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The Global Health Architecture: Governance and International Institutions to Advance Population Health Worldwide

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Perspective

The Global Health Architecture: Governance and International Institutions to Advance Population Health Worldwide

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Policy Points:

- Global health institutions and instruments should be reformed to fully incorporate the principles of good health governance: the right to health, equity, inclusive participation, transparency, accountability, and global solidarity. New legal instruments, like International Health Regulations amendments and the pandemic treaty, should be grounded in these principles of sound governance.
- Equity should be embedded into the prevention of, preparedness for, response to, and recovery from catastrophic health threats, within and across nations and sectors. This includes the extant model of charitable contributions for access to medical resources giving way to a new model that empowers low- and middle-income countries to create and produce their own diagnostics, vaccines, and therapeutics—such as through regional messenger RNA vaccine manufacturing hubs.
- Robust and sustainable funding of key institutions, national health systems, and civil society will ensure more effective and just responses to health emergencies, including the daily toll of avoidable death and disease disproportionately experienced by poorer and more marginalized populations.

Keywords: right to health, global health, good governance.

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THE UNITED NATIONS (UN) CREATED THE WORLD HEALTH Organization (WHO) as its first specialized agency out of the ruins and atrocities of World War II. For decades after its creation, the WHO had an unrivaled place leading world health at the very center of the global health architecture. In those early years, the WHO was one of very few institutions in the health space, later joined by the World Bank. By 1980, the WHO achieved the unimaginable—the eradication of the ancient scourge of smallpox. But the WHO's power and influence has steadily waned, with a plethora of global institutions and actors entering the space that the WHO alone had once occupied.

Following the West African Ebola epidemic (2014-2016), the WHO enacted several key reforms, notably the creation of its Health Emergencies Programme and a Contingency Fund for Emergencies. However, the COVID-19 pandemic was a turning point for the WHO. The agency found itself embroiled in a bitter political dispute between two superpowers, China and the United States, culminating in former President Trump's announcement that the United States would withdraw from the WHO. During COVID-19, the WHO's leadership was called into question, and governments largely failed to comply with the International Health Regulations (2005) (IHR) while disregarding WHO recommendations under the IHR. This precipitated a series of audacious reform proposals. The World Health Assembly (WHA) charged an Intergovernmental Negotiating Body with negotiating and codifying a new international instrument for pandemic prevention, preparedness, response, and recovery, often referred to as a pandemic treaty.

The WHA also established the IHR Review Committee to propose major amendments to the IHR. The IHR, the governing instrument for pandemic preparedness and response, was already fundamentally revised in 2005 in the aftermath of the severe acute respiratory syndrome (SARS) epidemic. The potentially transformative work of the Intergovernmental Negotiating Body and the IHR Review Committee should be harmonized to ensure they complement, rather than compete with, one another.^{1,2} Both the pandemic treaty and IHR reform will come before the May 2024 WHA for possible adoption. What's more, in 2022 the WHA approved long-overdue reforms to the agency's funding

structure, principally to increase member state mandatory dues. A transformation of the global health architecture is under way but still has far to go.

The COVID-19 pandemic exposed the failures of governments and international institutions to create a fair, just, and safe world. Even before the pandemic, the dominant global narrative was that large swaths of the planet were being left behind, with cavernous social, economic, educational, and health inequities within and among nations. Those inequities were magnified during COVID-19, as rich nations hoarded life-saving medical supplies—most prominently vaccines, but also diagnostics, personal protective equipment, and therapeutics—leaving extreme scarcity in low- and middle-income countries (LMICs). The WHO developed novel institutional structures to ameliorate health inequities, notably the Access to COVID-19 Tools (ACT) Accelerator and its vaccine pillar, the COVID-19 Vaccines Global Access (COVAX) Facility, but these fell far short of their goals.

While the world was overwhelmed by COVID-19, other pressing global health threats were not sufficiently addressed. The world was already behind on its commitment to achieving universal health coverage by 2030, with vast funding gaps. Routine infectious disease control, such as for AIDS, tuberculosis, and malaria, was also badly disrupted.³ The pandemic ushered in historic drops in life expectancy, especially in higher-income countries, while pushing many into poverty.⁴ But richer nations would recover economically from the crisis much faster than poorer nations, widening the global wealth gap.⁵ Meanwhile, the dual crises of COVID-19 and the war in Ukraine, along with the climate crisis and so, pushed millions of people into food insecurity and has caused mass migrations.

The WHO estimates that the pandemic caused nearly 15 million excess deaths worldwide through 2021.⁶ That figure will only rise in the coming years, resulting from interrupted care and delayed diagnosis and treatment for cancer, diabetes, cardiovascular disease, and other chronic diseases. If those challenges were not already too much for the world to comprehend, monkeypox reemerged and would underline many of the same failures of national and global governance as COVID-19 exposed.

This paper examines the global health architecture—its history, current state, and future. It offers pathways to a healthier and safer world for us and our descendants, rooted in the core values of equity, human rights,

solidarity, transparency, and accountability. It begins by examining these principles and then how current institutions and instruments embody them or fall short. Finally, it examines which reforms are under way, particularly for health emergency preparedness and response (HEPR), and what others are needed to bring the global health architecture more in line with principles of sound governance.

Universal Principles Underlying Good Health Governance

Protecting and advancing the world's health across the complex dynamics of globalization and against new health threats brings enormous challenges. The complexity is underscored by a proliferation of global health actors—among them international institutions, industry, global public-private partnerships, and large philanthropies. Yet the principles underlying good governance for health must remain the foundation even as the global health landscape expands and changes. Identifying problems in the global health architecture—and importantly, the reforms needed—requires understanding these foundational principles.

Right to Health

The WHO's Constitution begins with an affirmation of the right to health: "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."⁷ The right would later be embedded in binding human rights treaties, chiefly the International Covenant on Economic, Social and Cultural Rights (ICESCR). Article 12 of the ICESCR codifies the right of everyone to the highest attainable standard of health.

The right to health, particularly when incorporated into national constitutions and statutes, has proven a powerful tool, with a growing number of court decisions advancing the right. Yet the ICESCR requires only the "progressive realization" of the right to health, which recognizes countries' resource constraints. It has allowed for less than full and immediate implementation; its obligations are vague, with minimal accountability and lack of enforcement.

The right to health should be a primary goal of all global health actors. The global health architecture should mainstream health-related rights across its governance, systems, policies, and funding and in its laws, programs, and activities.⁸

Equity

The right to health requires assuring the conditions in which people can be healthy: 1) public health services, like sanitation, potable water, vector abatement, and alcohol and tobacco control; 2) access to high-quality health care services; and 3) the upstream social determinants of health, including nutritious food, stable housing, education, and a livable income.⁹

Embedded in the principle of universal access to these conditions is the equitable distribution of global public goods, within and among countries, while maximizing health outcomes nationally and globally. For governments and international institutions alike, this means at least four things. First, in governing health, there should be equitable (inclusive) representation and meaningful participation (the next principle). Second, equity should drive health financing, with substantial investments in underserved communities and funding to support LMICs. Third, data must be regularly collected and disaggregated (e.g., on race, gender, income, disability) to show which populations have inequitable access. Fourth, national and global actors must be transparent and held accountable.

Inclusive Participation

Decision-making processes should be inclusive, affording meaningful opportunity for community and stakeholder inputs and equitable representation in governance structures, including giving real voice to marginalized communities. Not only does the public have the right to participate in developing laws and policies that affect their lives, but their understandings of on-the-ground realities will enable institutions to operate more effectively.

Global Solidarity

Effective and equitable responses to the systemic drivers of ill health require global solidarity.¹⁰ Solidarity among nations, peoples, institutions, and industries should underpin the global health architecture we build. Solidarity fosters shared goals, drives collective action, and is essential to realizing health-related rights, achieving the Sustainable Development Goals, and effective HEPR. This includes securing sufficient funding for countries that cannot raise enough resources for their own populations. Countries acting in solidarity develop and adhere to frameworks that embody shared responsibilities, such as with respect to financing. They hold each other to account through enforceable mechanisms and are united in condemning and responding to rights violations. Approaches rooted in global solidarity are also important to domestic public health, from the market for unhealthy foods, alcohol, and tobacco to disease surveillance and data collection.

Transparency and Accountability

Health institutions should make policies and implement programs transparently and support them with clear, accessible data. These policies and programs should be regularly assessed for their impact on marginalized populations, requiring comprehensive disaggregated data.

Further, the rule of law is essential to good health governance.¹¹ Evidence-based laws should undergird national health policies and programs, while international instruments should ensure enforcement, compliance, and accountability. Evidence-based monitoring of progress, inspection, peer review, civil society assessments, public education, judicial and quasi-judicial mechanisms, incentives, and sanctions are all needed for cooperation and compliance.

How well do today's global health actors and key instruments fare with respect to these core principles?

Global Health Actors

With interconnected societies and economies and shared vulnerability to health threats, no state acting alone can secure the public's health and safety. As COVID-19 demonstrated, even the world's richest countries

are unable to stem global threats on their own. Yet a lack of solidarity among countries, whose governments have a primary role in governing many of the actors involved in global health, means that health institutions are often underresourced and cannot meet their goals. Among actors' various mandates, the right to health and health equity often are not prioritized, and decision making is not always transparent and rarely embodies the principle of inclusive participation.

These institutions vary considerably from those with a sole or primary focus on health, like the WHO, to those whose mandate is not health at all, but whose policies affect health. They range from intergovernmental organization and groups of nations to global public-private partnerships and nonstate actors, primarily civil society organizations, philanthropies, health associations, and companies (see Table 1).

UN System

The UN system has a key role in global health. The Joint UN Programme on HIV/AIDS (UNAIDS) is the global focal point for AIDS-related data, policy, strategy, targets, and advocacy. It is also a leader with respect to inclusion in its governance structure, including five (nonvoting) civil society members on its governing body, and its focus on equity and human rights. UNAIDS has long advocated against HIV-related discrimination and for the rights of populations at heightened risk of HIV, with human rights guidelines going back decades.¹²

Other UN organizations channel billions of dollars in health-related financing, like the World Food Programme and UN High Commissioner for Refugees, and emergency and sustained financing and programs, like the UN Children's Fund (UNICEF) and the UN Development Programme. The Food and Agricultural Organization publishes the Codex Alimentarius, with international standards and guidelines on food safety, and that organization, the World Organisation for Animal Health, and the UN Environment Programme are critical in implementing the One Health approach, recognizing the integral link among human health, animal health, and the environment. The Office of the UN High Commissioner for Human Rights champions all rights, including the right to health.

Meanwhile, the UN Security Council has the power to issue binding resolutions on health matters, with its first health-related

Table 1. Select Global Health Actors

Type of Organization	Examples
UN main bodies	UN General Assembly, UN Security Council
UN agencies, funds, and programs	World Health Organization, UN Development Programme, Food and Agricultural Organization, the Joint UN Programme on HIV and AIDS, International Monetary Fund, and the UN International Children's Emergency Fund
Multilateral organizations	World Trade Organization, World Organisation for Animal Health, and World Bank Group
Intergovernmental political forums	G7 and G20
Global public-private partnerships	Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund); Gavi, the Vaccine Alliance (Gavi); Unitaid; and Coalition for Epidemic Preparedness Innovations
Philanthropic organizations	Bill and Melinda Gates Foundation, Wellcome Trust, and Rockefeller Foundation
Civil society organizations	Médecins Sans Frontières and Physicians for Human Rights
Professional associations	World Federation of Public Health Associations and International Council of Nurses
Academic institutions	Schools of medicine, nursing, and public health
Companies	Pfizer, BioNTech, and AstraZeneca

resolution on AIDS in 2000¹³ and later resolutions addressing two Ebola epidemics^{14,15} and COVID-19.^{16,17} In the absence of Security Council action owing to Russia's veto following Russia's invasion of Ukraine, the General Assembly passed two resolutions demanding full respect for and protection of medical and humanitarian personnel and medical facilities.^{18,19} The UN General Assembly has also devoted special sessions to major global health issues, including HIV/AIDS, antimicrobial resistance, and universal health coverage.

The World Bank was an early major funder of the global AIDS response and remains an important source of funds for public health services like nutrition. It spearheaded a global funding mechanism for women's and children's health (the Global Financing Facility), and its grants and loans to governments for their COVID-19 response were worth \$135 billion in the pandemic's first two years.²⁰ Further, it and the International Monetary Fund strongly backed suspending debt service payments for low-income countries during COVID-19 via the Debt Service Suspension Initiative.²¹ Following the West African Ebola epidemic, the Bank formed the Pandemic Emergency Financing Facility and recently launched the Financial Intermediary Fund for Pandemic Prevention, Preparedness, and Response, though the former has since been close.

However, these organizations can also adversely affect global health. International Monetary Fund and World Bank structural adjustment programs, including scaling back budgets and freezing public wages and hiring as a condition of loans, can weaken public health systems. World Trade Organization intellectual property protection can also impede access of essential medicines by people in LMICs.⁹ These protections were waived for COVID-19 vaccines with respect to developing countries, but not until June 2022, even as a decision on a waiver for diagnostics and treatments was deferred until December 2022, and continues to be delayed.²²

WHO

The WHO remains the leader in global health. The right to health is embedded in its Constitution's Preamble, while Article 2 declares that the WHO should "act as the directing and coordinating authority on international health work."⁷

The WHO's Constitution also grants the Organization immense treaty-making authority, the pinnacle of its normative powers. If a state does not accede to a treaty within 18 months of its adoption by the WHA, the state must furnish reasons. Under its treaty-making power (Article 19), the WHO adopted the historic Framework Convention on Tobacco Control (FCTC), a landmark achievement that spurred a flurry of domestic legislation.

The WHA's powers to make regulations are even more far-reaching. Under Article 22, regulations automatically enter into force for all member states unless they proactively opt out or make a reservation. It is a unique power in international law because in all other contexts, states must affirmatively consent to be bound. The IHR is the prime example of WHO regulations.

The WHO also has so-called "soft" powers. Perhaps the most important exercise of this soft power is the Pandemic Influenza Preparedness (PIP) Framework, which establishes a system of sharing samples of influenza virus with pandemic potential in return for shared access to vaccines and antivirals resulting from these samples. The PIP Framework was adopted under the WHA's power to make recommendations under Article 23. Although nonbinding, the PIP Framework uses contracts to bind companies to contribute to global stockpiles of these technologies in return for access to viral samples for product development.

Yet the WHO is also (and perhaps primarily) a technical and scientific agency, charged with, among other functions, furnishing technical assistance and aid (during emergencies), conducting health research, and working toward eliminating or eradicating diseases. Most of its staff are technical specialists.

The WHO's normative and technical functions and its near universal membership²³ uniquely position the agency as the global health leader. But the WHO's influence has waned as countries have supported newer institutions carrying out critical health functions.

Waning Solidarity. The WHO is in a bind. Governments have high demands and expectations yet have provided the WHO with little financial and political support. The WHO's broad treaty-making authority has remained dormant for nearly two decades, despite proposals for treaties on the right to health, on alcohol control, and more. But because the Intergovernmental Negotiating Body identified the WHO's treaty-making power as the constitutional provision under which a new pandemic instrument should be adopted, this power may be revived.²⁴

For decades, the WHO's members have starved it of funding, with a budget less than that of a major research hospital.²⁵ Assessed member state contributions make up only about 13% of the WHO's budget, whereas voluntary contributions, mostly earmarked, make up the vast majority.²⁶ Little wonder, then, there has been such misalignment between WHO funding and global disease burdens; the WHO's most ambitious and well-funded program is to eradicate wild polio, despite as few as less than ten cases globally annually in recent years. It is not that the WHO spends too much money on polio eradication—the recent appearance of oral vaccine-derived polio in countries including the United States is a reminder of the global benefits that would accrue from eradication—but rather that the WHO lacks sufficient funds in other areas.

Meanwhile, the WHO's reliance on voluntary funding compromises its independence and ability to set the global health agenda. Voluntary funding, which can be earmarked, gives wealthier states undue influence over the WHO's agenda, along with other voluntary funders, including the Gates Foundation, and even private corporations. As a result, global health priorities have tended to skew toward infectious diseases in comparison to underserved global health areas like mental health, noncommunicable diseases, injuries, and disabilities. Addressing the problem of earmarked voluntary funds, in 2022 the 75th WHA voted to gradually increase member state assessed dues to reach 50% of the WHO's core budget—though based on the 2022/2023 budget rather than keeping up with its growth.²⁷

The WHO's limited budget and its control over it because of the earmarking of voluntary contributions leads governments and other organizations, including the Gates Foundation, to establish and fund new global health institutions like the Global Fund, Gavi, and the Coalition for Epidemic Preparedness Innovations (CEPI). The WHO's own missteps, like during the West African Ebola epidemic (discussed in a following section), have further reduced confidence in the organization and led to support and perceived need for other global health institutions.

States have failed in their solidarity with the WHO in other ways. China continues to deny Taiwan's existence as an independent country at the WHO, refusing to let it join. President Trump did the unthinkable by announcing a US withdrawal from the WHO, although President Biden reversed his decision. Israel, situated in the Middle East, is a

member of the WHO's European Regional Office, not the Eastern Mediterranean Regional Office where it should be, reflecting a concern that placing Israel with Arab countries could unduly politicize that office.

Shortfalls in Transparency and Accountability. The WHO has not always been transparent in its actions and decisions, nor has it been willing to hold itself or its member states accountable for failures, including states' disregard for the WHO instruments and recommendations and human rights abuses.

The WHO's lack of transparency can manifest itself in WHA resolutions—where closed-door negotiations can water down core provisions, yielding to powerful states—and in decisions whether to declare a public health emergency of international concern (PHEIC) under the IHR. The WHO's director-general inexplicably waited more than four months after Ebola was detected in West Africa in 2014 before declaring a PHEIC.

The WHO underwent substantial reforms following that epidemic, including creating the Health Emergencies Programme with independent oversight and monitoring and a Contingency Fund for Emergencies. The WHO also reformed its program budget, emphasizing clearer targets and results.

Beholden to its members, the WHO is loath to hold individual states accountable, even simply by naming states that fail to meet their responsibilities. For example, the WHO's Surveillance System for Attacks on Health Care does not name the parties responsible, including Russia's attacks in Ukraine.²⁸ Although the 75th WHA did condemn Russia by name, a swath of nations voted no or abstained, and the WHA refused to suspend Russia's voting privileges.²⁹

Limits in Human Rights and Equity. Despite its constitutional mandate, the WHO's focus on the right to health and equity has historically been limited. At times, the WHO has been downright hostile to human rights and equity, initially promoting clearly inadequate first-line drugs for multidrug-resistant tuberculosis in LMICs owing to cost concerns.³⁰ The WHO has also historically shied away from protecting health-related rights of marginalized populations.

Recently, the WHO has begun to find its voice, from its insistence on nondiscrimination and the right to health vis-à-vis immigrants to moving the Gender, Equity and Human Rights Team to the Office of the Director-General.³¹ Most visible has been Director-General Tedros's

insistence on vaccine equity during the COVID-19 pandemic, including criticizing wealthier countries for hoarding vaccines.

Noninclusive Participation. The WHO has failed to make progress in inclusive participation. Only governments are part of the WHA decision-making processes. Even civil society statements are strictly regulated and restricted to only several hundred nonstate actors in “official relations” with the WHO. And far from being representative, this select group of civil society organizations and professional associations in official relations with the WHO are required to have regional or global reach, excluding national and community-based organizations.

Smaller organizations and people outside of governments and non-state actors in official relations with the WHO, like academics, are not totally excluded from the agency’s work. The WHO may seek their input and support in a range of areas outside of governance activities, such as in reviewing evidence; providing scientific, technical, and strategic guidance on specific health issues; and raising political awareness on health priorities.³² Yet restrictions on civil society participation at the highest level of the WHO strategic decision making—establishing global health priorities and strategies—remains a gaping hole.

Beyond the WHO

Global public–private partnerships have become increasingly significant global health actors, usually with more innovative governance structures and focused mandates.³³ The Global Fund to Fight AIDS, Tuberculosis and Malaria provides more than \$4 billion annually to fight the three diseases in over 100 countries; Gavi funds immunization in low-income countries, while CEPI mobilizes funding for developing vaccines against high-risk pathogens, including Disease X (an unknown pathogen of pandemic potential).

The Global Fund has pioneered many core governance principles. It requires marginalized populations to have a say in countries’ funding applications.³⁴ Three of its 20 board seats are for civil society and people living with or affected by any of the three diseases.³⁵ Breaking down human rights barriers to HIV, tuberculosis, and malaria services is a central element of the Global Fund’s strategy.³⁶ Also, a human rights complaint procedure establishes accountability for its human rights commitments.³⁷

Gavi includes one civil society board seat,³⁸ as does Unitaid, which supports late-stage development of medical products to address AIDS, tuberculosis, and malaria.³⁹ Gavi, Unitaid, and the Global Fund all focus financing on diseases that primarily affect lower-income countries or enables them to scale up services in other areas.

Such inclusion is not universal. CEPI does not include any civil society representatives on its board,⁴⁰ though it is committed to equitable access to vaccines.⁴¹ Civil society does not always have the say in the Global Fund program design as intended,⁴² and the growth of civil society participation in new governance institutions often occurs alongside board representation for corporations in these institutions.

COVID-19 Institutions Designed for Equity

During the COVID-19 pandemic, the WHO and other entities spearheaded the ACT Accelerator, aiming for equitable access to COVID-19 medical countermeasures. Most prominent was its vaccine pillar, COVAX, a financing and procurement mechanism designed to accelerate development of COVID-19 vaccines and allocate them to the world fairly. It aimed to deliver 2 billion doses by the end of 2021. Yet COVAX fell far short,⁴³ and “vaccine nationalism” took hold.

By August 2020, the United States, United Kingdom, and European Union (EU) had entered bilateral deals to secure enough vaccine doses to vaccinate well over 100% of their populations⁴⁴ and continued to procure more, leaving too few doses for COVAX. Moreover, the United States and the EU temporarily restricted exportation of critical raw materials for vaccine development,⁴⁵ and as it grappled with its spring 2021 Delta wave, India prohibited exportation of COVID-19 vaccines,⁴⁶ including those of the Serum Institute, which had contracted to supply COVAX.

The new battle for equity is global access to COVID-19 treatments. Paxlovid, Pfizer’s antiviral medication, significantly decreases hospitalization and death, yet is largely unavailable in LMICs.⁴⁷ Pfizer signed agreements with the WHO’s Medicines Patent Pool for generic versions, but these do not include most upper-middle-income nations.⁴⁸ This means that many upper-middle-income countries will have limited or no access to the antiviral, with Paxlovid itself difficult to afford and generic versions of the drug unavailable. The same story that unfolded with COVID-19 vaccines will replay as nations face shortages of

diagnostics and antivirals, although purchase agreements with UNICEF and the Global Fund will begin to mitigate the inequities.^{49,50} It again unfolded in the world's response to monkeypox, with high-income countries hoarding limited vaccines, tests, and treatments.

The extant models for equitable distribution of lifesaving medical resources rely primarily on charitable contributions from rich nations and pharmaceutical companies. Yet charity has often been late coming and inadequate. Empowering LMICs to produce their own diagnostics, vaccines, and therapeutics (e.g., through regional manufacturing hubs) is an innovation whose time has come. Recognizing the importance of LMIC self-reliance, the WHO has supported messenger RNA vaccine hubs, with the first established in Cape Town, South Africa.

WHO Instruments

International Health Regulations (2005)

Lack of Transparency and Accountability. As the COVID-19 pandemic highlighted, countries frequently ignored IHR obligations. The IHR require states to notify the WHO within 24 hours of potential PHEICs in their territory¹ and respond rapidly. Yet China failed to report to the WHO as a novel SARS-like virus was circulating in Wuhan in December 2019. Instead, the WHO became aware of a viral pneumonia of unknown origin via “unofficial” sources.⁵¹ Weeks later, the WHO repeated China's reports that the virus had limited human-to-human transmission.⁵² Retrospective examinations revealed that Chinese officials had suppressed information of growing clusters of cases, including sanctioning whistle-blowers.⁵³ So, too, has China refused to allow WHO experts to freely enter its territory and investigate the origins of SARS-CoV-2. Whereas the preponderance of evidence suggests a natural zoonotic spillover,⁵⁴ the role of the Institute of Virology in Wuhan and a laboratory accident has become particularly contentious among Western governments, including with several U.S. intelligence agencies.

Furthermore, more than 90% of the world's population lived in countries that implemented travel restrictions contrary to the WHO's recommendations without scientific justification.⁵⁵ Travel bans impeded the flow of medical goods and personnel to areas in need, separated families, impacted international trade and commerce, and were especially devastating for refugees and other migrants. The IHR require states to explain

why they chose to ignore the WHO's IHR recommendations, but few countries actually submitted reports.⁵⁶

The IHR require states to develop core HEPR capacities, but two-thirds of countries still had not done so by the time COVID-19 struck.⁵⁷ The IHR have no enforcement mechanism for noncompliance.

Lack of Solidarity. Countries' failures to adhere to the IHR exemplify governments' prioritizing presumed national interest over global solidarity. Lack of solidarity is also evidenced in inadequate financing to support LMICs in developing core capacities and in equitable access to medical resources. Yet the IHR contain obligations for state parties to collaborate, including financially.¹

Missing: Equity and Human Rights. The IHR do not address equitable access to medical countermeasures. Although they do encompass human rights, such as with respect to treatment of travelers, they neglect other human rights concerns, from the manipulation of domestic disease control measures to stifle free speech and peaceful assembly (a violation of civil and political rights) to uneven access to medical countermeasures (a failure to realize the right to health without discrimination). The IHR only allow the WHO to protect the confidentiality of unofficial sources, who may be at risk of retaliation "when duly justified."¹

Lack of Transparency. The WHO lacks transparency, including with respect to its deliberations on whether to declare a PHEIC. Such transparency is critical given the impact of PHEIC declarations on national and global responses to pandemic threats.⁵¹

Framework Convention on Tobacco Control

The only major WHO binding agreement besides the IHR is the FCTC (with a third binding agreement addressing nomenclature). The FCTC is the WHO's standout achievement in the realm of noncommunicable diseases, adopted in 2003. Even as infectious diseases dominated the global health agenda—AIDS, tuberculosis, and malaria above all—the world came together in this historic effort to combat tobacco.⁵⁸ It was possible thanks to a confluence of a wide range of factors—innovative proposals from academics, early and persistent support from several governments, unwavering commitment from the WHO Director-General Gro Harlem Brundtland, and civil society advocacy. The campaign for the FCTC was also bolstered by the tobacco industry's malfeasance, revealed to the world as a result of litigation in the United States.

The treaty was adopted a decade after the idea was first proposed and came into effect two years later,⁵⁹ with broad acceptance by the world's countries. Its framework-protocol approach, with an initial treaty and expectation of later protocols to address additional issues—one adopted so far, on the illicit trade of tobacco products—could serve as a model for future WHO treaties.

Lack of Solidarity and Accountability. In some respects, the FCTC has been a stunning success. At least 66 countries have comprehensive smoke-free legislation, and 140 countries require graphic pictorial warnings on tobacco packaging.⁶⁰ Yet the FCTC, with 182 states parties, lacks accountability mechanisms for noncompliance. Furthermore, international funding for FCTC implementation has historically been inadequate. But in a hopeful turn, the FCTC Conference of the Parties established a \$50 million investment fund to support implementation.⁶¹

Lack of Equity. The FCTC does not address equity among or within countries. As wealthier countries enforce tobacco control measures, the tobacco industry has increasingly concentrated on marketing to people in LMICs⁶² while also targeting low-income and marginalized communities with the highest smoking rates^{63–65} within countries.

Pandemic Influenza Preparedness Framework

The WHO's most notable soft law instrument, the PIP Framework, uses contract law to bind companies, laboratories, and academic institutions. But it is not a treaty and has a narrow focus limited to pandemic influenza strains. It does not cover, for example, coronaviruses or Ebola viruses. It is unclear whether it applies to genetic sequencing data or only pathogen samples. The UN Commission following the West African Ebola crisis recommended expanding the PIP Framework and transforming it into a treaty,⁶⁶ but these recommendations have not been taken up.

Toward a More Principled Global Health Architecture

Just as past global health crises, such as the AIDS pandemic and the West African Ebola epidemic, have spurred reforms to the global health architecture, COVID-19 offers a historic opportunity for transformative

change. What would be an optimal design for a new global health architecture faithful to key principles of good governance (see Table 2)?

Normative Instruments

Bringing Accountability and Solidarity to the IHR. The 75th WHA established a working group to create a package of IHR amendments to present to the WHA by 2024.⁶⁷ Member states have been supported by the newly created IHR Review Committee, comprising experts in global health security. Amendments should increase states' accountability and the WHO's transparency as well as strengthen international cooperation.

There is scant independent scrutiny of states' compliance with their obligations to build core health system capacities. The Global Preparedness Monitoring Board advocated for "mechanisms for assessing IHR compliance and core capacity implementation, including a universal, periodic, objective and external review mechanism,"⁶⁸ which could include a mandatory self-assessment mechanism, possibly via the WHO Joint External Evaluation. The Universal Health and Preparedness Review mechanism that the WHO is piloting goes beyond IHR core capacities to the metrics of universal health coverage and healthier populations⁶⁹—a major step if it is rigorous and states respond to identified weaknesses through action-oriented, benchmarked action plans with monitoring and reporting on progress, and the international community provides the necessary technical and financial support. The IHR could also provide incentives for countries to build core capacities,⁷⁰ such as matching funds for LMIC domestic investments, raised through mandatory assessments or other innovative financing. This would be one way to give life to the solidarity envisioned by Article 44. That article requires states to collaborate to the extent possible in detecting and responding to public health events covered by the IHR, providing and mobilizing technical, logistical, and financial assistance, including with respect to the core capacities and in developing legal frameworks. The WHO could issue authoritative guidelines on what complying with Article 44 entails.⁷¹

Accountability should extend to the WHO's authority to compel production of information and independently investigate reports of unusual or unexpected health events. Rapid and open sharing of scientific information is crucial for controlling outbreaks before they become full-blown epidemics. Reforms should begin with rules for collecting and openly sharing disease surveillance data.⁷⁰ The WHO

Table 2. Proposed Reforms

A) Targeted amendments to the International Health Regulations (2005):

1. Include compliance mechanisms (e.g., mandatory self-assessment, Universal Health Preparedness Review)
2. Create incentives for state parties to build core capacities (e.g., matching funds for low- and middle-income country domestic health investments via mandatory assessments or innovative financing mechanisms)
3. Strengthen the World Health Organization's (WHO's) authority to compel production of information and independently investigate reports of health events
4. Require state parties to collect and openly share disease surveillance data
5. Empower the WHO to independently source information without requiring it to verify it with the state party concerned
6. Include whistle-blower protections
7. Establish a new compliance committee to review state parties' compliance and report to the World Health Assembly
8. Publish minutes or transcripts of Emergency Committee meetings
9. Publish reasons for WHO trade and travel recommendations
10. Require state parties to share biological samples and genetic sequencing data with the WHO, including access and benefit sharing obligation

Continued

Table 2. (Continued)

A)ii	Develop a robust pandemic treaty
1.	Incorporate the right to health (including principles of nondiscrimination and inclusive participation) and equity as overarching principles
2.	Transform the Access to COVID-19 Tools Accelerator into a permanent, equitable, end-to-end development and delivery mechanism
3.	Restrict export controls and bilateral dealmaking for emergency medical countermeasures
4.	Establish rules that facilitate technology transfer, including national laws that require manufacturers in state parties' jurisdictions to transfer technology, and rules for voluntary licensing and intellectual property waivers
5.	Expand the WHO's power to verify state reports, independently investigate disease events, publish outbreak and surveillance data, and take remedial action
6.	Establish a monitoring and evaluation regime and compliance mechanisms
7.	Channel funding for research and development into medical countermeasures
8.	Promote open access to data, scientific samples, and technologies
9.	Create obligations and incentives for state parties to invest in core health system capacities and universal health coverage
10.	Regulate land management, deforestation, and wild animal markets, implementing a One Health approach
11.	Create data sharing obligations
12.	Expand notification obligations for disease surveillance activities across the human–animal interface
13.	Harmonize treaty obligations with other international legal instruments

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Table 2. (Continued)

A)iii	Strengthen the Framework Convention on Tobacco Control (FCTC) (2003) <ol style="list-style-type: none"> 1. Establish an implementation investment fund for the FCTC 2. Include equity in its principles 3. Require state parties to partner with members of marginalized communities and civil society organizations
A)iv	Initiate a process toward a Framework Convention on Global Health, a global treaty that would create accountability around the right to health, accelerating the right's implementation and advancing national and global health equity
B)i	Reform institutions to realize equity and inclusive participation <ol style="list-style-type: none"> 1. Establish equity as the core operating principle of global institutions for health 2. Require inclusive participation of civil society organizations, members of affected communities, and marginalized populations in global institutions for health 3. States to include members of civil society organizations in delegations to international organizations 4. WHO to issue global guidelines on private sector engagement by health institutions
C)	Global health financing <ol style="list-style-type: none"> 1. Expand sustainable financing for the WHO 2. Provide full political and financial support for the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response 3. Establish an overarching platform for global health financing 4. Develop dedicated funding streams for underfinanced global health priorities

should also be empowered to make independently sourced information available to other states without being required to verify it with the state concerned.⁷² Whistle-blower confidentiality should be guaranteed.

Furthermore, the IHR could establish a new compliance committee^{73,74} to review states' compliance with IHR obligations and WHO recommendations and report its findings to the WHA. States could use mechanisms already possible through the IHR, including arbitration; avenues such as the World Trade Organization (WTO) Dispute Settlement Body if states defy WHO travel and trade recommendations; and human rights mechanisms for human rights violations.⁷⁵ A stronger IHR compliance regime demands inclusion of WHO decision making itself. Emergency Committee deliberations on declaring a PHEIC as well as reasoning behind WHO trade and travel recommendations should be more transparent.⁷³

IHR amendments could also facilitate global scientific cooperation. Rapid sharing of genetic sequencing data and biological samples is critical for developing therapeutics, diagnostics, and vaccines. The IHR should require states to share biological samples and genetic sequencing data with the WHO, building on existing platforms like GenBank and the Global Initiative on the Sharing of All Influenza Data.⁷⁶ The IHR (or a pandemic treaty) must also include equitable access to the fruits of scientific research.

A New Pandemic Treaty. A new pandemic treaty grounded in human rights and equity, equipped with effective enforcement mechanisms, and embodying solidarity would be transformative.

Right to Health. A pandemic treaty should be grounded in the right to health as an overarching principle.⁷⁷ It should incorporate human rights principles of nondiscrimination;⁷⁸ for example, nondiscrimination against undocumented immigrants and prisoners in access to medical countermeasures or pandemic-related social protection programs. The treaty could require pandemic-related decision making and policymaking to be inclusive, encompassing civil society, affected communities, and marginalized populations to ensure outcomes fully address their needs and respect their rights.

Equity. Equitable distribution of lifesaving medical resources should be at the heart of a new international legal instrument,⁸ within countries and ensuring global equitable access to medical countermeasures, technology, know-how, and raw materials needed to develop countermeasures.

One approach would be to transform the ACT Accelerator into a permanent, equitable end-to-end development and delivery mechanism for medical countermeasures, including diagnostics, therapeutics, and vaccines,⁷⁹ and other pandemic-related needs, like personal protective equipment. It would need global buy-in—such as through a pandemic treaty—and support for rules that restrict export controls and the kind of bilateral dealmaking that wealthy countries engaged in to secure medical countermeasures in during COVID-19. The instrument should facilitate technology transfer, commit countries to using nationally available legal tools to require this of domestic manufacturers, and require voluntary licensing or waiving intellectual property rights for pandemic-related technologies.

At the same time, technology transfer and the capacity of LMICs to develop their own medical countermeasures have taken on new importance. Providing regional hubs with the “know-how” and resources to manufacture their own vaccines and therapeutics could free LMICs from the need to ask, and wait, for voluntary donations from high-income countries and the pharmaceutical industry.

Accountability. Building on IHR reforms, a new pandemic treaty could expand the WHO’s power to verify state reports, independently investigate disease events, publish outbreak and surveillance data, and take remedial action.⁷⁸ Along with a thorough monitoring and evaluation regime, the treaty could include compliance mechanisms, from interstate arbitration and individual compliant mechanisms to sanctions.

Solidarity. The new pandemic instrument could channel funding for research and development into medical countermeasures and promote open access to data, scientific samples, and technologies. The instrument’s financing could extend to building core health system capacities, and perhaps reaching support for universal health coverage, given the benefits that will provide to HEPR.

Solidarity needs to extend to the One Health approach. The treaty could address land management, deforestation, and wild animal markets—key drivers of zoonotic disease emergence in humans.⁸⁰ Raising the prominence of the One Health approach would usher in a welcomed paradigm shift from reactive HEPR to primary (or “deep”) prevention focused on the drivers of disease emergence. A new treaty could introduce data sharing and expand notification obligations for disease surveillance activities across the human–animal interface and be harmonized with other treaties like the Convention on Biological Diversity.⁸¹

Beyond Health Emergencies: Enhancing Human Rights, Equity, and Solidarity in the FCTC and a New Right to Health Treaty. The principles of good health governance should infuse WHO normative instruments beyond those addressing health emergencies. The FCTC's governing body should build on its 2021 decision to establish an implementation investment fund. It could build equity into its principles and ensure steps are taken where the fund's resources fail to meet country needs, such as by supplementing voluntary contributions with additional mandatory assessments. Likewise, the FCTC could require states to partner with members of marginalized communities and civil society organizations to ensure that they benefit equally from tobacco control policies and can counter tobacco industry practices targeting them.

A new treaty could advance the right to health throughout health-related policies and actions. A proposed treaty to create accountability for right to health obligations, the Framework Convention on Global Health (FCGH), would establish clear standards and mechanisms around equality, accountability, and participation. These standards and mechanisms would also be aimed at ensuring that laws and policies in all sectors, and from local to global levels, conform to the right to health.⁸²

The process of establishing the FCGH could exemplify bottom-up reform. Human rights organizations and marginalized populations would have a central role at all stages of developing the treaty, from defining its core content through to the negotiating process. Also, government leadership would come from countries that are now at the short end of global health inequities yet are committed to the right to health, such as by their introducing a resolution in the WHO Executive Board and building a coalition supporting the FCGH.

Global Health Institutions

Equity, Inclusive Participation, and Human Rights. Equity is the *raison d'être* of many global health institutions, particularly financing institutions, which fund health needs in LMICs, and should be a core operating principle of *all* institutions acting for global health. Such institutions should build into their missions, operations, and policies the assurance that marginalized populations fully benefit, much like the Global Fund gives focus to at-risk populations. In another practice worth modeling, COVAX reserved 5% of its funds for a Humanitarian Buffer to benefit people in conflict settings or settings controlled by nonstate actors.⁸³

Such a practice could extend to refugees, asylum seekers, internally displaced persons, and stateless people. Another Global Fund practice worthy of emulation is its support for country planning and action to overcome human rights barriers.

Global health institutions should include civil society organizations and members of affected communities in their governance structures, with full voting rights. Doing so would be an important counterbalance to the voice of industry actors in such institutions. Current institutions fall short. Even the Global Fund includes only three nongovernmental organizations and community members among its 20 board constituencies. The WHO has none.

Inclusive governance would perhaps be the WHO's most dramatic change in its history. The WHO is an intergovernmental organization with a state-centric culture. However, there is no inherent reason why the WHA and the Executive Board could not be reimagined to include communities representing diverse regions and health concerns. It would make the WHO far more influential, with civil society advocating for WHO funding in their national legislatures, like the AIDS community does with the Global Fund.

Meanwhile, to protect against corporate influence within global institutions that may tilt global health policies away from robust protection of human rights, states could regularly include members of civil society organizations in delegations to international organizations, both health-focused organizations like the WHO and those affecting health like the WTO, countering the role that corporations may have within these delegations or their ability to influence them from the outside. This would also bring all the other benefits of civil society inclusion, including strong advocates for the right to health and marginalized populations, and ground truth that government officials may lack. Furthermore, the WHO could develop global guidelines on ways in which health institutions engage corporations. For example, corporations might offer views on ways they could contribute to health goals and develop the goals and strategies for doing so themselves.

Financing

Solidarity: WHO. Robust, sustainable financing for the WHO underpins its ability to be the global health leader the world needs. In a historic move, the 75th WHA resolved to increase the WHO assessed

contributions to at least 50% of the agency's base budget (based on its 2022/2023 budget) within a decade.²⁷ WHO members and other donors should strive to provide their additional voluntary contributions fully unearmarked, acting in solidarity with the WHO, rather than leveraging the WHO to advance their own particular health priorities. Next, WHO members should agree to increase assessed contributions to 50% of the WHO's entire budget, and for the 50% level to apply to the current budget, rather than a past budget.

Increasing the WHO's discretion over how it allocates funds would enable the WHO to assist LMICs to develop core HEPR capacities, protect its independence and integrity, and provide underfunded global health priorities the necessary financing. The WHO should include finance ministries in financing and programming activities, encouraging them to invest in the WHO,²⁵ while impressing on them the far-reaching economic harms of health emergencies and productivity costs of ill health. The WHO could also host periodic funding replenishment conferences,²⁵ with civil society participation, to call attention to underfunded global health priorities.

Solidarity: Health Emergencies. COVID-19 demonstrated systematic, global underinvestment in HEPR. Adequate financing could have saved lives, limited the pandemic's socioeconomic fallout, and prevented global economic turmoil. Countries should provide full political and financial support for the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response.⁸⁴ Funding should be secured from all countries, with higher-income nations contributing more, primarily from nonofficial development assistance budget lines.

Solidarity: Beyond Infectious Diseases. Whereas rapid injections of capital will be needed to prevent health emergencies from expanding, long-term, sustained funding is required to achieve universal health coverage and address the broader social, commercial, and political determinants of health.

However, current global health funding institutions are narrowly focused. Vaccine-preventable diseases have a dedicated funding facility in Gavi, as do HIV, tuberculosis, and malaria, via the Global Fund and Unitaid. CEPI, too, focuses on infectious diseases. Yet noncommunicable diseases, injuries, and mental and physical disabilities have no such dedicated institution or funding stream. Neither do health systems nor antimicrobial resistance nor universal health coverage. A reformed global health architecture would develop dedicated funding streams to

fill these and other gaps. More ambitiously, a single health financing institution or platform could serve as an umbrella for dedicated institutions and streams that are tailored to their mandate and may even extend to underlying determinants of health such as clean water and adequate sanitation. An agreed financing framework, linked to that umbrella institution, could ensure more resources overall, tied to need rather than simply spreading too little funding across health priorities.

Effect on National Health Systems

Ultimately, whether people receive high-quality health services comes down to national health systems. The global health governance reforms proposed in this paper would help drive national systems that embody good governance. A more effective WHO would benefit the health of all countries, helping enable populations everywhere to realize the highest attainable standard of health.

Systems of global equitable distribution, such as for medical countermeasures, would support national health systems in protecting their populations. Global health financing solidarity would reduce LMIC financing gaps and improve health services. Building national equity requirements into legal instruments like a pandemic treaty, and enhancing such requirements for global financing institutions, would create more equitable health systems, reducing domestic health inequities. Global health instruments could encourage further steps toward domestic health equity, such as developing national health equity action plans.⁸⁵

A Global Health Architecture for All

Vast inequities in health access and outcomes, overwhelmed health systems, and fractured national responses underscore what was clear even before COVID-19: the global health architecture is falling short. A well-functioning health architecture, rooted in principles of good governance and undergirded by the right to health, would engender trust in institutions and political support for health, creating a virtuous cycle of funding and support.

The choice is ours. We could accept a global health architecture that varies in its adherence to those principles, with gaps in law and financing, or we could use the catastrophe of COVID-19 to remake

our institutions and systems to protect and promote the health of all populations everywhere.

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Appendix

Table of Abbreviations

Access to COVID-19 Tools Accelerator	ACT Accelerator
Coalition for Epidemic Preparedness Innovations	CEPI
Framework Convention on Global Health	FCGH
Framework Convention on Tobacco Control	FCTC
Health Emergency Preparedness and Response	HEPR
International Covenant on Economic, Social and Cultural Rights	ICESCR
International Health Regulations (2005)	IHR
Low- and Middle-Income Countries	LMICs
Pandemic Influenza Preparedness Framework	PIP Framework
Public Health Emergency of International Concern	PHEIC
United Nations	UN
United Nations Children's Fund	UNICEF
World Health Assembly	WHA
World Health Organization	WHO
