

RESEARCH FOR THE WORLD

How to vaccinate the world

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Dr Olivier Wouters is Assistant Professor of Health Policy in the Department of Health Policy at LSE. He investigates the pricing and affordability of medicines internationally and is currently leading research projects on the costs of drug development and the extent and influence of pharmaceutical lobbying in the United States.

The pandemic is a global threat, but with rich countries first in line to access the tools to fight COVID-19, how will poorer nations build their line of defence? **Olivier Wouters** has been researching the challenge of improving global access to vaccines.

It became clear to Dr Olivier Wouters in the early days of the pandemic, around the time the first COVID-19 vaccines were entering clinical trials, that rich governments were securing priority access to vaccines. They were providing drug companies with substantial funds to speed up the development and manufacture of vaccines, and in the process, ensuring they would be at the front of the queue for buying any jobs that proved successful. The approach has helped fuel huge disparities in vaccine supply and, once again, highlighted inequalities between rich and poor nations.

Dr Wouters, an Assistant Professor of Health Policy at LSE, spent much of the second half of 2020 immersed in the world of COVID-19 vaccines, researching 26 leading vaccine candidates to create a “dashboard” that assessed their potential for bringing the global pandemic under control. Together with colleagues from the UK and Thailand, he tracked a variety of metrics for each vaccine, ranging from efficacy rates to the share of doses pre-purchased by high-income countries. They published **their findings** in the medical journal *The Lancet* in February 2021. Writing the paper was uniquely challenging, Dr Wouters explained, due to the rapidly evolving race to develop COVID-19 vaccines - a scientific undertaking without precedent in modern medicine.



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Vaccine nationalism in a global pandemic

He is now worried about how the next chapter of the pandemic will unfold, in which countries will need to figure out how to produce and distribute enough doses to vaccinate the world. As of June 2021, several high-income countries, including the UK, US, United Arab Emirates, and Israel, have provided at least one dose to over 50 per cent of their populations. At the time of publication, only one in 500 people in low-income countries had been vaccinated, owing to limited supply.

Dr Wouters argues that taking a narrow national view ignores the fact that COVID-19 is a global pandemic: "If we vaccinate everyone here in the UK, we may get back to something that resembles normal for at least a short while. Yet a new vaccine-resistant variant may emerge elsewhere, which could pose a major setback to this country. Even self-interested governments should be treating this as a global issue."

He says the "moral case" for prioritising the most vulnerable people worldwide is clear, but adds that the health and economic arguments are equally compelling. This echoes the World Health Organization's view that fairer vaccine distribution will minimise the global death toll and accelerate worldwide economic recovery.



Major funders still have leverage and clout to ensure companies engage in technology transfer to accelerate production. ”

Would breaking vaccine patents be enough to help countries access supply?

The present situation has re-ignited a longstanding debate over whether high-income governments and pharmaceutical companies have a responsibility to make sure populations in less wealthy nations have timely access to vital healthcare.

Dr Wouters takes the view that rich governments could and should do more to ensure that companies share their resources and know-how with manufacturers internationally. "At least \$10 billion dollars in public money went into developing and producing first-generation COVID-19 vaccines, as we documented in our paper," he says. "Even though it's probably too late to amend any clauses in the early funding contracts, major funders still have leverage and clout to ensure companies engage in technology transfer to accelerate production."

That's where the global conversation has moved onto whether governments can encourage or even compel companies to license their technologies to enable manufacturers in various parts of the world to produce these vaccines. Some have even called for governments to break patents on vaccines during the acute phase of the pandemic.

"Vaccines are very complicated to produce, so breaking patents on its own may not be enough. You also need the firms that developed the vaccines to share their technical expertise and data, otherwise the process of reverse engineering these



vaccines may take many months, if not years”, explains Dr Wouters. “There is untapped manufacturing capacity in countries around the world. So, we urgently need to figure out how to get companies to work with partners globally to expand production.”

He thinks the companies that developed COVID-19 vaccines will probably demand further financial incentives to engage in technology transfer. “Controlling the pandemic in the long-term is likely to require booster vaccines, so there is a huge amount of money at stake”, Dr Wouters says. “Without adequate incentives, companies may be reluctant to give up ownership of their products and production processes.”

“How to tackle the worldwide supply problem is the million-dollar question. But it’s a global pandemic and the only way to manage it is by producing enough vaccines for everyone, everywhere.” ■

Dr Oliver Wouters was speaking to Peter Carrol, Media Relations Officer at LSE.

Read ***Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment*** by Olivier Wouters, Professor Kenneth Shadlen, Maximillian Salcher-Konrad, Professor Andrew Pollard, Professor Heidi Larson, Yot Teerawattananon and Professor Mark Jit.

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