



HHS Public Access

Author manuscript

Cad Iberoam Direito Sanit. Author manuscript; available in PMC 2021 December 21.

Published in final edited form as:

Cad Iberoam Direito Sanit. 2021 ; 10(3): 199–210. doi:10.17566/ciads.v10i3.789.

Brief communication International cooperation in a non-ideal world: the example of COVAX

Florencia Luna^{1,2}, Felicitas Holzer³

¹Doctor; Bioethics Program Director, Facultad Latinoamericana de Ciencias Sociales (FLACSO), Bioethics Program, Ciudad de Buenos Aires, Argentina; principal researcher at National Council of Research in Science and Technology (CONICET).

²Dr. Luna acknowledges that research reported in this publication was supported by the Fogarty International Center of the National Institutes of Health under Award Number R25TW001605. The content is solely the responsibility of the author and does not necessarily represent the official views of the National Institutes of Health.

³PhD, Institute of Biomedical Ethics and History of Medicine, University of Zurich, Zurich, Switzerland.

Abstract

The world witnessed one of the fastest responses in history to a new disease in terms of drug and vaccine development. However, despite the fact that safe and effective vaccines for COVID-19 were developed at a remarkable pace, international cooperation seems to have failed regarding the global equitable allocation of vaccines. This article explores challenges to international cooperation in global health and specifically to the fair allocation of vaccines at a global scale. We will present major obstacles to cooperative efforts and an interesting answer such as the COVAX facility, a cooperative redistribution scheme that has recently been launched by WHO, CEPI and Gavi. Considering COVAX a laudable and necessary first step to improve international cooperation in health, we nevertheless argue that the facility needs to identify key areas of potential improvement.

Resumo

O mundo foi testemunha de uma das respostas mais rápidas da história a uma nova doença em termos de desenvolvimento de medicamentos e vacinas. No entanto, apesar do facto de que as vacinas seguras e eficazes para COVID-19 foram desenvolvidas a um ritmo notável, a cooperação internacional parece ter falhado no que diz respeito à distribuição global equitativa de vacinas. Este artigo explora os desafios para a cooperação internacional em matéria de saúde global e, especificamente, para a distribuição justa de vacinas à escala global. Apresentaremos os principais obstáculos aos esforços cooperativos e uma resposta interessante, como o mecanismo COVAX, um esquema de redistribuição cooperativa que foi lançado recentemente pela OMS, CEPI e Gavi. Considerando o COVAX como um primeiro passo louvável e necessário para melhorar a

florlunaflacso@gmail.com .
Colaboradores

Luna F contribuiu com a concepção/desenho do artigo, redação do artigo e aprovação da versão final. Holzer F contribuiu com a concepção/desenho do artigo, análise e interpretação de dados e redação do artigo.

cooperação internacional em saúde, argumentamos que o mecanismo precisa de identificar as áreas de potencial melhoria.

Resumen

El mundo ha sido testigo de una de las respuestas más rápidas a una nueva enfermedad, en términos de desarrollo de drogas y vacunas. Sin embargo, pese al hecho de que se han desarrollado vacunas seguras y efectivas para el COVID-19 a un paso impresionante; la cooperación internacional en relación al acceso equitativo a las vacunas parece haber fallado. Este artículo explora los desafíos a la cooperación internacional que se plantean en relación a la salud global y, específicamente, a la distribución justa de vacunas a escala global. Presentaremos algunos obstáculos a los esfuerzos cooperativos, así como también una respuesta interesante como lo es la del mecanismo COVAX, un sistema cooperativo de redistribución que ha sido recientemente introducido por la OMS, CEPI y GAVI. Aunque consideramos a COVAX un primer paso meritorio y necesario para mejorar la cooperación internacional en salud; argumentamos que el mecanismo necesita identificar áreas de mejora.

Keywords

International cooperation; Vaccine nationalism; Access to COVID-19 vaccines; Global justice

Palavras-chave

Cooperação internacional; Nacionalismo vacinal; Acesso às vacinas COVID-19; Justiça global

Palabras clave

Cooperación internacional; Nacionalismo de vacunas; Acceso a las vacunas COVID-19; Justicia global

The COVID-19 pandemic raised several new problems that we never experienced in this way before. The most obvious threat has been the spread of a new virus that still needs to be controlled by means of new therapeutics and vaccines. It seems that vaccine discovery has so far been advancing at a remarkable pace, having resulted in the approval of several suitable vaccines and vaccine candidates. However, even though safe and effective vaccines were developed – under the framework of emergency authorization – there remains a second pressing problem, which poses a much greater challenge, that is, a failure of international cooperation regarding the global equitable allocation of vaccines.

In this article, we will focus on the challenges to international cooperation and the allocation of vaccines at a global scale. More specifically, we will sketch major obstacles to cooperative efforts, as well as present and evaluate a new framework for enhanced cooperation that points in the right direction with regard to future pandemics: the COVAX facility. We will explore benefits and challenges to such a model of cooperation and, finally, suggest possible improvements.

The reality of international cooperative efforts in a non-ideal world

Vaccine nationalism refers to the position many governments have taken to use law and other mechanisms to secure priority access to future vaccines, for example through Advance Purchase Commitments (APAs) with vaccine manufacturers. APAs are one way to serve national interest but erode collaboration between countries (many countries end up hoarding more vaccines than needed). APAs have been criticized for lacking transparency and, importantly, for driving up the prices of vaccine candidates and related materials, as countries start competing against each other (1). Countries frequently opt for bilateral agreements in non-ideal circumstances, a practice with questionable consequences. In 2009, the H1N1 virus killed almost 300,000 people despite the fact that a vaccine had been developed within seven months from the beginning of the pandemic. At that time, 90% of the total vaccine production was made accessible to ten countries – among them Australia, Canada, and the US. Only after negotiations with WHO, 10% of the vaccine doses were released to make them accessible to other countries (1). Commentators unanimously agreed upon the sad truth that vaccines never arrived in low and middle-income countries (LMICs) that urgently needed them.

So, what, if any, lessons can be learnt from such historical incidences? Consider the following situation in mid-January 2021, high-income countries (HICs) purchased 4.2 billion doses, when only 7 billion doses had been available. While richer countries represent only 15% of the world population, they held 60% of the vaccine pool. Unsurprisingly, the number of completed APAs immensely exceeds – in many affluent countries – the required number of vaccines to fight the current pandemic (2). On top of that, some countries hoarding vaccines testify that vaccine doses are not used or discarded. This kind of practice jeopardizes global cooperation, especially when countries start competing against each other for the access to a scarce good. This does not only raise a moral red flag but seems to be irrational from a global cooperative perspective, from which the pandemic cannot be controlled by solely vaccinating the population in affluent nations. This does not mean that a moderate nationalism or partiality cannot be an accepted practice. However, if moderate nationalism were justifiable, clear limits should be established through caps or other means of self-restriction. (3)

In an ideal world, there is no doubt that global cooperation is necessary to effectively stop the pandemic and countries would choose full cooperation from a rational and moral stance. Reducing virus circulation, preventing the spread of new virus mutations, protecting the vulnerable and ultimately decreasing suffering and death will only be achieved through strong cooperative efforts at the international level. This insight is well captured by the slogan *no one is safe until everyone is safe*, which not only underlines the general value of solidarity but also appeals to a certain degree of self-interest. It serves as a rationale for countries to cooperate at the international level, and similarly for WHO, UNICEF and NGOs to sustain such global cooperation. From a moral stance, this cooperation model commits us to a cosmopolitan position, in which the distribution of vaccines should not depend on citizenship at all. It can be argued that all countries – including LMICs as well as HICs – should make sure high-risk groups and frontline health workers are provided a sufficient number of vaccines.

One way of implementing these ideas is through a multilateral agreement between nation states with the goal of distributing vaccines equitably and independently of national wealth and bargaining power. However, the implementation of such arrangement poses major challenges, as it would require ideal circumstances, that is, unanimous cooperation under fair terms at the global scale. In the actual non-ideal circumstances, in which vaccine nationalism remains the predominant attitude, current cooperation and the actual level of trust between states is not enough. As said, HICs safeguard an excessive share of vaccines; a tendency that is fuelled by their considerable soft power and negotiations behind the scenes. In this regard, one may discard the idea of global cooperation as being a utopian and unachievable vision in our current world.

The COVAX initiative: a reasonable middle ground?

The COVID-19 Vaccine Global Access Facility (COVAX) offers a platform for international cooperation and can be considered an intermediate strategy on the ground that countries can still buy vaccines outside the facility. COVAX has been introduced in a complex, non-ideal world.

COVAX is a global collaborative effort, co-led by the Vaccine Alliance (4), the Coalition for Epidemic Preparedness Innovations (CEPI), and the World Health Organization (WHO), that has been originated to speed up the development, manufacture and equitable distribution of new vaccines. COVAX encourages nations to participate in the innovative facility to guarantee rapid, fair and equitable access to COVID-19 vaccines worldwide. The facility's goal is to deliver 2 billion vaccine doses or more by the end of 2021 to all participating countries. COVAX is conceptualized as a cooperative mechanism based on several important pillars that aim to achieve benefits for individual countries (4). First, COVAX proposes a scheme for pooling resources and distributing the risk of vaccine development among participating countries. Countries pay into a central fund, which is then used to finance vaccine candidates being developed in a number of countries. Each participating country pays for a certain number of doses, which is sufficient to cover up to 20% of its populations. In this regard, the COVAX facility works as a global insurance policy for countries, meaning that the chance of accessing an approved vaccine candidate is increased. This pillar has been particularly important before November 2020, when a vaccine candidate had not yet been approved by regulatory agencies, which came along with great uncertainty.

Second, the advantage for individual countries is that they are not committed to a particular vaccine candidate. From an equity point of view, vaccines will not necessarily go to the country where vaccines are produced but will be distributed to participating countries as production increases. Third, COVAX not only delivers vaccines but also helps countries to get prepared for immunization campaigns. This is very important in countries that lack a sufficiently strong health infrastructure. Fourth, COVAX is a mechanism through which individual countries can contribute and fulfil their moral obligation to promote the health of their own citizens and fund and distribute at the same time vaccines to low-income countries. Gavi is here the leading institution in charge of implementing the COVAX AMC (Advanced Market Commitment) facility with its partners UNICEF and WHO, along with governments. The Gavi COVAX AMC is the financing mechanism that will support the

participation of 92 low- and middle-income countries in the facility, which guarantees access to donor-funded doses of safe and effective vaccines (5).

From a rational point of view, countries should be interested in a cooperative mechanism like COVAX, as joint negotiations with manufacturers and the subsequent unanimous distribution of vaccines should lead to better prices and to the most effective control of the pandemic. COVAX has also mitigated the risk related to the uncertain success of several vaccine candidates at the beginning of the pandemic. It also aims to overcome an unfavourable historic record of vaccine development and allocation during last outbreaks, as shown by the case of the H1N1 vaccine in 2009. In addition, a recent study by the ICC Research Foundation shows that it is rational and convenient for HICs to take poor countries into consideration when it comes to vaccine distribution, as vaccine nationalism is a costly undertaking with a horrendous loss of up to \$9.2 trillion if governments fail to ensure developing economies access to COVID-19 vaccines (6). Allowing the pandemic to continue in other countries increases the likelihood that other variants develop, which may then convert the pandemic into an endemic disease. For example, the Brazilian or the Delta variant of the virus is not only more contagious but can re-infect people who already recovered from other strains of the virus (7). Such virus mutations jeopardize the effective vaccination not only in isolated countries but also in other regions of the world, as demonstrated by the emergence of the current Delta variant. It is having a tremendous impact in Europe's intent to restore activities to normalcy.

A way forward: COVAX and global reform

Assuming that COVAX is the right way to a fairer and more efficient global vaccine distribution, the global community needs to think how COVAX could be implemented more forcefully and in compliance with ethical principles. In what follows, we will focus on three areas needing improvement, that is, ethical allocation schemes, enforcement, and implementation. More specifically, we will first present an alternative allocation scheme for the global distribution of vaccines. Second, we will assess how to provide a better fundament to make countries cooperate more effectively, also in the long run. Finally, we will inquire about reform proposals for a more effective implementation of the COVAX facility.

In search of a fairer allocation scheme

The standard allocation scheme supported by WHO and, so far, adopted by the COVAX facility is the so-called Proportional Allocation System (PAS) that establishes a formal standard of equity based on each country's population size. It is based on two phases. In the first one, countries receive doses proportionally to their local population for frontline workers and high-risk adults up to 20%. In phase two, countries would be able to cover other priority groups, which ensures them – among other things – predictability (8). By contrast, Emanuel, Luna and other scholars have suggested another allocation framework, that is, the Fair Priority Model (FPM) to advocate needs-based distribution instead of a proportional equity criterion under PAS (9). The needs-based model considers three phases to reach a truly equitable distribution. First, it takes into account the reduction of premature deaths as a consequence of the health emergency; in a second phase, distribution is aimed

at reducing economic hardship (with a focus on the overall economic improvement and the extent of people that would be spared from poverty); the third phase concerns the reduction of transmission rates to restore normalcy (9). The three values guiding this scheme are the following: benefiting individuals and limiting harm; prioritizing the disadvantaged; and equal global concern.

Emanuel *et al* (9) have argued that FPM outperforms PAS on grounds of justice and efficiency considerations, which makes it the ideal allocation framework. But even if this is the case, there remains the possibility of combining both models (10). As a starting point, we may accept proportionality as a formal standard and baseline. However, even if PAS proposes a reasonable default standard, it must allow for exceptions when the differences in impact are very large, such as the magnitude of local outbreaks and lives lost. PAS may be modified by – at least – giving priority to hot spots.⁴ For example, at the end of February 2021, COVAX allocated its first shipment of vaccines to Ghana, a country with 30 million inhabitants, 86,000 cases of COVID-19 disease and 700 deaths caused by the virus. At the same time, Peru was counting 48,500 deaths from COVID-19 disease; a country with a similar population size of 32 million people and a significantly higher number of cases, that is, 1.4 million infected people (11).

Under a model like FPM, Peru should be given priority over countries like Ghana. In addition, criteria should be developed regarding only providing the 3% or 20% if a country is in a catastrophic situation.⁵ Admittedly, it is a great success itself that African countries have been given access to vaccines on time, that is, in the very early initiation phase of vaccine delivery. However, if other countries with scarce health resources seem to be trapped in a more desperate situation, struggling to prevent deaths and alleviate suffering, justice demands that vaccine delivery should begin there. In this sense, Emanuel, Luna, Schaefer et al. make a point when saying that “[i]t may be justifiable to deprioritize countries that are in much less urgent need of the vaccine compared with the rest of the world.” (10, p.373). This kind of adjustments also resonate with the Strategic Advisory Group of Experts on immunizations (SAGE) brought into being by WHO to give advice regarding COVAX. The group also argues for the evaluation of threats (the potential impact of COVID-19 assessed on grounds of epidemiological data) and vulnerability (this is based on health systems and population factors). For the second phase, SAGE explicitly advises identifying countries with the highest risk which should receive the vaccine at a faster pace (8). Thus, we can observe that there are common points between advocates of the two models, even though according to FPM, this kind of allocation should not be postponed to the second phase but instead be considered all along the process of allocation.

In a nutshell, one of the things needed is the elaboration of a multi-parameter framework that takes in consideration need and multiple factors when deciding on the allocation of vaccines. The FPM model offers a substantive ethical allocation, which includes need and different relevant parameters as well as proxies to measure them (9).

⁴Beyond that, it can certainly be discussed whether COVAX should increase the share of vaccinated people per country to more than 20%, which may be, however, a difficult undertaking considering the scarcity of vaccines at present.

⁵See note 1.

Enforcement of international cooperation

To envisage an improved global governance for the development, procurement and distribution of vaccines, actors may take climate agreements as an example. For instance, countries could commit themselves to caps on bilateral agreements, similar to the caps on carbon emissions, that would still allow them to vaccinate their own population. Different proposals can be implemented: from a more restrictive position, such as the flu risk standard, which considers acceptable to retain doses to maintain a non-crisis level of mortality, the health system functionality, and economic activity (3) to a maximum of doses to achieve herd immunity. Such agreement would have the objective to halt excessive APAs and vaccine hoarding.

Whether international agreement and an improved institutionalization of cooperative efforts in global health remain soft law or whether countries will pass bills in their own countries, depends on the willingness to cooperate and the importance given to the value of solidarity. Pushing international cooperation is and will be an extremely ambitious and important enterprise. WHO and Gavi could take a lead role in improving and coordinating cooperative efforts, as well as in incentivizing countries to bring different stakeholders, including the pharmaceutical industry, NGOs, international organizations, COVAX, and nation states together. These lead institutions would furthermore need support by institutions and processes with direct or indirect impact, including the United Nations (UN), and the World Trade Organization (WTO), as well as by mechanisms and institutions created at national and regional levels to support global health governance (12,13). For instance, PAHO's Revolving Fund has been actively used for vaccine delivery in the Americas and Caribbean during the COVID-19 pandemic (14).

There has been justified critique towards the functionality of a global approach to health governance. Thomas Nagel (15) has most notably argued that the international realm is characterized by anarchy, that is, the absence of global authority. Global institutions that emerge may lack legitimacy and will most likely lead to a prioritization of the interests of its major funders. So, the major task of international players and stakeholders will indeed be to enforce and maintain democratization of global institutions and to hold them accountable, which can then create legitimacy in the long run (13). For instance, a facility like COVAX would need to assure that countries have an equal say when it comes to vaccine procurement and distribution. This may be naturally endangered by the fact that there are considerable differences between participating countries and other stakeholders regarding their funding abilities and bargaining power.

Bearing this objective in mind, Van de Pas *et al* (13) argue that there are essential functions of a potential system for global health governance. These functions include the production of global public goods, the management of externalities across countries, the mobilization of global solidarity, and stewardship. These aspirations, for example, are currently well supported by the Sustainable Development Goals (SDGs) that integrate economic and social development, as well as environmental change, with broad implications for global health.

Implementation and reform proposals for COVAX

As mentioned beforehand, any sustainable framework for cooperation must require that the different institutions involved are legitimate and can be held accountable. To address the legitimacy concern, improvements within the COVAX facility may first and foremost relate to more transparency in the negotiations with the pharmaceutical industry, its governance structure and the visibility of decision-makers. This goes hand in hand with the generation of trust in the facility itself, and also in the institutions governing COVAX, that is, Gavi, WHO and CEPI.

Transparency is one important pillar to render a facility like COVAX truly accountable. But this should be complemented by an endeavour of *democratizing* COVAX through multilateralism, e.g. by including more vaccine candidates in the portfolio, given that vaccines are proven to be safe and effective. COVAX is at the current stage perceived as a Western cooperative by many public health experts, not least because it forwent vaccine procurement in countries, such as Russia, despite the fact that the Russian vaccine has shown promising results during phase three trials.

Further downstream, there may be another important area of potential improvement, that is, the scale up of global vaccine production. Since production capacities of vaccines remain the real bottleneck to attain an adequate number of vaccines, COVAX could furthermore have a more active role in facilitating the technology transfer between vaccine innovators, that is, pharmaceutical companies and potential manufacturers. Given that many (past and future) pandemics have and will concern LMICs, CEPI is a crucial actor in assuring that innovative global partnerships between public, private, philanthropic, and civil society are continuing to accelerate the development of vaccines against emerging infectious diseases, and to enable equitable access to these vaccines during pandemics. It will certainly be necessary to build and strengthen production capacities in different LMICs and their regions. Manufacturing should be *de-centralized* and different regions of the world should have a capacity building policy to allow for a viable infrastructure. The partnership between the Serum Institute of India and AstraZeneca has been a promising first step in that regard and will hopefully serve as a model for other countries and regions, also in the long run.

Conclusion

We should acknowledge COVAX as a laudable enterprise, given the circumstances of a complex world in which global governance and cooperative efforts are, at best, in the early stages of development. As always, there is room for improvement, which means that the COVAX facility, and more generally global health governance, would certainly benefit from reforms together with a strengthened system for international health governance. Such reforms involve a discussion about an adequate equitable distribution scheme for vaccines, negotiations on global agreements and institutionalization to facilitate a fair global vaccine allocation. Despite current problems and obstacles perceived, the achievements of today and the mere fact that COVAX has been brought into existence as a global cooperation nevertheless offer a rather optimistic outlook on future pandemics.

References

1. Bollyky TJ, Bown CP. The Tragedy of Vaccine Nationalism: Only Cooperation Can End the Pandemic. *Foreign Affairs*. 2020;99(5):96.
2. Lambert J Global inequity in COVID-19 vaccination is more than a moral problem. *ScienceNews* [internet]. 2 2021. Available at: <https://www.sciencenews.org/article/covid-19-global-inequity-vaccines-deaths-economy>-<https://www.sciencenews.org/article/covid-19-global-inequity-vaccines-deaths-economy-pandemic>
3. Emanuel E, Fabre C, Halliday D. et al. How many vaccine doses can nations ethically hoard? *Foreign Affairs*. 3 9, 2021. Available at: <https://www.foreignaffairs.com/articles/world/2021-03-09/how-many-vaccine-doses-can>-<https://www.foreignaffairs.com/articles/world/2021-03-09/how-many-vaccine-doses-can-nations-ethically-hoard>
4. Gavi, The Vaccine Alliance. What is COVAX? COVAX is the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator. 2020. Available at: <https://www.gavi.org/covax-facility#what>
5. World Health Organization (WHO). COVAX Announces new agreement, plans for first deliveries. 1 22, 2021. Available at: <https://www.who.int/news/item/22-01-2021>-<https://www.who.int/news/item/22-01-2021-covax-announces-new-agreement-plans-for-first-deliveries>
6. International Chamber of Commerce (ICC). Study shows vaccine nationalism could cost rich countries USD 4.5 trillion. 1 25, 2021. Available at: <https://iccwbo.org/media>-<https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion>-<https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion>/[trillion/](https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion/trillion/)
7. Andreoni M, Lodoño E, Casado L. Brazil's Covid Crisis Is a Warning to the Whole World, Scientists Say. *New York Times*. 3 4, 2021. Available at: <https://www.nytimes.com/2021/03/03/world/americas/brazil-covid-variant.html>
8. World Health Organization. Fair allocation mechanism for COVID-19 vaccines through the COVAX Facility. 9 9 2020. Available at: <https://www.who.int/publications/m/item/fair-allocation-mechanism-for-covid-19-vaccines-through-the-covax-facility>
9. Emanuel EJ, Persad G, Kern A, Buchanan A, Fabre C, Halliday D et al. An ethical framework for global vaccine allocation. *Science*. 9 2020;369(6509):1309–1312. [PubMed: 32883884]
10. Emanuel E, Luna F, Schaefer O, Tan KC, Wolff J. Enhancing the WHO's proposed framework for distributing COVID-19 vaccines among countries. *AJPH*. 3. 2021;111(3): 371–373. Available at: <https://ajph.aphapublications.org/doi/10.2105/AJPH.2020.306098>
11. Worldometers. COVID-19 coronavirus pandemic. Update 3 12, 2021. Available at: https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1
12. Frenk J, Moon S. Governance challenges in global health. *The New England Journal of Medicine*. 3 2013;368(10):936–942. doi: 10.1056/NEJMra1109339 [PubMed: 23465103]
13. Van de Pas R, Hill PS, Hammonds R, Ooms G, Forman L, Waris A et al. Global health governance in the sustainable development goals: Is it grounded in the right to health?. *Global Challenges*. 2017;1:47–60. doi: 10.1002/gch2.1022. [PubMed: 28616255]
14. Pan American Health Organization (PAHO). PAHO Revolving Fund. Available at: <https://www.paho.org/en/resources/paho-revolving-fund>
15. Nagel T The problem of global justice. *Philosophy & Public Affairs*. 4 2005;33(2):113–147.