**Waiving patents doesn’t work. Tabarrok 21:**

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**Patents are not the problem**. All of the vaccine manufacturers are trying to increase supply as quickly as possible. **Billions of doses are being produced**–more than ever before in the history of the world. **Licenses are widely available. AstraZeneca [has]**have **licensed their vaccine for production** with [manufactures](https://www.astrazeneca.com/what-science-can-do/topics/technologies/pushing-boundaries-to-deliver-covid-19-vaccine-accross-the-globe.html) **around the world**, including in India, Brazil, Mexico, Argentina, China and South Africa. J&J’s vaccine has been licensed for production by multiple firms in the United States as well as with firms in Spain, South Africa and France. Sputnik has been licensed for production by firms in India, China, South Korea, Brazil and pending EMA approval with firms in Germany and France. Sinopharm has been licensed in the UAE, Egypt and Bangladesh. Novavax has licensed its vaccine for production in South Korea, India, and Japan and it is desperate to find other licensees but technology transfer isn’t easy and there are [limited supplies of raw materials](https://endpts.com/as-fears-mount-over-jj-and-astrazeneca-novavax-enters-a-shaky-spotlight/):

Virtually overnight, [Novavax] set up a network of outside manufacturers more ambitious than one outside executive said he’s ever seen, but they struggled at times to transfer their technology there amid pandemic travel restrictions. They were kicked out of one factory by the same government that’s bankrolled their effort. Competing with larger competitors, they’ve found themselves short on raw materials as diverse as Chilean tree bark and bioreactor bags. They signed a deal with India’s Serum Institute to produce many of their COVAX doses but now face the realistic chance that even when Serum gets to full capacity — and they are behind — India’s government, dealing with the world’s worst active outbreak, won’t let the shots leave the country.

**Plastic bags are a bigger bottleneck than patents. The US embargo on vaccine supplies** to India was precisely that the Biden administration used the DPA to prioritize things like bioreactor bags and filters to US suppliers and that meant that India’s Serum Institute was having trouble getting its production lines ready for Novavax. CureVac, [another potential mRNA vaccine](https://www.reuters.com/business/healthcare-pharmaceuticals/curevac-says-mass-vaccine-rollout-thrown-into-doubt-by-us-restrictions-2021-05-04/), is also finding **[makes] it difficult to find supplies** due to US restrictions (**which means supplies are short everywhere**). As [Derek Lowe said](https://blogs.sciencemag.org/pipeline/archives/2021/04/22/a-look-at-novavax):

**Abolishing patents will not** provide more shaker bags or more Chilean tree bark, nor **provide** more of the **key filtration materials needed for production**. These processes have a lot of potential choke points and rate-limiting steps in them, and **there is no wand that will wave that complexity away.**

Technology transfer has been difficult for AstraZeneca–which is one reason they have had production difficulties–and their vaccine uses relatively well understood technology. The mRNA technology is new and has never before been used to produce at scale. Pfizer and Moderna had to build factories and distribution systems from scratch. **There are no mRNA factories idling on the sidelines. If there were, Moderna or Pfizer would be happy to license since they are producing in their own factories 24** hours a day, **seven** days a week (monopolies restrict supply, remember?). Why do you think China hasn’t [yet produced](https://www.scmp.com/news/china/politics/article/3128998/revolutionary-mrna-vaccines-made-chinese-firms-will-be-ready) an mRNA vaccine? Hint: it isn’t fear about violating IP. Moreover, even Moderna and Pfizer don’t yet fully understand their production technology, they are learning by doing every single day. **Moderna has said that they won’t enforce their patents during the pandemic** but **no one has stepped up to produce because no one else can.**

**The US** trade representative**’s announcement** is virtue signaling to the anti-market left and **will do little to nothing to increase supply.**

What can we do to increase supply? Sorry, there is no quick and cheap solution. We must spend. Trump’s Operation Warp Speed spent on the order of $15 billion. If we want more, [we need to spend more and on similar scale](https://science.sciencemag.org/content/371/6534/1107). The Biden administration paid $269 million to Merck to retool its factories to make the J&J vaccine. That was a good start. We could also offer Pfizer and Moderna say $100 a dose to produce in excess of their current production and maybe with those resources there is more they could do. South Africa and India and every other country in the world should offer the same (India hasn’t even approved the Pfizer vaccine and they are complaining about IP!??) We should ease up on the DPA and invest more in the supply chain–let’s get CureVac and the Serum Institute what they need. We should work like hell to find a s[ubstitute for Chilean tree bark](https://www.theatlantic.com/science/archive/2020/10/single-tree-species-may-hold-key-coronavirus-vaccine/616792/). See [my piece in Science](https://science.sciencemag.org/content/371/6534/1107) co-authored with Michael Kremer et. al. for more ideas. (Note also that these ideas are better at dealing with current supply constraints and they also increase the incentive to produce future vaccines, unlike shortsighted patent abrogation.)

Bottom line is that **producing more takes real resources not waving magic patent wands**.

You may have gathered that I am angry. I am indeed angry that the people in power think they can solve real problems on the cheap and at someone else’s expense. This is not serious. I am also angry that **they are sending the wrong message** about business, profits and capitalism. So let me end on positive note. Like the Apollo program and Dunkirk, the creation of the mRNA vaccines by Pfizer and Moderna should be lauded with Nobel prizes and major movies. Churchill called the rescue at Dunkirk a “miracle of deliverance,” well the miracle of Moderna will rescue many more. Not only was a vaccine designed in under a year, an entirely new production process was set up to produce billions of doses to rescue the world. The creation of the mRNA vaccines was a triumph of science, logistics, and management and it was done at a speed that I had thought [possible only for past generations](https://patrickcollison.com/fast).

1. **TURN: IP waiver decreases access to vaccines, McMurry-Heath:**

McMurry-Heath, Michelle. [Michelle McMurry-Heath is a physician-scientist and president and CEO of the Biotechnology Innovation Organization.] “Waiving Intellectual Property Rights Would Harm Global Vaccination.” STAT, 18 Aug. 2021, www.statnews.com/2021/08/18/waiving-intellectual-property-rights-compromise-global-vaccination-efforts/?fbclid=IwAR0JmrQFmyJJm40JHjQItLs3DPScP1NOOhLRfZ43AonZGT3eIafZb\_fvexw.

Covid-19 vaccines are already remarkably cheap, and companies are offering them at low or no cost to low-income countries. Poor access to clinics and transportation are barriers in some countries, but the expense of the shot itself is not. In fact, **if the W**orld **T**rade **O**rganization **grants the IP waiver, it could make** these **vaccines more expensive**.

Here’s why. Before Covid-19 emerged, the world produced at most [5.5 billion doses](https://www.barrons.com/articles/a-plan-to-break-the-vaccine-manufacturing-bottleneck-51621952245) of various vaccines every year. Now the world needs an additional [11 billion doses](https://www.who.int/director-general/speeches/detail/director-general-s-opening-remarks-at-the-g7-summit---12-june-2021) — including billions of doses of mRNA vaccines that no one had ever mass-manufactured before — to fully vaccinate every eligible person on the planet against the new disease.

Even as Covid-19 vaccines were still being developed, pharmaceutical companies began retrofitting and upgrading existing facilities to produce Covid-19 vaccines, at a cost of [$40 to $100 million each](https://www.americanprogress.org/issues/healthcare/reports/2020/07/28/488196/comprehensive-covid-19-vaccine-plan/). Vaccine developers also licensed their technologies to well-established manufacturers, like the Serum Institute of India, to further increase production.

As a result, **almost every facility in the world that can quickly and safely make Covid-19 vaccines is already doing so, or will be in the next few months**.

The cutting-edge mRNA vaccines from Moderna and Pfizer-BioNTech face an even bigger capacity issue. Since the underlying technology is new, **there are no mRNA manufacturing facilities sitting idle** with operators just waiting for licensing agreements to turn on the machines. Nor are there trained personnel to run them or ensure safety and quality control. Embedding delicate mRNA vaccine molecules inside lipid nanoparticle shells at temperatures colder than Antarctica isn’t as easy as following a recipe from Bon Appetit.

Another big **barrier** to producing more shots **is a shortage of raw materials. Suspending i**ntellectual **p**roperty **protections** and allowing any manufacturer to try to produce these vaccines, regardless of preparedness or experience, **would increase the demand for scarce raw materials, driving up prices and impeding production.**

Nor could all companies that suddenly get a green light due to suspended intellectual property rights produce vaccines as cheaply or quickly as existing manufacturers. **Building a new vaccine manufacturing facility costs about $700 million, takes** many months — if not **years** — **to build** and, once opened, **requires another four to six months to start producing vaccine doses**. And because **negotiations surrounding the WTO waiver**, which began this summer, **could take until December before they are completed, it wouldn’t be until well into 2023 or later that any additional doses would become available.**

That’s slower than our current production rate. According to a report from Duke University’s [Global Health Innovation Center](https://launchandscalefaster.org/covid-19/vaccinemanufacturing), **companies are on track to manufacture enough shots in 2021** to fully vaccinate at least 70% of the global population against Covid-19 — the level required **to achieve herd immunity**.

Covid-19 vaccines are saving millions of lives and protecting trillions of dollars of economic activity for an exceptionally low cost. Israel, for example, which has one of the world’s highest vaccination rates, paid [$23.50 per dose](https://www.timesofisrael.com/israel-said-to-be-paying-average-of-47-per-person-for-pfizer-moderna-vaccines/) for early shipments, for a total of about $315 million. That’s approximately equal to the gross domestic productivity losses incurred during [just two days of shutdowns](https://www.bmj.com/content/372/bmj.n281) in the country.

Many countries are buying shots for under $10 per dose. India and South Africa — the two countries leading the petition to gut IP rights — are paying just $8 and $5.25 per dose, respectively. For reference, a regular flu shot costs about $14 in the United States, and pediatric vaccines average about $55 per dose.

Meanwhile, low-income countries that can’t afford even modest prices are getting their vaccines at no charge. [COVAX](https://www.who.int/initiatives/act-accelerator/covax), the international nonprofit vaccine distributor, aims to deliver 2 billion doses to developing nations by the end of the year.

President Biden vowed to make America the world’s [“arsenal of vaccines.”](https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/05/17/remarks-by-president-biden-on-the-covid-19-response-and-the-vaccination-program-4/) The U.S. has already committed $4 billion to COVAX, has donated more than 100 million vaccine doses abroad, and is on track to donate [500 million more](https://www.npr.org/sections/goatsandsoda/2021/08/03/1023822839/biden-is-sending-110-million-vaccines-to-nations-in-need-thats-just-a-first-step) by the end of summer. Other countries are following the administration’s leadership and ramping up their donations.

To be sure, the United States and other wealthy nations still need to give considerably more. But the fact remains that **ramping up production** in bona fide facilities **and donating doses are the most straightforward steps to producing** the vaccine **doses needed to end the pandemic. The effort to strip intellectual property rights**, by contrast, **would put success against the global scourge of Covid-19 even further out of reach.**

**Thus, the C.P. -member nations ought to directly fund both production of COVID-19 medicines and licensing of vaccine patents to maximize production both domestically and internationally  (conditional)**

1. **Public funding works best, Lindsey 21:**

Brink Lindsey, 21 — [Brink Lindsey, “Why intellectual property and pandemics don’t mix,” Brookings, 6-3-2021, https://www.brookings.edu/blog/up-front/2021/06/03/why-intellectual-property-and-pandemics-dont-mix/] Valley JS

What approach to encouraging innovation should we take instead? How do we incentivize drug makers to undertake the hefty R&D costs to develop new vaccines without giving them exclusive rights over their production and sale? **The most effective approach during a public health crisis is direct government support: public funding of R&D**, advance purchase commitments by the government to buy large numbers of doses at set prices, **and other**, related **payouts**. And when we pay drug makers, **we should not hesitate to pay generously**, even extravagantly: **we want to offer drug companies big profits so that they prioritize this work** above everything else, and so that they are ready and eager to come to the rescue again the next time there’s a crisis.

It was **direct support** via Operation Warp Speed that **made possible the astonishingly rapid development of COVID-19 vaccines and** then **facilitated a relatively rapid rollout of vaccine distribution** (relative, that is, to most of the rest of the world). And it’s worth noting that a major reason for the faster rollout here and in the United Kingdom compared to the European Union was the latter’s [misguided penny-pinching](https://www.nytimes.com/2021/05/17/opinion/europe-vaccines-commission.html?smid=tw-share). The EU bargained hard with firms to keep vaccine prices low, and as a result their citizens ended up in the back of the queue as various supply line kinks were being ironed out. This is particularly ironic since the Pfizer-BioNTech vaccine was developed in Germany. As this fact underscores, **the chief advantage of direct support isn’t to “get tough” with drug firms** and keep a lid on their profits. Instead, **it is to accelerate the end of the public health emergency by making sure drug makers profit handsomely from doing the right thing.**

**Patent law and direct support should be seen not as either-or alternatives but as complements** that apply different incentives to different circumstances and time horizons. **Patent law provides a decentralized system for encouraging innovation**. The government doesn’t presume to tell the industry which new drugs are needed; it simply incentivizes the development of whatever new drugs that pharmaceutical firms can come up with by offering them a temporary monopoly. It is important to note that patent law’s incentives offer no commercial guarantees. Yes, you can block other competitors for a number of years, but that still doesn’t ensure enough consumer demand for the new product to make it profitable.