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INTRODUCTION

The COVID-19 pandemic is a global emergency that requires global solidarity. In some areas, such as scientific research into the coronavirus, this international cooperation was forthcoming and resulted in unprecedented advances. But many facets of the pandemic response were hampered by a lack of solidarity. They include the sharing and distribution of personal protective equipment, vaccines, diagnostics, oxygen and other forms of treatment for serious cases. This was exemplified by the inequity in vaccine distribution: some countries were giving their citizens booster doses in 2021, while people of other nations did not receive their first doses until 2022, after thousands of preventable deaths and the unnecessary destruction of millions of expiring, unused doses. It is critical that the international community reforms its processes to enable a far more equitable response in future crises. Reform is needed on both the supply side – so that all countries promptly receive adequate supplies – and in the systems for ensuring the vaccines and other essentials reach the people who need them equitably. Alongside this, humanitarian funding remains in need of significant reform: in particular by increasing flexibility, decreasing earmarking, and improving support for locally led responses.

Definitions

Pandemic response products: Tangible products such as personal protective equipment (PPE), vaccines, diagnostics, oxygen and other forms of treatment for serious cases. Access to pandemic response products depends, in part, on the supply and distribution of these products globally, but also on strong domestic health services and information, including at the community level.

3.1 WHAT WE SAW SUCCESSES AND FAILURES OF GLOBAL SOLIDARITY

COVID-19 caused a truly global crisis. Every single nation and territory has been impacted. Such an unanticipated emergency demanded exceptional measures. In particular, it demanded exceptional levels of solidarity. Ideally, the solidarity mechanisms would have been established prior to the pandemic.

There have been some positive initiatives that demonstrated impressive collaboration (see Box 3.1). One such case was research into the SARS-CoV-2 virus and the disease it causes – or at least, its basic presentation and symptoms. Over the course of the pandemic research has been a triumph of international collaboration, in which data was freely shared between countries on an unprecedented scale. A meta-analysis released in August 2022 identified 346,267 studies involving researchers from 189 countries. It characterized these numbers as the result of an "overwhelming global scientific reaction" (Cao and Hou, 2022). The genome of the SARS-CoV-2 virus was first sequenced by Chinese researchers and released online on 10 January 2020 (Zhang et al, 2020). A detailed description of the virus followed in a scientific journal just 14 days later (Zhu et al, 2020). As the virus spread around the world, dozens of other institutions similarly shared genetic and other data. This flood of publicly available information helped to drive the rapid development of vaccines and other treatments.

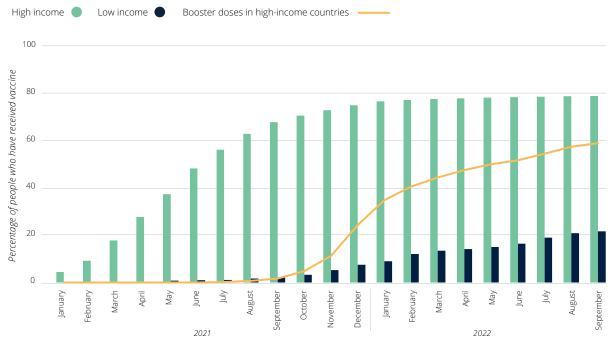
Alongside this scientific effort was an international initiative to achieve **equitable** access to COVID-19 health technologies. The Access to COVID-19 Tools Accelerator (ACT-A) was launched in April 2020 by the G20 group of countries. Its stated aim was "to ensure all people have access to all the tools to defeat COVID-19" (WHO, 2020). To do so, ACT-A brought together governments, scientists, businesses, civil society, philanthropists and global health organizations (WHO, no date c). It focused on four areas: diagnostics, therapeutics, vaccines and health systems (WHO ACT-A, 2020).

ACT-A has had significant successes and notable failures. By the end of March 2022, it had delivered over 167.8 million tests, awarded US\$184 million to countries for therapeutics and other hospital equipment, and delivered US\$463 million of personal protective equipment (PPE) (WHO ACT-A, 2022). An independent report published in October 2021 found that, despite significant problems, ACT-A had "played an additive and important role in accelerating the development and delivery of critical tools and has responded to country needs" (WHO ACT-A, 2021). More recently, in October 2022 the World Health Organization (WHO) released an external evaluation of ACT-A (WHO and Open Consultants, 2022). It found that ACT-A enabled "an unprecedented level of coordination and collaboration between global health agencies", which accelerated the response to the pandemic. However, it also found that ACT-A's coordination model was too "informal" and should not be replicated in a future pandemic. There was insufficient transparency and accountability, and the governments of low-income countries did not have enough representation. Finally, ACT-A was always under-funded, despite raising US\$23.5 billion, and struggled to disburse funds quickly. Such problems were arguably the inevitable result of ACT-A being formed during the pandemic, instead of such mechanisms being developed in advance.

There were already efforts to improve access to vaccines even before the pandemic. Notably, the Coalition for Epidemic Preparedness Innovations (CEPI) was founded in 2017 by a consortium of charities and governments. The aim was to establish a global fund for vaccine development to accelerate this process. CEPI was initially focused on six diseases, including Ebola and Zika. However, in January 2020 CEPI also began funding urgent development of COVID-19 vaccines (CEPI, 2020). CEPI has received some criticism for a lack of transparency in its agreements with vaccine developers (Usher, 2021). Nevertheless, its programme helped to ensure that vaccines were developed, tested and approved quickly – saving millions of lives in certain countries (CEPI, 2022).

These are some of the success stories. However, the pandemic has also exposed enormous failures in global solidarity. While the development of vaccines was a great success of international cooperation, actually producing them quickly, distributing them equitably and delivering them to the communities that needed them has been a calamity. As of 7 November 2022, according to the WHO, just 68% of the world's population has received a dose of COVID-19 vaccine to date (WHO, no date d). The WHO's original target, since revised (WHO Immunization, Vaccines and Biologicals, 2021b), was for 70% of the population to be fully vaccinated, meaning at least two doses, by mid-2022 (WHO Immunization, Vaccines and Biologicals, 2021a).

Figure 3.1: People in low-income countries received vaccines months after people in high-income countries



Source: UNICEF, World Bank

Shockingly, as of 2 November 2022, only 26% of those living in low-income countries have been vaccinated with a single dose (<u>UNDP Data Futures Platform</u>, no date). A report from data analytics resource Pandem-ic in October 2022 highlights the international inequalities (<u>Schellekens</u>, 2022). It shows that, in absolute terms, unvaccinated people are disproportionately found in Africa, South Asia and Southeast Asia – in low- and low-middle-income countries. Similarly, as late as June 2022, almost one billion people in Asia and the Pacific had not had a single dose of COVID-19 vaccine (<u>IFRC</u>, 2022a). Vaccination rates are also very low in Africa, with 24% of the population fully vaccinated and a further 6% having received one dose (<u>Mathieu et al</u>, no date). For instance, as of 2 November 2022 just 5.8% of the population of the Democratic Republic of the Congo had received at least one dose and 3.8% were fully vaccinated (<u>COVID19 Vaccine Tracker</u>, no date).

How has this enormous injustice occurred? The answer is complex, but a key contributor is a failure of solidarity: a combination of economic self-interest, lack of political courage and failure to take the pandemic's impacts sufficiently seriously. Another key contributor is lack of preparedness. Many of the mechanisms mentioned above were created only shortly before or well into the pandemic. This did not leave time for the creators to fully anticipate or address the extremely complex processes involved in the development, production, distribution and administration of pandemic response products like vaccines, therapeutics and diagnostics. In section 3.2 we explore what happened in more detail.



BOX 3.1 / CASE STUDY

VACCINE SOLIDARITY FROM THE RED CROSS SOCIETY OF CHINA

The invention of the first COVID-19 vaccines in 2020 provided hope for the world. However, many countries were unable to provide vaccines for the whole of their population. In response, members of the International Red Cross and Red Crescent Movement supported each other to deliver vaccines to those in need.

The Red Cross Society of China (RCSC) worked actively to provide vaccines to other National Societies and countries. Some were donated by RCSC itself; others came from donors but were delivered by RCSC. In total, RCSC has provided 2.1 million doses of the COVID-19 vaccine to other nations.

Table 3.1: Donations of vaccine doses by the Red Cross Society of China (RCSC) to other countries, 2021–2022

Date	Number of vaccine doses	Recipient country
June 2021	100,000	Ethiopia (<u>Xinhua, 2021a</u>)
July 2021	150,000	Syrian Arab Republic (Xinhua, 2021b)
July 2021	50,000	Lebanon (RCSC, 2021a)
August 2021	100,000	Cambodia (<u>Xinhua, 2021c</u>)
August 2021	100,000	Thailand (<u>Thai Red Cross</u> Society, 2021)
September 2021	200,000	Indonesia (Embassy of the People's Republic of China in the Republic of Indonesia, 2021)
September 2021	100,000	Nepal (RCSC, 2021b)
September 2021	100,000	Georgia (RCSC, 2021c)
October 2021	200,000	Bangladesh (RCSC, 2021d)
November 2021	200,000	Pakistan (<u>Xiaoyu, 2021)</u>
November 2021	100,000	Laos (RCSC, 2021e)
December 2021	200,000	Myanmar (RCSC, 2021f)
October 2022	500,000	Nicaragua (RCSC, 2022)

Chapter 3: Global solidarity

3.2 WHAT WE LEARNED OUR GLOBAL SYSTEMS OFTEN REDUCE SOLIDARITY

Our global institutions were not ready for COVID-19 – despite multiple initiatives directed at epidemic and pandemic preparedness, and despite the lessons learned from multiple previous outbreaks in recent decades like H1N1 influenza and Zika. Many known vulnerabilities were left unaddressed (IPPPR, 2021). Hard political choices needed to be made before the pandemic, but were not (Sachs et al, 2022). As a result, systems that should have been coordinated across the globe were disjointed and produced chaotic results.

3.2.1 Why we did not see equitable sharing of pandemic response products

Many key pandemic response products, including medicines and vaccines, were concentrated in rich countries. For example, the drug remdesivir, which was for several months the only one licensed to treat COVID-19, was bought up in large quantities by wealthy nations (Cheng and Marchione, 2020). This should not have come as a surprise to anyone: inequitable access to vaccines is a long-standing problem (Hinman and McKinlay, 2015). Similarly, a WHO report from before the pandemic highlighted that nearly 2 billion people had no access to basic medicines (WHO, 2017).

Early in the pandemic, months before COVID-19 vaccines were demonstrated to work, initiatives were launched to achieve equitable global distribution (<u>WHO</u>, no date b). Unfortunately, these initiatives have had only partial success.

One crucial vaccine equity project is COVID-19 Vaccines Global Access (COVAX) (WHO, no date a). It was created as part of ACT-A in early 2020; CEPI, WHO and United Nations Children's Fund (UNICEF) are key partners. Another leader of COVAX is GAVI, the Vaccine Alliance: a public-private partnership focused on vaccine access in poor countries (GAVI, no date a). COVAX set out to purchase doses of vaccine and distribute them to countries that would otherwise struggle to afford them. There was also an additional facet. National vaccination programmes often fail to reach people in humanitarian crises, so COVAX included a 'Humanitarian Buffer' that can secure up to 5% of its vaccine doses for "populations of concern" (GAVI, 2021a).

COVAX began distributing vaccines in February 2021 (BBC News, 2021). As of August 2022, it had delivered 1.6 billion doses to 146 countries. This is a significant number, but it masks multiple difficulties with both the timeliness of deliveries to countries and getting the vaccines into people's arms once they arrive.

The precise difficulties have changed over time. In 2021, COVAX struggled to obtain vaccines in sufficient doses. This was partly because governments began working with manufacturers to secure vaccines even before it was created. Many countries also did not allow flights in or out. However, in 2022 supply was

no longer a problem. Rather, method of delivery, timing of delivery and in-country vaccination capacity were issues. For instance, there were major difficulties addressing in-country logistics, vaccine distribution into communities, cold chain management, and country-specific messaging to encourage vaccine uptake and reduce vaccine hesitancy. Unless these problems are addressed, they will bedevil future vaccine distribution efforts. Alongside all this, the 'Humanitarian Buffer' – the mechanism that addressed vulnerable and marginalized populations that governments did not have the capacity to vaccinate quickly themselves – also struggled. By September 2021, not a single dose had been distributed (Bentley and Zerie, 2021). Even once vaccines did start moving, humanitarians reported that the buffer system was "opaque" and "unwieldy", leading to "consuming contractual wrangling" and months-long delays (MSF, 2022a).

By 2022, the situation looked very different (<u>Paton, 2022</u>). Since December 2021, vaccines have been shipped in significant quantities to low- and middle-income countries (<u>GAVI</u>, no date b). By February 2022, supply had outstripped demand for the first time (<u>Guarascio and Rigby, 2022</u>). Manufacturers struggled to sell their vaccines, and COVAX struggled to distribute purchased doses (<u>Braithwaite, 2022</u>). Some countries began turning down certain shipments, particularly if the vaccines had a short shelf-life that required implementing rapid mass vaccination campaigns and made distribution challenging (<u>Dunleavy, 2022</u>). Overstretched health systems that struggle to receive shipments of an ordinary size were (and still are) struggling to cope with huge quantities of vaccines being dumped on them. They would have been better able to use staggered shipments delivered over many months.

The bitter irony of this situation is that the doses arguably arrived too late. By the time countries received them, many people had already had COVID-19, and there was a popular but incorrect perception in many countries that the pandemic was over. As a result, the increased shipments coincided with a decrease in people's perceived risk from COVID-19. Furthermore, the late arrival was itself a deterrent; for example, some people had lost interest ('pandemic fatigue') or were suspicious of late-arriving vaccines. This has led to reduced demand for the vaccines, whereas if the doses had arrived in 2021 it is likely demand would have been higher (WHO, 2022a).

IFRC attempted to mitigate some of these problems by attempting to work with the COVAX Humanitarian Buffer and by sourcing vaccines directly. However, both attempts proved largely unsuccessful.

However, vaccine supply is far from the only problem. Getting vaccines into a country is one thing. It is also necessary to transport them within-country to the communities that need them, organize vaccination drives, and persuade people of the vaccines' merits – sometimes in the face of vaccine hesitancy. Only if this entire logistical system works do the doses end up in people's arms (Box 3.2). Unfortunately, there has been a lack of operational cost funding available to support this on-the-ground implementation (<u>IAVG</u>, 2021). Very little of COVAX's money was available on a flexible basis to organizations like NGOs that were trying to deliver vaccines within-country (<u>WHO</u>, 2022b).

Delivering vaccines was always going to be a challenge, especially in countries with fragile health systems. It is difficult to maintain a cold chain to preserve the vaccines, difficult to get access to last-mile communities, and difficult to find enough trained personnel to administer the vaccines. There is also a considerable community engagement and accountability challenge to overcome vaccine hesitancy. Unfortunately, the near-total lack of support for in-country logistics has meant that, in many countries, it has barely been possible to even attempt to surmount these challenges. The August 2022 report *Mapping COVID-19 Access*

Gaps looked at 14 countries and territories with low vaccination rates, and it found multiple reasons for low uptake. They include (but are not limited to): "proximity to vaccination centres and distrust of government (Democratic Republic of the Congo and Haiti), insecurity and violence (Haiti, Nigeria), continuing issues with predictability of supply, insufficient workforce to reach nomadic populations (Somalia), and suspicion due to legitimate concerns from historical memory of experimentation on Black bodies by white colonisers" (ITPC, 2022).

Finally, one problem has loomed over all phases of the global vaccine rollout. That is the question of indemnification and liability. The manufacturers of the COVID-19 vaccines initially couldn't purchase insurance for their products as the level of risk was too high. Instead, governments agreed to carry much of the risk. However, limited provisions were made for actors. COVAX established a No Fault Compensation Programme, which protected actors by offering compensation to anyone harmed by a vaccine delivered via COVAX (GAVI, 2021b), but this expired very rapidly. As a result, the potential legal risks were passed on to organizations distributing the vaccines. In theory, anyone who became ill after having the vaccine could pursue legal action against those organizations – potentially bankrupting them. This risk led many governments and organizations to refrain from distributing COVID-19 vaccines (Tharakan and Hart, 2021).

There is now a risk that this exceptional situation will ossify into a long-term problem. At this point, several vaccines have been widely approved and tests have shown them to be both effective and without major risk. Nevertheless, most manufacturers have not resumed their purchase of insurance. This potentially sets an alarming precedent for other vaccines – COVID-19-related or otherwise.



BOX 3.2 / CASE STUDY

DELIVERING COVID-19 VACCINES IN IRAN

Local actors have key roles to play in distributing vaccines within countries, especially to vulnerable and last-mile communities.

The Iranian Red Crescent Society is the only humanitarian organization in the country granted permission to facilitate imports of COVID-19 vaccines. It has managed to secure the import of more than 120 million COVID-19 vaccine shots (IFRC, no date).

The Iranian Red Crescent Society is running 10 field hospitals and 173 immunization centres launched in conjunction with Iran's Ministry of Health. All these centres are involved in COVID-19 vaccination efforts. Crucially, The Iranian Red Crescent Society has been mandated to facilitate vaccinations of three to four million refugees in the country (subject to vaccine availability).



3.2.2 Faults in humanitarian funding

Humanitarian funding is one of the key mechanisms of global solidarity. It supports those who are most in need and have the least financial capacity to manage risks and impact. During the COVID-19 pandemic, global humanitarian appeals have raised enormous sums of money and significantly mitigated the impacts of the crisis. But the quantities raised were nowhere near enough. Nor did the money always find its way to those most in need. In this section we explore the faults in the humanitarian financing system, which affect the global response to disease outbreaks and other crises. Put simply, there is not enough money, and for multiple reasons what there is does not always reach those who need it most.

On sheer scale, humanitarian donations for COVID-19 were enormous (IRC and Development Initiatives, 2021). In 2020, donors committed or paid US\$6.8 billion to the COVID-19 response (UN OCHA, no date a). This included US\$3.8 billion to the UN's Global Humanitarian Response Plan (Development Initiatives, 2022a). From 2021 onwards the UN has not run a specific COVID-19 appeal, but humanitarian funding can still be marked to the COVID-19 emergency. UN data indicates US\$1.5 billion was marked for COVID-19 in 2021, while 2022 has seen US\$540.1 million as of 7 November (UN OCHA, no date a). However, as of October 2022, IFRC alone has raised over CHF 399 million for its COVID-19 appeal, which is closing at the end of 2022. Meanwhile, National Societies raised CHF 2.4 billion through their governments or individual gifts (IFRC GO, no date).

However, these sums were inadequate. In 2020, donations only covered 40% of the Global Humanitarian Response Plan's funding requirements (<u>Development Initiatives, 2022a</u>). In other words, the pandemic response received less than half the money it needed. A particularly extreme example was Nepal, which ran a national COVID-19 response appeal in 2021. It received only US\$7.4 million of a target of US\$83.6 million – meaning 91.2% of the requirements were unmet (<u>UN OCHA, no date b</u>).

This pattern is replicated across the humanitarian sphere and has been for many years. According to the *Global Humanitarian Assistance Report 2022*, global humanitarian funding has plateaued since 2018. In 2021, US\$31.3 billion was donated globally, compared to US\$30.5 billion or US\$30.6 billion in each of the previous three years. This reveals that the COVID-19 pandemic did not drive an increase in overall humanitarian donations. Instead, some donations simply shifted towards COVID-19, neglecting other needs. The result is that humanitarian needs were not being met before the pandemic, and are still not being met. For UN-coordinated appeals, the percentage of total requirements met has fluctuated between 51% and 65% since 2012, never even approaching 100%. In 2021 just 53% of requirements were met (Development Initiatives, 2022b). Furthermore, increasing numbers of people are facing protracted crises, meaning their countries have had five or more consecutive years of UN-coordinated appeals. According to the *Global Humanitarian Assistance Report* 2022, in 2021, the number of countries experiencing a protracted crisis rose to 36, from 34 in 2020. These countries accounted for 74% of all people in need (Development Initiatives, 2022b).

Alongside this is the matter of where the money goes. There is a need for fair and equitable distribution of resources (Emanuel et al, 2020). It should be noted that this is far from trivial because there are multiple ethical values in play (O'Sullivan et al, 2022). Nevertheless, humanitarian money and efforts are not optimally distributed. Disproportionate amounts go to certain countries and regions, and to certain crises or types of crisis. As a result, those most in need often go wanting. In 2021 10 countries received 60% of country-allocable international humanitarian assistance. Yemen was the largest recipient, receiving

US\$2.7 billion or 12% of the total (<u>Development Initiatives</u>, <u>2022b</u>). There is no question that Yemen's needs are severe – but other countries and regions also require significant assistance. There is evidence of regional favouritism in the allocation of aid (<u>Bommer et al</u>, <u>2022</u>), and of ethnic favouritism (<u>Bommer et al</u>, <u>2018</u>). Further, some conflict zones have been neglected (<u>Narang</u>, <u>2016</u>). There is also evidence of aid being diverted to highly prominent sudden-onset crises, as appears to have happened in the case of Ukraine (<u>Development Initiatives</u>, <u>2022c</u>). While funding choices are always political, it is important to de-politicize humanitarian aid as much as possible.

There is a need for greater localization of funding. Direct funding of local actors is more cost effective. It links funding decisions more closely to those who know the context best. Providing money directly to **local actors** and national actors gives them more resources and flexibility (see Chapter 2). Direct funding from donors also enables local actors to better influence donor funding priorities. Local actors also get greater input into programme design and delivery. Furthermore, they are more likely to be able to access overhead funding than if they received funding through an international intermediary organization.

IFRC's own global appeal for COVID-19 innovated by localizing. Of the money raised by the Secretariat, 50% had been transferred directly to National Societies as of September 2022.¹ Similarly, as of September 2022, 70% of funds raised by the IFRC Membership was spent domestically. However, the wider humanitarian system is struggling to achieve such localization. According to the *Global Humanitarian Assistance Report 2022*, half as much funding was provided directly to local and national actors in 2021 (US\$302 million) than the previous year (US\$603 million). Local and national funding had increased in 2020, largely driven by the COVID-19 response. However, this was mainly due to fluctuations in funding to national governments rather than civil society, and in any case this trend quickly went into reverse (Development Initiatives, 2022b).

The IFRC's COVID-19 appeal also succeeded in reducing earmarking – at least at first. Donors often insist that their money be spent on specific regions or projects, and this earmarking impairs humanitarian responses by reducing flexibility. COVID-19 exemplified this problem because case numbers peaked at different times in different places. At the beginning of the pandemic, the IFRC Secretariat tried to encourage unearmarked donations and did not accept earmarking at the country level. Many donors were willing to oblige, and in subsequent evaluations external donors reported they were satisfied with IFRC's handling of the appeal. However, by the third quarter of 2020 IFRC was struggling to attract unearmarked funding and was pressured into accepting more targeted funding. This had a detrimental impact on the response. Some regions and countries suffered funding shortfalls, and National Societies had to scale back their plans. As a consequence, what was a highly nimble and effective response has been partly constrained by donors earmarking their money (IFRC, 2022b). A similar pattern was seen globally. In March 2020, the InterAgency Standing Committee released guidance requesting simpler and more flexible funding (IASC, 2020). The *Global Humanitarian Assistance Report 2022* later found that nine UN agencies got more unearmarked funding in 2020, but less in 2021 (Development Initiatives, 2022b).

In summary, humanitarian funding has a number of long-running problems, which were highlighted by the COVID-19 pandemic. Levels of funding are not sufficient to meet the global need. Donations that are made do not always go to the communities most in need, partly because of earmarking by donors. Finally, funding is insufficiently localized.

¹ Approximately a further 30% was spent on global and regional procurement of in-kind goods, which were then sent to countries for distribution by National Societies.

3.2.3 Consequences of solidarity failure

The lack of global solidarity was not only a moral and humanitarian failure; it was one of the factors that enabled the SARS-CoV-2 virus to spread faster and further, and to infect and kill more people. One study estimated, based solely on vaccine provisions, that vaccine hoarding has cost more than a million lives (Ledford, 2022). This in turn created more opportunities for the virus to mutate and for those mutations to spread (Otto et al 2021). This increased the chances of the virus evolving into newer variants like omicron, which is both highly infectious and partially able to escape the vaccines (Callaway, 2021).

The result was a significant impact on health, livelihoods, economies and society. Ultimately, we cannot measure the final cost, as the virus continues to spread and evolve. It should be a truism that nobody is safe until everybody is safe. The failures of the international community mean that even now, over two years into the COVID-19 pandemic, nobody is safe. We cannot stop pushing for global solidarity: the COVID-19 pandemic is not over, and even if it was the risk of global health crises shows no sign of diminishing.



3.3 WHAT WE NEED TO DO PROMOTE GLOBAL SOLIDARITY AT THE INSTITUTIONAL LEVEL

If our global institutions and systems are preventing true global solidarity, even in a vast emergency like the COVID-19 pandemic, our global institutions and systems need to be reformed. In this section we explore some promising avenues: first for ensuring more equitable access to disease outbreak essentials like vaccines, and second for improving the distribution of humanitarian funding.

3.3.1 Ensuring equitable access to vaccines and other outbreak essentials

The solutions here differ for pre-existing products like face masks and existing medicines and novel ones like newly developed vaccines.

For existing products, a natural buffer against potential shortages is the increasing of stockpiles for those products that can predictably serve in many types of outbreaks. Greater reliability can be achieved by expanding and maintaining multiple stockpiles, in multiple countries and regions. Stockpiles must be regularly updated, as many pandemic response products have expiration dates. A key challenge is identifying how wide an array of products to stockpile. This entails the need for more flexible solutions at the production level.

Similarly, it is dangerous to rely on a handful of countries or factories to produce all the world's supplies. Redundancy may not be maximally economically efficient, but it creates a more resilient system. It would be wise to boost regional or even domestic production of health technologies. Instead of a few facilities, mostly in the developed world, factories on every continent could in theory manufacture health essentials for **local and/or regional** use. Many countries want to do this. Indeed, the African Union has a goal of producing 60% of Africa's routine vaccinations locally by 2040 (Africa CDC, 2021). Several steps have already been taken in this direction. Pharmaceutical company BioNTech – co-developer with Pfizer of the first approved mRNA COVID-19 vaccine – has begun constructing a vaccine production facility in Kigali, Rwanda (Parrett, 2022). In January 2022, South Africa opened a new vaccine manufacturing plant in Cape Town (Arthur, 2022). Also in South Africa, Aspen Pharmacare has signed a deal with the Serum Institute of India to manufacture and sell four vaccines in Africa (Mukherjee, 2022). Such localized production should improve **equity** by ensuring fairer access to health technologies.

Supply problems could also be mitigated if governments and international organizations became ready for faster decision making and action to obtain and disseminate key materials at scale. This would require investing in improved procurement processes. However, it is possible that such global inequities are inevitable, so long as the production of pandemic response products is primarily determined by market forces and no enforceable global agreement exists by which states agree to share access when supplies are squeezed.





Getting vaccines into a country is one thing. It is also necessary to transport them within the country to the communities that need them, organize vaccination drives, and persuade people of the vaccines' merits.

Another challenge to adequate production was that companies were prevented from production due to intellectual property (IP) laws and the exorbitant cost of IP purchases. IP rights can be waived on vaccines, allowing third party companies to manufacture them. Consequently, at the World Trade Organization (WTO) in October 2020, India and South Africa proposed that pharmaceutical companies be forced to waive their rights to COVID-19 health technologies. Currently, patented medicines cannot be freely manufactured because states have committed to protect relevant IP rights under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). The proposed waiver would have allowed states to more freely permit the manufacture and sale of patented COVID-19 health technologies, without sanctions. Most WTO member countries supported this, but decisions must be unanimous and several members opposed it (Pilkington et al, 2022). A limited waiver was eventually agreed in June 2022, but it only applies to certain countries and only to COVID-19 vaccines – other medical essentials are excluded (MSF, 2022b). However, past experience suggests progress can be made on these IP issues (Adesina et al, 2013). For instance, there have been successful initiatives to improve both accessibility and pricing of HIV therapeutics (D'Angelo et al, 2021).

A further step will be to broaden the range of organizations that can distribute or administer pandemic response products, so long as it is done with the government's approval. If organizations, like National Societies, are able to better support governments to administer vaccines at the national level, following government-approved mandates and approval processes and using national storage facilities, vaccine rollouts would likely be improved in two crucial ways. First, humanitarian organizations can help organize campaigns to reach last-mile communities that governments struggle to reach thereby alleviating the pressure on governments to administer all doses within relatively short timeframes (Box 3.3). Success in the aforementioned steps should enable all countries and relevant organizations to obtain health essentials like vaccines. However, there are additional requirements. Countries should be told well in advance that shipments are coming. Deliveries should occur at the time promised to avoid the many problems caused by delays. Shipments should only include products accepted by the receiving country. Furthermore, products should be tailored to the receiving country; for example, vaccines that require a complicated cold chain are less suitable for countries with minimal infrastructure.

Just as importantly, it is necessary to ensure that the products are used; for example, that the vaccines are actually used to vaccinate people, and they do not simply sit on an airport tarmac until they decay. For this, there is a need for considerable in-country logistics support. This includes transportation, cold chain and trained personnel to administer the vaccines. Equally essentially, there must be coordinated risk communication and community engagement programmes to advise people on the benefits of the vaccines, find out any concerns they have about them, and assist them in registering and obtaining the vaccines. A significant tranche of all future funding for health essentials must be devoted to these logistical and communication challenges (DeLand, 2022). For instance, in Iraq the International Committee of the Red Cross (ICRC) has supported almost all the Ministry of Health's vaccination centres: it provides financial incentives to staff, as well as refrigerators, laptops and PPE. Meanwhile, in Mozambique the ICRC has provided fuel to transport vaccines, healthcare teams, and Mozambiquan Red Cross volunteer facilities, including in Cabo Delgado where over 800,000 people have been displaced by armed conflict in the past few years (ICRC, 2022).

BOX 3.3 / CASE STUDY

COVID-19 VACCINATIONS FOR PRIORITY GROUPS IN LEBANON

In early 2021, Lebanon was struggling to contain COVID-19. January saw a surge, with around 5,500 daily confirmed cases (World Bank, 2021). The situation was further complicated by the aftermath of the Port of Beirut explosion in August 2020.

In response, the World Bank re-allocated US\$34 million from an existing health resilience project to support vaccines. The project set out to provide vaccines for over 2 million people, beginning in February 2021. The rollout focused on priority groups including high-risk health workers, the over-65s, epidemiological and surveillance staff, and people with co-morbidities (World Bank, 2021).

The IFRC joined the project in February 2021 to perform oversight and supervision (IFRC, 2021). IFRC's role was to monitor multiple aspects of the rollout, from supply chain management tasks like temperature maintenance to service delivery at vaccination sites, eligibility of vaccine recipients, and capturing client perspectives and feedback.



3.3.2 Fixing humanitarian funding

Many of the problems with the quality of humanitarian funding could be solved by implementing the pledges made in the Grand Bargain (IASC, no date). This agreement was launched at the 2016 World Humanitarian Summit in Istanbul, Türkiye. It initially involved 18 donor countries and 16 international aid organizations. It has since grown to 64 signatories and in 2019 covered around 84% of all donor humanitarian contributions (IASC, no date).

The Grand Bargain's aim was to improve the efficiency and effectiveness of international humanitarian aid. Donors made 51 commitments, including reducing national earmarking of funds and channelling 25% of international emergency funding as directly as possible to local or national organizations (IASC, 2016). In addition, the Grand Bargain requires a significant increase in multi-year funding. This would put humanitarian operations on a much more sustainable footing and enable far greater preparedness (see Chapter 1), community engagement (see Chapter 2) and data-driven methods (see Chapter 5). Finally, the Grand Bargain calls for greater cooperation between humanitarian and development actors, which have traditionally been siloed.

Unfortunately, while some progress has been made towards the Grand Bargain targets, the majority remain unmet. A 2021 independent review identified a number of examples. For instance, the proportion of funding that is multi-year and unearmarked has not increased since 2016, even though some donors have shifted towards such predictable and flexible forms of donation. Similarly, while there has been a normative shift towards localization, this has not yet resulted in major changes in funding availability (Metcalfe-Hough et al, 2021). A 2022 update found only limited progress on these issues, although it did note a shift towards greater transparency on funding data (Metcalfe-Hough et al, 2022).

In 2021, negotiations began for a revised set of mechanisms for cooperating around the Grand Bargain, or Grand Bargain 2.0 (Alexander, 2021). This was finalized at the end of the year and will run until 2023, after which there will be another stocktake. It was not yet clear at the time of writing if the signatories would agree to continue the initiative (IASC, 2021). Donors and other actors must meet the Grand Bargain's commitments before the initiative is considered finalized.

Finally, to meet the logistics challenges discussed in 3.3.1, it is necessary to bolster health capacities within countries. Doing so requires more predictable international humanitarian funding so that personnel and resources can be retained (IFRC, 2018).

KEY RECOMMENDATIONS

Enable regional production and distribution of all pandemic response products. Countries must be able to manufacture and distribute their own vaccines, PPE and other equipment. This regionalized approach will create redundancies, reducing the likelihood of shortages of the type seen during the COVID-19 pandemic and instead ensuring that far more communities receive the pandemic response products they need in future emergencies. Establishing such regionalized production requires an investment in human resources and training, as well as concerted engagement with the communities hosting the production facilities.

Create viable global distribution mechanisms for new pandemic response products like vaccines.

Strong mechanisms, such as the International Coordinating Group, do exist but not for high-risk products. It is necessary to devise a new mechanism to ensure that vaccines and other pandemic response products reach the populations that need them – including those communities that governments are unable to cover. These mechanisms must enable pandemic response products to be distributed or administered by local and humanitarian organizations with oversight from governments. They must also include measures to avoid unbalanced and unsustainable legal risks for local actors and lower-middle-income countries, such as being held liable for the adverse effects of both newly developed and more proven pandemic response products. This can be achieved by ensuring manufacturers resume purchase of indemnification and liability insurance as soon as it is available (once a product is proven safe and effective).

Strengthen in-country capacity to get pandemic response products to communities. Provide support for logistics like transportation and cold chain, enabling the delivery of vaccines and other pandemic response products to last-mile communities. Complement this with effective community engagement and accountability programmes to maximize uptake of proven pandemic response products. Again, there is a need for additional investment in human resources to ensure vaccinators are trained and logistics are prepared ahead of time.

Reform humanitarian funding to make it more predictable, flexible and accessible to local actors. These commitments have already been made in the Grand Bargain and should be followed through. This will enable a more sustainable and equitable response to epidemics and other disasters, including greater preparedness. Greater accessibility of funding for local actors will also enable more community-driven actions.

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