

Achieving Global Vaccine Equity: The Case for an International Pandemic Treaty

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This paper presents an ethical argument in support of an international Pandemic Treaty. It argues that an international Pandemic Treaty is the best way to mark progress on global vaccine equity and broader issues of global pandemic preparedness and response which came to light during the coronavirus disease 2019 (COVID-19) pandemic. Section I evaluates principles of multilateral charity, national security, and international diplomacy standardly invoked in debates about global vaccine allocation and argues that these approaches fall short. Section II explicates notions of solidarity, duties to the least well-off, and mutual aid as ethical values more fitting for an era of emerging infectious diseases. Section III relates the discussion to an international Pandemic Treaty and presents legal, pragmatic, and ethical reasons to support it. The paper concludes that in an interconnected world, fair sharing of vaccines between nations is morally mandatory.

INTRODUCTION

Less than a year after the United Nations (UN) declared coronavirus disease 2019 (COVID-19) a pandemic, vaccines against the novel coronavirus were developed, emergently authorized, and first shots given. This astounding feat contrasts with the 8-to-15-year timeline more typical for developing and bringing to market a new vaccine [1]. Yet, despite swift development, COVID-19 vaccines have been slow to reach many people. As of March 17, 2022, just 9.9% of people in low-income countries have completed the initial COVID-19 vaccination protocol, compared with 73.7% of people in high-income countries (HICs) [2], leading some to say that a person's country of origin is among the most important factors de-

termining access to COVID-19 vaccines [3]. Disparities within nations are also stark, with differences appearing based on morally arbitrary features like an individual's racial/ethnic status, wealth, and zip code. For example, in the US, even though Black and Latinx individuals are more likely to be infected, and if infected, more likely to become severely ill and die from COVID-19 [4]. Access to vaccines for these groups is slower than the rest of the population due to social, geographic, economic, environmental, and other factors that adversely impact vaccine acceptance and access [5].

With vaccine supply now outpacing demand within HICs, disparities in access have largely diminished within HICs; yet, global vaccine scarcity has persisted and disparities between rich and poor countries are forecast

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Abbreviations: COVID-19, coronavirus disease 2019; LMIC, Low- and middle-income country; IHR, International Health Regulations; INB, International governing body; HIC, High-income country; UN, United Nations; WHO, World Health Organization.

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to continue until 2023 [6]. Impediments to global vaccine access for low-income and lower middle-income countries include advance market agreements that reduced global vaccine supply, allowing wealthier nations to secure 150-500% of their predicted need [6]; intellectual property protections that prevent sharing licenses and taking other steps to expand global vaccine manufacturing and technology transfer [7]. In addition, there is insufficient funding, accountability, and enforcement powers within existing global health structures to ensure equitable vaccine distribution between nations. For example, the UN and organizations under its auspices (eg, the World Health Organization (WHO), World Trade Organization, International Monetary Fund, UN Children's Fund, and World Bank) lack the ability to ensure compliance with recommendations; monitor, investigate and remediate harmful actions; require transparency and exchange of scientific information; and ensure global cooperation in the equitable allocation of medical resources, such as vaccines [8].

Evidence suggests that the global public has similar preferences for global sharing of vaccines. In a December 2020 study of eight HICs and five LMICs, Duch et al. reported citizens of all 13 countries expressed similar preferences for global allocation of COVID-19 vaccines, such as assigning priority to those at greatest risk of infection and greatest risk of severe disease and death; they also reported citizens of all 13 countries preferred publicly funded vaccine programs rather than voluntary methods reliant on philanthropy [9]. Nonetheless, the means to carry out global public preferences is stymied without global structures in place to execute these functions.

This paper addresses global vaccine distribution by presenting an ethical argument in support of an international Pandemic Treaty as a way to mark progress on global vaccine equity and broader issues of pandemic preparedness and response. The proposal is one step closer to realization. Following a December 1, 2021 Special Session of WHO member states, a consensus decision was reached to establish an intergovernmental negotiating body (INB) to draft and negotiate a WHO convention, agreement, or other international instrument on pandemic prevention, preparedness, and response [10]. The INB will deliver a progress report to the 2023 World Health Assembly, with final recommendations presented to the 2024 World Health Assembly.

While an international Pandemic Treaty finds legal backing in the constitution of the WHO and has historic precedent in both the Framework Convention on Tobacco Control and the International Health Regulations (IHR), its ethical basis is less clearly articulated. The initial call for an international Pandemic Treaty, from a group of 25 heads of government and the WHO Director-General, expressed a moral commitment to “ensuring universal

and equitable access to safe, efficacious and affordable vaccines, medicines and diagnostics for this and future pandemics” and urged nations and stakeholders of all types to foster an “all-of-government and all-of-society approach, strengthening national, regional and global capacities and resilience for future pandemics” by working together towards a new international treaty for pandemic preparedness and response [11]. While the group appealed to “the spirit of solidarity and cooperation,” they did not offer a sustained ethical argument.

This paper fills the gap, giving an ethical justification for an international Pandemic Treaty. Section I evaluates principles of multilateral charity, national security, and international diplomacy standardly invoked in debates about global vaccine allocation and argues that these approaches fall short. Section II explicates notions of global solidarity, duties to the least well-off, and mutual aid as ethical values grounded in justice that are more fitting for the era of emerging infectious diseases we are now in. Section III relates the discussion to an international Pandemic Treaty and presents legal, pragmatic, and ethical reasons to support it, along with key points that must be included. The paper concludes that in an interconnected world, fair sharing of vaccines between nations is morally mandatory.

I. MULTILATERAL CHARITY, NATIONAL SECURITY, AND INTERNATIONAL DIPLOMACY

During the COVID-19 pandemic, health disparities were evident in the distribution of vaccines both within and between nations. “Health disparities” are systematic, plausibly avoidable health differences that adversely affect socially disadvantaged groups [12]. Public discourse on global vaccine allocation often considers health disparities through the lenses of multilateral charity, national security, and international diplomacy. While these perspectives have pragmatic, political, and economic rationale, this section's focus is vaccine equity. It offers an ethical critique of the values implied by each approach.

Multilateral Charity

Appealing to voluntary benevolence to support more equitable global vaccine allocation aligns with the *de facto* method in place today. The current approach to vaccine equity relies on COVAX, a partnership between two philanthropic organizations (CEPI and Gavi) and the WHO to equitably distribute vaccines and ensure access for low- and middle-income countries (LMICs). COVAX (which is the vaccines pillar of the Access to COVID-19 Tools Accelerator) affords a voluntary mechanism for wealthy countries to help vaccines reach poorer nations while si-

multaneously protecting their own citizens. COVAX set an initial goal of delivering 2 billion doses of vaccines to poorer nations by the end of 2021, with each participating country receiving sufficient doses to vaccinate its highest priority populations and 20% of its general population.

COVAX initially coaxed wealthy countries to participate by functioning like an insurance scheme. Early in the pandemic, when COVID-19 vaccine candidates were still being trialed, wealthy countries had no way of knowing if the candidates they had invested in would be effective; overall, just 20% of clinical trials of pharmaceutical products result in a marketable product [13]. Against this backdrop, many high-income nations were persuaded to invest in COVAX in exchange for priority access to a portfolio of vaccine candidates COVAX was purchasing by pooling resources from many countries. Baked into this approach was a form of philanthropy sometimes termed, *philanthrocapitalism* [14], because it emulates the way business is done in capitalist economies, offering investors a “return on investment” in exchange for their donations. Early in the pandemic, COVAX offered returns to wealthy countries in the form of priority access to globally scarce future vaccines.

The downsides of COVAX are first, its power to persuade wealthy countries to fulfill their pledges was undercut once effective vaccines became available and the insurance model no longer applied. Once countries had effective vaccines against the novel coronavirus, they had little incentive to invest in a broad portfolio of vaccine candidates. Lacking independent powers of enforcement, COVAX was unable to ensure countries made good on their promises. According to The People’s Vaccine, just 14% of the 1.8 billion doses promised have been delivered to LMICs to date [15].

Second, COVAX deflected efforts to initiate deeper structural changes to the global architecture governing vaccine development, manufacturing, and allocation. Early in the pandemic, COVAX diverted attention from an historic opportunity involving national governments, pharmaceutical companies, the National Institutes of Health, and the WHO. These parties were reportedly engaging in negotiations to put in place a system for distributing vaccines that would curb the profits of the pharmaceutical industry and reign in the power of wealthy purchasers by establishing a pooled resource of COVID-19 products that would supersede a global pharmaceutical industry based on proprietary science and market monopolies [16]. COVAX overtook these efforts, which might have afforded a more enduring means to address global vaccine disparities. Harman et al. characterizes what transpired this way,

“the charitable model of COVAX becomes the smokescreen for inequitable systems. When states are asked about their stockpiling, they point to COVAX. When pharmaceutical companies are asked about IP [intellectual property], they point to COVAX or their low-cost commitment. The focus on a donor-based model of aid in achieving vaccine equity has distracted leaders from the ideologies, economic systems and trade regulations that leave access to medicine to the forces of the marketplace rather than global health priorities ([17], p. 2).”

Continuing to rely on charity to ensure global access to lifesaving vaccines during a public health emergency begs the question of what we owe people beyond our borders (a point elaborated in Section II). It signals that vaccine sharing is a wholly voluntary undertaking, rather than a matter of justice and rights.

National Security

A second way of framing global vaccine allocation is national security. A security framework builds on the intuitive idea that “the pandemic isn’t over anywhere until it’s over everywhere.” It holds that as long as the SARS-CoV-2 virus replicates in unprotected regions, new variants of concern can emerge, potentially reducing the protection afforded by vaccines or leading to breakthrough infections and “vaccine resistant” variants [18]. The Omicron SARS-CoV-2 variant of concern, which became dominant in many countries during early 2022, and its subvariants, BA.1 and BA.2, provide support for a national security model, demonstrating that if the SARS-CoV-2 continues to spread and mutate, people everywhere are at risk. Hence, protecting people beyond one’s borders is required to keep one’s own citizens safe.

The limitations of this way of thinking are first, experts now predict that SARS-CoV-2 will become endemic [19], reappearing annually alongside H1N1 and other respiratory viruses, such as rhinovirus, coronavirus, respiratory syncytial virus, and parainfluenza, referred to as the “common cold.” If this occurs, the argument for population-level protection seems elusive, partially undercutting the ethical basis for helping one’s neighbor.

Second, appealing to national security does not address the ethical importance of prioritizing at-risk groups, such as healthcare providers, older adults, and people living in congregate settings, over people at low risk of infection or severe disease. It speaks only to achieving threshold protection and would presumably permit inequities above and below the threshold. For example, it is consistent with a national security model to allocate third or fourth doses of vaccines to low-risk groups (like healthy children) in HICs before allocating first doses to high-risk people (like older adults) in LMICs, which

some argue is ethically indefensible [20].

International Diplomacy

Public discourse on vaccine allocation also invokes a third framework, vaccine diplomacy, which refers to international cooperation for the purpose of controlling infectious and tropical diseases [21]. The standard strategy of global health diplomacy has been a Westphalian model, which involves bilateral and multilateral treaties between states. This was reflected, for example, in both the 2005 WHO Framework Convention on Tobacco Control and the IHR. An advantage of a diplomacy model is that it can connect vaccine equity to broader development goals. For example, the Millennium Development Goals located global health squarely in the realm of international diplomacy.

The limits of diplomacy type arguments for achieving vaccine equity are first and foremost that these arguments are designed to engage other nations for the purpose of achieving a state's own interest. This gives HICs, which have greater vaccine purchasing power, an upper hand. It can serve to reinforce and perpetuate "the long history of powerful countries securing vaccines and therapeutics at the expense of less-wealthy countries..." ([22], p. 1281). Untethered from an ethical framework, international diplomacy can go awry, becoming an opportunistic means to accrue soft power, rather than a means to promote equity and justice. This was evident during the COVID-19 pandemic when China used its Sinopharm COVID-19 vaccine to enhance its influence with Pakistan, Cambodia, Sierra Leone, and Zimbabwe; India donated supplies of AstraZeneca to win friends and support with neighboring Bangladesh, Myanmar, and Nepal; and Israel expressed willingness to pay Russia to send its Sputnik V vaccine to the Syrian government as part of prisoner exchange deals. Jennings notes, "the prospect for global health becoming a new arena for global power competition and rivalry" is not a solution, but a source of ethical and health concern [23]. The lessons learned from the COVID-19 pandemic are that for diplomacy to work in the service of equity it must be part of a larger ethical commitment to promoting health for all.

A second limitation of diplomacy is that the scale and severity of COVID-19 requires an all-of-society effort rather than a traditional statist framing. Future diplomacy must incorporate multiple stakeholders, including not only states but non-governmental organizations, civil society groups, for-profit pharmaceutical companies, universities, and international philanthropic organizations, among others.

II. SOLIDARITY, DUTY TO THE LEAST WELL-OFF, AND DUTY OF MUTUAL AID

An optimal ethical framework for pandemic response must be truly "global," reflecting globally diverse values so that it can gain traction among multiple groups [24,25]. It also must recognize needs and capacities pertinent to LMICs, where most of the world's people reside [26,27]. Relatedly, it should reflect insights from authors outside high-income regions of the Global North, so that it gains legitimacy and represents their interests [28]. Accomplishing these desiderata requires a multi-value approach. Without attempting to provide a comprehensive assessment, this section identifies core values integral to a multi-value ethics framework that supports global vaccine equity.

Global Solidarity

The appeal to solidarity present in the initial call for a pandemic treaty can be usefully explicated by appealing to sub-Saharan African ethics. In African thought, solidaristic thinking encompasses both the existential fact of human interconnectedness and the ethical injunction to relate cooperatively. Thus, interconnected parties qualify as solidaristic only if their interactions are "cooperative, rather than competitive, and symbiotic, rather than predatory" ([25], p. 6). These ideas are apropos in an era of emerging infectious disease, as increased linkages between people, especially jet travel, facilitate disease transfer. The normative injunction to work cooperatively to prevent disease transfer can be expressed in terms of an *ethic of global solidarity*, which enjoins us to see our national interests as caught up with the interest of all humanity and work together to ensure protective measures are widely disseminated. The core idea is expressed by the African saying, "I am because we are" ([29], p. 106). Mbiti puts the point this way: "whatever happens to the individual happens to the whole..., and whatever happens to the whole happens to the individual" ([29], p. 106).

Increasingly, solidarity has been understood as a requirement of justice, not charity. This construal implies that solidarity is morally mandatory, enforceable, and extends impartially to all, making it distinct from philanthropy-based principles [30]. For example, Gould suggests this view when describing solidarity as a "requirement to realize justice through solidaristic activity [which] arises from people's interdependence and the fact that their free development as agents requires a set of conditions, both material and social" ([31], p. 545). Jecker and Atuire argue for viewing solidarity as a duty of justice on the grounds that 21st century global health threats, like the rise of emerging infectious diseases and zoonoses, climate change, and antimicrobial resistance, "foreground people's relationality, their ability to harm and be harmed by others" [32]. Others defend solidarity as justice in the context of the COVID-19 pandemic, pointing to historical injustices in the global basic struc-

ture that led to current inequities [33].

Duty to the Least Well-off

So understood, solidarity lends support to a special *duty to the least well-off*, because protecting everyone in an interconnected group requires strengthening the weakest link. In the context of COVID-19 and future pandemics, special obligations to the least well-off can be translated as aiding countries that require supportive partnerships to enable vaccine supply and delivery. More broadly, duties to the least well-off have been translated in terms of the “responsibility to protect,” a doctrine first formulated in response to human rights atrocities in Rwanda, Kosovo, Bosnia, and Somalia during the 1990s involving ethnic cleansing and genocide [34]. The doctrine requires protecting citizens of another state when the state is unwilling or unable to halt or avert serious harms that its people are suffering. Liu et al. specify and apply this criterion to a pandemic context using the metric of having or lacking core capacities, such as the ability to purchase or develop vaccines; transport and administer them while sustaining health system capacity in other areas; and treat patients who become critically ill [35].

Meeting duties to the least well-off necessitates engaging deeply with people and communities. For example, during an infectious disease outbreak it requires attending to syndemic features, which include not only the infectious pathogen (ie, the SARS-CoV-2 virus) but social, economic, environmental and political milieus that create pathways for the pathogen to spread [25,36]. A syndemic approach regards equitable vaccine access as one component among many needed for an effective pandemic response. This approach views with suspicion ethical principles that regard individuals as autonomous agents wholly separate from their environs [37-39]. It aligns well with African philosophies that situate persons in communities and consider duties and rights in the context of historical and social conditions [40-42].

A duty to the least well-off is often considered a requirement of justice, and in this respect, it differs from duties of benevolence that are charity-based. For example, Rawls regards it as comprising part of a principle of justice that would be chosen under fair conditions for deliberation [43]. In a pandemic context, a duty to the least well-off rejects vaccine distribution schemes that rely on voluntary charity in favor of those that are enforceable. Nyabola puts the point this way: “There is a perverse logic embedded in the international order that needs poor countries to be on their knees” [44].

A challenge associated with operationalizing a duty to the least well-off is formulating a metric for assessing and independently monitoring state capacities in order to provide an evidence base for determining which states qualify for aid. This kind of assessment will need to be

done on an ongoing basis as states develop and their capacities change. Long-term goals should include supporting capacity building and national self-sufficiency.

Duty of Mutual Aid

An ethic of global solidarity also underpins a broader societal duty of mutual aid that arises from human interdependency. It recognizes the fact that globalization creates interdependences on a scale not seen previously. Such interdependence is forcefully conveyed by the Akan maxim, *wo nsa nifa hohorow benkum, na benkum nso hohorow nifa* (The right arm washes the left arm, and the left arm washes the right arm). In a globally interconnected community, *an ethic of mutual aid* is morally mandatory because risks affect the whole interconnected system of which each is a part.

Spade delineates mutual aid as a form of “collective coordination to meet each other’s needs” [45]. It uses bottom-up strategies for change to directly provide for people and build alternative ways in which people can get their needs met [46]. Vaccine distribution modeled on Spade’s approach might include, for example, engaging trusted community leaders to address vaccine hesitancy or getting shots in arms by coordinating transport, offering childcare, and facilitating the use of accessible sites like churches, grocery stores, and “pop-up” vaccine clinics.

Unlike charity, mutual aid supports self-determination for people in crisis and resists “savior narratives” ([46], p. 142), [47]). Unlike public welfare programs that target “deserving” people, mutual aid creates “spaces where [all] people come together on the basis of... shared need” ([45], p. 17). Unlike non-profit foundations, which empower private donors to shape social policy [48], mutual aid empowers citizens by connecting them with one another. Unlike relief programs that spring up to manage periodic crises, then subside [49], an ethic of mutual aid generates an ever-expanding commitment to justice based on contact with the complex realities of injustice [45].

A further way to delineate mutual aid is to emphasize the implied idea of reciprocity. *Reciprocity* spotlights how different policies “treat” partners who occupy unequal positions [31]. For example, in global health alliances, reciprocity calls for mutually engaging all parties in a collective undertaking and fairly recognizing each member’s contributions, especially those made by groups with fewer resources and less power. In the context of the COVID-19 pandemic, reciprocity presupposes that each nation has something to contribute to long-term vaccine equity. For example, in low resource settings, contributing to vaccine equity may take the form of building capacity for vaccine manufacturing and strengthening healthcare systems. By recognizing and supporting all efforts, mutual aid incentivizes each country to do their

Table 1. Standard & Reframed Cross-Border Responsibilities

Standard	Principles	Definitions	Advantages	Disadvantages
	Multilateral charity	Voluntary benevolence justifies reducing vaccine disparities	All-of-society effort Recognizes existing contributions	Voluntary Non-comprehensive Unenforceable
	National Security	Global systemic risk justifies global vaccine sharing	Underscores seriousness of threat	Population-level immunity elusive Overstates threat of variants Priorities beyond threshold protection
	International Diplomacy	Advancing state interests justifies targeted vaccine sharing	Integrates with larger diplomatic efforts Strengthens alliances	Voluntary Non-comprehensive State-centric
Reframed	Global Solidarity	Increased linkages between people mandates a general duty to protect the whole of which each is a part	Recognizes globalization Humanity-centered Multilateral	Requires expansion to address zoonoses
	Duty to least well-off	Unequal state capacities justify helping low resource states	Compatible with responsibility Capacity-based	Requires metric for assessing capacities
	Duty of mutual aid	Diverse abilities justify each state or group contributing what they can	Compatible with reciprocity Recognizes all contributions	Requires monitoring and enforcing compliance

part. It builds trust and social capital to address long-term vaccine equity.

Table 1 summarizes the analysis of cross-border responsibilities set forth in Sections I and II, including advantages and disadvantages of standard and reframed accounts.

III. AN INTERNATIONAL PANDEMIC TREATY

How do the values outlined in Section II translate into practical steps to achieve a more equitable global distribution of vaccines? More specifically, how does an international Pandemic Treaty accomplish vaccine equity and realize these values?

Legal Justification

The idea of using the treaty powers of the WHO to address global vaccine equity and general pandemic preparedness was first proposed by the President of the European Council, Charles Michel, in December 2020; Michel called for a general treaty “anchored in collective mobilisation and solidarity” with the objective “to do better in all areas where we recognize it is in our interest to strengthen cooperation” [50]. Pre-pandemic, a Lancet Commission recommended utilizing international law to promote global health justice, calling strong legal capacity “a key determinant of progress towards global health and sustainable development” ([51], p. 1858). The legal basis for a Pandemic Treaty exists in the UN Charter,

which includes among its purposes, “achieving international cooperation in solving international problems of an economic, social, cultural, or humanitarian character and promoting and encouraging respect for human rights and for fundamental freedom without distinction as to race, sex, language or religion” ([52], p. 3). In contrast to “soft rules,” such as declarations and resolutions, international laws that stem from treaties are generally binding on states [51].

As noted (in the Introduction), the INB is the negotiating body responsible for proposing an international instrument for pandemic prevention, preparedness, and response to the World Health Assembly by 2024. *It remains to be seen* whether this group will seize this historic opportunity to rethink global health justice, establishing a path to global vaccine equity for future pandemics. The paradigms of multilateral charity, national security, and international diplomacy in use today are antithetical to this goal. The INB’s charge, which is prioritizing “the need for equity” and operationalizing “the principle of solidarity with all people and countries,” suggests an opening for a new model of global health justice, premised on global solidarity and incorporating duties to the least well off and duties of mutual aid ([10], p. 1).

Global vaccine equity will remain elusive unless it is operationalized through binding cross-border obligations that (1) empower WHO member states by securing independent stable financing; (2) waive intellectual property protections for pandemic-related medical products during global health emergencies and protect public policies

from industry interference; (3) build capacity in LMICs by transferring technologies and know-how related to vaccine manufacturing and strengthening national health systems; (4) ensure compliance with international guidelines through independent monitoring, inducements, and penalties; and (5) utilize multi-sector platforms, including partnering with local communities, to support last-mile efforts to get shots in arms.

Pragmatic Justification

The pragmatic argument for considering a Pandemic Treaty to address vaccine equity and overall pandemic readiness is premised on the sober recognition, noted previously (in Section II), that global interconnectivity creates not only systemic benefits, but systemic risks. Globalization, “a process driven by and resulting in increased cross-border flows of goods, services, money, people, information, technology, and culture” requires collective action and international coordination to manage ([53] p. 10). It would be farfetched to imagine otherwise, ie, that threats to health like emerging infectious diseases can be managed nationally or contained over the long-term by closing national borders. Commenting on this, Goldin and Mariathasan point out that “Any pathogen that is carried through a major airport hub will be global within three days at the most” and conclude that there is an urgent need for building capacities to address this, including rapidly developing and scaling up vaccines ([53], p. 167). The new landscape of public health demands legally binding understandings between multiple global actors involved in global health governance. The ethics of solidarity and cooperation affords the ethical underpinning for such action and the WHO treatise instrument provides the legal means to operationalize it.

Nikogosian and Kickbusch propose three criteria that must be met to warrant a global health treaty: “the problem should be of global concern and growing magnitude; transnational factors must play a dominant role; and existing instruments must be inadequate” ([54], p. 1). Measured against these criteria, how does a Pandemic Treaty fare? The first two criteria are clearly met; evidence that the third criterion is met stems from inadequacies with existing international laws, such as the IHR, laid bare during the COVID-19 pandemic, including long delays in vaccine reaching LMICs. The IHR, which represents the principal legal framework currently governing global pandemic response, was adopted by the World Health Assembly in 1996 and revised in 2005. It aims to “prevent, protect against, control and provide a public health response to the international spread of disease in which to avoid unnecessary interference and international traffic and trade” ([55], p. 1). It has been tested during numerous infectious disease outbreaks, including the H1N1 influenza, polio, Ebola virus disease in Africa, Zika virus in the

Americas, and most recently during the COVID-19 pandemic. Experience has made apparent shortfalls on several fronts, including IHR’s inability to ensure adequate compliance [56]; financing [57]; data sharing and transparency [58]. Furthermore, IHR failed to advance health equity, including adequately assisting developing nations [59]. Finally, during the COVID-19 pandemic, IHR was unable to achieve its most basic mission, namely, containing the spread of a severe public health threat while avoiding unnecessary intrusion in global traffic and trade.

It could be argued that rather than putting in place a Pandemic Treaty, we should instead modify IHR to address these and other concerns. However, this approach faces decisive challenges. Not only would revisions take years to accomplish (as the 2005 revisions showed), the threat of emerging infectious diseases raises unique challenges due to the speed, length, and magnitude of disease spread [60]. A dedicated instrument is therefore required to complement (rather than replace) IHR.

Ethical Justification

A central part of the ethical argument for a Pandemic Treaty is that it can better achieve vaccine equity than current approaches, which are focused on multilateral charity, national security, and international diplomacy.

Multilateral charity conceives of the duty to share vaccines with low-income countries as a purely voluntary act of benevolence. This leaves it open to rich nations whether or not to engage in sharing vaccines. Charity is also not comprehensive and can leave some groups unprotected; for example, if the focus is on access to vaccines for low-income nations, this can leave some middle-income nations without vaccine access [61]. Duties of justice better support equitable sharing of vaccines because unlike duties of charity or benevolence, they are non-elective and enforceable by law; and they are applied impartially without favor to people in one’s own nation or group [30].

National security and international diplomacy also fail to promote vaccine equity because of their emphasis on “protecting one’s own.” Even if some degree of priority to one’s own people is ethically warranted, during an infectious disease outbreak unfettered nationalism can be self-defeating and deadly. Since the novel coronavirus does not respect borders, allowing the virus to spread anywhere puts people everywhere at risk, potentially prolonging the pandemic and jeopardizing the health of vaccinated and unvaccinated people alike.

The values of solidarity, helping the least well-off, and mutual aid are a more fitting response to the globally interconnected world in which we live. They give grounds for rejecting forms of vaccine nationalism that give unqualified or excessive priority to one’s own citizens. For example, on one version of vaccine national-

Table 2. Legal, Pragmatic, and Ethical Arguments for an International Pandemic Treaty

	Arguments
Legal	Authority based in UN Charter Treaty preferred over “soft rules” due to enforceability Convention Framework for Tobacco sets a positive precedent
Pragmatic	Pandemics are a problem of international concern Transnational factors play a dominant role Existing instruments have proven inadequate
Ethical	Human-centered global solidarity justifies vaccine cooperation Duty to help the least well-off justifies helping based on capacity to vaccinate Duty of mutual aid justifies reciprocity “Fair-minded influenza standard” strikes a fair balance national and cross-national duties

ism, each nation is justified in prioritizing its own citizens until COVID-19 “becomes more like a bad influenza season in terms of mortality, other health effects, and public health restrictions—then there is no longer an ethical justification for retaining vaccine doses for country residents” ([62] p. 904). By contrast, an ethic of solidarity (and the associated values of helping the least well-off and mutual aid) give grounds for what Jecker and Lederman call “a fair-minded influenza standard,” which holds that “until COVID-19 resembles a bad influenza season, governments should work cooperatively, sharing vaccines” ([20], p. 3). A Pandemic Treaty provides a practical tool for fulfilling the requirements of a fair-minded influenza standard and preparing the world for future pandemics.

Table 2 summarizes the legal, pragmatic, and ethical arguments for an international Pandemic Treaty set forth in Section III.

CONCLUSION

In conclusion, global inequities in access to lifesaving COVID-19 vaccines violate global health justice. The values of global solidarity, helping the least well-off, and giving mutual aid comprise an ethical argument for remedying this. A promising avenue to realize global vaccine equity is harnessing the power of international law granted by the UN Charter to create an international Pandemic Treaty, with powers of funding and enforcement and the ability to assist with broader challenges that lie ahead.

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