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# A Year Out: Addressing International Impacts of the COVID-19 Pandemic

Prepared Written Testimony by

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Chairman Meeks, Ranking Member McCaul, and other distinguished members of the Committee: I am grateful for this opportunity to testify at this important and timely hearing.

The largest vaccination campaign in world history is underway, but many nations remain excluded from its benefits. Four months into the global rollout of coronavirus vaccines, approximately 382 million doses of vaccines have been administered globally, but just ten nations are responsible for three out of every four doses administered. Eighty countries representing approximately 1.2 billion people have yet to administer a single dose of vaccine.

In my testimony, I will focus on three areas: (1) an overview of current engagement of the United States and its allies in addressing the global inequities in vaccine distribution; (2) a summary of the emerging circumstances that would justify increased U.S. engagement in coronavirus vaccine diplomacy; and (3) a proposal for a U.S.-led initiative to increase the capacity, transparency, and resilience of vaccine manufacturing in order to produce sufficient quantities of vaccines and related materials to meet U.S. and global needs.

## Current Responses to Inequitable Global Vaccine Distribution

Vaccines have had a place in diplomacy almost from since their inception as the world's first truly effective medical intervention for preventing an infectious disease. Starting with the first vaccine—for smallpox—in the early nineteenth century, governments have used vaccine donations and vaccination campaigns to generate goodwill in other nations, increase the productivity of their colonies, ensure the safety of overseas nationals, and extend humanitarian benefits. Vaccination campaigns during the Cold War spurred scientific cooperation between the United States and the Soviet Union and were the basis for a ceasefire, solely to immunize children, in El Salvador's fourteen-year-long bitter and bloody civil war.

The United States has historically been a leading proponent of vaccine diplomacy and equity and has significant interests in continuing to be a leader in this pandemic. Safe and effective vaccines can meaningfully alter the trajectory of this pandemic and lessen its economic and humanitarian consequences at home and abroad, but success depends on getting doses to vulnerable populations who can benefit from them the most. Yet, efforts to bridge the global gap between the vaccine-haves and the vaccine-have-nots have stalled as the United States and other nations grapple with the domestic threat of this deadly virus.

The United States and other wealthy democracies have so far generally opted to donate funds rather than their early doses. In February 2021, the G7 nations pledged to increase their commitments to the multilateral initiative known as the COVID-19 Vaccine Global Access program, or COVAX, to $7.5 billion, with $2.5 billion coming from the United States.[1]

[1] The United States approved $4 billion for GAVI to procure and deliver COVID-19 vacccines for lower income nations. Of this total, $2.5 billion will be provided for vaccine procurement through COVAX.

## Top COVAX AMC Donor Governments and Team Europe

| Donor | Contributions (USD millions)[1] |
|---|---|
| United States | 2,500.00 |
| Germany | 1,097.10 |
| United Kingdom | 735.20 |
| European Commission | 488.70 |
| Japan | 200.00 |
| Canada | 197.00 |
| Saudi Arabia | 153.00 |
| Norway | 140.60 |
| France | 122.00 |
| Italy | 103.80 |

[1] Contributions include both direct contributions and contributions through the International Finance Facility for Immunisation (IFFIm).

*Data as of March 11, 2021*

COVAX is committed to distributing 2 billion doses by the end of the year, with at least 1.3 billion of those directed toward 92 low- and middle-income nations, covering at least 20 percent of the population in each of those nations. The progress of the COVAX initiative, however, has been slow relative to the vaccine rollout in wealthy nations. As of March 15, COVAX has shipped 29 million COVID-19 vaccine doses to 46 countries. Even if COVAX fulfills its ambitious 2021 target, widespread immunization remains a distant prospect in many nations; the African Union hopes to have 60 percent of the continent's 1.3 billion individuals vaccinated within three years.

The United States and many European nations have also announced a future intention to donate surplus vaccine doses once domestic demands have been satisfied, but few have stated the timing of those donations or how those donations will be allocated. France and Norway have proposed donating doses on a rolling basis, but have not begun doing so. The United Kingdom has indicated that it intends in the future to donate excess doses through COVAX.

Last week, the "Quad"—the United States, India, Japan and Australia—announced a joint pledge to produce and disseminate one billion vaccine doses to nations in the Indo-Pacific region by the end of 2022. The U.S. role in this effort will be helping to finance an Indian contract manufacturer to produce coronavirus vaccines, including the Johnson & Johnson vaccine.

**Emerging circumstances justify increased U.S. engagement in COVID-19 vaccine diplomacy**

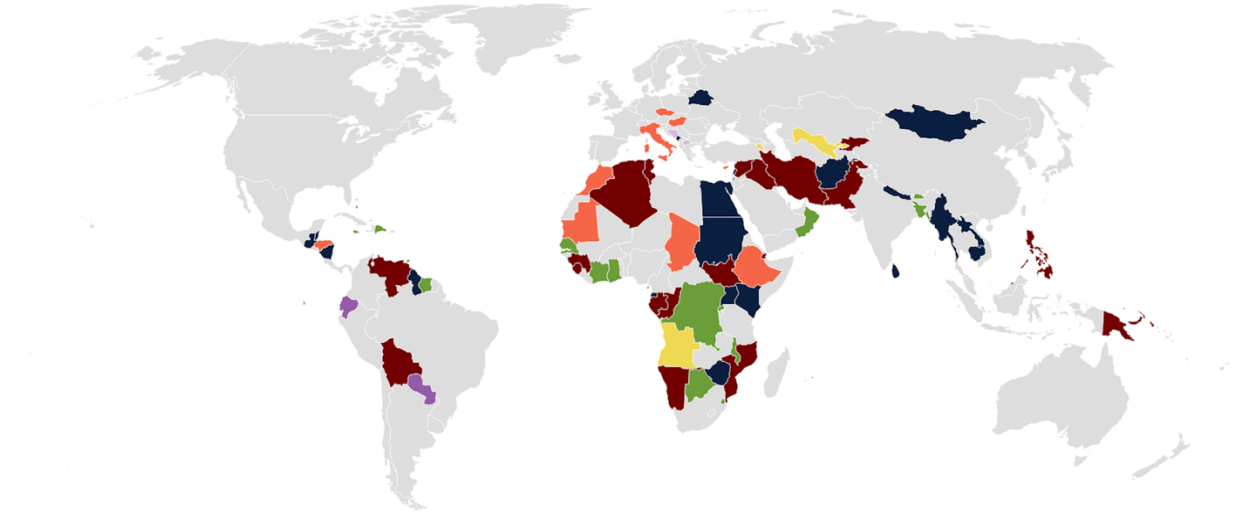
It is understandable that many democratic leaders, answerable to voters, have opted to give cash, rather than initial vaccine supplies, at a time when each dose provided abroad is one less dose available at home. Yet, circumstances are changing in ways that increase U.S. interests in expanding the global production and distribution of COVID-19 vaccines and related supplies.

1. *The Emergence of Competing Vaccine Diplomacy Efforts*

A handful of governments have begun directing sales or donations of their early vaccine doses to countries that are unable to compete with wealthier counterparts for advance vaccine purchases and are unwilling to wait for COVAX to deliver. Most, but not all, of the countries donating early vaccine doses are autocracies (e.g., Russia, China, United Arab Emirates) or nations considered as autocratizing (e.g., Serbia)—democracies in decline.

China, India, and Russia have been the most active among the group. China is donating vaccines to 39 countries, and its Foreign Ministry has indicated an intention to extend donations to 30 more nations. China is commercially exporting to 43 nations and announced in February that its three Chinese vaccine makers (Sinopharm, Sinovac, and CanSino) had received overseas orders for more than 572 million doses. India is donating vaccines to 40 countries and is producing much of the global vaccine supplies that will be distributed through COVAX. Russia is donating to a dozen nations and reportedly has contracted for commercial exports of 765 million doses of its Sputnik V vaccine.

**Countries That Are Receiving Vaccine Donations**



**Donations from:**

China only · India only · Russia only · Israel only · UAE only · Serbia only · Chile only · Multiple countries

This map features several donor countries that have provided or pledged COVID-19 vaccines to nations around the world. It does not include doses provided through COVAX.

*Last updated: March 15, 2021*

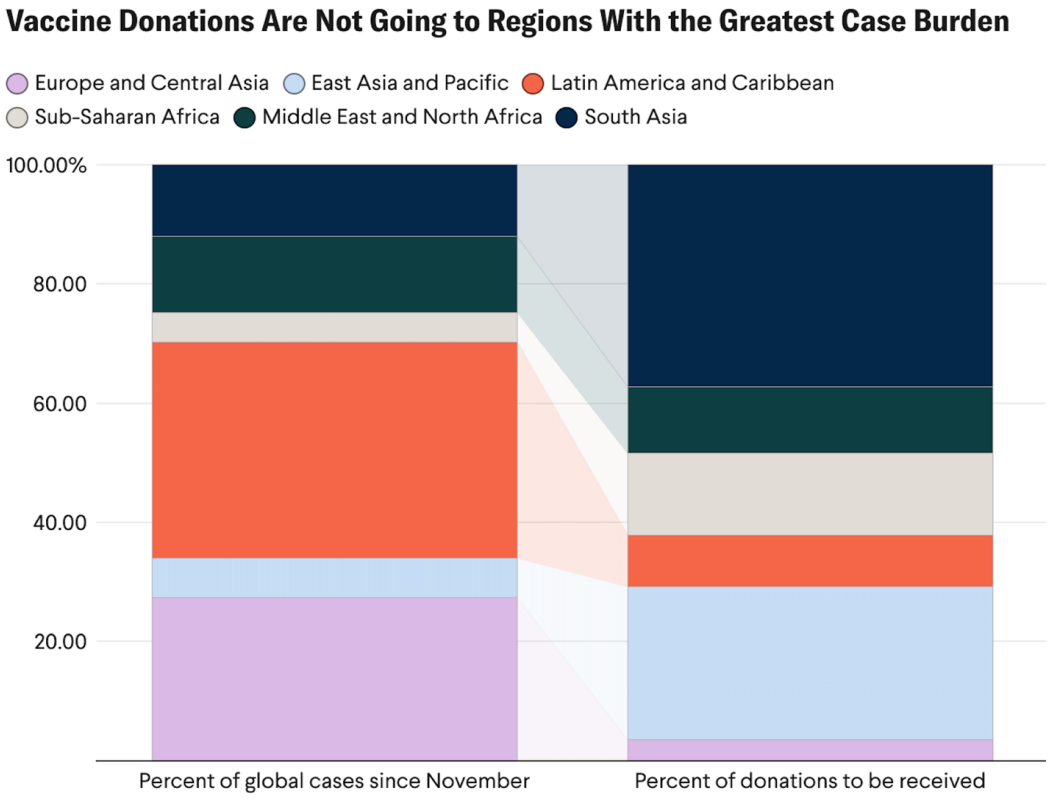
Three trends stand out concerning these donations and sales.

First, many countries that were unable to compete with wealthier nations for advance vaccine purchases and were unwilling to wait for COVAX to deliver were forced to turn to unproven Russian and Chinese vaccines—vaccines authorized before the completion of their phase III clinical trials or publication of the data from those trials. Argentina, for instance, began administering the Gamaleya vaccine on December 29, 2020—a full month before Sputnik V's safety and efficacy data were published in *The Lancet*. China has yet to publish the trial data for any of its vaccines—CanSino, Sinopharm, and Sinovac—that are currently being administered globally. As of March 4, a quarter of all middle-income countries currently administering vaccines were using Sputnik V, while 33 percent were using at least one of the Chinese vaccines. In contrast, no low-income or lower-middle-income country was using the Pfizer/BioNTech vaccine, but 84 percent of wealthy nations administering vaccines were.

Second, most of the donations have been small. China and India are pledging, on average, fewer than 300,000 doses. The UAE has so far pledged no more than 100,000 doses to any one country. Israel and Serbia are offering donations of 10,000 doses or less. Russia is providing donations ranging from 60 to 500,000 doses. To date, all pledged vaccines require a two-dose regime. While these donations have been

enough to start vaccination campaigns in some countries, the quantities involved are not sufficient to satisfy local or global demand.

Third, most of the donations have not been directed to the nations where the coronavirus crisis is currently the most severe and early doses may do the most good. All 39 countries to which China has donated vaccines are participants in its Belt and Road Initiative. China has also agreed to provide coronavirus vaccines to United Nations Peacekeepers and for any participant requiring vaccination ahead of this summer's Tokyo Olympics and next year's Beijing Winter Games. India has targeted its closest regional allies for its donations, with Bangladesh, Myanmar, Nepal, and Afghanistan getting the most. Russia is donating relatively little, but many of those donations appear to be directed through oligarchs and Russian firms. In general, the Asia Pacific region and, to a lesser extent, some African nations have received early donations disproportionate to the burden of their recently reported coronavirus cases. In contrast, countries with inadequate vaccine supplies in Latin America and Central and Eastern Europe have received far fewer donations than needed to stay ahead of their recent surges in cases.




Vaccine donations are from Chile, China, India, Israel, Russia, and the UAE. "Percent of global donations to be received" reflects only disclosed number of vaccines pledged or provided; promises to donate vaccines with no specific amounts or recipients are not included. In both columns, the United States, Canada, EU countries, and the United Kingdom have been removed. Regional classifications are from the World Bank.

*Last updated: March 15, 2021*

The manner in which these vaccine diplomacy efforts are being conducted suggest that they are more a means of cementing spheres of influence rather than advancing global health equity and bringing this pandemic under control as soon as possible. More meaningful and equitable global access to vaccines continues to hinge on the success of COVAX. Yet, at a time when governments are under extreme domestic pressure to roll-out vaccines and with few alternatives, countries will remember who came to their assistance, and when. Where vaccine donations go, it is possible increased influence for China and Russia may follow.

2. *Variants of concern may increase the global demand for vaccine manufacturing*

After months of remaining stable, multiple variants of the coronavirus, known as SARS-CoV-2, been identified in Brazil, South Africa, and the United Kingdom. The speed with which these variants are replacing previously circulating viruses and are spreading internationally demonstrates their potential to increase caseloads, hospitalizations, and deaths at home and abroad. The emergence of more contagious genetic variants of the coronavirus has increased the demand for manufacturing of safe, effective SARS-CoV-2 vaccines and the need for ensuring their widespread deployment.

First, early data suggests that current SARS-CoV-2 vaccines may be less effective against the new variants, and more manufacturing capacity is needed to produce the next generation vaccine candidates that effectively protect against the emerging variant strains. Vaccine manufacturers are already taking steps to develop and test candidates, but difficult decisions lie ahead for prioritizing the already finite supply of manufacturing materials and capacity, and deploying these newer vaccines on top of an already strained distribution system. The demand for that vaccine manufacturing will be greater if the active ingredient for addressing original and variant strains must be made separately and then combined in a bivalent vaccine.

Second, less effective vaccines means that countries will need to achieve higher rates of vaccination with current vaccines to reach herd immunity—the point at which a sufficient share of the population has developed immunity so that, even absent mask wearing and social distancing, transmission of the coronavirus can no longer be sustained. More vaccination requires manufacturing more vaccines.

Third, the only effective strategy for reducing the risk of new variants is reducing new infections, which will require increasing U.S. and global vaccination rates and making more vaccines. The longer that the coronavirus spreads, the more likely it is to mutate and produce genetic variants that are more contagious, deadly, or resistant to proven vaccines. Mask mandates, restricting international travel, and increasing genomic surveillance for variants are prudent measures, but they are no substitute for reducing new infections through increased U.S. and global vaccination.

3. *Supply shortages and disruptions*

Even without the potential need for re-vaccination and boosters to address new variants, global demand for COVID-19 vaccines in 2021 was already projected to be more than 10 billion doses, two to three times the annual global demand for all vaccines prior to COVID-19. With government support, vaccine manufacturers built manufacturing capacity, transferred technology to contract manufacturers, and started large-scale production of candidate vaccines and related material even before they had conclusive clinical data. The strain on global vaccine manufacturing capacities and supplies has nevertheless been enormous. There have been delays in manufacturers meeting their COVID-19 vaccine manufacturing commitments and shortages of raw materials, single-use components, and other vaccine-related supplies.

In response to manufacturer delays in delivering promised vaccine doses, the European Union (EU) has imposed export controls on SARS-CoV-2 vaccines destined for Australia. India also delayed the export of some locally produced doses. The U.S. federal government has imposed export restrictions on needles and syringes and is relying on the Defense Production Act to prioritize the allocation of limited inputs to vaccine manufacturers under contract with the U.S. Government. The Serum Institute CEO recently linked the global shortage of bioreactor bags to the U.S. policy of prioritizing domestic production, thereby limiting exports of inputs and vaccines to COVAX and other countries in need.

Other nations may follow suit, seeking to leverage the threat of disrupting COVID-19-related medical supply channels to gain earlier access to doses. Early in the pandemic more than 70 countries plus the EU imposed export controls on local supplies of personal protective equipment, ventilators, or medicines. That

group includes nations from which U.S. vaccine manufacturers are sourcing raw materials, buying single-use products, such as tubing and bioreactor liners, and relying upon contract vaccine manufacturing.

Solving the supply challenges of raw materials is essential not only for increasing COVID-19 vaccine supplies, but also for producing the billions of doses required annually for polio, diphtheria and tetanus, and other life-saving vaccines, which rely overwhelmingly on the same inputs and supplies as COVID-19 vaccines.

**A Strategy for U.S. Coronavirus Vaccine Diplomacy**

The United States is well placed to take on a leadership role in launching a G20 initiative to promote the resilient and transparent infrastructure needed to respond to the emergence of variants, reduce supply chain disruptions, and alleviate concerns about inequitable vaccine access in this and future pandemics. Such an initiative would build upon past G20 engagement on the Ebola epidemic in 2013-14 and the commitment at the Riyadh Summit to "spare no effort" to ensure affordable and equitable access for all people in a manner that is consistent with nations' commitment to incentivize innovation. It would also present a compelling alternative to the token donations being provided by China, Russia, and other autocracies that keep low- and middle-income nations dependent in responding to current and future crises. The forthcoming G20 Global Health Summit in Rome in May and June G7 Summit in Cornwall represent opportunities to launch such an initiative. It should have three parts.[2]

***Operation Warp Speed for Global Vaccine Manufacturing***. Scaling up vaccine manufacturing quickly in a pandemic requires financing and government policy support, as the U.S. experience has shown. Through Operation Warp Speed and successor efforts in the Biden administration, the United States made large advance purchases of vaccines and coordinated and matched suppliers with vaccine sponsors to ensure those purchase orders would be fulfilled. The United States subsidized and mobilized input production capacity, including raw materials, single use products, and the syringes, vials, and other supplies needed for

[2] See Thomas J. Bollyky and Chad P. Bown, "Vaccine Nationalism Will Prolong the Pandemic," *Foreign Affairs*, Dec. 29, 2020.

packaging and administering vaccine doses into arms. The United States worked with manufacturing and suppliers, invoking the Defense Production Act if necessary, to potentially untangle bottlenecks.[3]

A corresponding effort is needed to harness the potential capacity for global vaccine manufacturing that cannot be effectively mobilized by COVAX alone. The World Health Organization struggles to work constructively with the pharmaceutical industry, and the Coalition for Epidemic Preparedness Innovations (CEPI) and GAVI, the other COVAX co-leads, lack the financing and necessary clout with vaccine sponsors. Onshoring the manufacturing of all critical materials in the United States may not be feasible, economically viable, or the best means of promoting resilience and rapid response against future pandemic threats. Engaging low- and middle-income nations in manufacturing networks for vaccine and related-supplies can also help address those nations' concerns regarding inequitable vaccine access in this and future pandemics.

This initiative can work with governments and development-finance institutions to provide the support, assurances, and trained personnel that vaccine sponsors will require to transfer technology and tap unused contract vaccine manufacturing that still exists in well-regulated markets. The initiative can build on successful U.S. efforts to convince firms to redeploy vaccine manufacturing and ancillary materials that had been reserved for projects that did not pan out. Cross-border alliances and coordinated investments can establish and optimize the supply chains needed to provide new COVID-19 vaccine manufacturing sites with necessary inputs—capital equipment, raw materials, and ancillary supplies to produce and deliver those vaccines. Few nations outside of the United States will have both reliable contract vaccine manufacturers and the necessary local companies to produce the needed inputs at the scale required to satisfy global or regional demand. These efforts should promote the creation of a flexible, robust, and geographically distributed vaccine manufacturing network that can produce vaccine "platforms," or prototypes, such as mRNA, that can be adapted for future pandemic threats.

***Supply chain transparency***. In response to dozens of countries imposing export restrictions on food staples during a perceived food crisis in 2008–2011, the G20 created the Agricultural Market Information System (AMIS) to improve transparency and coordinate policy in the event of sudden scarcity. That system

[3] Chad P. Bown and Thomas J. Bollyky, "A Covid-19 Vaccine Investment and Trade Agreement is needed to end the pandemic. Here's why," PIE Brief, forthcoming.

generated information and trust that arguably reduced the use and duration of agricultural export bans in the early days of the COVID-19 pandemic. The G20 needs a similar effort on essential medical provisions, which may be initiated as a pilot project on COVID-19 vaccines, therapeutics, and ancillary supplies such as syringes, tubing, and vials. Recent export controls stem in part from the inability to determine whether vaccine sponsors have double-booked orders of vaccine doses. Without transparency into manufacturing and distribution, there may be more export restrictions and supply chain disruptions to come. It is critical that the quick ramp-up of COVID-19 vaccine manufacturing capacity does not disrupt the production and supply of other vaccines and vaccine-related inputs.

***Donation of excess vaccine doses***. The United States and other G20 governments with excess vaccine doses should announce in advance the future conditions under which those doses will be donated to give greater confidence and predictability to COVAX and other receiving nations. This G20 initiative should also expand upon initiatives under way at COVAX to develop the regulatory, liability, model contracts, and distribution arrangements to facilitate those donations.

**Conclusion**

Uneven or delayed global access to proven COVID-19 vaccines threatens core U.S. strategic interests. Increased U.S. engagement with COVAX is an important and necessary first step, but more is needed. The United States is well placed to promote the resilient and transparent infrastructure necessary to respond to the emergence of variants, reduce supply chain disruptions, and alleviate concerns about inequitable vaccine access in this and future pandemics. Progress will require excercising global leadership and marshaling support at home and from allies and rivals abroad. The United States is not doomed to be at the mercy of microbes now or in the future, provided we act on the lessons that we are learning from this pandemic .