organisations based in 30 countries. Civil society is operating in this space globally, regionally, and nationally on a range of thematic dimensions including health workforce, surveillance, community engagement, access to medicines, and human rights.

For those working at the global level, there was significant pessimism, and responses indicated there was little progress, with the lowest scores for global accountability and meaningful engagement of local communities. Notably, scores were higher

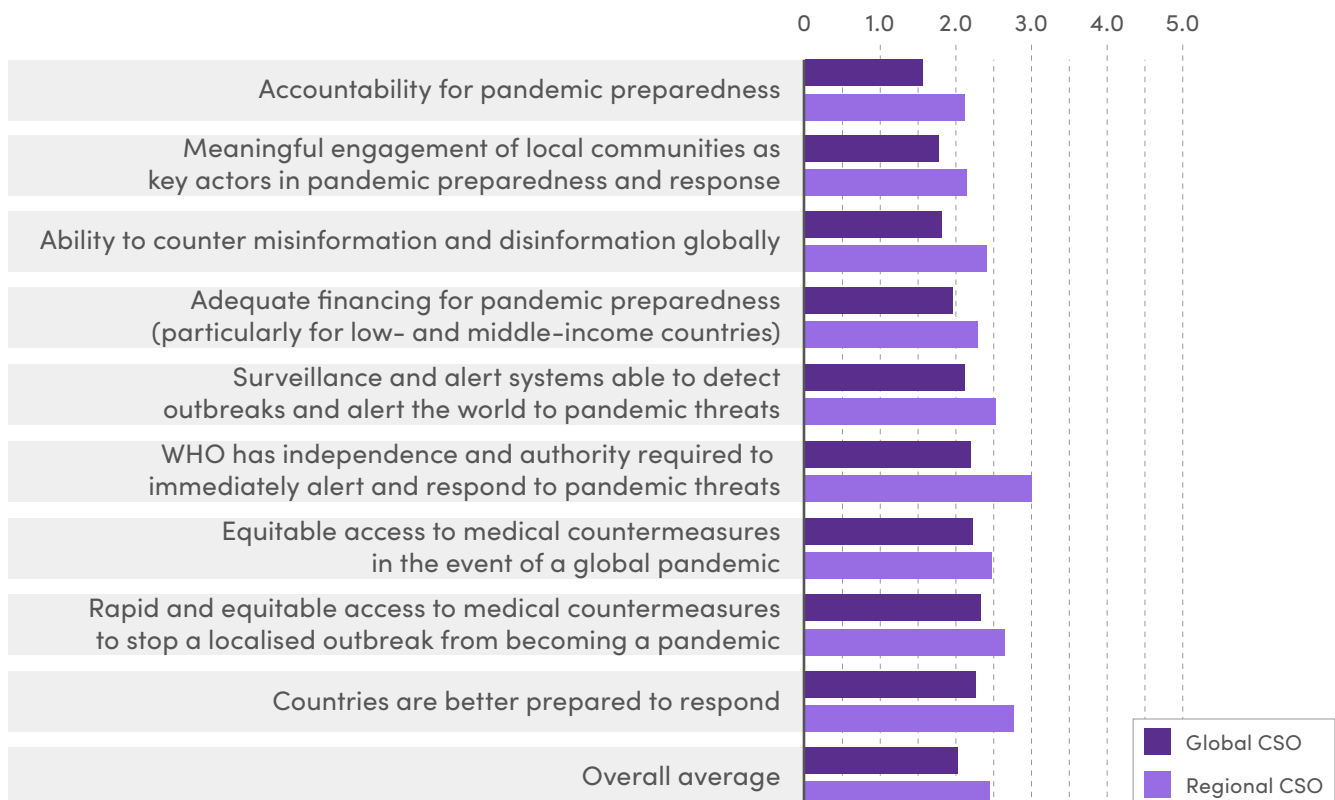
on average for those commenting on work at the regional level, and there was a wider spread of scores amongst respondents. There was particular concern about equitable access to medical countermeasures, whether it is to stop an outbreak or during a pandemic. Respondents' comments on the survey were clear that in another deadly outbreak or pandemic, there would be another failure to respond equitably.

There were multiple references to the regional work being done in Africa to enhance PPR efforts, but concern that domestic funding and investment were lacking in many countries there.

Respondents working in countries varied in their assessments on progress, but a recurring theme was the low scores assigned to engaging communities, which was an area of convergence across multiple respondents. In addition, with a few exceptions, many respondents said that governments were not prioritising the PPR agenda enough, were not making sufficient investments, and were not adequately countering disinformation.

### CSO assessment of progress in pandemic preparedness and response reforms since January 2020

(1 = no progress and 5 = necessary reforms completed)



Source: Online survey administered by The Independent Panel, May 2024

*“While African leaders have committed to an ambitious agenda for pandemic PPR across the continent, translating ambition to action has remained elusive. Promising initiatives like the Partnership for Africa Vaccine Manufacturing and Regional Integrated Surveillance and Laboratory Network need to be backed with continued political leadership and domestic investments to have impact and be sustainable.”*

*—Aggrey Aluso, Pandemic Action Network & Resilience Action Network Africa*

*“Despite 20 years of health institutions having civil society seats on their governing boards, there is still a lack of meaningful participation of civil society (including communities) in pandemic PPR governance and decision-making structures.”*

*—Courtenay Howe, Stop AIDS*

*“We need solutions that continue to underscore the interconnectedness of issues such as health, development, climate, gender, and finance and drive a race to the top on policy objectives, not the race to the bottom we have seen in recent months.”*

*On equity, the current PPR efforts still leave the most vulnerable and impacted groups behind. During COVID-19, people with disabilities, indigenous people, older people, and other vulnerable groups lacked prompt access to vaccines and treatment.”*

*—Diah Saminarsih, CISDI – Indonesia*

*“Treatment Action Group has been appalled by the degree that states are disregarding their existing human rights obligations in the pandemic treaty negotiations. The epidemics of HIV/AIDS and TB have shown that a human rights-based response is key to making progress on the path to elimination.”*

*—Gisa Dang, Treatment Action Group*

*“Investing in upstream prevention is critical for equity, because the tools of response (eg, vaccines) are rarely equitably distributed, even despite best efforts. Investing in upstream prevention will also help mitigate climate change, which is the greatest health threat we face this century.”*

*—Neil Vora, Conservation International*



## New international financing for global public goods

### GRADE: CODE ORANGE

COVID-19 provided a costly lesson on the consequences of failing to invest in pandemic preparedness and response—millions of lives and trillions of dollars. Another pandemic could be even more costly. Given the current limited fiscal space in many countries, a pandemic in the very near future would be catastrophic. Now is the window of opportunity to apply the lessons of the past four years, to protect citizens today and generations to come, but it will be realised only with the highest levels of political support for smart and sustainable PPR financing. Regrettably, as COVID-19 recedes from the public consciousness and voter demands are focused on more immediate issues, many governments and finance ministers are not compelled to act. There is a cynical attraction to providing significant and immediate resources during a crisis, rather than proactively preventing one. Yet history shows this will not end well.

In 2021, the Independent Panel highlighted this unconscionable cycle of neglect and panic. Three years later we echo this call for leaders to take the necessary steps to immediately invest in the protection of lives and avert a repeat of the human and economic devastation that resulted from COVID-19.

### What did the Independent Panel recommend and why?

In 2021, the Independent Panel found that not enough had been invested in preparedness and that funds that were meant to be released in an emergency were too little, and too late. **The Independent Panel set out recommendations to fill the gaps nationally, regionally, and globally and to raise new international financing for pandemic preparedness and response, which the Independent Panel deemed a global public good.**

### The Independent Panel's 2021 recommendations:

- ▶ **The creation of an international pandemic financing facility to raise additional reliable funding of \$10-15 billion for preparedness, and up to \$100 billion for rapid surge financing to respond in the event of pandemic threat. The facility would:**
  - ✓ Be based on a global public investment model, or ability to pay formula adopted whereby larger and wealthier economies will pay the most, preferably from non-ODA budget lines and additional to established ODA budget levels.
  - ✓ Include pre-allocation of preparedness funding according to function and institution.
  - ✓ Manage surge financing for response in the event of a new pandemic declaration guided by prearranged response plans for the most likely scenarios, though flexibility would be retained to adapt based on the threat.
- ▶ **The Independent Panel also strongly recommended that national governments invest domestic resources in pandemic prevention and preparedness now rather than when it is too late.**

## The consequences: \$ several trillions

of losses if there  
is a pandemic

**Required  
\$50–100 billion**  
surge for an emergency<sup>(i)</sup>

**Required  
\$10–15 billion**  
in new international finance  
annually for preparedness<sup>(i)</sup>

**Available  
\$603.6 million**  
in 2023 ODA  
for preparedness<sup>(ii)</sup>

## The consequences of not investing in pandemic preparedness and response

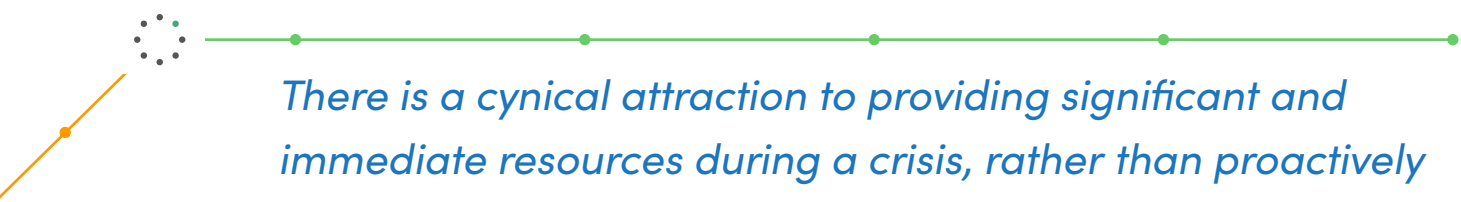
Source: (i) COVID-19: Make it the Last Pandemic; (ii) IHME<sup>29</sup>

### Progress to date

Since 2021, discussions on international preparedness and surge financing have been taking place across numerous platforms and locations around the world. There is some progress, but it is too slow and falls far short of what the Independent Panel recommended. Today, neither the volume nor the type of resources needed is available.

The recommendations focused on additional international resources, but the Independent Panel also made a strong recommendation to invest domestic resources in both prevention and preparedness and to plan for the rapid deployment of domestic resources in case of an emergency. Given the depletion of domestic resources to COVID-19, and the slow movement of countries to update pandemic plans, it is highly unlikely that the total current value of domestic resources is sufficient.

The Pandemic Fund, hosted by the World Bank in collaboration with WHO, was established in September 2022 at the initiative of the U.S. Government. As of April 2024, the fund had raised around \$2 billion through voluntary donations, the vast majority from ODA.<sup>80,81</sup>



*There is a cynical attraction to providing significant and immediate resources during a crisis, rather than proactively preventing one. Yet history shows this will not end well.*

The IHME estimates that in 2023, just \$603 million of ODA was spent on pandemic preparedness.<sup>30</sup> This falls well short of the estimated additional \$10–15 billion needed annually for pandemic prevention and preparedness,<sup>82</sup> particularly to fill gaps in low- and middle-income countries. To date, The Pandemic Fund has committed \$312.7 million directly to country projects. It has finalised a medium-term strategic plan, and replenishment is scheduled to take place during the G20 Health Ministerial in October 2024. However, given the challenging fiscal landscape globally and the competing replenishment processes across global health and development institutions,<sup>4</sup> the prospect of raising the billions required appears limited. Low- and middle-income countries would also like to see continued reforms to The Pandemic Fund’s governance and want to have equal voices in decision-making at a table seen to currently favour donors.

According to the IHR amendments adopted at the 77th WHA, a coordinating financial mechanism shall be established, intended to promote implementation of the IHR and seek to maximise finance availability and mobilise new resources. It is too soon to know exactly how this will operate.

**A fully functioning international PPR architecture also requires surge financing in the magnitude of \$50–100 billion. While the intentions to devise this have been stated by the G7<sup>83</sup> there has been no progress, or meaningful public discussion, on how to accomplish this.**

Beyond The Pandemic Fund, the World Bank has an important role to play in times of economic crisis and to protect economies and societies during a pandemic threat. Ongoing reforms will enable the World Bank not only to fund through country modalities but also to fund global common goods such as vaccines in a time of a crisis. This provides a potentially important source of future surge funding.

At the onset of the COVID-19 pandemic, the IMF rapidly scaled up emergency financing support through the Poverty Reduction and Growth Trust. Between 2020 and 2024, \$40 billion is projected to be provided as interest-free loans.<sup>84</sup> The IMF’s relatively new Resilience and Sustainability Trust<sup>85</sup> assists low-income and vulnerable middle-income countries to build resilience to climate change and pandemics, though there is little evidence this source has been tapped for pandemics as of yet.

Other organisations continue to play critical roles within the global PPR funding landscape. Gavi, the Vaccine Alliance, currently holds around \$4 billion of legacy COVAX funds,<sup>86</sup> making it a major player for the future of PPR financing as well as in investments in vaccine manufacturing capacity in Africa. The Global Fund to Fight AIDS, Tuberculosis and Malaria also played an important role during the pandemic by establishing the COVID-19 Response Mechanism. While this was successful, the Global Fund was never considered as an alternative to establishment of The Pandemic Fund. What specific role and added value each of these organisations should play in an evolving PPR landscape remain unclear.

Brazil is currently holding the G20 Presidency and is likely to take forward the G20 Joint Task Force on Finance and Health, which was initiated during the Presidencies of Indonesia and India. The G20 was also supportive of establishing and financing The Pandemic Fund. The prospect of increased funding or even support to transform The Pandemic Fund during this G20 Presidency remains uncertain.

Discussions are also actively taking place at the regional level. The Africa Epidemics Fund was created by African Heads of State and Government as a mechanism of funding PPR. The process to operationalise this is ongoing, including agreement on the governance arrangements, but the fund can play an important role on the continent, including strengthening the Africa Centres for Disease Control and Prevention (Africa CDC) to fulfil its mandate.

In summary, while we observe some progress, in June 2024, a functioning international financing architecture for PPR remains incoherent, fragmented, and elusive, and available funds are completely insufficient. Were a pandemic threat to appear today, LMICs would have to scramble for funds, and with few assurances of accessible, rapid funding to protect their populations and economies. All governments should be increasing investments in PPR, but few are choosing to do so. At the global level ODA unfortunately remains a main resource for PPR financing, and the landscape of actors, facilities, and interests is increasingly complicated and competitive.

## The way forward

Investments in pandemic preparedness and response represent one of the greatest opportunities to safeguard lives and economies. In contrast with the total cost of a pandemic on the scale of COVID-19, a comparatively modest amount of finance is needed to fund prevention and preparedness efforts and to have surge funding available and accessible when a pandemic threat emerges. Pandemic preparedness and response are a global good, and while the barriers to international financing are large, they are not insurmountable.

***“If we win this Pandemic Fund grant, it will create a lot of transformation in the health system. It will move us to the next level. It’s very important for us.”***

*– Angelo Goup Thon Kouch,  
Director of Health Security,  
Emergency Workforce  
Development and One  
Health, MOH, South Sudan*

Governments, regional groups, multilateral agencies, and international organisations must continue to work to ensure a coherent and effective financing of pandemic prevention and preparedness today and to agree how surge financing will be readily accessible for the next pandemic.



## Financing: the way forward

### 1. Avoid further fracturing and fragmenting of the PPR funding landscape

The international financing architecture for PPR is increasingly complex and inefficient with organisations competing for limited resources. This is why another new fund should not be created and instead we should build on what exists.

### 2. Finance pandemic preparedness and response as a global public good

Funding for PPR must move beyond ODA, with the financing seen as a priority for Ministries of Finance to secure health security and national stability in the same way that measures have been put in place to ensure global financial stability. Preventing a repeat of the devastation from COVID-19 is not an issue for development cooperation but one of global public goods requiring global public investment, which is in the interest of all governments.

### 3. Transform The Pandemic Fund into an International Pandemic Preparedness and Surge finance modality

Transform The Pandemic Fund into a model where all governments have a say and non-ODA financial resources are raised based on a formula according to an ability to pay scale, with two funding windows. The first should provide resources to support prevention and preparedness efforts in countries without sufficient domestic resources, combined with a requirement for incremental increases in domestic allocation over time. The second, through precautionary and clear triggers, should provide major early day response resources, covering development, procurement, and access to MCMs as well as resources for health service delivery and social safety nets.

### 4. Maximise the opportunity of an independent finance coordinating mechanism established under the amended IHR

Given the different organizations with PPR-related finance, a coordinating mechanism could be very useful to ensure countries can clearly understand and access the financing options for preparedness and response. This body should facilitate the flow of funds from different sources (e.g the World Bank, IMF, regional development banks, The Pandemic Fund, Gavi). Operationalising this will be challenging however due to the different business models and rules, mandates and governance structures of these entities.





## Strengthening WHO's independence, authority, and financing

### GRADE: CODE ORANGE TO YELLOW

WHO is the only international health organisation with the authority and expertise to guide the world through public health emergencies and pandemics. It has an essential role sharing outbreak information and assessing risk, determining whether an outbreak represents a public health emergency of international concern (and once the IHR amendments come into force, a pandemic emergency), and providing the normative and technical guidance and assistance required for countries to prepare for and respond to outbreaks and ideally stop them from becoming pandemics.

WHO's principal function is to set norms and standards. By following the science and employing and collaborating with leading expertise, the WHO develops technical guidance and strategies, provides advice to Member States, and supports countries to design and monitor health programs. From the emergence of COVID-19, WHO has played this important normative function globally, in its regions and in most countries.

In recent years, through its Health Emergencies Programme, the WHO has increasingly performed more of an operational function with an growing focus on procuring and delivering goods—a role more commonly associated with humanitarian organisations, nongovernmental organisations, and local governments.<sup>87</sup> This broadened function comes at a time when technical expertise and guidance are in high demand, as Member States and the WHO Secretariat strive to deliver a comprehensive pandemic agreement.

Now Member States are asking WHO to do more. Potentially agreed text in the draft pandemic agreement includes establishment of a global supply chain and logistics network “to be developed, coordinated, and convened by WHO in partnership.”<sup>88</sup> The amended International Health Regulations ask WHO to “make use of WHO-coordinated mechanisms, or facilitate, in consultation with States Parties, their establishment as needed, and coordinate, as appropriate, with other allocation and distribution mechanisms and networks that facilitate timely and equitable access to relevant health products based on public health needs.”<sup>89</sup>

Member States believe WHO can do this, but the question still to be answered is whether WHO is best suited in the international system for this role. This puts WHO at a crossroads. One path leads to a strengthened role anchored in normative, technical, and convening functions. The other sees WHO potentially transitioning to become a supplies delivery agency, akin to the reason the World Food Programme was born out of the Food and Agriculture Organization of the United

Nations (FAO) in the early 1960s. Many other actors can undertake this operational role and deliver supplies and ambulances, but no other organisation can perform WHO's essential normative and technical role.

The Member State-initiated reforms of the financing of WHO aim to further secure WHO as the specialised technical agency in the international system. Independence and integrity are required to be the trustworthy voice in global health, and this should not be diluted by procurement and distribution of supplies.

### What did the Independent Panel recommend and why?

In 2021, the Independent Panel was clear that the WHO's work throughout the COVID-19 pandemic was essential. The organisation was indispensable as it guided the world to navigate the largest health emergency of modern times. But the Independent Panel also noted that aspects of WHO's performance warranted reflection and change to strengthen and improve its core functions in the years ahead.

The Independent Panel considered what WHO's leadership role entails, what kind of a coordinating mandate WHO should have, how operational the organisation should be, and what authority it holds to ensure transparency of information and decision-making.

The Independent Panel concluded that WHO's mandate should be focused on activities where it provides true added value, where it makes the most use of its core competencies, and where there is less overlap with the mandate of other actors in the busy and crowded global health and international development space. Recommendations of The Independent Panel included:

#### The Independent Panel's 2021 recommendations:

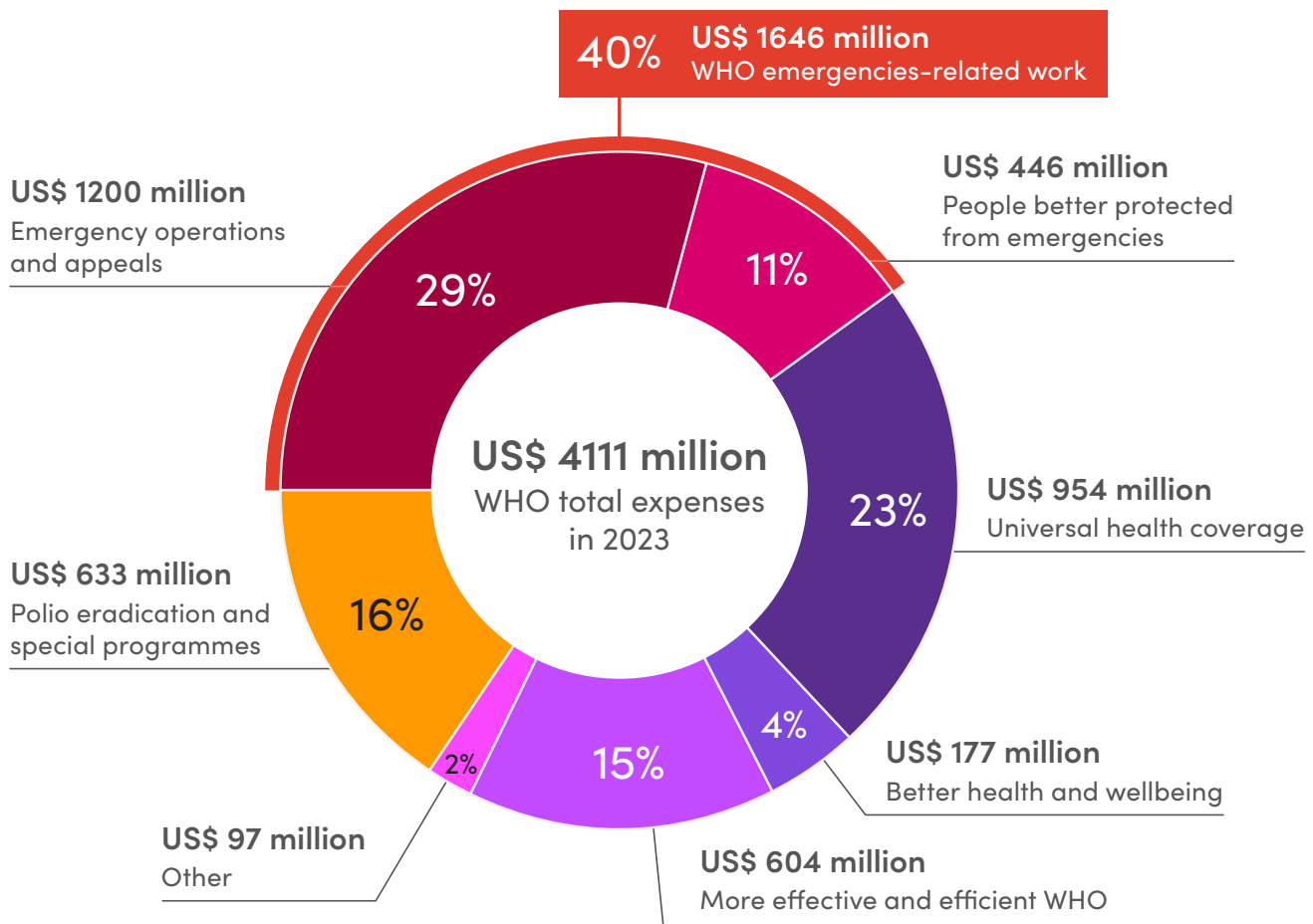
- ▶ **Establish WHO's financial independence**, based on fully unearmarked resources; increase Member States' fees to two-thirds of the budget for the WHO base programme; and have an organised replenishment process for the remainder.
- ▶ **Strengthen the authority and independence of senior staff**, including a single, seven-year term of office for the Director-General and Regional Directors, and depoliticise recruitment particularly at senior levels.
- ▶ **Strengthen the governance capacity of the Executive Board**, including by establishing a Standing Committee for Emergencies.
- ▶ **Focus WHO's mandate on normative, policy, and technical guidance**, including supporting countries and regions to build capacity for pandemic preparedness and response and for resilient and equitable health systems, without, in most circumstances, taking on responsibility for procurement and supplies.
- ▶ **Resource and equip WHO country offices sufficiently to respond to technical requests from national governments** to support pandemic preparedness and response, including support to build resilient equitable and accessible health systems, universal health care and healthier populations.

## Progress to date

**WHO financing:** In May 2023 the World Health Assembly approved an important resolution setting the path for reforming WHO financing.<sup>90</sup> The resolution made clear that for WHO to fulfil its mandate with the highest levels of independence and integrity, it needs to be adequately financed and for these resources to be made available without ties and conditions (i.e., unearmarked funds). The reform consisted of three components in line with the Independent Panel's recommendations: moving towards fully unearmarked resources; increasing assessed contributions to 50% of the base budget; and filling the remaining gap with voluntary contributions through a replenishment process.

In May 2023, the WHA approved a 20% increase in assessed contributions to the base budget. This represents a positive step but as the overall WHO budget is increasing, the share of assessed contributions relative to the total base budget remains at just 23%. It is difficult to know if Member States will support the planned stepwise increase of assessed contributions, but it will most likely depend on WHO improving the quality of its core technical and normative work and Members States recognising the ongoing value of this. Whether a replenishment model will work, and whether major donors are willing

## WHO total expenses in 2023



to provide unearmarked resources—as they do for the Global Fund and Gavi—remains uncertain, but the appetite and commitment appear low. In part this is because of a lack of faith amongst donors and internally in the organisation’s ability to manage unearmarked resources.

For transparency, WHO has established a web platform to make available more information regarding the budget and expenditures, but there is still much more room for improved transparency and accountability. The lack of reporting on WHO’s total spending on COVID-19 is a case in point.

**Health Emergencies Programme:** WHO has clearly been expanding its work in the emergency field. During the last biennium 2022–2023, the emergency operations financial resources have been close to the level of \$3 billion plus approximately \$1 billion of the base budget, making the total more than 40% of WHO’s overall work. This can partly be explained by the difficult situations in Gaza, Ukraine, Yemen, and many other places, but most importantly it is because WHO is now taking on the role as procurer and distributor of supplies and equipment. This is politically visible and relatively easy to raise financial resources for.

However, the COVID-19 pandemic pointed to the essential need for universal health coverage as well as more effective health promotion and prevention (Healthier Populations). Unfortunately, **those two** “pillars” of WHO’s work are not receiving the same attention as WHO’s emergencies work.

**An Emergency Committee** under the Executive Board was established in May 2022. The significance of that body remains unclear, including its relationships with related bodies and structures.

An important decision has been taken to **strengthen WHO country offices**, with an extra \$200 million made available by the Director-General in 2024. This is a significant sum but represents only 5% of total resources available to the country offices. Will it be sustained?

**Leadership terms, political appointments:** The Independent Panel’s proposal for a single term of office for the Director-General and Regional Directors have yielded no reactions. Senior appointments of Assistant Directors-General and the appointment of a Deputy Director-General have taken place without open competition, in contrast to other major UN organisations. These continue to be perceived as political appointments.



## A stronger WHO: the way forward

### 1. Focus WHO's role and functions on normative and technical work, also in emergency situations

WHO's authority, integrity, and independence need to be strengthened and associated with high-quality technical work. WHO's convening role needs to be better defined and understood for the organisation to play its appropriate role in the international system at large.

### 2. Consider splitting WHO into two organisations

Given the potential for WHO to play a more operational role vis-a-vis access to health products in emergencies, it might be necessary to establish a separate World Health Emergencies Programme with its own organisation, budget, and governance to maintain and enhance the quality of WHO's technical work across the three "pillars and billions." The alternative is to allow the United Nations Children's Fund (UNICEF), the World Food Programme, and other partners to play this role.

### 3. Introduce a single seven-year term of office for the next Director-General and Regional Directors

Member States should initiate this approach at the January 2025 Executive Board.

### 4. Continue the work to reform the financing of the organisation

The financing should move towards a combination of fully unearmarked assessed and voluntary resources, while also improving accountability and transparent ways of reporting. Reforms should be linked to enhance relevance, quantity, and outcomes of the technical work, especially in countries. Member States should fully support the replenishment process.





## A new international system for surveillance, validation, and alert

### GRADE: CODE ORANGE TO YELLOW

Sensitive surveillance for infectious disease and structures to report events can make the difference between a limited outbreak and a pandemic. Surveillance reporting also extends beyond people—to animals to detect potential spillover events, and beyond, to economic and political spheres, particularly if countries perceive reporting an outbreak as antithetical to their economic interests.

Critical to sensitive surveillance are national systems and protocols that ensure health events in a community that may be of international concern can be alerted up through to the country's leaders and rapidly to WHO in keeping with obligations under the IHR. The WHO in turn must have the authority to rapidly assess risk and alert the world to new threats, and countries must respond to alerts with the immediate attention required.

**The question is, four years since the world was overcome by COVID-19, can surveillance systems identify and alert public health officials to the next pandemic threat? Additionally, does WHO have the authority to sound the alarm and investigate, and will countries respond to the alarm?**

SARS-CoV-2 was unknown before late December 2020 and spread explosively to almost every country within four months. Many countries lost weeks of time, neglecting to take WHO's PHEIC alarm seriously. In 2022, mpox, endemic to parts of West and Central Africa, spread suddenly worldwide and while WHO determined a PHEIC, many countries were initially caught with limited diagnostic capacity. Low-income countries now at risk of more fatal strains still don't have ready access mpox vaccines. The highly pathogenic avian influenza strain H5N1 was identified in 1996 yet its recent spread to cattle in the United States was not immediately alerted to the public health sector, as should happen under a One Health approach. This spread has exposed the tensions between industrial and public health interests, which replicate in other countries.<sup>92</sup>

## What did the Independent Panel recommend and why?

The Independent Panel found that the alert system was not effective and fast enough and that the IHR amendments were too conservative and served to “constrain rather than facilitate rapid action.” The bureaucratic steps to communicate between systems required by the International Health Regulations (2005) could not keep pace with the speed of a fast-moving respiratory virus or with public reports and the internet. While WHO was taking IHR-mandated steps to gather more information from China, COVID-19 was spreading internationally.

The first meeting of the IHR Emergency Committee on Jan. 22–23, 2020, should have resulted in a PHEIC. When the WHO Director-General did determine a PHEIC on Jan. 30, too many countries failed to respond. Instead, many took a wait-and-see approach, and some countries outright denied there was a real threat. Only once it was too late, when COVID-19 had spread to 114 countries and was characterised as a pandemic on March 11, 2020, did governments take more serious measures. The Independent Panel further found that the WHO should have advised countries to take a precautionary approach early that assumed human-to-human transmission of SARS-CoV-2.

The Independent Panel recommended several improvements to the international system of surveillance and alert. These included:

### The Independent Panel's 2021 recommendations:

- ▶ **WHO should establish a new global system for surveillance**, based on full transparency by all parties, using state-of-the-art digital tools to connect information centres around the world, including animal and environmental health surveillance, with appropriate protections of people’s rights.
- ▶ **WHO should be given the explicit authority by the World Health Assembly to publish information about outbreaks with pandemic potential on an immediate basis** without requiring prior approval of national governments.
- ▶ **WHO should be empowered by the WHA to investigate pathogens with pandemic potential in all countries** with short-notice access for international epidemic experts to outbreak locations.
- ▶ **Future PHEIC determinations should be based on the precautionary principle:** that a PHEIC should be based on clear, objective criteria; that advisory committee decisions be transparent; and that the WHO immediately publish advice together with the PHEIC.

## Progress to date

Since May 2021, several steps have been taken towards implementation of these recommendations.

**One that has been essential—and successful—was the WHA-mandated Working Group process to amend the IHR**, which met for the first time in November 2022. Just 18 months later, on June 1, 2024, in the last hours of the 77th Assembly, the WHA celebrated the adoption of significant amendments to the IHR. This followed extra sessions prior to the WHA, marathon sessions during the week, and real fears that the process might fail. While not fully addressing the Independent Panel’s concerns, the amendments extend for the first time to address equity and finance, and represent a major step forward for effective, internationally binding rules governing outbreak detection, alert, and response. Of course, these are meaningless if governments and the WHO fail to full implement them.

**Significant amendments to the International Health Regulations include the following:**

- **Faster sharing of alerts**, including the authority for WHO to inform Member States about an outbreak, even if the originating country is not cooperating—which effectively gives WHO the ability to publish information about an outbreak of concern more rapidly. The amendments also place more onus on Member States to provide WHO with information about outbreaks “in a timely manner” even if full information is not available.
- **An obligation to report “clusters of severe acute respiratory disease of unknown or novel cause.”** This encourages a precautionary approach.
- **A pandemic emergency definition** and Director-General authority to declare a PHEIC and a pandemic emergency.
- Updated principles now include “equity and solidarity” and obligation for WHO to assist countries to **access health products, strengthen research and development, and support local production.**
- **IHR national authorities** should be designated in every country, which in the Independent Panel’s view must be multisectoral and managed by the Office of the President or Prime Minister.
- The creation of a **finance coordination mechanism** and agreement to help ensure that developing countries have finance to build their core capacities.
- Greater focus on prevention and preparedness according to **a detailed list of core capacities.** These include expanding surveillance and laboratory capacities, improving access to health products, and addressing mis- and disinformation.



- **More transparency** regarding membership of the Emergency Committee, including publishing the evidence members consider in their decisions. It's notable that WHO took this approach for the mpox PHEIC.
- An **implementation committee** that would work in nonpunitive manner.

The amendments concerning rapid information sharing are not as unequivocal as the Independent Panel recommended. **The Independent Panel therefore calls on governments and WHO to never hide behind vague language and to report and alert outbreaks of potential international concern without hesitation.** In return governments must be praised and never punished for their transparency.

**Missing from these amendments is the authority for WHO's request to enter a country and investigate be granted without restrictions. A mechanism to oblige compliance is also missing.** This is a real issue, given the many breaches of the IHR during COVID-19, with no guarantees these will not happen again. Further, the IHR amendments do not address stickier issues such as One Health or technology and knowledge transfer, nor do they address pathogen access and benefit sharing. These will be left to negotiators of the pandemic agreement.

### Will Member States opt out?

The current IHR amendments include an impressive 196 State Parties, two of which (the Holy See and Liechtenstein) are not even Member States of the WHO. But because the regulations fall under Article 21 of the WHO Constitution, countries must opt out if they don't wish to participate, and some have suggested they might do so. Slovakia disassociated itself from the resolution adopting the amendments at the WHA. It, together with Iran, the Netherlands, and New Zealand, opted out of a previous straightforward amendment to have amendments come into force within 12 months as opposed to 24 months. Argentina and Russia told the 77th WHA they would examine the amendments carefully. Any countries opting out would weaken the authority and effectiveness of the IHR.

## BOX 5. Are countries obliging themselves to act on a PHEIC?

A legal mapping study of 48 states<sup>93</sup> (eight per WHO region) showed that the term “public health emergency of international concern,” or PHEIC, rarely exists in national legislation. The study found that in domestic legislation, eight out of the 48 countries (16.7%) reference a PHEIC, while 18 (37.5%) reference pandemic; 38 (79.2%) reference epidemic; 27 (56.3%) reference WHO; and 13 (27.1%) reference other emergency triggers. The findings show that domestically, the term “PHEIC” has very little power.

The study suggests—as was demonstrated by COVID-19—the term “pandemic” may instill more concern and action. This in turn could mean that governments will continue to wait and see when a PHEIC is declared, and that only the term “pandemic” will ring a loud enough alarm. Notably, there was an effort to oblige legislation of the International Health Regulations into domestic legislation in the amendments, but this did not make the final accepted version.

*“I can take a rideshare and know exactly what time I will arrive. But I can’t know at any time what my infectious disease risk is. We could do that if we wanted to.”*

– Dylan George, Director for the Center for Forecasting and Outbreak Analytics, U.S. CDC

### **Movement towards a modern, state-of-the-art surveillance system**

In September 2021, with support from Germany, WHO established the WHO Hub for Pandemic and Epidemic Intelligence as part of its Health Emergencies Programme. Its ambition is “better data, better analysis, and better decisions” through collaborative surveillance aimed at better cross-sectoral, geographical, and vertical programme collaboration “with the ultimate goal of enhancing public health intelligence and improving evidence for decision-making.”

Multiple additional regional initiatives are underway, many in coordination with the WHO Hub. The Africa CDC reports much progress including on the establishment of cross-border networks and a focus on a One Health approach to coordinate across institutions. Before the pandemic, just seven Africa Union (AU) countries had next-generation sequencing capacity, and that number has now jumped to at least 31. The European Union continues to strengthen its surveillance through the European Centre for Disease Prevention and Control and the Health Emergency Preparedness and Response.<sup>94</sup> The U.S. Centers for Disease Control and Prevention (U.S. CDC) is investing in and pressure-testing strengthened data collection using modern tools including artificial intelligence, to improve interoperability of data across jurisdictions and sectors. Implementation of metrics, such as the so-called 7-1-7 approach to ensure seven days to detect an outbreak, one day to notify public health authorities, and seven days to respond is a promising standard being implemented in several countries.<sup>95</sup> It’s notable that in their self-assessments (SPAR), countries rate themselves as strongest in surveillance and laboratory capacities.<sup>96</sup>

Huge challenges remain. There are siloed networks within human health disease surveillance. Complexity and fragmentation are amplified subnationally when municipalities, districts, states, or provinces have different data collection and reporting systems including across the public and private sectors. Investments in human health surveillance have increased but remain insufficient. Veterinary and wildlife surveillance are not receiving nearly the investments required.

There is a One Health joint plan of action amongst the FAO, UN Environment Programme, WHO, and WOAQ Quadripartite, but financing for implementation is a struggle. The World Bank estimates that prevention guided by One Health principles would cost \$10.3–11.5 billion per year, including strengthening veterinary services and farm biosecurity and reducing deforestation in high-risk countries.<sup>6</sup> This is less than 1% of the cost of responding to the COVID-19 pandemic in 2020. Yet, even in the wealthiest countries, jurisdictional and transparency issues pose a barrier to consistent reporting of animal disease to public health authorities.<sup>97</sup>

The first signs of an outbreak will occur in a community, and so that’s where the trained people and tools must be to identify it. Sustained investment must be made available for low- and middle-income

countries to leapfrog earlier technologies and attain up-to-date digital tools. A community health worker trained and equipped with point-of-care testing and a smartphone connected to national reporting systems can eliminate days of delay and help to ensure a response that will protect local people from the outbreak, and ultimately protect the planet from a pandemic.

Decision-makers should ideally be able to see, analyse, and understand, through one integrated dashboard, the animal, environmental, and human health events that could result in an outbreak or new pathogen of pandemic potential. It's an ambitious goal, but the world has the digital tools, the people, and the money to make this happen. The next key step, of course, is for leaders to act on the information they could have at their fingertips.

A final challenge is to counter growing mis- and disinformation regarding the severity of infectious disease such as COVID-19 or even measles, the importance and effectiveness of the tools such as vaccines to protect people, and the belief that WHO has “control” over countries and their responses and public health advice.<sup>98,99</sup>



## Surveillance and alert: the way forward

- 1. Member States and WHO commit to report outbreaks from today according to the amended IHR** and WHO should be allowed to immediately investigate suspected outbreaks with pandemic potential.
- 2. Member States and WHO to invest now to implement the amended International Health Regulations**, including to create national authorities linked to the highest political office, determine operational details of a finance coordination mechanism, update the monitoring tools to better-reflect preparedness, and ideally, ensure that national laws and policies foster compliance.
- 3. WHO to further develop a communications strategy so that stakeholders including leaders, cabinet ministers, and the public better understand what a PHEIC is and what a pandemic emergency means** and what actions must be taken by government. Member States and WHO must work to dispel mis- and disinformation about all aspects of disease surveillance, control, and WHO's role and authority under the amended IHR and an eventual pandemic agreement.
- 4. Invest now in bottom-up surveillance based on a One Health approach** ensuring an effective Quadripartite and WHO Hub, regional networks, and community capacity and tools to detect and report on human, animal, and environmental events.



## Innovation and equitable access to medical countermeasures

### GRADE: CODE ORANGE

The COVID-19 pandemic demonstrated that investment in science could produce effective tests, vaccines, and treatments for a new pandemic disease in record time. The success was possible through collaborative global research and development (R&D) efforts between many public and private players that could build on existing knowledge and state-of-the-art technologies, the shared viral sequence, clinical trial infrastructure and people’s willingness to participate in trials, and massive public financing for both R&D and manufacturing scale-up. However, one of the biggest failures during the pandemic was our collective inability to ensure timely and equitable access to medical countermeasures including oxygen and personal protective equipment, especially to protect health care workers in LMICs. Early access could have saved many lives and likely have ended the pandemic crisis sooner.

Thirty years ago, the HIV/AIDS pandemic put a global spotlight on the devastating consequences of highly unequal access to lifesaving health technologies. While a range of initiatives has since been set up to address such inequities, the continued challenges of availability and access to MCM for COVID-19, Ebola, mpox, and cholera emphasise a need for more transformative change in the way we govern, finance, and conduct MCM R&D and manufacturing.<sup>101,102</sup>

Despite the Independent Panel’s call, together with many public calls by political<sup>87</sup> and civil society leaders globally to consider MCMs global common goods, the management of knowledge and technologies became one of the most controversial and immovable topics during the COVID-19 pandemic. The issue continues to bitterly divide countries on how to ensure a more equitable system in the pandemic agreement negotiations.

### What did the Independent Panel recommend and why?

When the Independent Panel published its first report in May 2021, vaccine inequities were at their heights. The early scramble for supplies such as oxygen and personal protective equipment put people, and especially health care workers, at great risk. Vaccine hoarding by wealthier countries through secret highest-bidder-first contracts resulted in an inability of the Access to COVID-19 Tools Accelerator (ACT-A)—created with the support of many of the same countries—to deliver as promised to LMICs, where people waited in vain for vaccines. All of this illustrated the lack of aligned vision amongst countries and manufacturers that medical countermeasures including vaccines should be managed as part of the global health commons, instead of market

*“Vaccine inequity is the world’s biggest obstacle to ending this pandemic and recovering from COVID-19.”*

— WHO Director-General  
Dr. Tedros Adhanom  
Ghebreyesus, July 2021<sup>100</sup>

commodities, and that they must be distributed equitably, with priority given to the most vulnerable populations. The Independent Panel also argued that equitable access cannot be negotiated in the heat of the moment once MCMs become available but must be built in from the start of the R&D process as part of a globally agreed end-to-end platform that includes coordination, timely sharing of knowledge and technologies, and access to adequate financing.

### The Independent Panel's 2021 recommendations:

- ▶ **MCMs should be considered as global health commons**, and instead of a model dominated by high-income countries (HIC), where innovation is largely left to the market, there should be a shift to a global, more inclusive approach in which all countries can contribute to R&D and manufacturing efforts to achieve equitable and effective access.
- ▶ To that effect, **a pre-negotiated, end-to-end ecosystem should be established for PPR R&D, manufacturing, and equitable distribution of MCMs, with adequate governance**, including provisions for timely technology transfer, sharing, and licensing; decentralised (regional) manufacturing hubs and capabilities for innovation and clinical trials; and binding commitments to ensure equitable access for public funding contributions.
- ▶ **Fit-for-purpose financing should be created for such an ecosystem that reflects public interest globally**, including access to appropriate financing from IFIs, regional development banks, and other public and private financing organisations.

### Progress to date

An independent ACT-A evaluation,<sup>103</sup> recommended also by the Independent Panel, was published in October 2022 and highlighted major shortcomings including in design, coordination, governance, and deliverables, while acknowledging the challenges of setting up such an endeavour in crisis times and the counterfactual that things would likely have been worse without it. However, it seems that key recommendations have not yet translated into needed changes towards better preparedness or response capacity. Likewise, the transformative change to the countermeasures ecosystem called for by the Independent Panel and partners remained unheeded.<sup>104</sup>

**Are MCMs managed as global health commons?** Despite popular narratives designating COVID-19 vaccines as global common goods, including in an open letter published in March 2023 signed by current and former Heads of State and Government, Ministers, Nobel laureates, leading economists, faith leaders, heads of civil society organisations, and health experts,<sup>105</sup> this has not translated into changes in laws,

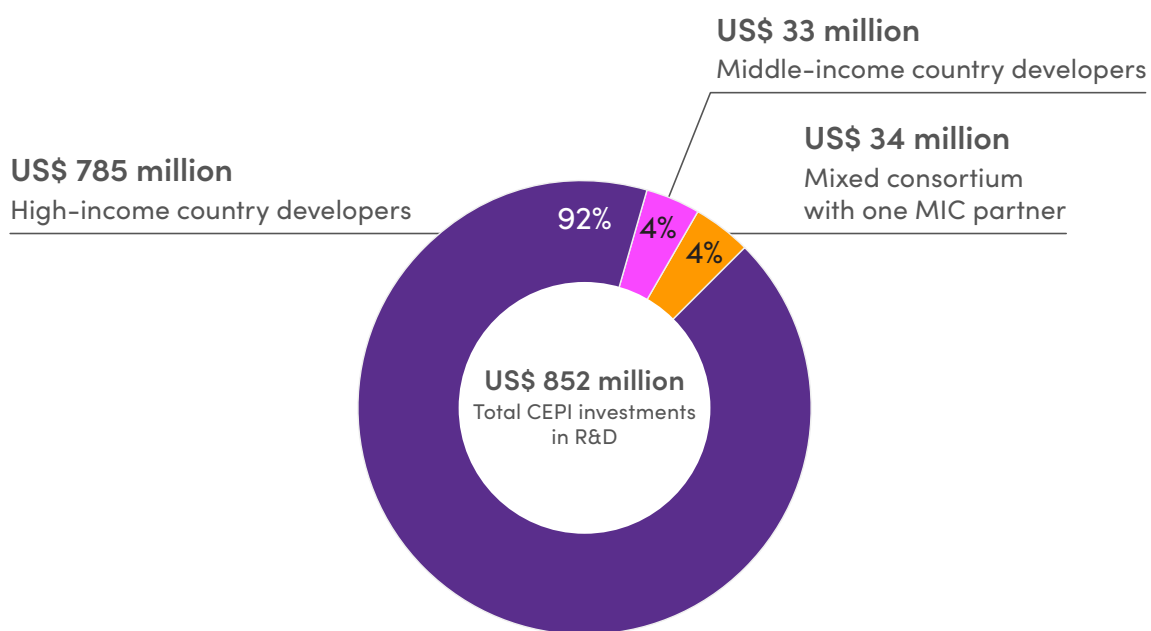


**Is there a pre-negotiated platform for MCM R&D, manufacturing, and access?** The failure to establish MCMs as global health commons also meant that efforts to increase timely availability and access have pursued more market-driven approaches including public-private partnerships, competition, and market push-and-pull mechanisms rather than building a pre-negotiated collective action platform for health.

The result is a fragmented landscape with many initiatives along the R&D to access value chain but without the transformative end-to-end leadership and governance needed to translate R&D into global health impact and equity, including to help ensure that regions have appropriate solutions—such as heat-stable vaccines—to regional outbreaks. The regional R&D hubs with pre-negotiated access to technologies, know-how, and finance<sup>110</sup> proposed by the Independent Panel as a transformative approach to drive regionally led innovation and manufacturing for equity are not being specifically pursued as a strategy.

Most of ACT-A’s implementors have extended the scope of their original mandates to integrate PPR, increasing budgets but without apparent changes in assumptions or business models. Coalescing under the 100 Days Mission umbrella led by the Coalition for Epidemic Preparedness Innovations (CEPI), the focus is on increasing speed of vaccine and other MCM development as the main driver for improved preparedness and response (see box 6). The dominant business model for innovation continues to rely on proprietary technologies and public

### CEPI’s R&D portfolio overwhelmingly funds HIC developers



Note: Distribution of CEPI funding for vaccine R&D according to developer headquarters’ locations. This excludes COVID-19-related funding that was mainly for product registration and manufacturing. Source: CEPI<sup>111</sup>



## *Financing for MCMs has followed the fragmentation of initiatives.*

funding for partnerships with private pharmaceutical companies, mostly in the Global North. While CEPI represents the main vaccine PPR R&D effort with a global mandate, there are also continued critical R&D investments in MCMs by the U.S. Government's Biomedical Advanced Research and Development Authority (BARDA)<sup>112</sup> and more recently by the United Kingdom<sup>113,114</sup> and the European Union.<sup>115,116</sup> While these countries' aspirations include being a global technology leader, their primary mandate in terms of health impact remains domestic health security.

The one important recommendation that has received general buy-in and significant investments is increasing and geographically decentralised vaccine manufacturing capacity (see box 7). In addition to multiple investments to support the African Union's ambition to produce 60% of the vaccines used on the continent by 2040,<sup>117</sup> this includes efforts by CEPI to establish a growing global network of pre-vetted manufacturers that can be activated as needed to produce under license the proprietary products developed with CEPI support.<sup>118</sup> These efforts are highly welcomed but should not mask that equity cannot be solved merely by increasing global availability. Critical challenges related to ownership, priority setting, coordination, freedom to operate, financing, and economic sustainability of vaccine manufacturing remain outstanding, including reliance on HIC-driven health innovation, in which developing countries remain recipients instead of co-creators.

In 2021, the WHO launched an mRNA technology transfer programme with the support of some high-income countries.<sup>119</sup> With a technology development hub in South Africa, it will share technology with 15 vaccine producers in middle-income countries, while collectively developing a portfolio of vaccine candidates to address local and regional health needs. While the end-to-end sustainability of this initiative remains to be established, it can be an innovative pilot for transformative change towards an ecosystem for health innovation for the common good, including for PPR.<sup>120</sup>

With a dominant focus on vaccines, progress on diagnostics and treatments has been meagre, despite their importance as a first line of response in case of epidemics including to stop outbreaks when and



where they occur. While R&D roadmaps have been developed,<sup>121,122</sup> critical leadership and financing to establish the needed R&D and manufacturing preparedness are lacking.

Recognising that pharmaceutical manufacturing requires a conducive ecosystem, efforts have been directed to strengthening regulatory capacity, building skilled human resources, bolstering technical assistance, and shaping finance and market forces with diverging economic views on how to do that. While most attention for increasing manufacturing capacities has been directed towards the African continent,<sup>123</sup> there have also been efforts in Latin America,<sup>124</sup> Asia,<sup>125, 126</sup> and other regions, as well as reshoring initiatives in Europe<sup>127</sup> and the United States.<sup>128</sup>

**In summary, despite a narrative of collaborative approaches towards equity, there are multiple—sometimes competing—initiatives and actors, with no one in charge of end-to-end or public health purpose, and a tendency of continued prioritisation of national or regional interests.** The principle focus is on increasing and decentralising manufacturing and supply capacity as a technical solution to MCM inequities, without addressing the underlying political economy related to ownership, market power asymmetries, technological capacity inequalities, and financing imbalances. Improved global coordination and governance have remained largely aspirational including under WHO's interim coordination mechanism known as i-MCM-Net,<sup>129</sup> a “network of networks” with an unclear mandate that may evolve into a WHO-led Global Pandemic Supply Chain and Logistics Network as proposed in the latest draft text submitted to the 77th WHA by the INB.

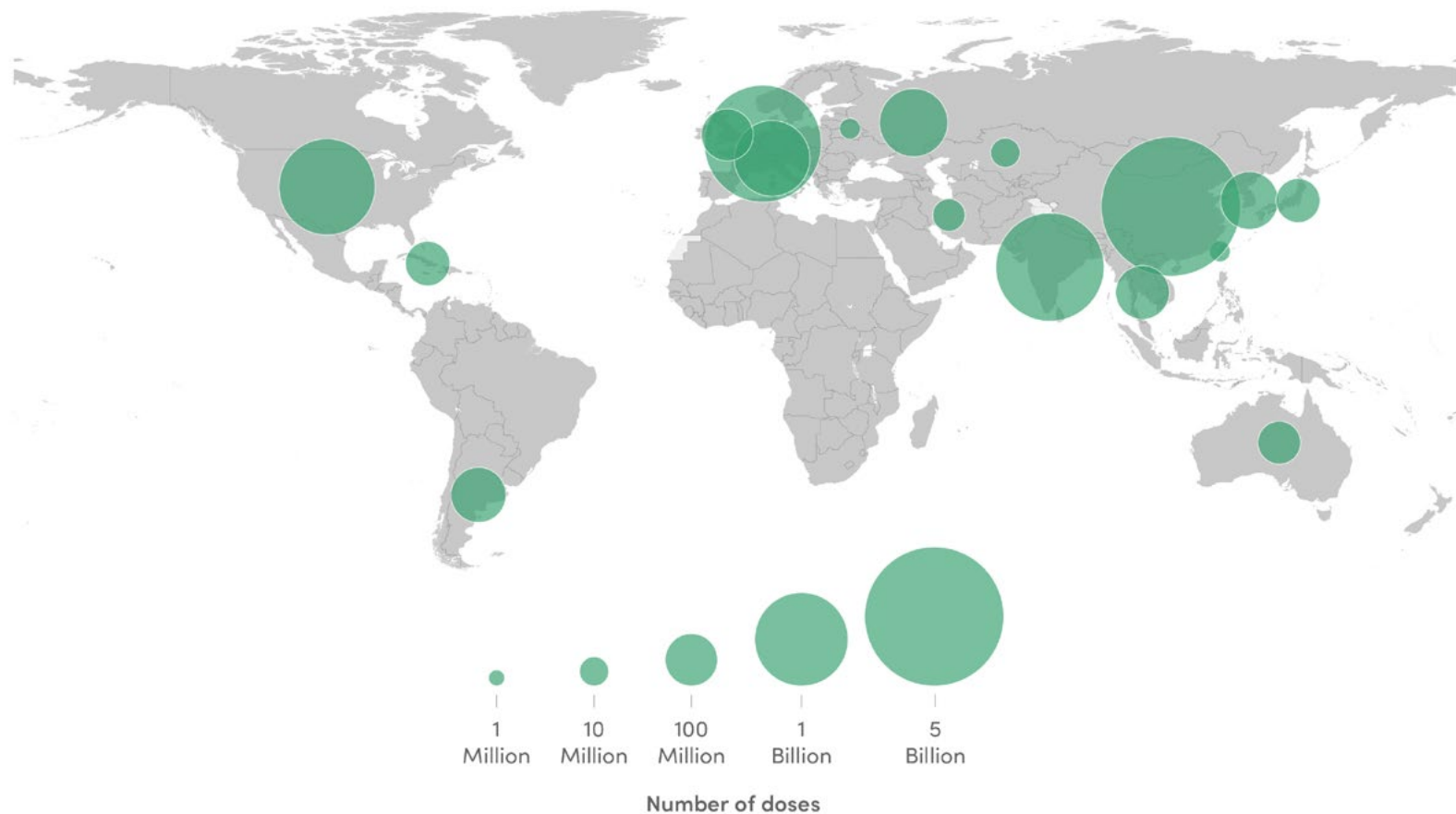
**Is there fit-for-purpose financing?** Financing for MCMs has followed the fragmentation of initiatives. Most new financial commitments have gone to CEPI as part of efforts to replenish its 2022–2026 strategy (box 6), to strengthen local manufacturing efforts in Africa (box 7), and to increase HIC R&D readiness and technology development for domestic health security. These primarily came through existing funding mechanisms—each within its specific niche and limitations (bilateral or multilateral ODA, domestic R&D funds and investments, IFI financing). No dedicated new funding streams have been created that specifically cover MCMs in a comprehensive way (pre-negotiated platforms, end-to-end, regional R&D hubs with autonomy and freedom to operate, surge financing). The Pandemic Fund does not currently finance MCM-related activities, and no new specific funding commitments have been agreed. Amendments to the IHR request that WHO support countries with R&D and local production of health products, but it will take time to understand how this will be financed and implemented.

Because most funders continue to view MCMs as market commodities, financing streams remain framed as market push-and-pull mechanisms and investments that need to deliver financial returns. This is particularly the case for IFIs, which have shown little flexibility to revisit their design, objectives, and return expectations to help shape a conducive ecosystem<sup>130</sup> through at-risk financing, grant funding, and long-term investments for health and technological capacity building that are needed in this area.

GloPID-R, a coalition of research funders in pandemic preparedness and response, has launched a Pandemic PACT<sup>131</sup> that aims to facilitate coordination amongst mostly public and philanthropic funders to channel research funds where they are most needed. While this voluntary initiative is welcome, it is unclear if and how commercial product developers or major players like CEPI and the U.S. National Institutes of Health will interact with this initiative.

## Location of COVID-19 vaccine manufacturing

(November 2020–January 2022)



Source: Global Commission for Post-Pandemic Policy<sup>132</sup>



## An equitable end-to-end platform: the way forward

### 1. Treat MCMs for outbreaks and pandemics as global health commons

Given their public health importance for prompt epidemic control and the fact that public funding and public researchers are major contributors to the development of MCMs, there is a strong case to govern PPR health technologies as global health commons. At a minimum, public benefits need to be attached to public funding to foster technology and know-how sharing, co-creation, and other collective actions to enable availability and production of health technologies where and when needed and to promote equity.

### 2. Establish regional R&D hubs to decentralise innovative capabilities

Regional R&D hubs must be established that have technological capacity around a range of technology platforms, and the skills, financing, and freedom from IP constraints to rapidly adapt them to respond to new outbreaks and deliver MCMs equitably. Regional R&D hubs should be linked to clinical trial platforms, local manufacturing capacity, and political responsibility to create an end-to-end approach and ensure regional resilience. While a bottom-up approach from researchers and developers in different regions is critical to foster a local needs-driven focus, political leadership including financing must be ensured from each region and globally. Brazil's proposal to the G20 for an Alliance for Regional Production and Innovation,<sup>133</sup> as well as AU leadership, could be catalytic to that effect.

### 3. Fit-for-purpose financing for an end-to-end R&D and manufacturing ecosystem for people's health

In addition to dedicated new funding streams to support regional R&D hubs, available funding for MCM R&D and manufacturing through regional, bilateral, or multilateral initiatives must be streamlined and coordinated in transparent ways to ensure a viable end-to-end approach for PPR R&D and manufacturing, including building capacity.

This will require different financing mechanisms (e.g., grants, subsidies, concessional loans, equity investments, prizes) to be designed and combined in ways that support developers' and manufacturers' needs over time and reward health purpose and resilience over financial returns. Public financing must include stipulations requiring collaboration and knowledge and technology sharing, clinical trial design and implementation driven by public health need, and it must ensure that the resulting products are managed as global health commons.

### 4. Invest in diagnostic and treatment R&D and manufacturing preparedness

The current focus on vaccines has overshadowed attention for other critical MCMs such as diagnostic tests that are the first critical tool to help stopping outbreaks in their tracks. Similarly, little investment is made into therapeutic preparedness—which, as with HIV, may be the first available medical tool. The ability to promptly diagnose and treat infected people to both reduce morbidity and mortality and to minimise epidemic spread could be critical as a public health intervention in future outbreaks, especially if vaccines are not available or widely used. Regional R&D hubs should also engage in these critical activities, linked to clinical trial and manufacturing capacity.

## BOX 6. The 100 Days Mission: increasing speed as the main driver for better PPR

With the objective of more effectively stopping epidemics and pandemics, the UK-initiated and G7/G20-supported 100 Days Mission (100DM) was proposed in 2021<sup>134</sup> by G7 Scientific Advisors and ACT-A related experts chaired by Sir Patrick Vallance, also the chair of the subsequent Steering Group. Its main premise is that decreasing the time to develop MCM in response to outbreaks will have the biggest impact on the global response capacity. 100DM maintains an International Pandemic Preparedness Secretariat, supported by the Wellcome Trust and the Bill & Melinda Gates Foundation.

CEPI, a partnership set up in the wake of the Ebola outbreak in West Africa in 2014–2016 to develop vaccines against emerging epidemics, and a central pillar of ACT-A, has adopted 100DM at the heart of its 2022–2026 strategy,<sup>135</sup> mobilising funding and partners globally around that goal. CEPI's 100DM comprises five pillars

related to vaccine R&D and manufacturing for better preparedness along the R&D value chain, plus response planning: to reinforce global capabilities for early characterisation of pathogens and outbreaks; develop preexisting, well-characterised prototype vaccines for representative pathogens across multiple virus families; identify biomarkers of robust immune response and protection; establish global clinical trial infrastructure and readiness; and establish global capacity for rapid manufacture and validation of experimental vaccines.

For the implementation of its five-year strategy, CEPI projects a budget of \$3.5–4 billion. Of that total, \$1.95 billion was raised by the end of 2022,<sup>136</sup> positioning CEPI squarely at the centre of vaccine and biological MCM development and manufacturing.<sup>137</sup> For diagnostics and treatments, no equivalent financing or leadership has materialised.

## BOX 7. Investments in vaccine manufacturing capacity for greater equity

Because initial supply scarcity played an important role in the unequal availability of vaccines during the COVID-19 pandemic, a key response has been to increase global vaccine manufacturing capacity. This includes the ambition to decentralise manufacturing capacity to ensure better geographic spread to increase health security and regional resilience. Especially for Africa, the continent most affected by vaccine inequities during COVID-19, a broader political momentum<sup>117</sup> emerged towards establishing industrial capacity such that by 2040, 60% of the vaccines used in Africa will be produced there (compared with less than 1% today). This ambition was clearly articulated by the AU and Africa CDC through the establishment of the Partnerships for African Vaccine Manufacturing, and has the support of the African Development Bank, the African Export-Import Bank, the European Commission (Team Europe), and G7 economies, amongst others.<sup>138</sup>

Recent reports examining current and planned vaccine manufacturing in Africa showed that while at least 30 initiatives have been announced in recent years to build or strengthen such capacity, they are mostly focused on the last step of the process, the so-called fill and finish, which is the packaging of vaccines that are produced in bulk elsewhere.<sup>139,140</sup> Investment in capacities to include the active substance of vaccines or actual R&D to develop new vaccines remain limited. Moreover, there currently are no mechanisms to coordinate all these initiatives, either in terms of matching supply and demand or to ensure supply diversity and complementarity. Importantly, there seems to be little attention paid to the governance of these new initiatives, including local or regional ownership, decision-making about portfolio and commercial strategy, and links to addressing regional needs.<sup>141</sup>



## Accountability

### GRADE: CODE RED

An effective system of pandemic preparedness and response must ensure that countries are accountable to one another for their commitments, and for of mutual assurance. They are also accountable to their own populations—a total of some 8 billion people globally—who could ultimately all suffer should a new pandemic arise.

COVID-19 revealed the gaps and shortcomings of the International Health Regulations. Many countries did not follow WHO's temporary recommendations under IHR and did not explain why. The pandemic also exposed a lack of accountability for areas IHR did cover, such as state commitments on core capacities for national preparedness.

Many lessons from COVID-19 could be implemented in the international processes intended to improve pandemic preparedness and response. For example, while states comply with international law for a number of reasons,<sup>136</sup> an examination of treaties in other areas shows that independent compliance monitoring has the most potential to promote state implementation and compliance to treaty commitments.<sup>142</sup>

### What did the Independent Panel recommend and why?

In 2021, the Independent Panel found accountability to be lacking across the pandemic preparedness and response system, particularly in relation to commitments made by national governments.

The Independent Panel recommended elevating the political leadership for pandemic preparedness and response to improve accountability. No longer delegated to Ministries of Health that lacked sufficient power both domestically and internationally, political oversight at the head of state level would create greater urgency, responsibility, and multisectoral and multilateral action to improve how the world prepares for and responds to global health threats.

The Independent Panel also called for clear rules on roles and responsibilities for PPR and recommended a Pandemic Framework Convention to fill existing gaps.

Improving performance also meant improving the assessment of countries' pandemic preparedness and response capacities through the establishment of independent, impartial review mechanisms.

## The Independent Panel's 2021 recommendations:

- ▶ Elevate the political leadership for pandemic preparedness and response including establishment of a global health threats council to improve accountability.
- ▶ Clear rules on roles and responsibilities for PPR and recommended a pandemic Framework Convention to fill existing gaps.
- ▶ Improve the assessment of countries' pandemic preparedness and response capacities through the establishment of independent, impartial review mechanisms.
- \* In the 2023 report, A Road Map for a World Protected from Pandemic Threats<sup>143</sup> there was a specific call for an independent monitoring body to complement the pandemic agreement.

### Progress to date

The Independent Panel's call for a framework convention was aimed at filling gaps in the system, clarifying roles and responsibilities, and kick-starting political engagement for lasting governance reforms. The pandemic agreement was heralded to become the primary legal instrument of coordination, governance, finance, and accountability.

Despite explicit accountability measures' inclusion in early drafts of the agreement, as negotiations progressed, they were removed and are absent from the draft that was submitted to the 77th World Health Assembly and will continue to be negotiated. An implementation committee was agreed in the amended IHR, with a suggestion that it could act across both instruments. How it will do so is unclear given it is unknown how many of the 196 State Parties to the IHR would ratify an eventual pandemic agreement. Further, an implementation committee, while an important, friendly tool, will also not enforce compliance. In short, if State Parties to the IHR don't comply with it, there will be no consequences.

The latest pandemic agreement draft includes a proposed Conference of the Parties but no mention of independent monitoring. The COP is directed to "regularly take stock" of implementation, including the ability to delegate oversight to the IHR's newly established implementation body. Heads of State are involved in the COP's work only under extraordinary circumstances. State Parties are to submit periodic public implementation reports to the COP through the Secretariat with the format, frequency, and content to be determined by the COP.

Formalising peer monitoring has also not occurred. Many states remain sceptical of mandated peer and external reviews, and reference to them were removed from the pandemic agreement and IHR amendments.

**When it comes to questions of national preparedness for the next pandemic, accountability remains weak.** States are largely left to themselves to self-assess their readiness to deal with a health emergency, and many have not incorporated pandemic preparation and response into their national laws or political discourse.<sup>93</sup> That makes bottom-up accountability from the electorate challenging in countries of every income level. Having said that, there is encouraging progress in self-reporting. Prior to the pandemic, many states did not submit a SPAR each year or they submitted incomplete reports. This was substantially improved in 2023 to 99%. In addition, for the 2023 reporting cycle, 25 countries had undertaken JEEs.

The UN Political Declaration on Pandemic Prevention, Preparedness, and Response, agreed in October 2023, contained very little by way of accountability as there are very few measurable commitments. It did commit to hold another high-level meeting in September 2026.

The Global Preparedness Monitoring Board, which looks broadly at systemwide global preparedness, has significantly revamped its monitoring framework, potentially filling some of the accountability gaps the global health threats council<sup>75</sup> aimed to address. The GPMB produces yearly progress reports to encourage accountability and high-level action. The extent to which these reports and advocacy around them will have impact is still to be determined, and because the Secretariat reports to the WHO Chef de Cabinet, the GPMB cannot be considered fully independent.

We have witnessed a wave of new tools and metrics to track and assess preparedness, but the infusion of often better information makes it challenging to decipher the data, which is reported across a wide range of dashboards and websites. Are countries ready for the next pandemic crisis? That is a question that should be easy to answer. If success is hard to decipher and progress difficult to identify, accountability becomes impossible. In short, the lack of accountability prior to the pandemic led to widespread noncompliance. Now we must ask if anything has really changed.

## The way forward

There are two major aspects to accountability. The first is whether countries and organisations are ready to manage the next pandemic threat, having put recommended investment and systems in place. The second is whether countries and global institutions are complying with their commitments, including Political Declarations, and binding agreements, including the IHR, and an eventual pandemic agreement.



### Accountability: the way forward

#### 1. Revise and simplify monitoring and reporting mechanisms

WHO should work as a matter of priority to simplify the reporting of national preparedness data, presenting the findings in a simplified way that promotes accountability and action. An independent monitoring group is essential to validate findings.

#### 2. Create an independent monitoring body

This body would monitor the state of pandemic preparedness on a global, regional, and country basis. This could be a GPMB fully independent of WHO or a new body modelled on the IPCC. The independent monitoring body would be well placed to undertake an objective review of all tools, metrics, and initiatives aimed at assessing pandemic preparedness, with the goal of rationalising and simplifying these to create a system that is valid and robust and that has impact.

#### 3. Create an implementation and compliance mechanism

Should a pandemic agreement be adopted, and a COP be mandated, the COP must create a mechanism to monitor compliance with the agreement commitments. To be successful, the COP must be enabled through political support, sound procedural mechanisms, a robust and independent secretariat, and financing.

#### 4. Consolidate and strengthen the Implementation Committee of the IHR to include compliance

#### 5. Prepare for the 2026 high-level meeting

A multisectoral civil society engagement mechanism should be established now to prepare for the 2026 meeting.





# The urgency and imperative to unite for humanity

In our 2022 report,<sup>144</sup> we concluded that instead of delivering transformative change for pandemic preparedness and response, leaders were merely tinkering at the fringe of existing systems. In 2024, we believe that leaders now are simply gambling in the hope that another pandemic threat does not emerge. Yet hope is not a strategy.

## **The pathway to delivering a comprehensive package of reforms**

As in 2021, the recommendations set out in this report reflect the level of ambition needed to transform pandemic preparedness and response nationally, regionally, and globally, but they are equally practical and achievable. The following must underpin these efforts:

### **Political leadership at the highest level to unlock and unblock the path to progress**

An activated group of champions is needed to make pandemic preparedness and response a priority, build trust across regional groupings, and to help navigate an increasingly polarised and fragmented discourse. Over time this can grow into a broad base of support across geographies and the political spectrum.

### **Such political leadership needs to be matched nationally—with national authorities, plans, and investments**

### **Clear rules for collaboration backed by independence, transparency, and mutual assurance**

The amended IHR and an eventual pandemic agreement together will form the rules for pandemic preparedness and response. These will have a much greater chance of success if compliance to them is independently monitored and transparently reported, in a system of mutual assurance where countries know they can report outbreaks of concern without punishment and receive the support they require to stop the outbreaks and prevent them from becoming pandemics.

### **Dependable, sustained financing for preparedness, MCM development, and emergencies**

Millions must turn to billions—to save trillions—to close the gap and support the necessary action within countries and regions. Domestic financing must be the foundation, but for many countries international finance is critical. A transformed Pandemic Fund would play a central role, alongside wider reforms of multilateral development banks, which

hold the potential to deliver new and larger windows for pandemic preparedness and response efforts. When crisis strikes, countries must know exactly where to turn and must be able to rely on rapid emergency funding to ensure they can protect their citizens and not take on crushing debt.

### **Build trust in science and in government**

Trust in science, institutions, and governments was rocked during COVID-19. Trust is hard to build but easy to break and must be at the centre of preparedness and response efforts, including through the meaningful engagement of communities and by communicating clearly and transparently about risk. Mis- and disinformation further endanger trust and are likely to make managing future threats more challenging. Developing systems and capacities to address and manage this should be an urgent priority for countries, regions, and international organisations.

### **Regional resilience, connected to the global system**

Regions must have their own plans, supported by all countries within them. This includes the need for every region to have its own capacity to research, develop, manufacture, and distribute medical countermeasures. For regions currently building their capacities, this will necessitate technology and knowledge transfer with the freedom to operate on established platforms in order to stop outbreaks before they become pandemics. Building such capacities will take time, but if investments aren't made now, then when? While regions must be prepared and resilient, they must connect to one another as well as to the global institutions that can help to ensure a cohesive system without gaps.

### **A strong and resourced civil society voice**

Civil society plays a critical role by speaking truth to power and holding leaders, governments, and institutions to account. From the community to the national and global levels, a strong civil society voice will be key to deliver a package of reforms for pandemic preparedness and response. Recognising that in many places civic space is under threat, advocates who are capable can use their platforms and resources to call for stronger recommitment. Strong, multisectoral civil society engagement will be key to the success of the 2026 High-Level Meeting on Pandemic Prevention, Preparedness and Response.

### **Whole-of-society and whole-of-government leadership**

Preventing, preparing for, and responding to pandemics is everyone's business. When governments and institutions engage consistently and transparently across society, including with community leaders and the private sector, pandemic prevention and preparedness can be enhanced.

In the next two years, we feel the following priority actions can strengthen pandemic preparedness and response and help to transform a system that remains largely stuck in a pre-2020 status quo.

## **Pandemic preparedness and response must remain on the political agendas of Heads of States and Governments.**

Over the next 12 months, we believe that the following priority actions can strengthen pandemic preparedness and response, as well as help to transform a system that remains largely stuck in a pre-2020 status quo:

- ▶ **July 2024: The pandemic agreement INB process resumes with new ways of working, and inclusion of independent experts including civil society.**
- ▶ **September 2024 UNGA: A Champions Group to Prevent Pandemics is formed and declares their commitment to continued advocacy, including to a successful pandemic agreement, to finance and equitable access to countermeasures; and to rally a strong response in times of health crises.**
- ▶ **September 2024 UNGA: The Summit of the Future agrees a new Emergency Platform for complex global shocks as part of the Pact for the Future. The Emergency Platform should expand to include emergency preparedness.**
- ▶ **October 2024: The Global Preparedness Monitoring Board is made fully independent and de-linked from WHO; or a new independent pandemic preparedness and response monitoring panel like the IPCC should be established.**
- ▶ **November 2024 G20: Full replenishment of The Pandemic Fund of non-ODA funds; and South Africa G20 2025 prioritises converting The Pandemic Fund into a preparedness and surge mechanism with a global public investment model.**
- ▶ **November 2024 G20: Brazil, South Africa and other middle-income countries use opportunities such as the G20 to negotiate to move away from a charity model for medical countermeasures access, and towards one of regional innovation centred on resilience, knowledge and technology sharing.**
- ▶ **November G20: Member States must meet milestones for WHO's Investment Round and repledge to meet targets for unearmarked funding.**
- ▶ **January 2025 WHO Executive Board: WHO Members States to initiate a one-term approach for the Director-General and Regional Directors, and WHO to actively work with Member States to depoliticize senior appointments.**
- ▶ **June 2025: The amended International Health Regulations come into force and are fully implemented, including new multisectoral National Authorities with CSO engagement. WHO to begin publishing annual reports on country preparedness against its new benchmarks.**

## A summary of The Independent Panel’s original recommendations, progress towards their implementation, and ways forward

Grades: Green – Good/substantial progress | Yellow – Some/notable progress | Orange – Limited progress | Red – No progress/worsening | Grey – Insufficient information to make an assessment

Highest-level political leadership for pandemic preparedness and response – CODE RED	
The Independent Panel 2021 Recommendations	Status
Establish a global health threats council. The membership should be endorsed by a UNGA resolution. The council should be led at the Head of State and Government level, and membership should include state and relevant non-state actors, ensuring equitable regional, gender, and generational representation. The council would maintain political commitment, ensure cooperation across the system at all levels, monitor and report progress towards goals and targets set by the WHO, guide the allocation of resources by the proposed new finance modality and according to an ability to pay formula, and hold actors accountable.	<b>RED.</b> The global health threats council—or another body that would achieve its purpose—has never materialised, due in large part to lack of high-level political will and leadership.
Adopt a Pandemic Framework Convention within 6 months, using the powers under Article 19 of the WHO Constitution, and complementary to the IHR, to be facilitated by WHO and with the clear involvement of the highest levels of government, scientific experts, and civil society.	<b>ORANGE.</b> Initiated at a WHA Special Session and announced on Dec. 1, 2022. Initial drafts provided the foundation for transformative change, particularly on issues of equity, but later iterations contain fewer, weaker commitments. Unable to agree the final text by May 2024, the WHA extended the deadline to reach agreement by WHA78, with potential for a WHA Special Session if agreement is reached earlier.
Adopt a political declaration by Heads of State and Government at a global summit under the auspices of the UN General Assembly at a Special Session convened for the purpose and commit to transforming pandemic preparedness and response in line with the recommendations made in this report.	<b>ORANGE.</b> The UNGA High-Level Meeting for Pandemic Prevention, Preparedness and Response took place in September 2023. However, the political declaration fell short in aspiration and commitment. Another high-level meeting was agreed for 2026.
The way forward	
<ol style="list-style-type: none"> <li><b>1. Establish a group of champion leaders who make pandemic preparedness and response a priority.</b> A Champions Group to Prevent Pandemics comprised of current, former, and future senior leaders can engage across a broad spectrum of politics, sectors, and society to make clear why pandemic reforms are so critical, help advocate for a reformed and fully funded international system, provide a voice of reason in fraught and fractious discussions, and counter the mis- and disinformation that seek to block progress for the common good. This could start with support for the negotiation and ratification of a pandemic agreement, working alongside legislators to promote its value; and assisting with mobilising the funds required for preparedness and response, including for R&amp;D hubs linked to manufacturing and distribution in every region.</li> <li><b>2. The pandemic agreement INB process must resume with new ways of working,</b> with inclusion of independent experts including civil society. It should work systematically to commit to an agreement by Dec. 1, 2024, that complements the IHR, has equity at its heart, and fills the remaining gaps including in One Health, pathogen access and benefit sharing, preparedness and surge finance, and independent monitoring and compliance.</li> <li><b>3. Incorporate pandemic preparedness and response within the Emergency Platform at the Summit of the Future.</b> The Emergency Platform has been proposed by the UN Secretary-General as a means of strengthening international response to complex global shocks. This provides an opportunity to leverage the convening and unifying power of the UN system to strengthen political commitment to pandemic response. It should evolve to also address preparedness.</li> <li><b>4. Ensure regular engagement within the pandemic agreement Conference of the Parties (COP) by Heads of State and Government.</b> As with climate change, an eventual pandemic agreement COP must include regular engagements at the Heads of State and Government level to reflect that preventing and responding to pandemics require whole-of-government attention. The current pandemic agreement text reads that Heads of State and Government would be involved in extraordinary sessions only on an as-needed basis, which is also akin to gathering leaders to respond to a crisis rather than to lead and prevent a crisis to begin with.</li> </ol>	

## Strengthening country preparedness capacities – CODE ORANGE

The Independent Panel 2021 Recommendations	Status
WHO to set new and measurable targets and benchmarks for pandemic preparedness and response capacities.	<b>GREEN.</b> Published in December 2023.
All national governments to update their national preparedness plans against the targets and benchmarks set by WHO within 6 months, ensuring that whole-of-government and whole-of-society coordination is in place and that appropriate and relevant skills, logistics, and funding are available to cope with future health crises.	<b>UNKNOWN.</b> Lack of systematic tracking of national preparedness plans makes this challenging to assess.
WHO to formalise universal periodic peer reviews of national pandemic preparedness and response capacities against the targets set by WHO as a means of accountability and learning amongst countries.	<b>ORANGE.</b> A formalised universal periodic peer review delivered at scale remains elusive. Universal Health and Preparedness Review piloted in several Member States. First global peer reviews of three states' national review findings took place in February 2024.
As part of the Article IV consultation with member countries, the IMF should routinely perform a pandemic preparedness assessment, including an evaluation of the economic policy response plans. The IMF should consider the public health policy evaluations undertaken by other organisations.	<b>RED.</b> No meaningful progress on integrating an evaluation of the economic policy response plans into IMF Article IV consultation.
Ensure that national and subnational public health institutions have multidisciplinary capacities and multisectoral reach as well as the engagement of the private sector and civil society. Evidence-based decision-making should draw on inputs from across society.	<b>UNKNOWN.</b> Available data (e.g., SPAR and JEE) provides some information on multisectoral coordination mechanisms, but information on multidisciplinary capacities within public health institutions is limited.
Conduct multisectoral active simulation exercises on a yearly basis as a means of ensuring continuous risk assessment and follow-up action to mitigate risks; engage in cross-country learning and accountability; and establish independent, impartial, and regular evaluation mechanisms.	<b>ORANGE.</b> Thirty-five simulation exercises were reported through the WHO dashboard for 2023. By December 2023, 7 countries had also run the tabletop simulation exercise as part of the WHO's PRET initiative. There is limited interest or broader public discussion on the prospect of conducting multisectoral simulation exercises.
Heads of State and Government to appoint national pandemic coordinators accountable to the highest levels of government, with the mandate to drive whole-of-government coordination for both preparedness and response.	<b>YELLOW.</b> The amended IHR obligates countries to designate a National IHR Authority to coordinate IHR implementation. If these authorities report to the Office of the Head of State or Government to ensure multisectoral planning and oversight, and include membership of civil society, this would be a major step forward.
Strengthen the engagement of local communities as key actors in pandemic preparedness and response and as active promoters of pandemic literacy, through the ability of people to identify, understand, analyse, interpret, and communicate about pandemics.	<b>RED.</b> While some efforts have been made to strengthen meaningful engagement, most initiatives and platforms have not moved beyond the pilot stage. The CSO survey in this report also highlights perceptions around limited progress related to the meaningful engagement of communities. Mis- and disinformation continues to circulate widely.
Invest in and coordinate risk communication policies and strategies that ensure timeliness, transparency, and accountability, working with marginalised communities, including those that are digitally excluded, in the co-creation of plans that promote health and well-being and build enduring trust.	<b>RED.</b> Several efforts are underway at the national, regional, and global levels, but they lack the scale and cohesion to fully address the challenge. There is currently no tracking of national or global investments into risk communication or community engagement.
Increase the threshold of national health and social investments to build resilient health and social protection systems, grounded in high-quality primary and community health services, universal health coverage, and a strong and well-supported health workforce, including community health workers.	<b>UNKNOWN.</b> Data on health and social protection investments is sparse for many countries and regions. The limited available data suggests that the health and social investment during COVID-19 is now returning to or below pre-COVID levels.

## The way forward

1. **Track and transparently document country preparedness plans and actual implementation.** As of 2024, we do not know how many countries have updated their pandemic plans to reflect the learnings of COVID-19, nor do we know the level of implementation of these plans. The WHO should provide annual and transparent tracking on country preparedness plans based on the updated benchmarks using existing tools, such as NAPHS and JEEs (updated to reflect the IHR amendments). This information should be publicly reported in an easily understood format and readily accessible on a modern website and on handheld device applications.
2. **Validate new whole-of-society preparedness metrics.** New preparedness metrics should be independently validated, such as through an independent monitoring board or through academic endeavours, to determine if they fill gaps in existing preparedness assessments as they intend to do. These metrics must go beyond standard health preparedness to look at risks and vulnerabilities from a whole-of-society perspective, providing a unified framework for assessing risks and preparedness across borders and regions.
3. **Rapidly move from pilot to scale with a robust peer-review mechanism.** Efforts to establish a global peer-review mechanism are notable. However peer-review will help to bridge the gap in the preparedness assessment landscape only if universally applied with the engagement of all countries and their leaders, bring significant added value to existing tools and data, and lead to meaningful improvements in preparedness.
4. **Mainstream disinformation management into pandemic preparedness including prioritising establishment of a global mechanism.** The management of disinformation in future health emergencies will be critical, and major investments to understand and counter it must be made today. A modern global mechanism linked to regions and countries is essential. This will require investment and collaboration across sectors, from governments and regulators to social and traditional media companies and the public.
5. **Ensure community engagement in health emergency governance.** Engagement mechanisms need to be developed, and where in place strengthened, to allow the meaningful engagement of communities and civil society within the development and implementation of pandemic preparedness plans and policies at all levels. Civil society must be made members of the new National IHR Authority now required by the IHR amendments.

## New international financing for the global public good of pandemic preparedness and response – CODE ORANGE

The Independent Panel 2021 Recommendations	Status
<p>The creation of an international pandemic financing facility to raise additional reliable funding of \$10–15 billion for preparedness, and up to \$100 billion for rapid surge financing to respond in the event of pandemic threat. The facility would:</p> <ul style="list-style-type: none"> <li>✓ Be based on a global public investment model, or ability to pay formula adopted whereby larger and wealthier economies will pay the most, preferably from non-ODA budget lines and additional to established ODA budget levels.</li> <li>✓ Include pre-allocation of preparedness funding according to function and institution.</li> <li>✓ Manage surge financing for response in the event of a new pandemic declaration guided by prearranged response plans for the most likely scenarios, though flexibility would be retained to adapt based on the threat.</li> </ul> <p>The Independent Panel also strongly recommended that national governments invest domestic resources in pandemic prevention and preparedness now rather than when it is too late.</p>	<p><b>ORANGE.</b> The Pandemic Fund, hosted by the World Bank, was established in September 2022. So far the fund has stated commitments of around \$2 billion, most from ODA. There has been no progress on surge financing. There is also no centralised financing for medical countermeasures R&amp;D or manufacturing.</p>

### The way forward

1. **Avoid further fracturing and fragmenting of the PPR funding landscape.** The international financing architecture for PPR is increasingly complex and inefficient with organisations competing for limited resources. This is why another new fund should not be created and instead we should build on what exists.
2. **Finance pandemic preparedness and response as a global public good.** Funding for PPR must move beyond ODA, with the financing seen as a priority for Ministries of Finance to secure health security and national stability, and it should be approached as a global public good.
3. **Transform The Pandemic Fund into an International Pandemic Preparedness and Surge finance modality.** Transform the present Pandemic Fund into a model where all governments have a say and non-ODA financial resources are raised based on a formula according to an ability to pay scale, with two funding windows. The first should provide resources to support prevention and preparedness efforts in countries without sufficient domestic resources, combined with a requirement for incremental increases in domestic allocation over time. The second, through precautionary and clear triggers, should provide major response resources, covering development, procurement, and access to MCMs as well as resources for health service delivery and social safety nets.
4. **Maximise the opportunity of an independent finance coordinating mechanism established under the amended IHR.** Given the different organisations with PPR-related finance, a coordinating mechanism could be useful to ensure that countries can clearly understand and access the financing options for preparedness and response. An effective body would facilitate the flow of funds from different sources (e.g., the World Bank, IMF, regional development banks, The Pandemic Fund, Gavi).

**Strengthening WHO's independence, authority, and financing – CODE YELLOW for potential; CODE ORANGE for current status**

The Independent Panel 2021 Recommendations	Status
Establish WHO's financial independence, based on fully unearmarked resources; increase Member States' fees to two-thirds of the budget for the WHO base programme; and have an organised replenishment process for the remainder of the budget.	<b>YELLOW.</b> In May 2023 the World Health Assembly approved an important resolution setting the path for reforming WHO financing including a 20% increase in assessed contributions. Success will depend on Member States' commitment to increase assessed contributions in a step-wise manner through 2030.
Strengthen the authority and independence of the Director-General, including by having a single term of office of seven years with no option for reelection. The same rule should be adopted for Regional Directors.	<b>RED.</b> There has been no meaningful discussion on this recommendation.
Prioritise the quality and performance of staff at each WHO level. Depoliticise recruitment (especially at senior levels) by adhering to criteria of merit and relevant competencies.	<b>RED.</b> There has been no meaningful discussion on this recommendation. Recent senior appointments of Assistant Directors-General and a Deputy Director-General have taken place without open competition.
Strengthen the governance capacity of the Executive Board, including by establishing a Standing Committee for Emergencies.	<b>YELLOW.</b> An Emergency Committee under the Executive Board was established in May 2022. The significance of this body in relation to other bodies and structures remains unclear.
Focus WHO's mandate on normative, policy, and technical guidance, including supporting countries to build capacity for pandemic preparedness and response and for resilient and equitable health systems.	<b>ORANGE.</b> WHO has clearly been expanding its work in the emergency field, and 40% of total 2023 expenditures were dedicated to emergencies. This can partly be explained by the difficult situations in Gaza, Ukraine, Yemen, and many other places, but most importantly it is because WHO is now taking on the role as procurer and distributor of supplies and equipment. This is politically visible and relatively easy to raise financial resources for but is work that could be performed by other agencies.
Empower WHO to take a leading, convening, and coordinating role in operational aspects of an emergency response to a pandemic, without, in most circumstances, taking on responsibility for procurement and supplies, while ensuring that other key functions of WHO, including providing technical advice and support in operational settings, do not suffer.	<b>YELLOW.</b> The amended International Health Regulations now explicitly state that WHO should have a role to "coordinate international response activities during public health emergencies of international concern, including pandemic emergencies." (Article 13.7)
Resource and equip WHO country offices sufficiently to respond to technical requests from national governments to support pandemic preparedness and response, including support to build resilient health systems, universal health care, and healthier populations.	<b>YELLOW.</b> An extra \$200 million has been made available to countries by the Director-General to support them. This is a significant sum but represents only 5% of total resources available to the country offices.

**The way forward**

- 1. Focus WHO's role and functions on normative and technical work including also in emergency situations.** WHO's authority, integrity, and independence need to be strengthened and associated with high-quality technical work. WHO's convening role needs to be better defined and understood for the organisation to play its role in the international system at large.
- 2. Consider splitting WHO into two organisations, with a new operational World Health Emergencies Programme,** in order to maintain and enhance the quality of WHO's technical work across the three "pillars and billions." Given potential for WHO to play a more operational role vis a vis access to health products in emergencies, it might be necessary to establish a separate World Health Emergencies Programme with its own organisation, budget, and governance. The alternative is to allow partners such as UNICEF and the World Food Programme to play this role.
- 3. Introduce a single term of office of seven years for the next Director-General and Regional Directors.** Member States should initiate this approach at the January 2025 Executive Board.
- 4. Continue the work to reform the financing of the organisation** and move towards a combination of fully unearmarked assessed and voluntary resources, while also improving accountability and transparent ways of reporting. Link the reforms to enhance relevance, quantity, and outcomes of the technical work, especially in countries. Member States should fully support the replenishment process.



**A new international system for surveillance, validation, and alert – CODE YELLOW for potential; CODE ORANGE for current status**

The Independent Panel 2021 Recommendations	Status
WHO to establish a new global system for surveillance based on full transparency by all parties, using state-of-the-art digital tools to connect information centres around the world and include animal and environmental health surveillance, with appropriate protections of people’s rights.	<b>ORANGE – TO YELLOW.</b> The WHO Hub for Pandemic and Epidemic Intelligence was established in 2021 and has embarked on several projects. Multiple additional regional initiatives are underway, including in Europe, Africa, and the Americas, many in coordination with the WHO Hub. Huge challenges remain, including siloed networks, with complexity and fragmentation amplified sub nationally. Adequate investment remains a major challenge.
WHO to be given the explicit authority by the World Health Assembly to publish information about outbreaks with pandemic potential on an immediate basis without requiring prior approval of national governments.	<b>GREEN.</b> Following amendments to the IHR, WHO can use its authority to inform Member States about an outbreak, even if the originating country is not cooperating. This effectively gives WHO the ability to publish information about an outbreak of concern more rapidly.
WHO to be empowered by the World Health Assembly to investigate pathogens with pandemic potential in all countries with short-notice access to relevant sites, provision of samples, and standing multi-entry visas for international epidemic experts to outbreak locations.	<b>RED.</b> The amended IHR contain no such formal provision.
Future declarations of a PHEIC by the WHO Director-General should be based on the precautionary principle, where warranted, as in the case of respiratory infections. PHEIC declarations should be based on clear, objective, and published criteria. The Emergency Committee advising the WHO Director-General must be fully transparent in its membership and working methods. On the same day a PHEIC is declared, WHO must provide countries with clear guidance on what action should be taken and by whom to contain the health threat.	<b>YELLOW.</b> The IHR amendments include new provisions that largely address this recommendation. Clusters of respiratory disease of unknown origin will be a notifiable event, allowing for a more precautionary approach. WHO should publish information about a health event even if the originating country is not cooperating. The Emergency Committee must be transparent in its membership and in publishing the evidence base for its decisions.

**The way forward**

- 1. For Member States and WHO commit to report outbreaks from today according to the amended IHR and WHO should be allowed to immediately investigate suspected outbreaks with pandemic potential.**
- 2. Member States and WHO to invest now in implementation of the amended International Health Regulations** including to determine operational details of a finance coordination mechanism, ensuring that WHO has an overview of existing and potential health products and is ready to help countries to access them; updates to the JEE and other tools as per the listed core capacities, establishment of the national authorities linked directly to country leadership, and ideally, the national laws and policies required to ensure compliance.
- 3. WHO to further develop a communications strategy so that leaders, cabinet ministers, the public, and other stakeholders better understand what a PHEIC and a pandemic emergency mean and what actions must be taken by government.** Member States and WHO must work to dispel mis- and disinformation about all aspects of disease surveillance, control, and WHO’s role and authority under the amended IHRs and an eventual pandemic agreement.
- 4. Invest now in bottom-up surveillance based on a One Health approach,** ensuring an effective Quadripartite and WHO Hub, regional networks, and community capacity and tools to detect and report on human, animal, and environmental events.

**Innovation and equitable access to medical countermeasures: transformational change is missing in action – CODE ORANGE**

The Independent Panel 2021 Recommendations	Status
<p>Transform the current ACT-A into a truly global end-to-end platform for vaccines, diagnostics, therapeutics, and essential supplies, and instead of a model where innovation is left to the market, there should be shift to a model aimed at delivering global public goods. Governance to include representatives of countries across income levels and regions, civil society, and the private sector. R&amp;D and all other relevant processes to be driven by a goal and strategy to achieve equitable and effective access.</p>	<p><b>ORANGE.</b> An independent evaluation of ACT-A, while noting that things would likely have been worse without it, raised serious shortcomings. Key recommendations have not yet translated into action, and transformative change to the pandemic countermeasure ecosystem remains unheeded. There is no stated public goods approach, actions to date are not coherent, and transparency concerning actions that are underway is subpar.</p>
<p>Ensure technology transfer and commitment to voluntary licensing are included in all agreements where public funding is invested in research and development.</p>	<p><b>ORANGE.</b> Issues of intellectual property governance, including technology and knowledge sharing, has remained largely unaddressed. IP-related issues have been amongst the most contentious in the INB negotiations, especially articles related to R&amp;D, technology transfer, and knowledge and benefit sharing.</p>
<p>Establish strong financing and regional capacities for manufacturing, regulation, and procurement of tools for equitable and effective access to vaccines, therapeutics, diagnostics, and essential supplies, and for clinical trials based on plans jointly developed by WHO, regional institutions, and the private sector with commitments and processes for technology transfer, including to and amongst larger manufacturing hubs in each region. Financial support would come from International Financial Institutions, regional development banks, and other public and private financing organisations.</p>	<p><b>ORANGE.</b> Multiple initiatives to build local manufacturing capacity have been undertaken predominantly on the African continent, but also in Latin America and Asia, as well as reshoring initiatives in Europe and the United States. Yet critical challenges related to ownership, coordination, priority setting, technology and know-how sharing, freedom to operate, financing, and (economic) sustainability are yet to be solved to ensure meaningful impact on health equity.</p>

**The way forward**

- 1. Treat MCMs for outbreaks and pandemics as global health commons.** Given their public health importance for prompt epidemic control and the fact that public funding and public researchers are major contributors to the development of MCMs, there is a strong case to govern PPR health technologies as global health commons. At a minimum, public benefits need to be attached to public funding to foster technology and know-how sharing, co-creation, and other collective actions to enable availability and production of health technologies where and when needed and to promote equity.
- 2. Establish regional R&D hubs to decentralise innovative capabilities.** Regional R&D hubs must be established that have technological capacity around a range of technology platforms, and the skills, financing, and freedom from IP constraints to rapidly adapt them to respond to new outbreaks and deliver MCMs equitably. Regional R&D hubs should be linked to clinical trial platforms, local manufacturing capacity, and political responsibility to create an end-to-end approach and ensure regional resilience. While a bottom-up approach from researchers and developers in different regions is critical to foster a local needs-driven focus, political leadership including financing must be ensured from each region and globally. Brazil’s proposal to the G20 for an Alliance for Regional Production and Innovation,<sup>126</sup> as well as AU leadership could be catalytic to that effect.
- 3. Fit-for-purpose financing for an end-to-end R&D and manufacturing ecosystem for people’s health.** In addition to dedicated new funding streams to support regional R&D hubs, available funding for MCM R&D and manufacturing through regional, bilateral, or multilateral initiatives must be streamlined and coordinated in transparent ways to ensure a viable end-to-end approach for PPR R&D and manufacturing, including building capacity. This will require different financing mechanisms (eg., grants, subsidies, concessional loans, equity investments, prizes) to be designed and combined in ways that support developers’ and manufacturers’ needs over time and reward health purpose and resilience over financial returns. Public financing must include stipulations requiring collaboration and knowledge and technology sharing, clinical trial design and implementation driven by public health need, and it must ensure that the resulting products are managed as global health commons.
- 4. Invest in diagnostic and treatment R&D and manufacturing preparedness.** The current focus on vaccines has overshadowed attention for other critical MCMs such as diagnostic tests that are the first critical tool to help stop outbreaks in their tracks. Similarly, little investment is made into therapeutic preparedness—which, as with HIV, may be the first available medical tool.

## Accountability – CODE RED

The Independent Panel 2021 Recommendations	Status
<p>Elevate the political leadership for pandemic preparedness and response including establishment of a global health threats council to improve accountability.</p> <p>Clear rules on roles and responsibilities for PPR and recommended a Pandemic Framework Convention to fill existing gaps.</p> <p>Improve the assessment of countries' pandemic preparedness and response capacities through the establishment of independent, impartial review mechanisms.</p> <p>*In the 2023 report, A Road Map for a World Protected from Pandemic Threats<sup>144</sup> there was a specific call for an independent monitoring body to complement the pandemic agreement.</p>	<p><b>RED.</b> There is no global body of leaders as recommended by the Panel. The most recent draft of the pandemic agreement does not include reference to independent monitoring and has no provision for monitoring compliance.</p>

## The way forward

1. **Revise and simplify monitoring and reporting mechanisms.** WHO should work as a matter of priority to simplify the reporting of national preparedness data, presenting the findings in a simplified way that promotes accountability and action. An independent monitoring group is essential to validate findings
2. **Create an independent monitoring body** to monitor the state of pandemic preparedness on a global, regional, and country basis. This could be a GPMB fully independent of WHO or a new body modelled on the IPCC. The independent monitoring body would be well placed to undertake an objective review of all tools, metrics, and initiatives aimed at assessing pandemic preparedness, with the goal of rationalising and simplifying these to create a system that is valid and robust and that has impact.
3. **Should a pandemic agreement be adopted, and a COP be mandated, the COP must create an implementation and compliance mechanism** to monitor compliance with the agreement commitments. To be successful, the COP must be enabled through political support, sound procedural mechanisms, a robust independent secretariat, and financing.
4. **Consolidate and strengthen the Implementation Committee of the IHR to include compliance.**
5. **Establish a multisectoral civil society engagement mechanism now** to prepare for the 2026 high-level meeting.



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## About The Independent Panel

The Co-Chairs, the RH Helen Clark and HE Ellen Johnson Sirleaf, led The Independent Panel for Pandemic Preparedness and Response together with 11 distinguished panelists beginning in September 2020. They spent eight months rigorously reviewing various dimensions of the pandemic. In May 2021 the Co-Chairs submitted their evidence-based landmark report entitled COVID-19: Make it the Last Pandemic to the World Health Assembly. They made recommendations which, taken as a package, could transform the international system in a way that could make it the last pandemic of such devastation.

Today, The Independent Panel former Co-Chairs, several members and advisors continue to advocate for implementation of the full package of recommendations due to concerns about the failure to implement recommendations of past high-level reviews of major outbreaks. Their interest is to see a fit-for-purpose, transformed, and effective international system for pandemic preparedness and response. The former Co-Chairs and members continue to do this work in their own time because of the serious implications of the lack of transformative change being made.

The ongoing work to monitor developments, produce reports, issue statements and hold meetings and events has been funded through grants from the Bill and Melinda Gates Foundation and Open Society Foundations - both administered by Panorama Global; and the Skoll Foundation through the UN Foundation.

[www.TheIndependentPanel.org](http://www.TheIndependentPanel.org)



## References

1. World Health Organization. Number of COVID-19 deaths reported to WHO. 2024. <https://data.who.int/dashboards/covid19/deaths?n=o> (accessed 5 June 2024).
2. The Economist. The pandemic's true death toll. 2024. <https://www.economist.com/graphic-detail/coronavirus-excess-deaths-estimates> (accessed 15 May 2024).
3. Kamorudeen RT, Adedokun KA, Olarinmoye AO. Ebola outbreak in West Africa, 2014–2016: Epidemic timeline, differential diagnoses, determining factors, and lessons for future response. *Journal of Infection and Public Health* 2020; 13(7): 956–62.
4. World Health Organization. International Health Regulations. 2005. Geneva: World Health Assembly, A77/8, 2024.
5. Stutzman H, Micah A, Dieleman J. Funding Pandemic Preparedness: A Global Public Good. 2020. <https://bit.ly/45n82cl> (accessed 5 June 2024).
6. Bali S, Batmanian G, Berthe F. Putting Pandemics Behind Us: Investing in One Health to Reduce Risks of Emerging Infectious Diseases. Washington, DC: World Bank Group, 2022.
7. World Health Organization. WHA76.1 Programme budget 2024–2025. Geneva, 2024.
8. World Health Organization. Draft fourteenth general programme of work, 2025–2028. Geneva, 2024.
9. Global Preparedness Monitoring Board. A World at Risk: Annual report on global preparedness for health emergencies. Geneva, 2019.
10. Msemburi W, Karlinsky A, Knutson V, Aleshin-Guendel S, Chatterji S, Wakefield J. The WHO estimates of excess mortality associated with the COVID-19 pandemic. *Nature* 2023; 613(7942): 130–7.
11. World Health Organization. World health statistics 2024: monitoring health for the SDGs, sustainable development goals. Geneva, 2024.
12. Jha P, Deshmukh Y, Tumbe C, et al. COVID mortality in India: National survey data and health facility deaths. *Science* 2022; 375(6581): 667–71.
13. Szwarcwald CL, Boccolini CS, da Silva de Almeida W, Soares Filho AM, Malta DC. COVID-19 mortality in Brazil, 2020–21: consequences of the pandemic inadequate management. *Archives of Public Health* 2022; 80(1): 255.
14. Hillis S, N'konzi J-PN, Msemburi W, et al. Orphanhood and Caregiver Loss Among Children Based on New Global Excess COVID-19 Death Estimates. *JAMA Pediatrics* 2022; 176(11): 1145–8.
15. World Health Organization, United Nations Development Programme. COVID-19 and NCD risk factors, 2020.
16. McGowan VJ, Bamba C. COVID-19 mortality and deprivation: pandemic, syndemic, and endemic health inequalities. *The Lancet Public Health* 2022; 7(11): e966–e75.
17. Cai M, Xie Y, Topol EJ, Al-Aly Z. Three-year outcomes of post-acute sequelae of COVID-19. *Nature Medicine* 2024.
18. CDC. Long COVID - Household Pulse Survey. 2024. <https://www.cdc.gov/nchs/covid19/pulse/long-covid.htm> (accessed 5 June 2024).
19. Cutler D. The Economic Cost of Long COVID: An Update: Harvard University, 2022.
20. Bryant J, Child F, Dorn E, et al. How COVID-19 caused a global learning crisis: McKinsey & Company, 2022.
21. Changoiwala P. How COVID Increased Childhood Obesity in India. 2024. [https://www.thinkglobalhealth.org/article/how-covid-increased-childhood-obesity-india?utm\\_source=thinkglobalhealth&utm\\_medium=email&utm\\_campaign=TGH%202024May31&utm\\_term=TGH](https://www.thinkglobalhealth.org/article/how-covid-increased-childhood-obesity-india?utm_source=thinkglobalhealth&utm_medium=email&utm_campaign=TGH%202024May31&utm_term=TGH) (accessed 5 June 2024).
22. Moore S, Hill EM, Dyson L, Tildesley MJ, Keeling MJ. Retrospectively modeling the effects of increased global vaccine sharing on the COVID-19 pandemic. *Nature Medicine* 2022; 28(11): 2416–23.
23. Taylor A. WHO pandemic treaty: "Torrent of fake news" has put negotiations at risk, says WHO chief. 2024. <https://www.bmj.com/content/384/bmj.q243> (accessed 5 June 2024).

24. Shalal A. IMF chief sees inflation dropping further in 2024, not yet fully defeated. 2024. <https://www.reuters.com/markets/imf-chief-sees-inflation-dropping-further-2024-not-yet-fully-defeated-2024-04-11/#:~:text=Georgieva%20said%20headline%20inflation%20for,expected%20to%20continue%20in%202024>. (accessed 5 June 2024).
25. Walmsley T, Rose A, John R, et al. Macroeconomic consequences of the COVID-19 pandemic. *Economic Modelling* 2023; 120: 106147.
26. International Labor Organization. Fewer women than men will regain employment during the COVID-19 recovery says ILO. 2021. <https://www.ilo.org/resource/news/fewer-women-men-will-regain-employment-during-covid-19-recovery-says-ilo> (accessed 17 May 2024).
27. International Monetary Fund. World Economic Outlook: Navigating Global Divergence. Washington, DC: IMF, 2023.
28. Harcourt S, McNair D. Net finance flows to developing countries turned negative in 2023. 2024. <https://data.one.org/data-dives/net-finance-flows-to-developing-countries/> (accessed 28 May 2024).
29. Institute for Health Metrics and Evaluation. Financing Global Health 2023: The Future of Health Financing in the Post-Pandemic Era. Seattle, WA.: IHME, 2024.
30. GAVI. History's Seven Deadliest Plagues. 2021. <https://www.gavi.org/vaccineswork/history-seven-deadliest-plagues>. (2024).
31. World Health Organization. The Global Health Observatory: HIV. 2022 <https://www.who.int/data/gho/data/themes/hiv-aids#:~:text=Since%20the%20beginning%20of%20the,at%20the%20end%20of%2020222024>.
32. Rugarabamu S, Mboera L, Rweyemamu M, et al. Forty-two years of responding to Ebola virus outbreaks in Sub-Saharan Africa: a review. *BMJ Global Health* 2020; 5(3): e001955
33. Madhav N, Oppenheim B, Stephenson N, et al. Estimated Future Mortality from Pathogens of Epidemic and Pandemic Potential: Center for Global Development, 2023.
34. World Health Organization. Disease Outbreak News. 2024. <https://www.who.int/emergencies/disease-outbreak-news> (accessed 17 May 2024).
35. Kumah E, Boakye DS, Boateng R, Agyei E. Advancing the Global Fight Against HIV/Aids: Strategies, Barriers, and the Road to Eradication. *Ann Glob Health* 2023; 89(1): 83.
36. Okeke IN, de Kraker MEA, Van Boeckel TP, et al. The scope of the antimicrobial resistance challenge. *The Lancet* 2024; 403(10442): 2426-38.
37. Marani M, Katul GG, Pan WK, Parolari AJ. Intensity and frequency of extreme novel epidemics. *Proc Natl Acad Sci U S A* 2021; 118(35).
38. O'Brien JT, Nelson C. Assessing the Risks Posed by the Convergence of Artificial Intelligence and Biotechnology. *Health Secur* 2020; 18(3): 219-27.
39. Field M. WHO: biological hazard brewing in Sudan as fighters overtake a central public health lab. 2023. <https://thebulletin.org/2023/04/who-biological-hazard-brewing-in-sudan-as-fighters-overtake-a-central-public-health-lab/> (accessed 7 June 2024).
40. Boniol M, Kunjumen T, Nair TS, Siyam A, Campbell J, Diallo K. The global health workforce stock and distribution in 2020 and 2030: a threat to equity and 'universal' health coverage? *BMJ Global Health* 2022; 7(6): e009316.
41. Weaver MR. Epidemics That Weren't: How Countries Shut Down Recent Outbreaks. 2023. <https://www.nytimes.com/2022/12/27/health/pandemic-prevention-preparedness.html> (accessed 7 June 2024).
42. Finger F, Mambu N, Ratnayake R et al. Case-area targeted interventions to rapidly contain the spread of cholera - a prospective observational study in the Democratic Republic of the Congo. 2024.
43. Resolve. Epidemics that didn't happen: Influenza in Brazil. 2023. <https://preventepidemics.org/epidemics-that-didnt-happen/influenza/> (2024).
44. World Health Organization. Global leaders unite in urgent call for international pandemic treaty. 2021. <https://www.who.int/news/item/30-03-2021-global-leaders-unite-in-urgent-call-for-international-pandemic-treaty> (accessed 28 May 2024).
45. Norris P. Global governance and cosmopolitan citizens. *Governance in a globalizing world* 2000; 155: 173-5.
46. Health Policy Watch. UN Approves High-Level Pandemic Summit. 2022. <https://healthpolicy-watch.news/un-approves-high-level-pandemic-summit/> (accessed 15 May 2024).
47. UNGA. Political Declaration of the United Nations General Assembly High-level Meeting on Pandemic Prevention, Preparedness and Response. 2023. <https://www.un.org/pga/77/wp-content/uploads/sites/105/2023/09/PPPR-Final-Text.pdf> (accessed 5 May 2024).

48. United Nations. High-level Meeting on Pandemic Prevention, Preparedness and Response (20 September 2023). 2023. <https://espeakers.unmeetings.org/64c913355249900f9c253c9801082023> (accessed 5 June 2024).
49. Taylor A, Habibi R. The collapse of global cooperation under the WHO International Health Regulations at the outset of COVID-19: sculpting the future of global health governance. *AS/L Insights* 2020; 24(15).
50. G7. Carbis Bay G7 Summit Communiqué: Our Shared Agenda for Global Action to Build Back Better. 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/13/carbis-bay-g7-summit-communique/> (accessed 5 May 2024).
51. The White House. Global COVID-19 Summit: Ending the Pandemic and Building Back Better. 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/24/global-covid-19-summit-ending-the-pandemic-and-building-back-better/> (accessed 5 May 2024).
52. CEPI. The Global Pandemic Preparedness Summit: On the road to 100-Day vaccines. 2022. <https://cepi.net/global-pandemic-preparedness-summit-2022-road-100-day-vaccines> (accessed 5 May 2024).
53. Wenham C. Forum shifting in global health security. *Bull World Health Organ* 2024; 102(2): 123-9.
54. World Health Organization. INB Process. 2024. <https://inb.who.int/home/inb-process#Conceptual%20Zero%20Draft> (accessed 10 May 2024).
55. World Health Organization. Report of the Review Committee on the Role of the International Health Regulations (2005) in the Ebola Outbreak and Response Geneva, 2016.
56. United Nations. Strengthening the International Response to Complex Global Shocks – An Emergency Platform. New York, 2023.
57. World Health Organization. Mpox (monkeypox) outbreak. 2024. <https://www.who.int/europe/emergencies/situations/monkeypox> (accessed 5 June 2024).
58. CDC. Outbreak in Democratic Republic of the Congo. 2023 <https://www.cdc.gov/poxvirus/mpox/outbreak/2023-drc.html> (accessed 3 June 2024).
59. Vakaniaki EH, Kaciat C, Kinganda-Lusamaki E, et al. Sustained Human Outbreak of a New MPXV Clade I Lineage in Eastern Democratic Republic of the Congo. *medRxiv* 2024: 2024.04.12.24305195.
60. Emanuel G. DRC is seeing its worst mpox outbreak – but has no vaccines or treatments yet. Why? 2024. <https://www.npr.org/sections/goatsandsoda/2024/04/26/1247460477/drc-is-seeing-its-worst-mpox-outbreak-but-has-no-vaccines-or-treatments-yet-why> (accessed 3 June 2024).
61. Bright R. Why the New Human Case of Bird Flu Is So Alarming. 2024. <https://www.nytimes.com/2024/06/02/opinion/bird-flu-case-respiratory.html> (accessed 3 June 2024).
62. CDC. H5N1 Bird Flu: Current Situation Summary. 2024. <https://www.cdc.gov/flu/avianflu/avian-flu-summary.htm> (accessed 3 June 2024).
63. Looi MK. Bird flu: Person with rare strain in US sparks alarm about cow transmission. *BMJ* 2024; 385: q797.
64. Haldane V, De Foo C, Abdalla SM, et al. Health systems resilience in managing the COVID-19 pandemic: lessons from 28 countries. *Nat Med* 2021; 27a(6): 964-80.
65. World Health Organization. WHA 77/22 Report of the External Auditor. Geneva 2024.
66. World Health Organization. National Action Plan for Health Security (NAPHS) and Costing. 2024. <https://extranet.who.int/sph/naphs> (accessed April 29 2024).
67. World Health Organization. Preparedness and Resilience for Emerging Threats (PRET). 2024. <https://www.who.int/initiatives/preparedness-and-resilience-for-emerging-threats> (accessed 28 May 2024).
68. World Health Organization. Pandemic influenza preparedness in WHO Member States: Report of a Member State Survey. Geneva, 2019.
69. World Health Organization. Pandemic Influenza Preparedness Framework Eighteen-month progress report. Geneva, 2023.
70. World Health Organization. WHO benchmarks for strengthening health emergency capacities Geneva, 2023.
71. World Health Organization. Joint External Evaluation. 2024. <https://extranet.who.int/sph/jee/activities> (accessed 11 June 2024).
72. World Health Organization. After Action Review (AAR). 2024. <https://extranet.who.int/sph/after-action-review> (accessed 5 June 2024).



73. Hayman DTS, Barraclough RK, Muglia LJ, et al. Addressing the challenges of implementing evidence-based prioritisation in global health. *BMJ Global Health* 2023; 8(6): e012450.
74. Universal Health and Preparedness Review (UHPR) Global Peer Review (GPR) Geneva: WHO, 2024.
75. Kandel N, Chungong S. Dynamic preparedness metric: a paradigm shift to measure and act on preparedness. *The Lancet Global Health* 2022; 10(5): e615–e6.
76. Global Preparedness Monitoring Board. A Fragile State of Preparedness: 2023 Report on the State of the World's Preparedness. Geneva, 2023.
77. Legido-Quigley H, Clark H, Nishtar S, Horton R. Reimagining health security and preventing future pandemics: the NUS-Lancet Pandemic Readiness, Implementation, Monitoring, and Evaluation Commission. *The Lancet* 2023; 401(10393): 2021–3.
78. Bollyky TJ, Hulland EN, Barber RM, et al. Pandemic preparedness and COVID-19: an exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021. *The Lancet* 2022; 399(10334): 1489–512.
79. Ishizumi A, Kolis J, Abad N, et al. Beyond misinformation: developing a public health prevention framework for managing information ecosystems. *The Lancet Public Health*.
80. Pandemic Action Network. Closing the Gap: Pandemic Fund Tracker. 2024. <https://www.pandemicactionnetwork.org/policies-and-actions/closing-the-gap-global-pandemic-fund-tracker/> (accessed 15.04 2024).
81. World Bank. The Pandemic Fund. 2024. <https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/fund-detail/pppr#1> (accessed 15 April 2024).
82. World Health Organization, World Bank. Analysis of Pandemic Preparedness and Response (PPR) architecture, financing needs, gaps and mechanisms, 2022.
83. G7. G7 Nagasaki Health Ministers' Communiqué Nagasaki, 2023.
84. IMF. Poverty Reduction and Growth Fund. 2024. <https://www.imf.org/en/Topics/PRGT> (accessed 5 June 2024).
85. Hicklin J. The IMF's Resilience and Sustainability Trust: How Conditionality Can Help Countries Build Resilience: Centre for Global Development, 2024.
86. Usher AD. Gavi expands into new areas as multi-billion-dollar COVID money bin continues to grow. 2024. <https://www.development-today.com/archive/2024/dt-1-2024/billions-of-unspent-pandemic-funds-in-gavi-keep-growing> (accessed 15 April 2024).
87. World Health Organization. Operations support and logistics: year in review 2022. Geneva, 2023.
88. World Health Organization. Intergovernmental Negotiating Body to draft and negotiate a WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response Geneva, 2024.
89. World Health Organization. International Health Regulations (2005) A77/A/CONF./14 Geneva, 2024.
90. World Health Organization. WHA 76/32 Sustainable financing: feasibility of a replenishment mechanism, including options for consideration Geneva, 2023.
91. WHO. <https://www.who.int/publications/i/item/A77-20>
92. Branswell H. These are the bird flu questions that influenza and animal scientists desperately want answered. 2024. <https://www.statnews.com/2024/06/05/bird-flu-h5n1-in-cows-scientists-top-questions/> (accessed June 7 2024).
93. Wenham C, Stout L. A legal mapping of 48 WHO member states' inclusion of public health emergency of international concern, pandemic, and health emergency terminology within national emergency legislation in responding to health emergencies. *Lancet* 2024; 403(10435): 1504–12.
94. European Commission. Threat assessment and intelligence gathering. 2024. [https://health.ec.europa.eu/health-emergency-preparedness-and-response-hera/preparedness/threat-assessment-and-intelligence-gathering\\_en#latest-updates](https://health.ec.europa.eu/health-emergency-preparedness-and-response-hera/preparedness/threat-assessment-and-intelligence-gathering_en#latest-updates) (accessed 29 May 2024).
95. Bochner AF, Makumbi I, Aderinola O, et al. Implementation of the 7-1-7 target for detection, notification, and response to public health threats in five countries: a retrospective, observational study. *Lancet Glob Health* 2023; 11(6): e871–e9.
96. World Health Organization. e-SPAR. 2024. <https://extranet.who.int/e-spar/#submission-details> (accessed 5 June 2024).
97. Uyeki TM, Milton S, Abdul Hamid C, et al. Highly Pathogenic Avian Influenza A(H5N1) Virus Infection in a Dairy Farm Worker. *N Engl J Med* 2024.

98. Kushner J, Cheng K. The long shadow of Covid-19 myths. 2023. <https://www.bbc.com/future/article/20230328-the-long-shadow-of-covid-19-myths> (accessed 28 May 2024).
99. Finch A, Klock K, Gostin L, Halabi S, S. W. Safeguarding the Pandemic Agreement from Disinformation. 2024. <https://www.thinkglobalhealth.org/article/safeguarding-pandemic-agreement-disinformation> (accessed 28 May 2024).
100. World Health Organization. Vaccine inequity undermining global economic recovery. 2021 (accessed May 20 2024).
101. Torreele E, Kazatchkine M, Liu J, et al. Stopping epidemics when and where they occur. *Lancet* 2023; 401(10374): 324–8.
102. Olliaro P, Torreele E. Global challenges in preparedness and response to epidemic infectious diseases. *Mol Ther* 2022; 30(5): 1801–9.
103. Open Consultants. External Evaluation of the Access To COVID-19 Tools Accelerator (ACT-A) 2022. [https://www.who.int/docs/default-source/coronaviruse/act-accelerator/act-a-external-evaluation\\_october\\_2022.pdf?sfvrsn=c4b6541a\\_3&download=true](https://www.who.int/docs/default-source/coronaviruse/act-accelerator/act-a-external-evaluation_october_2022.pdf?sfvrsn=c4b6541a_3&download=true) (accessed 20 May 2024).
104. Torreele E, McNab C, Adeyi O, et al. It is time for ambitious, transformational change to the epidemic countermeasures ecosystem. *The Lancet* 2023; 401(10381): 978–82.
105. The Guardian. ‘Profiteering’ of Covid pandemic must never be repeated, world figures warn. 2023. <https://www.theguardian.com/global-development/2023/mar/11/profiteering-of-covid-pandemic-must-never-be-repeated-world-figures-warn> (accessed 20 May 2024).
106. World Health Organization. Health for All: Transforming economies to deliver what matters. Geneva, 2023.
107. Foreign Policy. The WTO Failed the World in Covid. 2024. <https://foreignpolicy.com/2024/02/28/wto-covid-pandemic-treaty-vaccines-patents-intellectual-property/> (accessed 20 May 2024).
108. Taylor L. WHO pandemic treaty: Negotiations falter as pharma companies warn that intellectual property rules will harm profits. *BMJ* 2023; 383: 2475.
109. The South Centre. Pathogen Access and Benefit-Sharing (PABS). 2023. <https://www.southcentre.int/tag/pathogen-access-and-benefit-sharing-pabs/> (accessed 20 May 2024).
110. Torreele E, Wolfe D, Kazatchkine M, et al. From private incentives to public health need: rethinking research and development for pandemic preparedness. *The Lancet Global Health* 2023; 11(10): e1658–e66.
111. Active CEPI-Funded Vaccine Candidate Portfolio by Phase, as of March 2024, CEPI website. [https://static.cepi.net/downloads/2024-04/CEPI%20active%20portfolio%20overview%20website\\_Last%20Updated%204%20Apr%202024.pdf](https://static.cepi.net/downloads/2024-04/CEPI%20active%20portfolio%20overview%20website_Last%20Updated%204%20Apr%202024.pdf)
112. US Department for Health and Human Services. BARDA Strategic Plan 2022–2026. Washington DC.
113. UK Department of Health and Social Care. UK Vaccine Network. 2024. <https://www.gov.uk/government/groups/uk-vaccines-network> (accessed 15 May 2024).
114. UK Government. UK announces “transformational” support to boost global health at the UK General Assembly. 2023. <https://www.gov.uk/government/news/uk-announces-transformational-support-to-boost-global-health-at-unga> (accessed 15 May 2024).
115. Wouters OJ, Forman R, Anderson M, Mossialos E, McKee M. The launch of the EU Health Emergency Preparedness and Response Authority (HERA): Improving global pandemic preparedness? *Health Policy* 2023; 133: 104844.
116. Politico. HERA isn’t the hero Parliament wants – or the game-changer Council fears. 2021. <https://www.politico.eu/article/hera-eu-commission-health-emergency-preparedness-response-authority/> (accessed May 17 2024).
117. Africa Centres for Disease Control and Prevention. Partnerships for African Vaccine Manufacturing (PAVM) Framework for Action. Addis Ababa, 2022.
118. CEPI. CEPI invites vaccine developers and manufacturers to join global outbreak response network. 2022. <https://cepi.net/cepi-invites-vaccine-developers-and-manufacturers-join-global-outbreak-response-network> (accessed 5 June 2024).
119. World Health Organization. The mRNA vaccine technology transfer hub. 2024. <https://www.who.int/initiatives/the-mrna-vaccine-technology-transfer-hub> (accessed 20 May 2024).
120. The WHO Council on the Economics of Health for All. The mRNA Vaccine Technology Transfer Hub: a pilot for transformative change for the common good? Geneva, 2023.
121. International Pandemic Preparedness Secretariat. The 100 Days Mission Therapeutics Roadmap, 2024.

122. International Pandemic Preparedness Secretariat, FIND. Making the Exceptional Routine: Embedding diagnostic best practice to improve pandemic preparedness, 2023.
123. CEPI. CEPI and Institut Pasteur de Dakar announce 10-year partnership to boost manufacturing of affordable vaccines for the Global South. 2023. <https://cepi.net/cepi-and-institut-pasteur-de-dakar-announce-10-year-partnership-boost-manufacturing-affordable> (accessed 28 May 2024).
124. Pan American Health Organization. PAHO presents key recommendations to increase equitable access to health at G20 event in Brazil. 2024. <https://www.paho.org/en/news/15-4-2024-paho-presents-key-recommendations-increase-equitable-access-health-g20-event-brazil> (accessed 28 May 2024).
125. Smith N. South Korea accelerates vaccine production to shore up defences against future pandemics. 2023. <https://www.telegraph.co.uk/global-health/science-and-disease/south-korea-vaccines-pandemic-preparedness-outbreaks/> (accessed 28 May 2024).
126. Asian Development Bank. From Lab to Job: Improving Asia and the Pacific's Readiness to Produce and Deliver Vaccines. 2023. <https://www.adb.org/publications/from-lab-to-job-improving-asia-and-the-pacific-s-readiness-to-produce-and-deliver-vaccines> (accessed 28 May 2024).
127. European Parliament. Post Covid-19 value chains: options for reshoring production back to Europe in a globalised economy 2021.
128. US Department of Health and Human Services. Public Health Supply Chain and Industrial Base. Washington, DC: HHS, 2022.
129. World Health Organization. i-MCM-Net Update: 6th Member States Briefing. Geneva, 2024.
130. WHO Council on the Economics of Health for All. Health for All: Increase, transform and redirect Geneva 2021.
131. GloPID-R. GloPID-R announces the launch of Pandemic PACT. 2024. <https://www.glopid-r.org/glopid-r-announces-the-launch-of-pandemic-pact/> (accessed 28 May 2024).
132. Global Commission for Post-Pandemic Policy, <https://globalcommissionforpostpandemicpolicy.org/covid-19-vaccine-production-to-january-31st-2022/>
133. G20. Sherpa Health Track. 2024. <https://www.g20.org/en/tracks/sherpa-track/health> (accessed 28 May 2024).
134. UK Government. 100 Days Mission to Respond to Future Pandemic Threats. 2021. <https://www.gov.uk/government/publications/100-days-mission-to-respond-to-future-pandemic-threats> (accessed 28 May 2024).
135. CEPI. CEPI 2.0 and the 100 Days Mission. 2021. <https://cepi.net/cepi-20-and-100-days-mission> (accessed 15 May 2024).
136. CEPI. 2022 Annual Progress Report. Oslo, 2023.
137. Ravelo J. CEPI hopeful despite underwhelming replenishment. 2022. <https://www.devex.com/news/cepi-hopeful-despite-underwhelming-replenishment-102862> (accessed 17 May 2024).
138. Africa Centres for Disease Control and Prevention. Thematic Area: Partnerships for African Vaccine Manufacturing (PAVM). 2024. <https://africacdc.org/thematic-area/partnerships-for-african-vaccine-manufacturing-pavm/> (accessed 5 June 2024).
139. Africa Centres for Disease Control and Prevention, Clinton Health Access Initiative, PATH. Current and planned vaccine manufacturing in Africa 2023.
140. Wellcome Trust, Biovac, Boston Consulting Group. Scaling Up African Vaccine Manufacturing Capacity 2023.
141. Torreele E. Tackling vaccine inequity in 2023: have we made progress? *Expert Review of Vaccines* 2024; 23(1): 1-4.
142. Lehtimäki S, Reidy A, Nishtar K, Darehshori S, Painter A, Schwalbe N. Independent Review and Investigation Mechanisms to Prevent Future Pandemics UNU-IIGH and Spark Street Advisors, 2021.
143. Clark H, Johnson Sirleaf E. A Road Map for a World Protected from Pandemic Threats : The Independent Panel for Pandemic Preparedness and Response, 2023.
144. Clark H, Johnson Sirleaf E. Transforming or Tinkering?: The Independent Panel for Pandemic Preparedness and Response, 2022.



There is a path that  
political leaders can  
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countries and the world  
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their citizens today and  
for generations to come.