

# Rethinking the International Response System to Global Health Threats: Strengthening International Collaboration to Ensure Vaccine Equity and Combat Vaccination Hesitancy

Ramin Walter Parsa-Parsi, MD, MPH

At least 9 million people died waiting for the price of antiretroviral therapy to become more affordable to them as the world faced a global outbreak of a new and devastating virus 4 decades ago: the human immunodeficiency virus (HIV), the virus that causes acquired immunodeficiency syndrome.<sup>1</sup> In the early response to this global epidemic, newly developed drugs provided hope after years of loss and devastation. These treatments remained out of reach for impoverished countries and communities, however, even as well-off countries gained access to lifesaving medications that transformed HIV from a death sentence to a treatable, chronic disease. Generic drug production and the competition that resulted finally reduced the price of the antiviral drugs by 99%, thereby saving millions of lives.<sup>2</sup>

The world faces a similar dynamic amidst the coronavirus disease 2019 (COVID-19) pandemic. Although there is still no cure for COVID-19, a number of potentially lifesaving vaccines have been developed in record time. Access to these vaccines has thus far mostly been limited to wealthy nations, which have secured much of the world's COVID-19 vaccine supply for their own citizens. This is something that the global community cannot afford to repeat. The rapidly changing and increasingly interconnected world and a global pandemic caused by a fast-spreading potentially life-threatening virus have ushered in an era of global public health challenges that require new ways of thinking. This time, no one is safe until everyone is safe.

The inequitable distribution of COVID-19 vaccines has not only led to a humanitarian crisis in developing nations, but it also threatens to derail any progress that has been made in the countries that have already launched substantial vaccination programs. The lessons learned during the global HIV epidemic and other global health crises must be put into action immediately. This

begins with the understanding that the world community has a high level of moral responsibility to prevent the unnecessary loss of human life, no matter the part of the world. Furthermore, and this is especially true in the case of the highly contagious COVID-19 virus, helping to end the pandemic on a global scale is in fact the only way to reduce the risk of the emergence of new and potentially even more dangerous virus variants. The longer the COVID-19 virus is in circulation anywhere on the globe, the greater the chance that new variants that are resistant to existing treatments and vaccines will emerge and spread.<sup>3</sup> Vaccine resistance threatens to wipe out any successes that have been achieved; extend the duration of the pandemic; worsen the massive global economic, cultural, and social impact; exacerbate the substantial negative collateral health effects of the pandemic response; and, above all, cause more suffering and death from COVID-19.

Vaccine nationalism may seem like the fastest way to protect a country's population in a global pandemic, but a go-it-alone approach does not provide lasting protection for those countries that can afford vaccines and treatment.<sup>4</sup> Unfortunately, so far, the COVID-19 pandemic has once again laid bare the great inequity of access to lifesaving serums and the dangers posed by vaccine nationalism. Many developing countries are at a disadvantage due to financial restrictions and limitations on production capacity, while higher-income countries have the resources to access highly effective vaccines, in some cases even securing twice as many doses as needed to cover their populations.<sup>5</sup>

To put a halt to this injustice and embark on sustainable solutions, the response to global health emergencies must be reimaged to adapt to these new public health challenges. A key part must involve shifting from a system that disproportionately benefits the highest bidder to a more collaborative and multifaceted international approach on all levels.

As a start, vaccine production must be maximized throughout the world as quickly as possible. This is crucial, but it can only be part of the solution because even if patent-holding drug companies and their licensed partners scale up their production to capacity, the current global demand will not be met in a reasonably timely manner. Still, in the immediate term, countries with the supplies and mechanisms to share vaccines with those facing shortages can save the lives of frontline workers and help vulnerable groups.<sup>6</sup>

Ultimately, the goal must be to establish and support sustainable local production of effective vaccines. The key to a self-sustaining system of vaccine production would be to resolve patent issues in a reasonable and effective way that would prevent manufacturers from monopolizing production, vaccine doses, and/or the raw materials needed to produce them without jeopardizing future vaccine innovation and investment. The reduced prices that would result from increased production and competition would ultimately improve accessibility<sup>4</sup>; however, lifting patents alone will not solve the issue of vaccine shortage. Even more crucial will be the transfer of technology, knowledge, and manufacturing expertise and the training of staff to facilitate

---

From the Department for International Affairs, German Medical Association, Berlin, Germany.

Correspondence to Dr Ramin Walter Parsa-Parsi, German Medical Association, Herbert-Lewin-Platz 1, 10623 Berlin, Germany. E-mail: rparsa@baek.de. To purchase a single copy of this article, visit [sma.org/smj](http://sma.org/smj). To purchase larger reprint quantities, please contact [Reprintsolutions@wolterskluwer.com](mailto:Reprintsolutions@wolterskluwer.com).

R.W.P.-P. has received compensation in the form of travel reimbursement from the World Medical Association.

Accepted September 24, 2021.

Copyright © 2022 by The Southern Medical Association

0038-4348/0-2000/115-165

DOI: 10.14423/SMJ.0000000000001360

the complex process of vaccine production. This must be bolstered by international investment in vaccine production sites, including in resource poor settings, and the guarantee of adequate quality control.<sup>7</sup> At the same time, we need to be alert that all of these efforts could increase the risk of counterfeit vaccines entering supply chains around the world.<sup>8</sup>

Although there is still much work to be done, as witnessed in the great disparity of vaccination rates throughout the world, there are some excellent examples of global cross-sectoral collaborations with the potential to serve as blueprints for a more efficient and effective future pandemic response system. As part of the Access to COVID-19 Tools Accelerator<sup>9</sup> framework for collaboration, the Coalition for Epidemic Preparedness Innovations (CEPI) and COVID-19 Vaccines Global Access initiatives have offered a glimpse into how countries and their governments can pool their resources and risks to invest in vaccine research and development and to coordinate the production and equitable (and transparent) global distribution of successful vaccines. Although there are certainly improvements still to be made,<sup>10</sup> both CEPI, a tool for the international funding of health research, and COVID-19 Vaccines Global Access, a voluntary initiative led by CEPI, the Vaccine Alliance (Gavi), and the World Health Organization with the objective of ensuring that all countries have equitable access to vaccines, reveal the clear benefits of a multilateral rather than a unilateral approach to both the current and any future global health crises.<sup>6</sup>

There also are countries where vaccines are readily available but subject to skepticism and mistrust. Vaccine hesitancy is a complex issue and poses a similarly dangerous threat to controlling the pandemic. Some reluctance in disadvantaged communities is rooted in historical inequities, breaches of trust in medical research, negative experiences with health care, and suspicion about pharmaceutical companies.<sup>11,12</sup> A more malignant form of vaccine hesitancy is driven by unfounded and misleading claims and myths, including disinformation about adverse effects.

As in the case of vaccine inequity, a cross-sectoral approach is needed to address vaccine skepticism. Taking this message to heart, the German Medical Association recently teamed up with the World Medical Association and the Pontifical Academy for Life to host a webinar focused on the issues of vaccine equity and vaccination hesitancy.<sup>13</sup> This extraordinary collaboration between the international medical community and religious leaders demonstrated how partners from different sectors with different areas of expertise, knowledge, and resources can complement their activities and expand their networks with the aim of promoting the health and well-being of people.

One objective of the International Roundtable on Vaccination, which was well covered by the international media, was to generate vaccine confidence by fostering awareness of the safety of vaccines and combating the spread of myths and disinformation. Vaccination confidence may suffer from mistrust of a number of sources, ranging from skepticism of the motivations of politicians and other stakeholders, the system that delivers

vaccines, or even the effectiveness and safety of vaccines, especially when it comes to newly developed drugs. The best antidote for vaccine hesitancy is building trust, increasing transparency, and addressing communication failures. As trusted voices in the community, medical professionals play a crucial role in this scenario. The resulting joint statement published with the Vatican highlighted the urgency and necessity of vaccination in an effort to boost vaccination confidence.

The meeting also drew attention to some of the other issues that play a role in vaccination hesitancy, including complacency and convenience.<sup>14</sup> The issue of complacency is rooted in the false assumption that one has a low risk of being affected by a health threat and therefore perceives vaccines as unnecessary. Convenience, however, can be affected by external factors, such as physical proximity to vaccination centers or inconvenient operating hours. To address this, the global medical community must ensure that strategies are in place at the local level to provide equitable, not merely equal, access to vaccines. We must understand and confront the myriad reasons for a slow vaccine uptake.<sup>12</sup>

Furthermore, improved international collaborative initiatives will need to address economically and/or politically motivated active dissemination of false information regarding the safety and effectiveness of approved vaccines. Aggressive antivaccine and antisience messages undermine the progress that is being made and endanger the lives of people.<sup>8</sup>

Even though there are some promising building blocks in place that could lead the way to a more equitable and just allocation of health resources worldwide, they require a stronger foundation of international support and sustainable collaboration to be effective at the scale needed to address global health threats in this new era.

## References

1. Byanyima W. UNAIDS executive director report. [https://www.unaids.org/sites/default/files/media\\_asset/20210701\\_48\\_PCB\\_Speech\\_En.pdf](https://www.unaids.org/sites/default/files/media_asset/20210701_48_PCB_Speech_En.pdf). Published June 29, 2021. Accessed August 9, 2021.
2. Médecins Sans Frontières. 1999–2019: 20 years of advocacy in action. <https://msfaccess.org/1999-2019-20-years-advocacy-action>. Accessed August 9, 2021.
3. McNally A. What makes new variants of SARS-CoV-2 concerning is not where they come from, but the mutations they contain. *BMJ* 2021;372:n504.
4. Krishtel P. Suspend intellectual property rights for covid-19 vaccines. *BMJ* 2021;373:n1344.
5. Kavanagh MM, Gostin LO, Sunder M. Sharing technology and vaccine doses to address global vaccine inequity and end the COVID-19 pandemic. *JAMA* 2021;326:219–220.
6. Moon S, Ruiz AA, Vieira M. Averting future vaccine injustice. *N Engl J Med* 2021;385:193–196.
7. Hotez P, Narayan KMV. Restoring vaccine diplomacy. *JAMA* 2021;325:2337–2338.
8. Iacobucci G. Covid-19: how will a waiver on vaccine patents affect global supply? *BMJ* 2021;373:n1182.
9. World Health Organization. The Access to COVID-19 Tools (ACT) Accelerator. <https://www.who.int/initiatives/act-accelerator>. Accessed August 9, 2021.

10. Herzog LM, Norheim OF, Emanuel EJ, et al. Covax must go beyond proportional allocation of covid vaccines to ensure fair and equitable access. *BMJ* 2021;372:m4853.
11. Bajaj SS, Stanford FC. Beyond Tuskegee—vaccine distrust and everyday racism. *N Engl J Med* 2021;384:e12.
12. Corbie-Smith G. Vaccine hesitancy is a scapegoat for structural racism. *JAMA Health Forum* 2021;2:e210434.
13. Pontifical Academy for Life. World Medical Association, German Medical Association and Pontifical Academy for Life collaborate to promote vaccine equity and confront vaccine hesitancy. <http://www.academyforlife.va/content/dam/pav/documenti%20pdf/2021/ConferenzaStampa02luglio/Final%20press%20release%20International%20Roundtable%20on%20Vaccination.pdf>. Published July 2, 2021. Accessed August 9, 2021.
14. Strategic Advisory Group of Experts (SAGE) on Immunization Working Group. Report of the SAGE Working Group on Vaccine Hesitancy. [https://www.who.int/immunization/sage/meetings/2014/october/1\\_Report\\_WORKING\\_GROUP\\_vaccine\\_hesitancy\\_final.pdf](https://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf). Published October 1, 2014. Accessed August 9, 2021.