

NOVEMBER 2021

The Shot Heard around the World

The Strategic Imperative of U.S. Covid-19 Vaccine Diplomacy

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Executive Summary

In 2020, the United States won the global race to develop a Covid-19 vaccine. But that historic victory could become a historical footnote if the United States loses the race to deliver its vaccines to the rest of the globe.

Vaccine diplomacy has never been more important. Every nation on earth will be watching to see who will rise to the challenge and reap the rewards of global leadership. The United States now has an opportunity to deploy its scientific and economic preeminence in the service of all humanity. The United States has the ability to shield developing nations not only from the virus, but from the designs of competing powers. Yet, to date, the United States has been slow to seize this opportunity, and international rivals—especially China—are eagerly filling the gap created by its inaction.

Vaccines have been widely available throughout the United States for many months and to vulnerable groups for almost a year. Yet elsewhere in the world, billions of people are still without access to any shots and are desperate for help. Vaccine-rich nations such as the United States have a humanitarian responsibility to help bring everyone else out of the pandemic as well; inoculating the world is a moral duty.

In addition to a humanitarian obligation to deliver vaccines around the world, the United States has sound strategic and competitive reasons to do so.

In the absence of U.S. leadership, desperate nations are turning to Beijing, which is offering inferior vaccines in exchange for foreign-policy concessions. Meanwhile, at the World Trade Organization (WTO),

a group of nations is proposing that countries agree to strip vaccine makers of their patents, copyrights, and trade secrets—the intellectual property (IP) underlying the products and processes they invented, including the vaccines themselves and the technology that produces them. Unfortunately, the Biden-Harris administration has endorsed this idea, which would surrender national competitive advantages to rival nations without adding a single dose to the global vaccine arsenal.

The real barriers to vaccinating the developing world are not IP protections. Forcing vaccine makers to give up intellectual property will not lower barriers; it will only create new ones, both for today's global vaccination project and in future pandemics. Rather, a combination of logistical, regulatory, and infrastructure challenges is slowing global vaccination efforts. Fortunately, these are problems U.S. economic resources and technological innovation can readily solve.

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The present challenge provides a perfect opportunity for the United States to reassert its leadership role in international affairs and check its rivals' cynical opportunism.

To the Biden-Harris administration's credit, the United States has committed to financing or providing **1.1 billion vaccine doses** abroad, with most designated for low- and lower-middle-income nations. Of these doses, 160 million have **already shipped**. The commitment makes the United States the **largest** single-country donor of any vaccine, ever.

Yet the United States and other wealthy nations can and should give more. The United States, like many prosperous countries, already has a surplus of Covid-19 vaccines, with hundreds of millions of doses **in danger of expiring** before they can be administered. Washington should collaborate with its allies and industry partners to ship these doses abroad immediately to prevent needless hospitalizations and deaths and help stop the spread. The leading democracies of the Group of Seven (G7) should also develop a comprehensive plan to maximize worldwide production and accelerate distribution to countries in need.

With more than half of all Americans fully vaccinated—and 68 percent of those 12 and above—the United States is slowly **winning the fight** against the pandemic at home. Smart, aggressive vaccine diplomacy can now help win that fight internationally.

CHINA'S VACCINE DIPLOMACY: STEPS AND MISSTEPS

Vaccine diplomacy has a long history. In fact, eighteenth-century British physician Edward Jenner, the creator of the first vaccine, might have also been the first **vaccine diplomat**. Jenner's work immunizing the world from smallpox earned him the universal respect of even the United Kingdom's hated adversaries. During the Napoleonic Wars, in which France and the United Kingdom battled fiercely, Jenner **appeared** before leading French scholars and physicians and declared, "The sciences are never at war." So grateful were the French—and all of Europe—for Jenner's work popularizing his vaccination method that he became

an unofficial ambassador between warring countries. Napoleon himself **responded** to one diplomatic entreaty, saying, “Jenner! We can refuse nothing to this man.”

In 1801, U.S. president Thomas Jefferson **equipped** the Lewis and Clark expedition with smallpox vaccines for the Native American tribes they encountered. And throughout the nineteenth century, France **distributed** Louis Pasteur’s rabies vaccine around the world.

To be sure, vaccine diplomacy is not purely altruistic. Countries use these lifesaving inoculations to secure favor and influence. During the Cold War, the United States and Soviet Union quietly partnered to distribute the polio vaccine around the globe—each hoping that doing so would strengthen ties with their respective recipient nations.

So far during the Covid-19 pandemic, China has engaged in much more vaccine diplomacy than the United States. And it has not bothered to hide its self-interested motives.

Consider Paraguay. As in many South American countries, Paraguay’s battle against Covid-19 is far from over. As of November 2021, only 37 percent of its population was **fully vaccinated**. Paraguay’s pressing need, coupled with the lack of vaccine assistance from the United States or Europe, created an opening for China to offer its help—for a price. Dangling possible access to the Sinovac vaccine, China tried to pressure Paraguay to **cut diplomatic ties** with Taiwan, which Beijing considers a renegade province of China.

In Algeria, the Sinovac vaccine arrived as the government in Algiers promised **not to criticize** Beijing’s human rights abuses in Hong Kong. In Brazil, China delivered Sinovac around the same time Brasilia unexpectedly reinvented Chinese telecom giant Huawei to join in building out the South American nation’s 5G wireless network—reversing its **previous policy** banning Huawei technology. Huawei is the world’s leading seller of 5G equipment, but the U.S. intelligence community believes the company is beholden to the Chinese government and has accused Huawei of inserting spyware into its devices; the United States has **effectively banned** Huawei products. After initially following the U.S. lead, Brazil reversed course to obtain access to Chinese vaccines.

THE OPPORTUNITY FOR U.S. LEADERSHIP

Washington has a golden opportunity to offer developing countries a far better alternative to Beijing’s vaccination strongarming. The United States has the resources not only to distribute vaccines globally, but to do a much better job of it than China.

For one thing, the United States’ vaccines are demonstrably better. Though effectiveness rates have dipped somewhat against the highly contagious Delta variant, the shots developed by or with the support of U.S. life-sciences firms are still overwhelmingly successful at preventing hospitalization and death.

The effectiveness of Chinese-developed vaccines, on the other hand, **has been murky** from the beginning. Testing of Sinovac in Brazil found it **only 51 percent effective**, and the country’s health regulator suspended use of 12.1 million Sinovac doses in September after learning that the vials were filled at an **unauthorized location**. Similarly, in July, Singaporean officials decided **not to count** citizens who had received Sinovac shots as fully vaccinated, citing inadequate data, especially against new variants.

At a conference in April, the director of the Chinese Center for Disease Control and Prevention **indirectly acknowledged** that his country’s vaccines were not performing well, averring, “We will solve the issue that current vaccines don’t have very high protection rates.” China is reportedly **experimenting** with various vaccines, technologies, and dose timing to improve performance.

If all the United States did was simply deliver its superior products abroad, that alone would help beat back the disease. But its advantages go far beyond better medicine. The United States also has better technology to manufacture, deliver, refrigerate, and administer its vaccines. The country has vast private and public resources to help developing nations acquire the equipment and train the people they need to vaccinate themselves. And, unlike China, the United States would not attach unsavory strings to lifesaving assistance.

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THE COMPETITIVE DISADVANTAGES OF SURRENDERING U.S. INTELLECTUAL PROPERTY

Aware of the quality and strategic value of the United States' vaccines, several countries have proposed a different approach: seizing the IP of vaccine developers.

India and South Africa are leading a proposal at the WTO that would allow countries to strip away standard, internationally recognized IP protections on Covid-19 vaccines, treatments, and other technologies. This would **affect** hundreds of U.S. companies. Proponents claim this would enable developing countries to produce the medicines they need to protect and treat their populations.

However, there is plenty of reason to view the proposal's official rationale with skepticism. As Washington Post columnist Josh Rogin **observed**, "Countries like India and South Africa"—home to huge **generic-drug industries**—"have been **trying to weaken** WTO intellectual property protections for decades."

The truth is that every qualified manufacturing facility on the planet is churning out as many Covid-19 shots as is safely possible. In fact, researchers at Duke University's Global Health Innovation Center estimated that global manufacturers are on track to **produce enough vaccines** to inoculate 70 percent of the world's adult population by the end of 2021. Far from stymieing vaccine distribution, IP protections have made this previously unthinkable pace of production possible by ensuring that those facilities licensed to produce the vaccines worldwide can meet the rigorous standards of the vaccines' developers.

Waiving IP protections would not lead to the manufacture of a single additional dose of a vaccine. One key reason is that there is currently no capacity to make more; production facilities are running at full tilt, and the supply of key ingredients in the manufacturing process has already been fully tapped. Before the pandemic, the world **collectively produced** about 5 billion vaccine doses annually for maladies such as the measles, polio, and chickenpox. People still need those shots, but now **we need 14 billion doses** of the Covid-19 vaccines, too.

While voiding IP protections would not increase vaccine production, doing so would strike a severe blow against the United States' world-leading biotech industry—and the incentives to discover cures for dreaded diseases and future pandemics. Abraham Lincoln once **described** the U.S. system of IP rights as adding “the fuel of interest to the fire of genius.” Today, these laws underpin our entire innovation ecosystem. They are a chief reason the United States is home to the most advanced pharmaceutical companies, scientists, and laboratories in the world. Indeed, it was U.S. laws protecting IP that created the huge competitive advantages U.S. companies enjoyed in pursuit of Covid-19 vaccines.

The United States' IP protections reflect the nation's respect for science and scientists. Americans know how important and difficult scientific research is. Ensuring that scientists can benefit from their discoveries is not greed or selfishness; it reflects appreciation for the people and institutions whose breakthroughs benefit everyone else.

Estimates of the cost of taking a drug to market—a years-long process of lab testing and clinical trials that most often end in failure—range from **\$1 billion** to **\$2.8 billion**. The entire research and development process for a **single drug** often lasts a decade or more. Without IP protections, companies would **hesitate** to make the enormous investments in research and development modern science requires.

The U.S. commitment to IP also makes science a national strength. History demonstrates that the humanitarian rewards of open inquiry outweigh the political risks—but only for societies unafraid of the scientific method, which, by definition, involves failure and risk. The United States embraces such failure and risk.

Because the United States is responsible for the lion's share of pharmaceutical innovation, relinquishing its IP **will not lead** to more medicines globally. It will lead to less research and development and ultimately fewer medicines—to say nothing of the impact on the U.S. economy and one of its most important industries. Today, the biopharmaceutical industry **supports** more than 4 million American jobs and employs people at twice the average private-sector wage. It **accounts** for more than \$1 trillion in annual economic output. Every single one of those jobs and every dollar of GDP this sector produces is derived from IP—and the fact that it is protected worldwide. After U.S. drug companies' triumph against Covid-19, a **forcible surrender** of their new knowledge would hamstring both economic growth and scientific inquiry.

THE STRATEGIC FOLLY OF A TRIPS WAIVER

In May, the U.S. government came out in support of a proposed WTO waiver that would get rid of existing, standard IP protections under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This unprecedented move would constitute a clear and present danger to the United States' global economic competitiveness.

The biotech sector is among the crown jewels of U.S. prosperity and the envy of the world. The mRNA technology that underlies some of the Covid-19 vaccines, for example, is poised to **reshape** the future of healthcare. It has the potential to cure ailments that have long plagued humankind, from cancer to Alzheimer's disease. Also on the mRNA horizon are **personalized treatments** for deadly diseases and other scientific advances we cannot yet imagine.

It is thus unsurprising that the United States' rivals are eager to get their hands on these mRNA platforms to grow their own drug industries. If they succeed, any one of them could leverage such mRNA-based innovations to achieve its diplomatic, economic, and even military goals—at the United States' expense.

There is a national security dimension to the TRIPS waiver as well. U.S. taxpayers **funded** some mRNA advances through the Defense Advanced Research Projects Agency, and the mRNA technology underlying

the vaccines, like all technology, also has the potential to be used for nefarious purposes. Giving it away willy-nilly to anyone who wants it would be both economically unwise and strategically imprudent.

Mark Cohen, former senior counsel at the U.S. Patent and Trademark Office, summed up the risks well: “We would be delivering a competitive advantage to countries that are **increasingly viewed** as our adversaries, at taxpayer expense, when there are other ways” to speed up vaccinations worldwide.

SOLVING THE REAL PROBLEMS

The governments and activists calling for waiving IP protections have settled on the wrong solution. But they are unquestionably correct that the global vaccine rollout has been too slow—and too inequitable.

The United States has a moral obligation to change that. In concert with its G7 allies, the United States could dramatically accelerate the global vaccination campaign by tackling key barriers that still exist nearly a year after the shots first became available.

- **Raw Materials.** Raw materials needed for vaccine manufacturing **are in short supply** around the world. Governments and international organizations such as the WTO can work to increase investment in raw-material production.
- **Trade Barriers.** Ramping up vaccine making **will require** a commensurate ability to import raw materials and export doses around the world. This means eliminating tariffs and other trade restrictions, including onerous and unnecessary customs requirements. A recent WTO report on ways to accelerate vaccination highlighted the importance of dismantling trade barriers and ensuring “the **free flow** of the medical inputs and supplies critical to saving lives.” Notably, the report **made no mention** of IP waivers as a solution.
- **Supply-Chain Tracking.** A unified, global tracking system along all the various Covid-19 supply chains would help **identify bottlenecks** and clear them quickly.
- **Manufacturing Capacity.** The past year has shown that global vaccine manufacturing capacity, while increasing, is insufficient. More and larger facilities will be needed to fight future pandemics, so the United States should start **expanding capacity** now.
- **Donations.** The United States **has committed** to financing or providing 1.1 billion vaccine doses abroad, with most allocated for lower-income nations. This makes it the single largest donor of Covid-19 vaccines. Yet with a stockpile accruing, the United States can and should give more: by December 2021, according to a Brookings Institution analysis, the nation may **have a surplus** of more than 1 billion shots. Whatever the United States can spare, it should give to foreign governments and international relief efforts such as COVAX, the global facility for promoting vaccine access. These **donations** should include shots and the equipment **to ship, refrigerate, and administer** them.
- **Leadership.** Finally, the United States should reinvest the global goodwill it amasses through Covid-19 vaccine diplomacy in building international capacity for future pandemic research, coordination, and relief. It should model this effort on the President’s Emergency Plan for AIDS Relief (**PEPFAR**), a **successful program** instituted by President George W. Bush. Collaboration with industry partners today will undoubtedly improve the rollout of vaccines in future pandemics, saving countless lives.

HELP AMERICA HELP THE WORLD

The United States' response to the challenge of vaccinating the world will shape its international reputation for years to come and set expectations for the inevitable next pandemic.

China is using the global emergency to leverage policy concessions from vulnerable nations. The United States should counter this effort through a generous, open campaign of vaccine diplomacy. Washington needs to act quickly—but intelligently—to seize the opportunity Beijing has created with its missteps. The faux solution proposed at the WTO by India and South Africa—and inexplicably supported by many U.S. policymakers—would just hurt the United States and help China.

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Global experts from across the political spectrum acknowledge that waiving drugmakers' IP rights would neither accelerate nor improve the global vaccination effort. European Commissioner for Trade Valdis Dombrovskis went even further, claiming the WTO waiver would “**hinder the efforts** to ensure the widest distribution of COVID-19 vaccines.” According to the European Union, he said, “The solutions to rapidly scale up the required manufacturing and distribution of vaccines at this stage can only be delivered through close public-private cooperation and intellectual property is a **key element** of this equation.” Outgoing German chancellor Angela Merkel's government agrees that “the protection of intellectual property is a **source of innovation** and must remain so in the future.”

These authorities know that IP laws are not an impediment to global vaccinations but rather part of the solution. IP laws enable licensing agreements between companies, allowing them to enter voluntary partnerships with the assurance that their discoveries will be protected from exploitation. This has enabled historic collaborations over the past 19 months. Small companies have been able to partner with large ones to develop and distribute revolutionary vaccine technologies. Companies in one country **have partnered** with those in others, including in India and South Africa, to supply billions of vaccine doses for patients around the world. And, in some cases, longtime competitors have even collaborated with each other to manufacture vaccines at accelerated rates.

Altogether, as of June 2021, the leading Covid-19 vaccine makers had entered into a total of nearly **300 partnerships**, illustrating how voluntary licensing agreements with trusted entities are a far better way forward than any compulsory IP waiver. When companies know their IP will be protected, they are more likely to share their technology and know-how with partners.

Strong IP protections align U.S. economic interests with global public health. Millions of jobs, trillions of dollars in economic activity, and billions of people's lives all depend on the United States' research industry. The kind of breakthroughs the American biopharmaceutical sector achieved in the fight against Covid-19 could be matched in the coming years as American scientists find new ways to fight cancer, mitigate climate change, or overcome obstacles to space exploration. Protecting IP—even in times of crisis—is

what enables U.S. researchers to remain global leaders in their fields. It empowers and enables U.S. scientists to solve the dire problems the world sometimes throws at them. Most researchers would not burn the midnight oil in their labs—nor would entrepreneurs pour their life’s savings into fledgling biotech startups—if governments could simply steal the fruits of their labor and give them to competitors.

The Indian and South African proposal is not about wanting to produce more Covid-19 vaccines. Credible and capable companies in those nations are already partnering with U.S. companies to manufacture more doses. Rather, officials of those governments want to gain access to the underlying technologies so their domestic biotech industries can gain an unearned advantage.

Smart vaccine diplomacy abroad, expanded drug-manufacturing capacity at home, and protection for IP rights align with President Biden’s agenda to “build back better.” With this approach, Americans can help themselves the best way they know how—by helping everyone else. ■

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This report is made possible by general support to CSIS. No direct sponsorship contributed to this report.

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