

# Giving the World a Shot: Increasing Access to Vaccines by Expanding Local Production

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## Unequal access to COVID-19 vaccines

- Coordination problems and vaccine nationalism led to bilateral agreements between vaccine manufacturers and wealthy countries. This weakened the leverage of COVAX as a procurer and may have increased prices overall.
- As of October 2022, United States has donated 63.7% of doses promised by the end of the year.
- Only 15% of people in low-income countries have received at least one dose of a vaccine, compared to 80% in high-income countries.
- Reliance on donated doses renders supplies inconsistent, damages national sovereignty, and creates a risk that donors will abuse the system for other foreign policy purposes.

## How to increase regional production

- As global need outstrips global supply, proposals to increase regional production of vaccines have included:
- **Waiving TRIPS obligations.** Given its limitations (to patents, to vaccines, and to a narrow set of countries), the current waiver may also have limited effectiveness.
- **WHO's mRNA technology transfer hubs.** The South African hub has reverse-engineered the Moderna vaccine and has either begun or planned to share know-how and training with scientists across Africa, Asia, Latin America, and Eastern Europe. Animal trials for the vaccine begin in October 2022. However, the industry has been fiercely opposed to this project. Moderna refused to cooperate with the hub and has encouraged skepticism of the vaccine's effectiveness. BioNTech has tried to influence the South African government to terminate the reverse engineering project and to have local manufacturers partner with BioNTech instead. The pressure of the waiver proposal may have accelerated the to-date limited efforts of major vaccine manufacturers to expand their production efforts in low-and-middle income countries (LMICs) and their partnerships with manufacturers there.
  - Intellectual property issues: Moderna has promised not to enforce its patents against the hub for its COVID-19 vaccine for the duration of the pandemic, but could do so against future mRNA vaccines developed by the hub. Afrigen, one of the collaborators in the mRNA hub, has argued that it needs a more permanent guarantee that is not restricted to the duration of the pandemic.
  - Expertise and resources: Industry actors have argued that LMICs lack the expertise, facilities, cold chain infrastructure, and raw materials to produce COVID-19 vaccines. However, the WHO's due diligence process and an independent vetting process by the New York Times both found several manufacturers who met these criteria. The hubs were established at the sites which best met the criteria.

## Other benefits of regional production

- **Agency over research agenda-setting.** Although the global nature of the pandemic prevents the underfunding seen in, e.g., neglected diseases research, the types of vaccines developed may be more suited to the infrastructure of wealthy countries (like mRNA vaccines requiring a chain of cold storage).
- **Building R&D and manufacturing capacity and empowering local scientists.** Scientists in developing countries have had their contributions exploited and uncredited in partnerships with Western institutions. Furthermore, the lack of investment in local science perpetuates myths (such as those cited by industry in these debates) that local industry lacks the expertise and skills to manufacture vaccines.

## Efficiency concerns

- Early on in the pandemic, the urgent need for vaccines exacerbated coordination and fairness problems, making governments more likely to pursue bilateral deals than more unwieldy multilateral ones, and less likely to bargain for affordability and access considerations.
- The South African manufacturing hub may need to wait several years for approval of its COVID-19 vaccine without assistance from Moderna. However, the United States government may be able to use domestic policy tools to compel Moderna to share information.
  - Leveraging the NIH dispute with Moderna over inventorship of mRNA compositions that Moderna has claimed sole inventorship of in a patent application. Moderna made some form of co-ownership offer in late 2021 but did not publicly disclose the full terms of the offer, which the government did not accept. The government could potentially use the threat of litigation to negotiate with Moderna and encourage the company to cooperate with the WHO's technology transfer hub. The government has so far refused to rule out litigation.
  - Using the Defense Production Act (DPA), an initially wartime law authorizing emergency powers which both Trump and Biden have used during the pandemic. Scholars and activists have argued that the DPA could be used to mandate the acceptance and prioritization of technology transfer contracts. The administration has signaled mixed interpretations of the law, with spokespeople stating both that the government cannot use the DPA to mandate sharing and that the government has not ruled out using the DPA.

## Recommendations for a pandemic treaty

- A treaty could require contributions to a monitoring and research fund, a requirement that any bilateral agreements with manufacturers include technology transfer, contributions to R&D investment in LMICs, and clearer triggers for the suspension of TRIPS obligations.