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The rocky road to universal COVID-19 vaccination



As of May 9, 2021, the COVID-19 pandemic has caused 3 277 272 deaths and disrupted the lives of billions of people. Global equitable access to COVID-19 vaccines is the only way to mitigate the public health and economic impact of the pandemic. That is why 1 year ago the COVAX scheme, co-led by the Coalition for Epidemic Preparedness Innovations, Gavi, the Vaccine Alliance, and WHO, was set up to try to ensure fair access to vaccines, by guaranteeing that each country would receive vaccine doses for at least 20% of its population.

So far, COVAX has distributed over 59 million COVID-19 vaccine doses to 122 countries, but it is far from its ambitious target of supplying at least 2 billion vaccine doses this year. This delay is problematic for poorer countries that rely on COVAX to access vaccines that they would otherwise be unable to afford. Consequently, the global situation in terms of vaccine availability remains uneven: so far, only 1% of available vaccine doses worldwide have been administered in Africa. Overall, COVAX is facing several problems: a lack of support from wealthy nations, a competitive market for the limited number of vaccine doses available, and vaccine production problems. Funding for COVAX has not yet reached the required targets, and this might be because it is seen more as an aid project for low-income and middle-income countries (LMICs) than as a global collaboration that governments should support to get the pandemic under control. WHO Director-General Tedros Adhanom Ghebreyesus has declared that US\$35–45 billion is needed this year to cover the remaining costs to ensure most adults are immunised. He has also criticised wealthier nations for undermining COVAX, by ordering many more doses than they need for their own populations.

The currently limited production capacity for vaccines was already threatening the efforts of COVAX to deliver vaccines worldwide, but the dramatic upsurge of COVID-19 cases in India has exacerbated the situation. The major supplier of the most widely available vaccine for COVAX, the Oxford-AstraZeneca vaccine, is the Serum Institute of India. However, since March, India has stopped the exportation of COVID-19 vaccines because of the need to use doses, already vastly insufficient, for the vaccination of Indian citizens. This sudden block to vaccine exportation has resulted in the interruption of

vaccine delivery to many low-income countries. With predictions that the Serum Institute of India will struggle to upscale vaccine production to meet the needs of the Indian population, it is unclear where COVAX will get its supply of COVID-19 vaccines. One possibility is that countries that have already made substantial progress in vaccinating their populations could share surplus vaccine doses with other countries.

A potential solution for the shortage and the inequities in vaccine distribution could come from the temporary waiving of intellectual property protections on COVID-19 vaccines to boost manufacturing. The proposal, reiterated by the administration of US President Biden on May 5, had originally been made to the World Trade Organization by South Africa and India last year, but despite support from Ghebreyesus, it was opposed by the UK, Canada, Norway, and the EU (and the USA, under the previous administration). Vaccine developers are, unsurprisingly, opposed to the waiver and maintain that manufacturing capacity, not intellectual property, is the real bottleneck in scaling up vaccine supply. Even if intellectual property was waived now, it will take a long time to build the expertise and manufacturing capacity in LMICs, so this would not be a solution in the short term. It is expected that the onus will fall on governments that provided public funding for COVID-19 vaccine research and development to require companies to engage in technology transfers to scale up vaccine production globally.

Even if vaccines were available, another hurdle to overcome for COVAX in many countries is vaccine hesitancy—for example, 16 000 Oxford-AstraZeneca vaccine doses had to be discarded in Malawi after people withdrew from vaccination for fear of blood clotting. Moreover, vaccine availability per se will not be enough if the adequate logistics and distribution chains are not in place too.

If vaccine production is not scaled up, COVAX will struggle to compete with the power of countries better equipped to negotiate unilateral deals. But considering that leaving large parts of the world's population unvaccinated will favour the emergence of SARS-CoV-2 variants that might elude the protection of existing vaccines, supporting COVAX now has wide-ranging advantages for all nations. ■ *The Lancet Infectious Diseases*



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