



MOVING FROM WORDS TO ACTION: IDENTIFYING POLITICAL BARRIERS TO PANDEMIC PREPAREDNESS

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Introduction: preparedness requires shifting political constraints

Current political barriers make it impossible to fully prepare for the next pandemic. The task of building preparedness is therefore twofold. Policymakers, political leaders, and health advocates need to take immediate steps to strengthen resilience to the extent possible within existing constraints. At the same time, they must work to change those constraints progressively. To do so, policymakers, political leaders, and health advocates need to look beyond the traditional stakeholders engaged in public health and build broader coalitions that can wield political power to drive deeper shifts. Preparedness efforts must also look beyond technocratic or “crisis management” views of public health and consider the broader political and social systems in which they are embedded, and which ultimately shape their effectiveness.

Throughout the COVID-19 crisis, political dynamics have been amongst the most powerful drivers of health outcomes globally, nationally, and locally. Geopolitical tensions have made it more difficult to coordinate across countries, and domestic tensions have reduced the effectiveness of national responses.

Political analysis is therefore critical to overcoming barriers to preparedness. Understanding, from a public health or epidemiological perspective, what decisions policymakers *should* take must be married to an evidence-based analysis of whether policymakers *will* or *will not* take certain decisions. Real preparedness will not be built on abstract exhortations to summon “political will,” but rather requires a sophisticated understanding of the conditions under which certain political dynamics can push toward--or against--decisions that build preparedness. Because current political dynamics present formidable barriers to adequate policies, real preparedness also requires strategies that can shift political constraints over time. Designing policy recommendations accordingly can help build “an immune system for the body politic” ([Hale 2020](#)).

The Global Preparedness Monitoring Board (GPMB) has published reports on pandemic readiness in 2019 and 2020 ([GPMB 2019](#), [GPMB 2020](#)). Despite the ongoing COVID-19 pandemic, many of these recommendations have not been taken up. The GPMB’s 2021 report seeks to understand why, and to propose ways to break the barriers.

This memorandum surveys political barriers to pandemic preparedness. It is rooted in a brief review of 10 priority recommendations, mostly focused on international policy, identified by GPMB (see Table 1 below) and is structured around five categories of political dynamics that affect readiness. This brief memo is not intended as a comprehensive analysis of each of the 10 areas, but rather aims to inform the GPMB report.

Table 1: Political barriers and selected recommendations

Categories of political barrier	Selected recommendations
<ol style="list-style-type: none"> 1. Domestic dominance 2. Multilateral gridlock 3. Short-termism 4. Donor-recipient dynamics 5. Building resilient health systems 	<ol style="list-style-type: none"> 1. Advance agreements for vaccine distribution 2. Contingency fund for public health emergencies 3. Agreement on sharing viruses and access to vaccines 4. Strengthen periodic review of compliance with IHR core capacity requirements 5. Assist developing countries to build research, manufacturing, and therapeutic capacity 6. Mobilize financial support for IHR core capacities 7. Increase assessed contributions to WHO by 10 percent 8. WHO fund for research, diagnostics, and therapeutics 9. UN high-level council on global public health crises 10. Summit on global public health crises

Political barriers to preparedness

To facilitate discussion, we group the political dynamics around pandemic preparedness into five barriers that apply across multiple topics and also across the international (including both multilateral and regional) and domestic scales. This typology is not intended to be comprehensive.

In each of the five categories below, it is important to distinguish ongoing versus conjunctural dynamics. The current COVID-19 crisis has mixed effects on the political dynamics identified below. Some of the barriers are lessened by current pandemic (e.g. low salience) while others are (at least in some contexts) exacerbated (e.g. capacity, political opposition, short-termism).

For each barrier we cite examples of solutions that could help to address it. These solutions include both those feasible under present political constraints, and those that are likely not politically achievable in the short-run. We include both types of solutions to highlight the importance of developing strategies to shift political constraints over time. A stark lesson of the COVID-19 crisis is that we will not achieve resilience without deep shifts in how states interpret their sovereignty, and in the social contract between governments and publics around the world. These will not change overnight. But highlighting the scale of transformation needed is an important first step toward building a political strategy for changing what is feasible.

Domestic dominance

As transborder phenomena, pandemics functionally require coordination and cooperation across national boundaries to, for example, share early information regarding new pathogens, regulate international travel to ameliorate risk, or transfer PPE, vaccines, or treatments to places that lack them. Despite this functional need, and despite the significant architecture of global health governance, the present

crisis demonstrates how reactions to COVID-19 have been strongly driven by national interests and domestic political concerns.

The pre-eminence of domestic interests is a structural condition of an international system consisting of sovereign states. However, states create international institutions to help them coordinate and cooperate to better achieve their interests. Under certain narrow conditions, international institutions can constrain state behaviour. For example, if there is a consensus across powerful states, they can shape other states' incentives to follow international rules through carrots and sticks, as in the nuclear proliferation regime (powerful states are relatively insulated from such pressures). For countries more dependent on foreign aid, international constraints may exert greater influence, but this does not necessarily translate into domestic ownership (see below), and so faces limits on what greater influence can achieve. Alternatively, states may have an incentive to accept certain international constraints voluntarily in order to elicit reciprocal concessions from other states, as in the global trade regime. Predominantly, though, international institutions do not seek to constrain state behaviour but rather, less ambitiously but quite importantly, aim to facilitate exchange and coordination.

Because preparedness often involves taking commitments or actions in the present to shape behaviour in the future, states face an additional time inconsistency challenge with making binding international commitments in the realm of pandemic preparedness. States may commit themselves to a certain set of policies with genuinely pro-cooperation intentions in advance of a pandemic, but when the crisis strikes they may find domestic interests become much more salient and decisive. While breaking prior commitments may involve some reputational cost or institutional friction, such costs are unlikely to significantly alter state behaviour when domestic interests are significantly affected, meaning international constraints can only bind so much.

Numerous implications for pandemic preparedness follow from this structural domestic dominance. International institutions will find it more difficult to commit states to policies with greater "sovereignty costs", e.g.:

1. Share information that may prove costly (e.g. damaging to political leaders' political standing)
2. Mobilize significant funding, especially when there are competing domestic priorities
3. Shift policy against the interests of domestic stakeholders

Conversely, policies with lighter "sovereignty costs" will be easier to implement, e.g.:

1. Technical exchanges of information
2. Sharing of best practices
3. Pooling and coordination of already committed resources

The dominance of domestic politics means that it is important for preparedness efforts to be embedded in domestic decision-making processes, and ultimately

“owned” by domestic stakeholders. A good example would be the introduction of effective national review processes, learning the lessons from COVID-19 and helping lay the groundwork to prepare better for future pandemics. Such inquiries and reviews can be structured in ways that are amenable to resistant countries. For instance, by having a commission that reports jointly to domestic political leaders and to an international body, or having an inquiry fully-owned by the domestic government but based on an internationally standardised terms of reference. Such approaches do not attempt to neutralise domestic dominance, but rather they accept it as a reality and attempt to work within the constraints of sovereign nations. The WHO and other bodies could offer to co-run national level pandemic review processes with countries. Such hybrid models can be observed in the realm of post conflict reconstruction, when international bodies support national leaders to conduct “truth and reconciliation” processes.

States are unlikely to take actions with high sovereignty costs except when vital national interests are threatened. The current COVID-19 crisis strongly reinforces states' understanding of pandemics as such a threat, and therefore creates a window of opportunity for decisions with higher sovereignty costs. For example, states could take the radical step of tying their own hands and removing state control from the flow of information between countries. There has already been massive global cooperation sharing data and virus surveillance between countries; it is a critical part of the global response. But these efforts are not perfect. Some countries, such as Turkmenistan, have not officially reported any COVID-19 cases ([Balakrishnan, 2020](#)), and at the very beginning of the pandemic in December 2019, there was a crucial lag of several days between officials discovering the novel virus and reporting it internationally ([Zhang et al. 2020](#)). An independent system of information sharing and monitoring, without the oversight of national government and health agencies could avoid such issues in the future. This could be achieved through giving international agents investigatory powers, such as the safeguards inspectors of the International Atomic Energy Agency: signatories to the Nuclear Non-Proliferation Treaty allow international inspectors, with a form of diplomatic immunity, to undertake independent inspections of facilities and report back to the international community.

Similarly, domestic dominance helps explain why frameworks such as the 2005 International Health Regulations are not as effective as they should in pushing states to develop core capacities needed to prepare for health emergencies. While the IHR's Annex 1 explicitly states the core capacities needed to be developed and implemented, no state is fully compliant, and progress in IHR capacity has remained at the same level between 2018-2020 ([WHO e-SPAR, 2021](#)). A [2019 WHO report](#) on country preparedness capacities concluded that 66% of countries had limited or developed capacity, and only 34% had demonstrated or sustainable capacity.

One of the main issues is that compliance with IHR core capacities largely depends on the public health capacities of individual states, meaning that poorer states are significantly less prepared for health emergencies. Nevertheless, the IHR lack

detailed strategies for capacity building, and there are no comprehensive plans to resolve the need for financial and technical issues ([Bartolini, 2021:241-248](#)). The first step to resolve the lack of compliance with IHR core capacities would be to devise a comprehensive capacity building strategy, perhaps incorporating other institutions and programs with the same aims, such as the World Bank's [Pandemic Emergency financing facility](#).

The IHR monitoring system also suffers from critical deficiencies. States are monitored through annual reports that are largely self-assessed and voluntary. The State Parties Self-Assessment Annual Reporting Tool (SPAR), which has been criticised for being unreliable, has recently been integrated with three other voluntary tools: simulation exercises for public health emergencies, the Guidance after Action Review and the Joint External Evaluation (JEE). Unfortunately, all evaluation systems are voluntary and largely depend on an individual state's will to cooperate with WHO. While the JEE includes on-site visits and reviews by external experts, it is still grounded on a preliminary self-assessment by the State. Moreover, the State's approval is required for the selection of experts, their methodology and the publication of the findings ([Bartolini, 2021:244](#)). States tend to overestimate their performance, and the voluntary character of such assessments makes it difficult for them to be impartial and strict, especially in non-democratic countries. The monitoring framework also has no sanctions or negative consequences for states that do not comply with IHR, or inflate their performance in annual reports.

In the short- to medium-term, a reform of the IHR monitoring framework should be considered in order to move away from voluntary and self-assessed reports and establish clear sanctions for non-compliance. Following the [2020 GPMB Report](#), amendments to the IHR should include "mechanisms for assessing IHR compliance and core capacity implementation, including a universal, period, objective and external review mechanism" (p. 43), perhaps embodied by an independent oversight board assisted by civil society and non-state actors. In the long-term, an [international pandemic treaty](#) or [global health security convention](#) could be considered, taking into account the critical points of the 2005 IHR and insights from the COVID-19 pandemic to effectively replace the current regulations.

While it is important to be clear-eyed about the constraints on international cooperation and global governance created by the primacy of domestic politics, it does not mean that only "high sovereignty cost" tools are effective. Less intrusive policies can provide some help in the short-term. For example, technical exchanges help states understand what their interests are and what policies can best help them achieve their desired outcomes ([Raustiala 2002](#)). In this way they can significantly determine how national interests are defined and what policies they advocate for. Similarly, review and benchmarking exercises can help states better understand their performance and learn from others, while also exerting soft pressure on them to improve compliance ([World Bank 2017](#), [Hale 2017](#), [Kelley 2020](#)).

However, the COVID-19 pandemic shows that higher sovereignty cost measures will ultimately be needed. Accepting greater constraints will ultimately be necessary in order for states to create greater safety for their citizens.

Multilateral gridlock

Gridlock has become a pervasive, if not universal condition of multilateral decision making across all areas of world politics ([Hale, Held, and Young 2013](#)). As interdependence has deepened, countries face increasing difficulty reaching common agreements due to long-term structural trends:

1. **Multipolarity.** More countries with more diverse interests, socio-economic conditions, and political systems have greater ability to shape transnational problems ranging from trade, to climate change, to security matters, to global health. This shift reflects positive trends toward a greater say for developing countries in international decision-making, but also means that consensus is naturally harder to obtain. Moreover, increasing geopolitical contestation between the United States and China significantly exacerbates long-term multipolarity.
2. **Harder problems.** As globalization and interdependence have deepened, connecting more aspects of society to transnational flows of goods and people, transnational challenges penetrate more deeply into domestic policy, requiring greater adjustment to achieve mutual gains. For example, trade issues are no longer primarily about tariff levels, but rather regulatory alignment. Similarly, pandemic preparedness requires going beyond, for example, health checks for travellers, to include adjustments to food production supply chains.
3. **Institutional inertia.** Once set up, international institutions are difficult to change, often requiring consensus or supermajorities to shift rules. Institutional design tends to reflect the constellation of power and interests at the moment of creation, but then proves more difficult to shift over time as power and interests evolve.
4. **Fragmentation.** The world has gone from several dozen international organizations at the end of the Second World War to several thousand today, at both the global and regional scales. At the same time, companies, foundations, cities, NGOs, and other sub- and non-state actors have created numerous transnational networks and initiatives. To the extent institutional proliferation fills gaps or circumvents dysfunctional arrangements, it can enhance effectiveness. But the same trend creates counterproductive forum-shopping, standards arbitrage, and increased transaction costs.

The above dynamics pervade global pandemic governance. For example, donor countries have been hesitant to offer greater financial support to the WHO, in part because developing and emerging countries play an important role in deciding how such resources are spent. Instead, specialized funds have proliferated, some

backed by large private actors. While these new institutions have achieved some important successes, they also contribute to greater fragmentation of the system overall.

Precisely because gridlock has become so pervasive in world politics, governments, international organizations, and other actors have sought pathways through and beyond it: how can progress be made, even given these constraints ([Hale and Held 2017](#))? Two are particularly relevant for pandemic governance.

First, more technocratic processes are often relatively insulated from the sharpened political contestation typical of gridlock. Within epistemic communities, there is more consensus on how problems are defined and which solutions are preferred. To the extent pandemic preparedness can be achieved through coordination of public health bureaucracies, gridlock can be mitigated. However, this pathway only applies when pandemic readiness follows the logic of “low” politics; with little broader salience, only technical bureaucracies and specialized interest groups are engaged. When, as during the current crisis, pandemic responses become subjects of “high politics,” politicization leads the gridlock dynamics to bite more strongly. Moreover, “low politics” processes are often insufficient to mobilize the policy decisions or scale of funding required to take key steps toward preparedness. Technocratic processes therefore provide a useful but ultimately partial solution, addressing those aspects of the problem that can be insulated from top-level political decision-making.

Second, even when gridlock applies, international organizations can sometimes nonetheless function if they have some degree of autonomy from their member states, typically a function of the organization’s governance structure and budgetary arrangements. In the global health context international organizations like the World Health Organization tend to be strictly accountable to member states, though hybrid institutions like the Global Fund or GAVI, which rely on private philanthropy and donor governments, possess relatively greater autonomy in, for example, decision-making. Even here, though, the actual work of delivery and implementation must be done with the consent and support of individual member states.

For example, greater autonomy may allow the WHO to more effectively draw the world’s attention to emerging health crisis. To date, governments have only granted limited authority to the WHO to make decisions around public health emergencies. The IHR authorizes the WHO DG to declare a Public Health Emergency of International Concern (PHEIC) in consultation with an Emergency Committee of experts. However, the Emergency Committees are created ad hoc, drawing on the IHR roster of experts, so the decision to form a committee lays with the WHO leadership. Initially the membership and deliberations of the Emergency Committees were kept secret, but following reforms in 2011 they are now made publicly available. The Emergency Committees make recommendations on whether a specific health situation rises to the level of a PHEIC following a

prescribed set of criteria, but ultimately the decision to declare a PHEIC lays with the WHO DG.

These arrangements give very little autonomy for the WHO to objectively assess the existence of a PHEIC. They can also take a long time, wasting essential days at the start of a crisis ([Mullen et al. 2020](#)). The WHO DG relies on the continuing confidence of member states administratively (they appoint the DG), financially (they fund the WHO's work), and substantively (their cooperation is needed to respond to health threats). The DG therefore must balance objective assessments of the health situation with the political and economic interests of member states, lest he or she lose all ability to function effectively ([Woods and Sridhar 2020](#)). Because member states are wary about the adverse trade and travel effects they may face if a PHEIC is declared, they have not allowed more autonomy to the WHO to make these assessments independently. Going forward, geopolitical tension can be expected to further distort the ability of the WHO DG to issue objective assessments in a timely fashion.

Institutionalizing greater autonomy around the process of declaring PHEICs can create an import buffer against these dynamics. Steps could include:

1. Creating a standing Emergency Committee that would not require the WHO DG to initiate deliberations around a potential PHEIC
2. Appointing Emergency Committee members for relatively long, non-renewable terms, 5-10 years.
3. Allow the Emergency Committee itself to declare the presence / absence of a PHEIC, removing the need for the WHO DG to intervene. The Emergency Committee could also consider issuing both majority and minority assessments when it does not reach agreement.

The PHEIC process is just one example of where greater autonomy for the WHO could enhance outcomes ([Gostin et al. 2020](#)).

Because gridlock makes collective decision-making more difficult, it is important to determine which areas of pandemic preparedness can be advanced effectively by sub-groups of countries or "coalitions of the willing." While pandemic preparedness is in many ways a "weakest link" problem requiring global coordination, building preparedness may need to be built in a more piecemeal fashion.

Short-termism

Short-termism is a pervasive condition of political systems, driven by both human psychology and political institutions and structures ([Boston 2016](#)). These challenges vary across issue areas and contexts, but are particularly vexatious for the politics of preparedness for both immediate crises like pandemics or natural disasters, as well

as longer-term problems like antimicrobial resistance or climate change. As Al Gore has put it, "the future whispers while the present shouts."

A number of systematic cognitive patterns push individual-level decision-making to the short-term. Humans anchor their preferences on the status quo and are averse to losses, so have a bias toward the present state. We struggle to accurately weight probabilistic risks, assigning them either too much or too little significance. Because we possess only limited cognitive resources, our scarce attention focuses on what is most present and salient. And even when we do understand what actions are in our long-term self-interest, we often struggle to act sufficiently in advance in the moment.

While these individual-level features likely shape the politics of pandemic response, social-level short-termism is more consequential for blocking effective decision-making. Several dynamics apply, each reinforcing the others.

First, policymaking typically involves chains of principal-agent relationships. For example, public health bureaucracies, are accountable to political leaders, who are themselves typically accountable to publics either through regular elections or less institutionalized forms of performance evaluation. Such principal-agent relationships are typically structured through relatively short-term accountability cycles, like elections every several years, annual performance evaluations, 5-year plans, etc. Because political actors' future careers are tied to the outcomes of these regular accountability cycles, they are forced to prioritize shorter-term outcomes, even when they recognize the value of longer-term planning and preparedness.

Second, analogous to the individual level, political decision-making suffers from stark attention scarcity. Decision-makers are confronted with a constant stream of demands, but bureaucracies make decisions through regular processes of evaluation, deliberation, internal negotiation, and ultimately decision-making by an appropriate leader or body, all of which require time. This bureaucratic attention constraint forces political institutions to prioritize the most urgent challenges, which are often those that have greatest media-generated salience. This problem can be partially addressed by tasking specialized bureaucracies with longer-term planning, but ultimately key decisions will need to be taken by higher-level decision-makers with shorter time-horizons.

Third, because political decisionmakers are subject to short-termism, it is difficult for them to make credible commitments to act a certain way when a crisis unfolds. For example, a government may agree to share virus samples before a pandemic occurs, but then, faced with an immediate, potentially fatal political cost, a political leader may decide not to follow through on that commitment. In this way short-termism undermines the ability of international legal instruments to effectively bind state behaviour, a key design consideration for a potential pandemic treaty.

Though short-termism permeates all spheres and levels of governance, several institutional tools can be used to limit it. The Secretary-General's landmark September 2021 report on [Our Common Agenda](#) highlights a number of such approaches, with applications beyond pandemic preparedness to climate change and beyond.

For example, a number of governments have created future-oriented institutions explicitly tasked with gauging future risks. Most commonly these roles are embedded in bureaucratic structures, for example a team within a national health ministry charged with developing a pandemic plan. Less commonly, some governments have created a more public-facing and political position (e.g. the Welsh government's Commissioner for Future Generations) tasked with scrutinizing policy. Such institutions are principally informational / hortatory in nature. For example, commissioners/ombudsmen for future generations are tasked with reviewing government policy, assessing the implications for future generations, and raising those points in the public sphere. Such steps can add an important dimension to the policy process, but are unlikely to fundamentally change the barriers to greater preparedness. After all, the risks of pandemics are widely known, even if insufficiently acted upon.

A stronger step would be for governments and courts to create legal requirements around preparedness. For example, in the climate realm, a wave of litigation is forcing a number of governments to increase their preventive actions, arguing that current policy is failing to adequately protect future generations. Similar activist legal tactics could be explored for pandemic preparedness. More proactively, governments could create independent statutory bodies with the authority to assess preparedness and mandate improvements where weaknesses are exposed. Again, the example of climate change is helpful. A number of governments have adopted climate laws that create an independent scientific body to assess the adequacy of national policies vis-a-vis stated policy goals, and to recommend actions where there are gaps. Such laws can also empower citizen groups to take the government to court where policies fall short. While these kinds of solutions are not universally applicable (for example, they presume an effective, strong, independent judiciary), they can fundamentally change the incentives of political leaders to invest in preparedness by creating hard sanctions for insufficient action.

Donor-recipient dynamics

Pandemics can be seen as a "weakest link" problem, in which the overall outcome depends heavily on the strength of the least-resilient actor. However, preparedness and response capacity are distributed highly unevenly both across countries and within them (this memo focuses on the former, though the latter is equally important and has some parallels). There is thus a critical functional need to effectively transfer funding and capacity from wealthier countries to less wealthy ones. This need creates a number of political dynamics around the donor-recipient relationship,

ultimately resulting in misalignments of prioritization and inefficient distribution of resources that limit global cooperation in pandemic scenarios. Pandemic response (in both acute response and slower-burning baseline capacity) is hurt when donor and recipient countries have differing funding capabilities, public health priorities, and preferred programming/funding models.

The first challenge is the difficulty of mobilizing adequate funding from donors. As noted above, domestic dominance means countries have tended to under-invest beyond their national borders, and short-termism makes it difficult for them to invest in outcomes without immediate benefits. Securing donor funding for pandemic preparedness is thus doubly difficult. The present COVID-19 crisis has mixed effects on this core challenge. While the cost of the crisis makes the value of longer-term investments clear and salient, donor governments have also faced unprecedented domestic spending needs to respond to the crisis.

Second, donors and recipients can perceive pandemic preparedness differently. Donors typically see pandemic preparedness abroad as an external security threat. Recipient governments, in turn, see the issue more as part of the broader challenge of building up state capacity and health systems (see below). Security approaches highlight containment of “emergent” infections—infections implicitly assumed to arise from less wealthy states—and in their policies emphasize areas of geographic linkage such as travel bans and testing requirements along borders. Indeed, both of these are highlighted in international health action such as the US-led Global Health Security Agenda ([KFF](#)). Health security logics have become dominant in the past two decades, and have even begun to feature involvement of security forces (Wenham, [2019](#)). But while donor countries tend to focus on “emergent” infectious illness and related security, recipient countries have more commonly viewed pandemic preparedness in the context of significant primary care needs (Rifkin, [2018](#)). Widespread access to diagnostic testing, for example, are argued for by donor-states largely as a measure for surveillance of infectious illness, whereas lower-income countries face dual demands for primary care diagnostic services (ex: cancers, basic blood panels). The impacts of this on health systems are expanded on in the next section.

Third, and relatedly, donors tend to prioritize specific outcomes and concrete results (e.g. X lives saved, Y doses administered, Z nurses trained, etc.). Donors must justify their expenditures to domestic taxpayers and political leaders. In this context, more abstract, indirect investments in strengthening systems over time are more difficult to “sell” domestically. This pressure also leads donors to sometimes bypass recipient state institutions and work with NGOs or private contractors who can guarantee instrumentalized results of the kind that can pass scrutiny from domestic auditors.

Finally, though agreement between donors and recipients is ultimately needed, donors possess greater power and agenda-setting capacity since they hold the money and also typically possess greater analytic and technical resources. Where North American and European states drive funding to global health programming

and international health responses, they are more capable of foregrounding a health security agenda over a primary care one. Where wealthier states drive health funding, wealthier states' universities and health institutions are viewed as centres of "global" health expertise, and wealthier states adopt increasingly similar vertical aid—pandemic response is less responsive to the needs and priorities of lower-income states (Abimbola, [2021](#); Steurs, [2019](#)). This in turn, weakens the necessary cooperative basis for pandemic preparedness.

This is not to say that donor-recipient politics are immutable. Recent pushes for global health equity have highlighted the potential of South-South and regional collaboration, and shifting US political leadership has highlighted the need for less hegemonic pandemic preparedness funding and programming. This in turn allows greater agenda-setting power for lower-income states and increased autonomy over funding streams. While there remain political barriers on alternative global health programming, movements toward epistemic justice, regional leadership, and expansions of non-earmarked funding could all contribute to more representative pandemic preparedness. Reorienting donor-recipient dynamics to be more effective and more equitable requires both short and long-term action. A combination of technical access points and long-term mindset shifts are needed to move global pandemic preparedness beyond the pitfalls of COVID-19.

The issue of vaccine distribution shows both the need for urgent action within existing constraints and the need to shift those constraints in the future. A first, immediate, solution lies with renewed production and distribution of vaccines, including by abolishing IP and patent restrictions currently inhibiting global response efforts. At present, vaccine distribution is dependent on a charity model of wealthier countries making additional purchases of vaccines within existing privileged purchasing systems, and then donating those vaccines to lower-access states. Overcoming this "vaccine apartheid" requires an immediate reshaping of vaccine purchasing and production pathways. Donor states should exercise existing domestic legal and political structures to open up vaccine production and IP sharing, including compelling high-income countries to partner with vaccine manufacturers in the global South to expedite production (Morten et al, [2021](#); Maxmen [2021](#); Rizvi [2021](#)). Additionally, this will be achieved only with (continued) global political pressure that moves high-income states to accountability, as well as material assistance from the WHO, WTO and other technical and regulatory organizations in a position to reshape IP/patent rules to support widespread vaccination access. In the long term, domestic and regional vaccine production capacities must be developed so as to avoid the Covid-era arguments regarding insufficient vaccination production capabilities in the global South, and international organizations and "donor" states must realign norms and expectations surrounding biomedical IP to better coordinate future pandemic responses.

Despite the immense effectiveness of the COVID-19 vaccines thus far, preparedness does not rest in biomedical IP alone. An additional significant priority must be to develop and implement a health systems resilience fund to support routine health

system capacities. Centralized funds have existed in different forms thus far, including the COVID-19 Solidarity Response Fund, WHO's Contingency Fund for Emergencies, UN Central Emergency Response Fund, and the World Bank's Pandemic Emergency Financing Facility (described pg 15 draft report). These funds have worked primarily on the basis of philanthropic and voluntary donations by both state and non-state actors (Devex, [2020](#)). However, such funds have been largely insufficient, partly because of their voluntary nature and states' relative preference to earmarked funding. To overcome these structural shortcomings, a new iteration of a global health or health resilience fund should be created, one that uses mandatory contributions and a flexible mandate to break existing vertical funding dynamics. Such a fund could utilize existing international organizations' logics of international taxation (such as UNAIDS' use of tax on air travel) to ensure ongoing and substantial contribution, and focus on a broader logic of resilience and horizontal priority-setting that can help to upend the vertical logics which constrained the COVID-19 response ([UNAIDS](#) ; Friedman et al, [2020](#)). Such a move would continue the trend of recognizing the need for broad-based resilience, while also taking advantage of the unique awareness brought about by the COVID-19 crisis.

A final and related point is the need to engage a broader suite of non-state actors in health resilience funding. Country-based contributions can fall victim to political pressures both at home and abroad, with membership and contribution to health organizations and health funds alike suffering as health preparedness moves on and off of domestic agendas. Increased and coordinated involvement of non-state actors would help to ameliorate this gap. Large, philanthropic organizations such as the Gates Foundation have held considerable influence in the past, and are uniquely placed to respond quickly and unilaterally to expressed need without substantial political red tape. While having the WHO gain significant funding from private actors and wealthy individuals comes with its own set of concerns, inclusion of private actors both allows alignment with business sector and non-state actors' interests while also filling in crucial gaps in dynamic emergency scenarios where background maintenance funding might not be sufficient (Devex, [2020](#); Usher, [2020](#)). Attempts to broaden funding sources to include philanthropic individuals and the business sector should emphasize the mutual interest of such investment. This must be done with care — broadening the voices and funding streams in health preparedness should reduce dependence on singular wealthy states, not reproduce harmful donor-recipient dynamics. However, centralizing and organizing private sector involvement through mechanisms such as the Solidarity fund have the potential to cut down on fragmented health funding streams while also broadening buy-in on the issue of health preparedness.

A combination of these efforts, and more, will allow movement toward a more equitable and truly global health system that supports a more fundamental paradigm shift away from the high-income-state-led, charity-based structures that dominate global health preparedness efforts at present.

Building resilient health systems

At its core, global pandemic preparedness requires building strong health systems for the whole world. An integrated and flexible healthcare system is critical for saving lives when pandemics strike, while also allowing for continuous surveillance and preparation during normal times. However, building state capacity, and particularly the capacity of health systems, is at best a slow process, subject to reversals and decay, with significant political obstacles.

First, historically, health policymaking has followed two distinctive approaches, and has, therefore, developed competing policy priorities, uncoordinated institutions, and segregated financing mechanisms. The Global Health Security (GHS) approach is centred on population-level interventions to prevent and control (ad hoc) threats from infectious diseases, whereas the Universal Health Coverage (UHC) approach stresses citizens' continuous access to timely and quality care. Ideally, the two approaches should work synergistically, but resource scarcity often leads countries to tough choices, such as whether to increase lab capacity or promote social equality through subsidising insurance participation. Moreover, discrepancies between the Global Security Index Rank (2019) and countries' COVID-19 performance, as well as between countries' overall healthcare capacity and COVID-19 performance, suggests neither perspective is sufficient for assessing health-system readiness for health crises. Core challenges include:

1. **Funding sustainability:** relying almost solely on general tax revenue rather than risk-pooling funds, whether contributory or not, has contributed to chronic underinvestment in public health. A more robust health financing system could help alleviate inadequacy and interruption due to unfavourable macro-economic conditions, budget cuts and shifting political attention.
2. **Funding pathways:** for countries relying on international assistance, the predominant pattern in aid allocation channels funding vertically towards single disease categories. This narrow and rigid funding pathway has resulted in the concentration of resources in some "high profile" diseases, while neglecting others. A more flexible funding allocation mechanism to support weaker health systems could help align support and need, enhance the local ownership of global health policies, and improve cross-cutting coordination capacity, including the capacity to work with business actors and align their interests with global health missions.
3. **Grass-root level capacity building:** the gap between the GHS and UHC approaches risks turning the uninsured population away from seeking care and keeping early signs of pathogens transmission under the radar. Capacity building in primary care facilities can activate resources in the established and most far-reaching health service network, including the social capital of doctor-patient trust, to not only assist surveillance efforts, but also be useful in

testing and contact tracing, vaccine administration and public health communication.

Second, there are gaps between political incentives and public health needs on both the input and output side of the policy cycle. At the agenda setting stage, politicians are incentivised to focus on broadening individual access to healthcare services due to the topic's political salience and electoral appeal. Voters focus most on securing tangible assistance and treatment for disease. There is thus less political benefit for spending on public health or preventative strategies, which are less tangible. At the policy evaluation stage, decision-makers are incentivised to justify expenditure leading to a "value-for-money" paradigm that stresses "outcome based" performance assessment in both international assistance and domestic public spending accountability mechanisms. This approach to health systems is observed in many political contexts, but is particularly associated with political leaders espousing neoliberal economic policies, and was exacerbated by the 2008 financial crisis and its aftermath. Because population-level preventative measures are unlikely to have easily auditable outcomes, they are harder to justify under these conditions. Moreover, resilient systems necessarily require some degree of reserve capacity in order to be ready for pandemics when they strike. Put another way, what "short-term efficiency" within, for instance, a regular budget cycle, may not be efficient over the longer-term. During the current crisis, for example, many governments have rushed to contract out various needs (testing, contact tracing, production of PPE, etc.) to private consultants, often at significant expense.

Third, governments have defined preparedness to narrowly refer to individual technical or healthcare provision capacities at the centre of public health responses such as testing facilities, surveillance systems, PPE supply and hospital beds. While all essential, these capacities are only effective in the context of the larger system in which they are embedded. On the one hand, other social service systems should be brought into the perspective of preparedness. Seemingly remote factors such as, for example, public transport and childcare for healthcare workers, community support for people in self-isolation or under lockdown, mental health provision to large segments of the community, clear and specialised guidance for protecting high-risk populations and settings (proactive measures concerning elderly people in long term care facilities) etc. can be decisive. On the other hand, national and international legal frameworks, including those concerning sensitive topics, should be investigated and adjusted to facilitate health system capacity building in the long run. In some countries, strict immigration rules have formed major barriers for recruiting foreign health workers, thus limiting stable healthcare capacity growth. National or regional data protection regulations should be reviewed and aligned to enable using sensitive but critical personal data without patient consent during pandemics, which, of course, does not mean deregulation.

Ultimately, true preparedness will require a new social contract. The right to health is among the core promises of social contracts between national governments and their people, although the exact architecture of social contract varies across

societies and cultures. The COVID-19 pandemic has put such a promise to a severe test. While the multilateral system should play an enhanced role in providing global public goods, a strong social contract at the national level provides the foundation for international cooperation. As [Our Common Agenda](#) suggests, “*bonds across countries do not work when bonds within them are broken*”. A resilient national health system is not only critical for tackling threats to people's health, it also better prepares the system, the society, and people for health emergencies. More importantly, an inclusive, fair, adequate, and participatory healthcare system is indispensable for avoiding failing the social contract and damaging citizens' trust in institutions and members of other social groups. Therefore, we propose the following steps to strengthen national health systems and promote social solidarity.

First, the failures that cost lives and livelihood during COVID-19, highlight the false dichotomy in health governance between infectious and non-communicable diseases (NCDs). Despite [available evidence](#) that NCDs are highly relevant to the morbidity and mortality of COVID-19, are often [linked](#) to infectious disease [experiences](#), and make up an increasing share of disease burden in [all states](#), NCD management has not been incorporated into communicable disease control efforts to build a resilient health system that will function well both in normal times and during health emergencies. To build an integrated and resilient health system, governments must think beyond infectious disease pathogens alone, and try to address risk factors, including social, economic, and environmental determinants. The complex and interconnected health problems call for multisectoral actions. For example, when investing in infrastructures, apart from those having explicit medical functions, such as PPE, ventilator, vaccine and other pharmacological production facilities and stocks, governments need to strategically plan for those in non-health sectors, such as the energy, transportation, logistic and cold supply industries. The multiple health needs of population groups, especially those who are more vulnerable, must be taken into consideration, such as mental health support for young people, as well as safe and adequate elderly care.

Second, the COVID-19 age has witnessed a global deterioration in political and social trust. The lack of trust has created tremendous difficulty for maintaining consensus behind government policies in response to COVID-19, such as stay at home orders and vaccine mandates. To rebuild both institutional and interpersonal trust, a key step is to reclaim the informational environment, online and in the media, as a common, public space. A resilient health system should provide open and reliable information, science and knowledge as public goods to all citizens, targeting the information asymmetry caused by technology inequality and the weaponization of misinformation for political ends. Governments undermining scientifically established facts must be held accountable by national legislators, the international community, and members of the society. Meanwhile, governments should actively engage scientists, civil societies, NGOs, business partners, especially the internet giants, to fight against misinformation, for example the [anti-vaccine campaigns](#) which are rampant in the US, Europe, Brazil and many other countries.

Combating disinformation or misinformation requires not only the mere availability of information, but also strategic communication, since misinformation overwhelmingly targets ethnic minority and indigenous communities, where structural racism and deep-rooted social economic disadvantage have rendered institutional trust and social solidarity with other groups historically fragile. Besides, the breakdown in trust in institutions is also due to their real and perceived failures to be fair, transparent, inclusive and protective. National social protection floors, including Universal Health Coverage and other coordinated social policies, are needed to address the social determinants of health and eliminate inequities in health. A trustworthy health system must leave no one behind.

Third, a resilient health system should also listen to people's needs and take a participatory approach to decision making, including those related to budgeting and funding allocation. The lack of participation from actors outside the state erodes government accountability and transparency. It also leads to the misalignment between the mission of health policies and people's wellbeing. In relatively insulated policymaking spaces, state actors are incentivised to justify expenditure leading to a "value-for-money" paradigm that stresses "outcome based" performance assessment and, therefore, risks underfunding preventative measures that are unlikely to have easily auditable outcomes. The vertical-based approach for allocating international assistance money, which is earmarked to infectious disease, also undermines the health system's cross-cutting capacity. To move beyond the top-down pattern of decision-making, pluralist political participation is essential, especially the participation from the future generations. The neoliberal paradigm of health financing roots deeply in the increasingly inadequate income sources generated by the old social contract. The renewed social contract should leverage innovative taxation tools to power a resilient health system and drive a sustainable and just transition. As suggested by *Our Common Agenda*, in addition to fighting tax avoidance and money laundering, new approaches to boost the health system include tax risk factors threatening healthy living and a healthy planet, such as carbon emission, pollution, tobacco consumption and so on. To prepare for new challenges, governments should think beyond redistribution among individuals, they should enlarge fiscal spaces while motivating responsible activities.

Finally, governments should enhance public health systems. Investment should be directed to the primary healthcare facilities to ensure universal entry-of-point access to health care. For example, governments should work on increasing the number of GPs per thousand population, the accessibility of local outpatient clinics, in addition to increasing hospital bed capacity. Besides, hospitals should be renovated with needed modifications in preparation to future epidemics, especially in countries with weak health systems. Steps to be taken include making regular hospital beds convertible to ICU-level care, separating clean and dirty hospital corridors, and implementing the protocol of separate management of containment, half-containment, and clean zones in all hospitals and staff facilities.

Governments should also empower and support health professionals, who function as the main point of contact and the binding agent between the State and people when delivering health functions. Governments should improve medical personnel training, increase the number of internists, intensivists (ICU specialists), ICU nurses, and anaesthesiologists. Ensure non-ICU medical professionals receive training units on intensive care and carry out training and periodic exercises on ICU and infectious disease protective-gear dressing protocols.

Assessing progress made on key recommendations

Below we briefly review 10 priority recommendations identified by the GPMB. For each we assess the current state of progress and link where the barriers identified above have and have not played a role in blocking greater preparedness.

<p>Recommendation 1: Advance agreements for vaccine distribution</p> <p>Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009 ("H1N1 IHR Review Committee")</p>	<p>Recommendation 11.30. Encourage advance agreements for vaccine distribution and delivery. In concert with efforts by Member States, and building on existing vaccine distribution systems, WHO should encourage advance agreements with and among appropriate agencies and authorities in Member States, vaccine manufacturers and other relevant parties that would facilitate approval and delivery of pandemic vaccines to low-resource countries, to increase equity in supply and support advance planning for administration of vaccines.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>Several global health partnerships and financing mechanisms were developed to strengthen the advance agreements for vaccine distribution and delivery, and have played positive roles in combating regional epidemic outbreaks. However, such examples were sporadic, limited in their scopes, and unable to provide broadly-based incentives to various actors to commit to equity in vaccine distribution and effective delivery.</p> <p>1. GAVI initiated the Advanced Market Commitment (AMC) to boost pharmaceutical companies' confidence in producing and delivering vaccines at scale as soon as the vaccines were licensed, and distributing a guaranteed number of vaccine doses to less profitable markets. This innovative financial instrument has been successfully applied to building advance agreements related to pneumococcal vaccines and Ebola vaccines, and has helped put out several Ebola outbreaks in Central and West</p>

African in 2018 and 2019. This mechanism laid the groundwork for the "[COVAX AMC](#)".

2. Pharmaceutical companies and public research institutions have explored advance agreements for vaccine distribution and delivery, although some terms and conditions are concerning. AstraZeneca and Oxford University have formed a partnership conditioned on the company's non-profit promise during the "pandemic period". The company has also pledged to provide vaccines at a not-for-profit price to a list of developing countries in perpetuity. However, observers have found that the company is entrusted with significant discretion to define when the pandemic period is over, and the predefined list of developing countries does not align entirely with the list of countries "in need of vaccine support" by UNICEF and WHO.

3. CEPI, the international organisation focusing on cultivating public-private partnership has found the WHO's list of pathogens in need of vaccines as unattractive to pharmaceutical companies. Major drug companies on CEPI's scientific advisory panel [pushed back](#) on CEPI and MSF's pledge to provide all countries with equal and affordable access to CEPI-funded vaccines.

4. Agreement or even consensus is missing on the demand side. The COVAX scheme is unable to exclude bilateral advance purchase agreements between participating countries and manufacturers. Parallel purchasing channels have increased competition for a limited supply of doses, discouraged manufacturers' no-profit commitment while higher offers are on the market, thereby undermining COVAX's collective purchasing power.

5. Advance agreements and partnerships have played a limited role at the delivery stage. The US CDC worked with local partners in [Sierra Leone](#) to establish the ultra-cold supply chains to deliver Ebola vaccines, but the partnership in building up infrastructure capacity is at a much smaller scale than needed in the COVID-19 scenario.

6. Advance agreements and resources are scarce to help developing countries build adult immunisation infrastructures, which form a cross-cutting capacity for health systems to deliver vaccines to the whole population. As of 2018, [fewer than 11% of](#) countries in Africa and South Asia reported having adult vaccination programmes for any disease, posing significant obstacles to plan, administer and monitor multi-dose

	vaccination programmes, even if they were available.
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>Actors include WHO, other global health organisations and partnerships, member states, pharmaceutical companies and NGOs. Their interests are very different. While international organisations pledged to promote vaccine equity, the private sector at large is reluctant to sacrifice their interest in profit. Also, partnerships have been more advanced at the research and manufacturing stages than at the procurement and distribution stages.</p>
<p>Barriers. How do the barriers above apply?</p>	<p><u>Domestic dominance</u>: although HICs and major powers have participated in COVAX and made financial contributions to promote vaccine equity, they have all taken counteractive actions to bypass COVAX in procurement and sign bilateral agreements at a higher price to ensure their domestic access to vaccines is prioritised. <u>Multilateral gridlock</u>: Public views express disappointment at CEPI's inability to bring large pharmaceutical companies on board. Doctors Without Borders (MSF) criticised CEPI's "vague, toothless and weak new policy". <u>Health system weakness</u>: the fragmented approaches for global health governance and health system development have wasted the latter's opportunity to develop partnership for rolling a universal vaccine program in a timely fashion. The vertical pathway for allocating international assistance towards individual vaccine programmes has limited low-resource countries' ability to build cross-cutting capacity in coordination, vaccine delivery and administration.</p>

<p>Recommendation 2: Contingency fund for public health emergencies</p> <p>Source: H1N1 IHR Review Committee</p>	<p>Recommendation 13 37. Create a contingency fund for public-health emergencies. Member States should establish a public-health emergency fund of at least US\$ 100 million, to be held in trust in a location and form that would be readily accessible to WHO. The fund, which would support surge capacity, not the purchase of materials, would be released in part or whole during a declared Public Health Emergency of International Concern, based on approval of a plan for expenditures and accountability submitted by WHO. The precise conditions for use of the fund should be negotiated among the Member States in consultation with WHO.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>Post-Ebola WHO reforms sparked the creation of a Health Emergencies Program and the Contingency Fund for Emergencies (CFE), of which Germany, UK, Norway Canada are top funders. However, funds are dispersed over several areas, and WHO developed a COVID-19 fund because the CFE was becoming overwhelmed.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>Actors include WHO and member countries. Donor countries are in favour of a pathway to shape the usage of the contingency fund on some diseases more politically-salient than others in their own domestic settings; and to satisfy the domestic regulations and spending inquiries from the legislators and executives.</p>
<p>Barriers. How do the barriers above apply?</p>	<p><i>Fragmentation</i>: the global health funding system is fragmented. The WHO CFE must compete with other funds such as the UN Central Emergency Response Fund and the World Bank’s Pandemic Emergency Financing Facility for donor money, even though their objectives are the same. <i>Donor-recipient dynamic</i>: It is more politically popular for</p>

	<p>donor countries to see funds earmarked, for donors to “control” specifics of funding choice. <i>Multipolarity</i>: WHO risks funding losses as economic superpowers engage in blame-shifting and name-calling. Traditionally these superpowers contribute the largest funding contributions to WHO. Consequently, a dependency on world superpowers for resources to advance outbreak response compromises the effectiveness of global institutions such as WHO. <i>“Value for Money” paradigm</i>: accountability scrutinizers in donor countries often advise against the idea of giving money without sufficient control of its usage. For example, the watchdog of UK Official Development Assistance made 13 suggestions to ensure the country’s impact and influence at every stage of a foreign aid spending cycle, stressing the “ability to appraise and select the best value interventions from among competing options, using sophisticated methods to assess costs and benefits.” State parties’ spending accountability requirements have added to the difficulty of creating a contingency fund with an unspecified spending plan or conditions.</p>
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<p>Recommendation 3: Agreement on sharing viruses and access to vaccines</p> <p>Source: H1N1 IHR Review Committee</p>	<p>Reach agreement on sharing of viruses and access to vaccines and other benefits. The Review Committee urges Member States and WHO to conclude negotiations under the Open-ended Working Group of Member States on Pandemic Influenza Preparedness: Sharing of Influenza Viruses and Access to Vaccines and Other Benefits. A successful conclusion to this negotiation will lead to wider availability of vaccines and other benefits and greater equity in the face of the next pandemic, as well as continued timely sharing of influenza viruses.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<ol style="list-style-type: none"> 1. GISAID is a global science initiative and primary source established in 2008 that provides open access to genomic data of influenza viruses and the coronavirus responsible for the COVID-19 pandemic. 2. In May 2011, the 64th WHA endorsed a new agreement—the 2011 Pandemic Influenza Preparedness Framework (PIPF). Under the new agreement, pharmaceutical manufacturers are no longer permitted to access data and

	<p>biological samples on circulating virus strains to develop influenza vaccines without committing to benefit-sharing arrangements, including providing a percentage of influenza vaccines at heavily discounted prices. Other benefits include such measures as technology transfers and improved access to diagnostic reagents and influenza test kits—resources that many LICs previously struggled to obtain.</p> <p>3. This has meant, however, that small to medium companies have avoided entering into formal agreements with the WHO even though they may still be accessing—and financially benefitting from—GISRS biological materials. Moreover, it has been discovered that even laboratories that have signed agreements have not consistently utilised the Influenza Virus Traceability Mechanism, which tracks the sharing of GISRS biological materials and triggers the PIPF 'benefit sharing' process. In short, due to a variety of issues, the reformed GISRS is still not operating as envisaged.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>Actors include WHO, member states and pharmaceutical companies. Little incentive to sign onto restrictions, especially in face of limited domestic public health capacities.</p>
<p>Barriers. How do the barriers above apply?</p>	<p><u>Institution inertia</u>: A PIP Framework Review Group was established in December 2015 to conduct the first review of the PIP Framework after it had been implemented for 5 years. It issued its report to the Executive Board in December 2016 (EB140/16). The Review Group recommended that the “PIP Framework is a foundational model of reciprocity for global public health that could be applied to other pathogens; however, the current scope of the PIP Framework should remain focused on pandemic influenza at this time. <u>Broader regulatory misalignment</u>: existing legal frameworks, such as Europe's new General Data Protection Regulations (GDPR), have</p>

	<p>taken an intellectual property approach to individual, institutional, and government data ownership. An exclusive “data as property” rather than the “data as communal and public goods” approach, however, aligns poorly with the needs of producing, using and sharing data in contexts of PHEs.</p>
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<p>Recommendation 4: Strengthen periodic review of compliance with IHR core capacity requirements</p> <p>Source: Report of the High-level Panel on the Global Response to Health Crises</p>	<p>Recommendation 6 WHO strengthens its periodic review of compliance with the IHR core capacity requirements.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<ol style="list-style-type: none"> 1. States Parties and WHO are required to report annually to the WHA on the IHR implementation. WHO IHR Secretariat developed a monitoring checklist including 28 indicators, of which 20 are compulsory, to assist countries to report their implementation of 13 IHR core capacities. Between 2010 and 2017, the main instrument was for countries to complete self-assessment questionnaires. 2. According to WHO, all the 196 state parties have submitted at least one IHR implementation report between 2010 and 2018. However, the worldwide completion rate of this compulsory reporting task ranges from 63% to 93% over the last decade. Not a single WHO region has behaved consistently in fulfilling the annual report requirement over the past decade. 3. The Ebola outbreaks in West Africa in

2014–2016 reminded the world that countries remain vulnerable to emerging infectious diseases, and [data derived from the annual questionnaire have significant gaps](#). The annual report indicators mainly collect simple “yes/ no” answers to the existence of specific mechanisms. Still, they do not indicate their functionality or the actual country capacity to manage public health events.

4. After 2016, progress in IHR core capacity periodical review has been made on two fronts: (1) the review system moved from exclusive self-evaluation to one that combines Mandatory States Parties Annual Reporting (SPAR); voluntary Joint External Evaluations (JEEs; conducted every five years); simulation exercises (SimEx); and After Action Reviews (AAR); (2) In 2018, WHO also digitised the SPAR system (e-SPAR) to allow states parties to make the annual report online.

5. The JEE aims to provide an independent, impartial and transparent assessment of the current status of a country’s IHR core capacity. However, not many countries have adopted this tool. As of 2018, only 11 out of 53 member states in the WHO Europe regions have conducted or planned JEEs, including [Albania, Armenia, Belgium, Finland, Kyrgyzstan, Latvia, Lithuania, Serbia, Slovenia, Switzerland/Liechtenstein, Turkmenistan](#).

6. In 2016–2019, [WHO supported 63 AAR and 117 SimEx, of which 42 \(66.7%\) AAR reports and 56 \(47.9%\) SimEx reports](#) were available, and they were most commonly conducted in the WHO African Region. [Academic review of the current global pool of SimEx](#) materials have found that the tool is used extensively within health security and emergency response sectors but is not yet adequately used to test health system resilience. Currently available SimEx materials lack an integrated health system perspective and have a limited focus on the quality of services delivered

	<p>during a public health emergency, a key factor to control excess morbidity and mortality from future Public health emergencies.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>Actors include WHO and all member countries' national and local governmental authorities. Interests are highly diverse.</p>
<p>Barriers. How do the barriers above apply?</p>	<p><u>Domestic dominance</u>: WHO has relatively <u>limited</u> capacity and economic/political influence over member state action. State parties have not fulfilled the compulsory requirements of IHR SAPR consistently. This low-compliance phenomenon might be due to the low political salience of IHR implementation or completing a self-assessment questionnaire -- a barrier hopefully lessened by COVID-19. But the IHR Monitoring and Evaluation Framework will have to be useful for countries to understand their core capacities, rather than yet another administrative burden. The progress after the 2016 reform to the framework, especially the growing adoption of voluntary JEEs, AAR and SimEx tools outside the HICs suggests that countries do follow rationalised technical advice. The data, information and experience coming out from such review practices will form a solid basis for knowledge dissemination and South-South cooperation. <u>Weak health capacity</u>: the current IHR Monitoring and Evaluation Framework lacks an integrated health system perspective, which does not help countries' to track their health service resilience, nor reduce indirect morbidity and mobility during PHEs, thus risking discounting the credibility of the technical advice, and that of the international organisations who have given the advice.</p>

<p>Recommendation 5: Assist developing countries to build research, manufacturing, and therapeutic capacity</p> <p>Source: Report of the High-level Panel on the Global Response to Health Crises</p>	<p>Recommendation 16 WHO leads efforts to assist developing countries in building research and manufacturing capacities for vaccines, therapeutics and diagnostics, including through South-South cooperation</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<ol style="list-style-type: none"> 1. Coalition for Epidemic Preparedness Innovations (CEPI) was founded in 2016 to finance independent research projects to develop vaccines against emerging infectious diseases. Apart from major philanthropic funds and rich donor countries, several middle-income countries and beneficiary countries have made financial contributions to CEPI, including India, Ethiopia, Indonesia etc. 2. A range of programmes to support research and science capacity development in Africa have been established, many of which are supported by partnerships with the US government, the Australian government and European agencies. According to a Wellcome Trust report, research is now widely accepted as an essential element of the response to epidemics and preparedness. The WHO has been instrumental in this shift. A cornerstone was establishing the R&D Blueprint to prioritise, accelerate and coordinate product-related R&D for epidemic risk diseases with no existing treatments. 3. The numerous initiatives and actors in R&D have overlapping interests and remits. This, compounded by complexities at the country level to align to national strategies, can lead to duplication and inefficient use of R&D money. 4. Funding is not always well-aligned with the needs of the countries and communities affected. Even when national research for health agendas exists, differing priorities from government ministries, national research institutions and international funders commonly risk making research less strategic and undermine

	long-term health outcomes.
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	Actors include WHO, member states.
<p>Barriers. How do the barriers above apply?</p>	<p><u>Fragmentation</u>: Fragmentation is among the largest barriers to leveraging limited resources to promote developing countries' R&D activities. The coordinating system should be rationalised to reduce fragmentation, recognise overlaps and accelerate innovation. As part of this, WHO's role needs to be further strengthened and</p> <p>resourced to provide leadership across preparedness and response. <u>Vertical funding pathway</u>: international funders direct resources for improving R&D capacity in developing countries to specific diseases. Such efforts should not focus narrowly on building capabilities that are only relevant in the event of an epidemic.</p>

<p>Recommendation 6: Mobilize financial support for IHR core capacities</p> <p>17 – Report of the High-level Panel on the Global Response to Health Crises</p>	<p>The Director-General of WHO leads urgent efforts, in partnership with the World Bank, regional development banks, other international organizations, partners, foundations and the private sector, to mobilize financial and technical support to build the IHR core capacities.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>In 2017, the World Bank's International Development Association (IDA), a fund for the poorest countries in the world, contained in its provision to support the capacity of governments for pandemic preparedness (Annex to A/70/723). No state is entirely compliant with IHR – Europe has the highest (self-reported) compliance at 74%.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>Member states, WHO, World Bank and related bodies. While aggregated data is available in reports on country preparedness, individual countries and their failures are rarely reported. Evaluations through “State parties self-assessment annual reporting tool” (SPAR) are regarded as unreliable due to their self-reported character and lack of external, independent evaluation (Gostin & Katz, 2016; Tsai & Katz, 2018; Semenza et al., 2019). Therefore, detailed information on specific problems is often unavailable.</p>

Barriers. How do the barriers above apply?

Multilateral gridlock, short-termism, donor-recipient dynamics: countries are largely non-compliant with IHR core capacity requirements ([Tonti, 2020b](#); [Bartolini, 2020:235](#)). Member states have campaigned against fixing more standardized criteria for IHR capacity evaluation. There is no effective monitoring system in place, even if states do not comply there are no sanctions or debate to not hinder state sovereignty (Bartolini, 2020; Tonti, 2020b:8). Long-term planning and capacity building strategies for pandemic preparedness do not seem to be a priority ([Lal et al., 2020](#)). No marked changes seem to have been made after the second Ebola outbreak, especially in rich donor countries ([IWG, 2017](#)). LMICs have more difficulty financing IHR core capacities due to economic limitations, but redistributing funding is extremely difficult. Ultimately, compliance with and financing of IHR core capacities is dependent on the public health capacities of individual states. It should be noted that around 80% of WHO's budget is composed by voluntary contributions, most of which earmarked for specific purposes that reflect the contributors' priorities and not necessarily what is needed around the world, especially in LMICs, in terms of preparedness or other concerns (Bartolini, 2020:241). The [2015 IHR Review Committee Report](#) recognised that there is "limited solidarity" for countries needing external funds to build capacities, as well as limited investment of national financial and human resources.

<p>Recommendation 7: Increase assessed contributions to WHO by 10 percent</p> <p>18 – Report of the High-level Panel on the Global Response to Health Crises</p>	<p>The WHO member States increase their assessed contributions to the WHO budget by at least 10 percent.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>In May 2017 at the World Health Assembly a 3% increase in assessed contributions for the 2018-2019 budget was approved. No evidence could be found that the recommended 10% increase ever came to fruition.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>The relevant actors are member states and WHO itself. There is scarce evidence on the matter, from the reporting on the 2016 financing dialogue where the increase was proposed, most countries do not believe increasing contributions will solve issues within WHO and do not believe investment in the organization will bring them advantages.</p>

Barriers. How do the barriers above apply?

Multilateral gridlock: member states are fundamentally fragmented on the issue of increased contributions. At the 2016 financial dialogue, despite the explanation of why the increase was needed (i.e., ensure security for critical programmes and functions of the organization), Czech Republic, Austria, Bulgaria, Hungary, Latvia, Poland, Slovakia, and Spain were against the increase because they believed it would not address the problem of the long-term financial sustainability of the WHO. Mexico stated the WHO budget should be restructured; Colombia was also against it. Other countries, such as Sweden, India and the US agreed to consider the proposals but under different conditions. The Netherlands, Germany, Monaco, Norway and Zimbabwe were in favour. *Donor-recipient dynamics:* Reddy et al. (2018) argue that assessed contributions are a highly contentious issue. They name some financing challenges faced by WHO: “misalignment between WHO budget and member states financial commitments, unpredictability of financing, lack of transparency of financing and efficiency in resource management, vulnerability due to just 20 contributors funding 75% of the programme budget, and inflexibility of financing”. The article also states that rich donor countries are often the ones pushing back on financial reforms that would approve more contentious proposals such as an increase of assessed contributions (Reddy et al., 2018:7). The organization thus tends to prioritize and go along with what rich donor countries or top contributor non-state actors (i.e. Bill & Melinda Gates Foundation) highlight as priorities, with earmarked extra-budgetary funds undermining the co-ordination and coherence of international cooperation and strategic resource allocation.

<p>Recommendation 8: WHO fund for research, diagnostics, and therapeutics</p> <p>22 – Report of the High-level Panel on the Global Response to Health Crises</p>	<p>WHO oversees the establishment and management of an international fund of at least \$1 billion per annum to support the research and development of vaccines, therapeutics and rapid diagnostics for neglected communicable diseases.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>The Task Force stated entities such as UNITAID are better suited to manage funds financing R&D of vaccines than WHO. Therefore, an R&D fund as recommended has not been created.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>The relevant actors are the Global Health Crises Task Force, WHO and related bodies. It is unclear from public information why WHO's own task force judged the organization as unfit to preside over such a fund. It is also unclear what potential roadblocks and impediments both the organization itself and individual member states are responsible for.</p>

Barriers. How do the barriers above apply?

From a review of relevant literature, a convergence of several barriers emerges. *Domestic dominance*: health sector financing is a chronic development issue, where costs are not sustainable for low- and middle-income countries, but high-income countries prioritize internal investments (OECD report, Head et al., 2020). *Donor-recipient dynamics*: following from the previous point, redistribution of funds for R&D from high-income countries to LMICs is extremely difficult because donor countries are reluctant and do not consider pandemics as a global security threat (Commission on Global Health Risk report, 2016). Lack of R&D investment is also thought to be due to lack of market-driven incentives, and the fact vaccines are seen as less profitable because of their preventative nature and long-term effects (Nakatani et al., 2020; Zue and Ouellette, 2020). The lack of long-term vision and risk assessment of pandemics as a global security threat are also reflective in the *cognitive/behavioural dimension of short-termism*. Building healthcare capacity to fight potential pandemics is not considered a priority and is disregarded in favour of more visible and immediate issues (see also *Health capacity barrier 1, 4, 5*). As can be seen by the review of empirical evidence, after the start of the COVID-19 pandemic several countries have increased their investments both in the WHO and vaccine R&D, mostly specifically for COVID-19 (i.e., US government with Moderna, Germany with BionTech/Pfizer, UK with Oxford/AZ), but all policy has been reactive rather than proactive. The same reaction did not occur during the Ebola outbreaks, likely because they only affected a small number of countries, concentrated in Africa. *Multilateral gridlock*: at the same time, WHO and the UN system have also been unable to effectively coordinate

countries and counter the dynamics cited above (see also Commission on Global Health Risk report; Head et al., 2020).

<p>Recommendation 9: UN high-level council on global public health crises</p> <p>26 – Report of the High-level Panel on the Global Response to Health Crises</p>	<p>The United Nations General Assembly immediately creates a high-level council on global public health crises to ensure that the world is prepared and able to respond to public health crises.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>No high-level council on global public health crises has been established.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>The relevant actors are the UNGA, the World Health Assembly and the IHR Review Committee. In 2017, the UNGA Secretary General declared he did not support the creation of the council because its competences could be covered by more frequent exchanges between UNGA and the Economic and Social Council and the World Health Assembly. He also stated the creation of the council “might have significant resource implications”. In 2016, the IHR Review Committee stated in a report that it did not support this recommendation because it risked “confusing or undermining the authority of WHO”.</p>

<p>Barriers. How do the barriers above apply?</p>	<p>Difficult to know without access to internal information. It seems funding was an issue, as well as perhaps internal power dynamics between the UNGA and WHO and related bodies.</p>
<p>Recommendation 10: Summit on global public health crises</p> <p>27 – Report of the High-level Panel on the Global Response to Health Crises</p>	<p>A summit on global public health crises is convened in 2018 to focus on preparedness and response to health crises.</p>
<p>Assessing progress. What progress has there been? What has not been done?</p>	<p>The UNGA scheduled some high-level meetings (in 2018, one on NCDs and one on TB), most recently a special session on COVID-19 in December 2020. UNGA has not requested or scheduled summits on global public health crises as per the recommendation.</p>
<p>Analysis. Who are the relevant actors? (states, international organizations, bureaucracies, economic actors, etc.). What are their interests/ideas/preferences? (sovereignty, profit, public health, etc.). What are the relevant Institutional settings / constraints?</p>	<p>The relevant actors are member states of the UNGA and the organization itself. It is not possible to draw a conclusive picture of what the roadblocks are due to lack of public information.</p>

Barriers. How do the barriers above apply?

Multilateral gridlock: as far as can be inferred, it might have been difficult to convene the UNGA on issues not seen as priority by member states, leading to the absence of decision-making. Member states might have been fragmented in their opinions of the topic and its importance. *Short-termism:* member states might not consider public health crises as relevant to their agenda if one affecting the majority of them is not ongoing and might discount potential future costs. There might also be a lack of accurate probabilistic risk assessment, perhaps due to the absence of such capabilities within governmental bodies (especially in the executive branch). Considering UNGA convened for a special session on COVID-19 in December 2020, which was also the subject of World Health Summits (Rome May 2021, Berlin Sept 2021) by the G20 etc., states seem to operate solely on reactive policies re: public health crises.