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Trade Is Good for Your Health

Freeing Trade in Medicines and Other Medical Goods during and beyond the COVID-19 Emergency

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EXECUTIVE SUMMARY

There is increasing need to free up medical trade to help end the COVID-19 pandemic and secure global health. Yet import tariffs, export restrictions, and other limitations on international trade in medicines and medical goods continue to confound the hopes for fulfilling this need. Indeed, added restrictions have been imposed on medical trade during the pandemic. Meanwhile, governments have accomplished little at the World Trade Organization (WTO) to help meet this need. Using trade to help fight the COVID-19 pandemic and to otherwise support global health must move to the top of the WTO agenda, with the aim of finalizing new rules to support trading for health care goods by the time of the next WTO ministerial conference in Geneva in late November 2021—and ideally, sooner.

Members of the WTO must work to modernize their long-standing but limited sectoral agreement eliminating duties on pharmaceuticals by extending it to cover all medicines and medical goods, as well as applying it to all WTO members. They must ensure that WTO obligations that prohibit export restrictions apply effectively to the restrictions in the medical sector and must do away with needless regulatory restrictions on medical trade. Ideally, these reforms could be included in a new medical trade agreement that would be fully multilateral. If that is not at first achievable, such an agreement could initially include some WTO members and later be expanded to be fully multilateral. The key to the success of such an agreement would be making it fully enforceable—like other WTO agreements—in WTO dispute settlement, backed by the possibility of authorized trade sanctions if a member does not comply with its treaty obligations.

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INTRODUCTION

As the COVID-19 pandemic continues worldwide, one front on which the battle for human health is being waged is international trade. Domestic policymakers are confronted with life-and-death decisions about how to deploy the limited resources of vaccines and other medical goods urgently needed throughout the world to combat the pandemic. Amid intense domestic political pressures, tariffs and other restrictions on medical trade have persisted and proliferated. As a global response, the goal of strengthening the links between trade and health in support of global well-being should be at the top of the trade agenda. This is the view of the new director-general of the World Trade Organization, Ngozi Okonjo-Iweala, who has said that her top priority is to ensure that the WTO does more to address the pandemic, including by speeding up efforts to lift export restrictions that are slowing trade in medicines and medical supplies.[1] On the new COVID-19 vaccines, she has warned that "the nature of the pandemic and the mutation of many variants makes this such that no one country can feel safe until every country has taken precautions to vaccinate its population."[2]

Yet it is not the director-general who sets the agenda for the WTO; the 164 members of the WTO do that. The director-general can continue to play an important role through a combination of exhortatory public statements and behind-the-scenes persuasion, but success will come only if WTO members place medical trade at the top of their agenda. To date, while there has been considerable talk by the WTO members about freeing medical trade from tariff and other restrictions, there has, unfortunately, been no action. Worse, the restrictions on medical trade have increased. Failure by the members of the WTO to take actions to free trade in medical goods will only undermine progress toward ending the pandemic.

Goal 3 of the United Nations Sustainable Development Goals is to "ensure healthy lives and promote well-being for all at all ages," including by combating communicable diseases and by providing "access to safe, effective, quality and affordable essential medicines and vaccines for all."[3] International trade is indispensable to meeting this global goal. As the WTO, the World Health Organization (WHO), and the World Intellectual Property Organization (WIPO) have explained, "International trade is vital for access to medicines and other medical technologies, markedly so for smaller and less-resourced countries." Trade is vital to achieving this goal because it promotes competition and thus reduces prices. Also, it offers a wider range of suppliers, improving security and predictability of supply. As these three international institutions have said, "Trade policy settings—such as tariffs on medicines, pharmaceutical ingredients and medical technologies—therefore directly affect the accessibility of such products." What is more, they have emphasized that

> trade policy and the economics of global production systems are also key factors in strategic plans to build domestic production capacity in medical products. Non-discriminatory domestic regulations founded on sound health principles are also important for a stable supply of quality health products. Access to foreign trade opportunities can create economies of scale to support the costs and uncertainties of medical research and product development processes.[4]

These opportunities will be missed, the pandemic will be longer and deadlier, and Goal 3 of the Sustainable Development Goals will not be accomplished if freeing trade in medical goods is not a top priority for the WTO-based multilateral trading system.

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THE COMPOSITION OF WORLD MEDICAL TRADE

Although international trade has always been important to ensuring health and combating communicable diseases, it has become even more important during the COVID-19 pandemic. According to the WTO, WHO, and WIPO, the "vast majority of countries are net importers of all categories of health technologies, including those needed to address COVID-19."[5] World imports of medical products totaled about $1.01 trillion in 2019. Of these imports, most—about

$597 billion—are linked to the pandemic. The products essential for defeating COVID-19 include medicines; medical supplies; medical equipment and technology; and personal protective products such as face masks, sanitizer, and hand soaps. Medicines comprise 56 percent of these imports.[6]

Medical trade is concentrated in developed countries that dominate trade in health-related products.[7] For instance, Germany, the United States, and Switzerland combined supply 35 percent of the medical products in the world, and the top 10 exporters of medical products account for almost three-fourths of global exports. Imports are similarly concentrated: the top 10 importers of medical products account for 65 percent of all imports, with the United States being the single largest global importer of medical products with 19 percent of the global total.[8]

China is, however, the world's largest exporter of medical equipment, including several medical devices that have proven crucial for combating the pandemic.[9] Much noticed in the United States during the COVID-19 pandemic has been the fact that—even with the contentious trade conflicts between the United States and China—imports of medical equipment have remained significant. According to China's foreign ministry, between March 2020 and March 2021 Chinese exports to the United States included more than *43 billion* medical masks.[10]

China was a major global supplier of face shields, protective garments, mouth-nose-protection equipment, gloves, and goggles before the pandemic, and it has remained so during the pandemic. As Chad Bown of the Peterson Institute for International Economics has noted, "As the coronavirus spread in China, the rest of the world feared being cut off from critical Chinese supplies just when they would be needed the most." But that did not happen. Although there were some disputed reports of export restraints, for the most part China scaled up production of key medical goods and exported them widely.[11]

One of the most important and complex categories of medical goods is medicines. The active pharmaceutical ingredient (API) is the chemical or other substance that produces the intended beneficial effect of a drug. Some drugs have multiple active ingredients. At one time, most pharmaceutical companies created the API, made the tablet or capsule, and packaged the final medical product. However, major pharmaceutical firms in developed countries have taken advantage of advances in global logistics and trade to specialize in the value-added portions of the drug production process by likely "pursuing potentially lucrative, blockbuster patents rather than producing lower-margin bulk pharmaceuticals that are no longer covered by patents."[12] They started outsourcing much of the lower-end work in the production of both generic drugs and APIs to factories in developing countries.

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About 90 percent of the drugs taken by Americans are generic drugs for which the patents have expired.[13] It is not profitable economically to produce many of these drugs in the United States or the European Union. Similarly, outsourcing the production of APIs made sense because most are commodity products that are substitutable irrespective of where they originate, and all drugs contain APIs. Thus, "the United States sources 80 percent of its APIs from overseas, and a substantial portion of U.S. generic drug imports come either directly from China or from third countries like India that use APIs sourced from China."[14] Sourcing in these developing countries offers distinct cost advantages in labor, energy, water, and other factors of production that lower prices for U.S. pharmaceutical companies and, thus, for American consumers.

This shift in the low-end production of pharmaceuticals went largely unnoticed until the arrival of COVID-19. The Center for Infectious Disease Research and Policy at the University of Minnesota has listed 156 acute critical drugs that are often used in the United States—"the drugs without which patients would die in hours." As the center's director, Michael T. Osterholm, and a coauthor, Mark Olshaker, have explained in a published article,

> All these drugs are generic; most are now made overseas; and many of them, or their active pharmaceutical

> ingredients, are manufactured in China or India. A pandemic that idles Asian factories or shuts down shipping routes thus threatens the already strained supply of these drugs to Western hospitals, and it doesn't matter how good a modern hospital is if the bottles and vials on the crash cart are empty.[15]

Specializing as a source of low-end manufacture for such products on global pharmaceutical value chains, China has become the second-largest exporter of drugs and biologics to the United States, accounting for 13.4 percent of U.S. imports of those products in 2018.[16] In particular, China has become a key supplier to the United States of APIs and generic medicines for which the patents have expired. China is the world's leading supplier of APIs, accounting for 16 percent of world exports in 2019.[17]

Otherwise, though, China is not yet a major source of medical products. Leaving aside APIs and other inputs, in 2019 China accounted for *only 1 percent* of world exports of *final* medical products.[18] On the other hand, with its growth, China has become the world's second-largest market of drug consumers after the United States.[19] Thus, China is not only a source of low-end import supply; increasingly, it also represents a major potential new market for U.S. and European medical exports.

Many of the Chinese pharmaceutical products are drugs that American companies could not produce profitably.[20] Notably, Chinese medical exports to the United States are often generic equivalents and raw materials for older medical products. For example, China is the principal source for the United States of the raw materials and chemical ingredients of many medicines for hypertension and of some older antibiotics no longer manufactured in the United States, including penicillin. China is also "the only maker of key ingredients in a class of decades-old antibiotics known as cephalosporins, which treat a range of bacterial infections, including pneumonia."[21] About 70 percent of the acetaminophen used in the United States is made in China.[22]

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India is another of the world's leading suppliers of drugs and is the biggest supplier of generic drugs, including 40 percent of the generic drugs consumed by Americans.[23] India produces domestically but imports about 70 percent of the API they use in manufacturing drugs from China.[24] Because of India's dependence on Chinese imports and because of its need to avoid supply-chain disruptions, the Indian government has, since the start of the COVID-19 pandemic, established new incentives to encourage the domestic manufacture of key starting materials and active ingredients that India currently sources from China.[25]

Chinese and Indian firms do not monopolize the global marketplace for these and other medical products, however. China ranked only seventh among the top 10 exporters of all medical products in 2019, with just 5 percent of world exports; India ranked much lower.[26] The global statistics on API sourcing and production as a part of global medical trade are sketchy, but according to the U.S. Food and Drug Administration (FDA), of about 2,000 manufacturing facilities in the world producing APIs, 13 percent are in China, 18 percent are in India, 26 percent are in the European Union, and 28 percent are in the United States. For those APIs that the WHO has identified as essential medicines, 21 percent of the manufacturing facilities are in the United States, 15 percent are in China, and the rest are spread among India, Canada, and the European Union. The FDA reports that, in 2019, there were 510 API facilities in the United States and that 221 of them were supplying essential medicines.[27]

TARIFFS ON MEDICINES AND OTHER MEDICAL GOODS

The response to COVID-19 has demonstrated that we do not yet have free trade in medicines and other medical goods. As with other traded goods, the principal tool used to limit medical trade has been taxes imposed at the border in the form of tariffs. Despite some tariff cuts in the

years leading up to the pandemic, tariffs on many medical products remain high. For all medical products, the average "bound" tariff—the average tariff ceiling that is pledged by a country in its WTO concessions—is 26 percent. Almost one-third of WTO members have an average bound tariff on medical products of more than 50 percent.[28] The average "applied" tariff on medical products—the tariff currently in use—is considerably lower, at 4.8 percent. In the United States, the applied average tariff on medical goods is only 0.9 percent, but the gap between the bound tariff rates and the applied tariff rates leaves ample legal room for increasing tariffs on these products without violating WTO rules.[29]

> "Tariffs on medical products have a protectionist effect, but they are not always imposed for the purpose of protecting domestic industries. Instead, many of them are intended to raise tax revenue, especially in poorer countries."

Generally, among international trade negotiators, a tariff of 15 percent or higher is considered a "tariff peak."[30] Some members of the WTO apply tariffs as high as 65 percent on some of these essential products. The average tariffs on the protective supplies used to combat COVID-19 are as high as 27 percent in some countries. The average applied tariff on hand soap is 17 percent.[31] Surprisingly, only nine WTO members allow a health product as basic as soap to enter their countries duty-free. Trade economist Simon Evenett has mused, "At a time when the frequent washing of hands is recommended by the World Health Organization, policies that increase the cost of soap are particularly difficult to rationalize."[32]

These tariffs on medical products have a protectionist effect, but they are not always imposed for the purpose of protecting domestic industries. Instead, many of them are intended to raise tax revenue, especially in poorer countries. Yet these revenue-raising measures are counterproductive for these countries because tariffs increase the prices of medical products. They are taxes on consumption that undermine health care by increasing the prices of medicines, medical supplies, and other health products, which are often paid for by the public health services in these countries. The harmful effect of these tariffs on health care became apparent in the early stages of the pandemic when both consumers and governments scrambled for unprecedented amounts of medical and protective equipment such as masks, respirators, gloves, goggles, garments, and ventilators, as well as numerous hygienic and disinfectant products.[33] International trade in personal protective equipment doubled in the space of only a few months, but much of the trade in medical products was burdened by tariffs.[34]

The shortages of medicines and other medical goods that occurred immediately following the COVID-19 outbreak were not wholly unanticipated. In the decades leading up to the pandemic, intermittent efforts were made to free up trade in medical products, partly to prevent such shortages. Those efforts can be traced back to the Uruguay Round and 1994, when a subset of WTO members concluded the Agreement on Trade in Pharmaceutical Products (the "Pharma Agreement").[35] The parties to this WTO sectoral agreement are Canada; the European Union; Japan; Macao, China; Norway; Switzerland; the United Kingdom; and the United States. The Pharma Agreement has eliminated tariffs, as well as other duties and charges, on a long list of pharmaceutical products and on the ingredients and other substances used to produce them, permanently binding them at duty-free levels.[36] Although only about a quarter of WTO members are currently parties to this agreement, they have eliminated duties on all covered products on a most-favored-nation basis, which means that they have ended the duties on those products in their trade with all other WTO members, and not only with just the countries that have signed the agreement.

The Pharma Agreement was updated in 1996, 1998, 2007, and 2010. Even so, it has not kept up with the growth and diversity of the global trade in pharmaceuticals. The parties to the agreement represent about two-thirds of all pharmaceutical trade, but since the conclusion of the Uruguay Round other WTO members have entered the pharma market without signing the Pharma Agreement. As a percentage of the burgeoning trade in pharmaceuticals, the coverage of the Pharma Agreement has shrunk. In 1994 the agreement accounted for about 90 percent of the world trade in the covered products. At present, it accounts for only about 66 percent. Furthermore, the Pharma Agreement deals only

with the tariffs on international trade in medicines and what goes into making them but does not address the tariffs on the growing trade in other medical goods.

Thus, tariff-free trade in medical goods other than medicines remains mostly an aspiration for the WTO. To their credit, four WTO members—Macao, China; Hong Kong, China; Singapore; and Iceland—have eliminated all duties on all medical products.[37] The other 160 WTO members, however, have not. While most of the world continues to struggle to secure essential medicines and other medical goods at affordable prices, most WTO members continue to apply tariffs that limit international trade in those products.

Tariffs rarely make sense, and border taxes on imports of life-saving goods may make the least sense of all because, by increasing upstream costs in the value chain, "their impact on price may be magnified" over and above the amount of the tariffs.[38] Eliminating the tariffs on medicines and on other medical products would reduce their costs and reduce the likelihood of shortages. It would, as a consequence, help end the COVID-19 pandemic and otherwise enhance global health. Furthermore, as former Costa Rican trade minister and prominent international trade scholar Anabel González has observed, "Eliminating such protectionist measures could also lower the cost of inputs like active ingredients and other chemical products, encouraging domestic investment and production."[39]

PANDEMIC EXPORT RESTRICTIONS ON MEDICAL GOODS

With the sudden outbreak of the COVID-19 pandemic, trade in essential medical products simultaneously experienced a demand shock, a supply shock, and disruptions of global transport and supply chains. Faced with the immediacy of domestic shortages in medical goods because of the disruption of just-in-time business practices and the less than ample emergency stockpiles, the first frantic response of some countries to the pandemic was to restrict and to otherwise distort trade in medical goods. India banned exports of respiratory masks, 26 pharmaceutical ingredients, and some of the products made by them.[40] The European Union announced emergency export restrictions on hospital supplies that were needed to counter the pandemic.[41] German authorities halted delivery of 240,000 medical masks to a Swiss buyer.[42] An executive order issued by then president Donald Trump in August 2020 required federal agencies in need of essential drugs and other medical supplies to "Buy American."[43] In addition, the U.S. federal government contracted with Gilead Sciences, the company that made the first drug that was licensed for the treatment of COVID-19—remdesivir—to provide the bulk of its production, at least temporarily, exclusively to Americans.[44] Throughout 2020, pandemic protectionism infected more and more countries.[45] By the end of the year, 92 governments had taken a total of 215 measures restricting exports of medicines and medical supplies.[46] Simon Evenett, who keeps a running tally of these medical trade restrictions, lamented, "Now, beggar-thy-neighbour becomes sicken-thy-neighbor."[47]

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Like tariffs, these other restrictive trade measures prevent the limited quantity of drugs and other medical supplies from going to where they are most in demand.[48] It is understandable that national leaders will want to secure medicines, medical supplies, and medical care for their own citizens. But these leaders will not help their citizens by restricting trade in medicines and other medical products that will ultimately just limit the overall supply. Restrictions on exports of medical goods will have the economic effect of limiting their production because it will limit potential markets and thus reduce the incentive to increase the production of those goods. Measures that restrict trade in medicines and medical supplies are self-defeating and "hurt all countries, particularly the more fragile."[49]

Poorer countries, which must import many of the medical goods they need to deal with COVID-19, will be hurt first, and

maybe the most, from the higher prices resulting from such restrictive trade measures. What is little understood, though, by many people in the developed world, is that wealthier countries, usually those imposing the restrictions, will also be harmed. Not only will domestic production be constrained, but World Bank economists Aaditya Mattoo and Michele Ruta have explained that prices will also be higher than necessary and that medical supplies will not be distributed efficiently or equitably.[50] Nigerians and Indonesians, Bolivians and Indians will suffer; but so too will Canadians and Australians, Europeans and Americans. Further, the timeless objections to recurring attempts at economic self-sufficiency and autarky still apply. It would be exceedingly difficult for any one country to ensure for itself all the vast variety of essential medicines and medical supplies that its people demand. Even if it could be done, it could only be done at great cost to that country's economic efficiency and to its standard of living.

In general, WTO rules prohibit export restrictions on trade in goods. The following provisions establish the legal framework here. First, the core prohibition is found in Article XI of the General Agreement on Tariffs and Trade (GATT), which is captioned "General Elimination of Quantitative Restrictions."[51] Significantly, export *taxes* are not forbidden by this WTO rule (although export taxes are not an option for the United States because they are barred by the U.S. Constitution).[52] Other WTO members are generally free to impose export taxes unless they have committed otherwise in their WTO accession agreements. About one-third of the WTO members—usually developing and least-developed countries—impose export taxes in the form of export tariffs, usually on primary commodities.[53] The WTO should negotiate rules to discipline such actions, which distort trade by distorting market decisions. But export taxes have not generally been employed in medical trade.

Apart from export taxes, under Article XI:1 of the GATT, "prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas . . . export licenses or other measures . . . on the exportation or sale for export of any product" are prohibited.[54] In WTO dispute settlement, panels and the Appellate Body have consistently ruled that, because it is a "General Elimination of Quantitative Restrictions," the prohibition in Article XI:1 "is very broad in scope," as the panel put it in the *India—Quantitative Restrictions* dispute.[55]

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However, there are some exceptions. Under Article XI:2(a), this general prohibition does not apply to "export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting" WTO member.[56] There is uncertainty in the scope of this exception as no definition is provided for the terms "temporarily applied," "critical shortages," or "essential" products. However, these three terms have been clarified in WTO dispute settlement. In the appeal in the *China–Raw Materials* dispute, the Appellate Body found that, with respect to Article XI:2(a), the phrase "temporarily applied" is one that "describes a measure applied for a limited time, a measure taken to bridge a 'passing need.'"[57] In that same dispute, the panel defined "critical shortages" as "situations or events that may be relieved or prevented through the application of measures on a temporary, and not a permanent, basis."[58] On appeal there, the Appellate Body added that the term "critical shortages" "refers to those deficiencies in quantity that are crucial, that amount to a situation of decisive importance, or that reach a vitally important or decisive stage, or a turning point." Furthermore, in the appeal in the *China—Raw Materials* dispute, the Appellate Body clarified that "essential" products are "absolutely indispensable or necessary products."[59]

Even if an export restriction meets the legal requirements in Article XI:2(a) it must, under Article X:1 of the GATT, be made transparent through "prompt" publication "in such a manner as to enable governments and traders to become acquainted with" it.[60] Publication of such measures is important because it gives other countries the opportunity to raise objections. Moreover, even if an export restriction meets the legal requirements of Article XI:2(a), it must not be discriminatory. Under Article XIII:1 of the GATT, such an export restriction can only be applied if "the exportation of

the like product to all third countries is similarly prohibited or restricted."[61] The country applying the export restriction cannot limit that restriction to one or a few countries. Although there is, to date, no WTO jurisprudence on these two legal issues, these are the conclusions that would most likely be reached by the Appellate Body.

Importantly, any export restriction, even if it is not eligible for the carve-out for temporary measures relating to critical shortages of essential products, can be justified as necessary to protect human health, or necessary to secure compliance with domestic laws or regulations that are not inconsistent with WTO obligations, as long as the restriction is not applied "in a manner which would constitute arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade."[62] Conceivably, a decision to exclude from the restriction the 46 least-developed countries that have been certified as such by the United Nations could be defended as discrimination that is neither "arbitrary" nor "unjustifiable," and thus entitled to one of the general exceptions in Article XX of the GATT, but no other discrimination between and among WTO members seems likely to meet this treaty requirement for entitlement to one of the general exceptions.[63] Although there is no WTO jurisprudence on any of these issues relating to the relationship between GATT Article XI:2(a) and GATT Articles X:1 and XIII:1, or between GATT Articles XI:2(a) and XIII:1 and GATT Article XX, these are the conclusions most likely to be reached by WTO jurists.

Lastly, under Article 12.1(a) of the WTO Agreement on Agriculture, any WTO member that "institutes any new export prohibition or restriction on foodstuffs in accordance with" the exemption of temporary measures applied to prevent or relieve critical shortages of essential products in Article XI:2(a) of the GATT "shall give due consideration to the effect of such prohibition or restriction on importing Members' food security."[64] The Agreement on Agriculture does not explain how this due consideration must be given. Also, this requirement applies only to foodstuffs. It does not apply to medicines and other medical goods or to other sectors of trade. For all but foodstuffs, the implication of this omission is that WTO members are not required to consider the efforts of their export restrictions on other WTO members.

Stepping beyond the WTO rules, the fact that many of the export restrictions imposed on medical goods during the pandemic are probably legal under WTO law does not, as Martin Wolf of the *Financial Times* has said, "make them wise."[65] Jennifer Hillman, a leading American trade scholar and a former member of the WTO Appellate Body, has explained that

> such actions clearly work to the detriment of the world's ability to distribute . . . scarce medical resources to where they are needed most with the minimal amount of red tape. When one country imposes an export ban, others tend to follow, resulting in higher prices and pockets of scarcity outside of the silos created by the bans. Moreover, given the number of components that must cross borders in today's global supply chain manufacturing system, export bans may disrupt supply chains and delay the production of critical medical supplies or devices.[66]

Further, export restrictions on medical goods cause "disproportionate harm to developing nations that cannot otherwise compete in bidding wars."[67]

The threat of harm everywhere from medical export restrictions has intensified as the pandemic has persisted. Most visibly, this threat can be seen in the turn toward restrictions on the export of COVID-19 vaccines as the world's handful of vaccine suppliers ramp up to unprecedented levels of production. In March, one major producer, the European Union, unveiled emergency rules that gave it broad powers to curb vaccine exports temporarily. This action seemed likely to cut exports to the United Kingdom and other countries in order to ease European supply shortages.[68] At the same time, India cut back on its vaccine exports as virus cases surged at home, which also threatened to undermine vaccination in other countries.[69] Depending on how they are structured and applied, these actions may be legal under WTO rules, but they are nevertheless bad policy.

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The gap between the supply of COVID-19 vaccines and the urgent demand for them has led to a disheartening outbreak of vaccine nationalism. The handful of countries that have produced vaccines in record time have largely given the limited doses to their own citizens first, whatever their level of infection risk, while leaving people in other countries, especially poorer countries, without potentially life-saving inoculations. This myopic approach would be inefficient and it could have the effect of making the pandemic last longer. It is truly the case that no one is safe from COVID-19 until everyone is safe from COVID-19.[70]

In response to this widespread shortsightedness, India and South Africa, with the support of other developing countries, have sought—so far unsuccessfully—a broad waiver of the WTO intellectual property rules in relation to COVID-19 medicines. Although these WTO members are well-intentioned, their waiver proposal aims at the wrong target.[71] What the world faces is not an abuse of their rights by vaccine patent holders; it is a shortage of vaccine supply. What is needed to speed the spread of COVID-19 vaccines worldwide is thus not a waiver of intellectual property rights but a rapid scaling up of vaccine production. The antidote to vaccine nationalism is multilateralism, and this healing multilateralism must focus on increasing the capacity for vaccine production, accelerating production, and distributing doses of the vaccines throughout the world as quickly as possible.[72]

What is more, a waiver of intellectual property protections for the inventors of the COVID-19 vaccines would not have the intended effect and would also have undesirable consequences for future vaccine innovations. It is not at all clear that, if these protections were waived by the WTO, that the vast majority of developing countries would have the immediate or imminent capacity—much less the technical know-how—to produce these cutting-edge biologic drugs. It is clear, however, that waiving these protections could have a chilling effect on the development of additional COVID-19 vaccines and could reduce the incentives for innovators to produce vaccines for future pandemics.

Opening medical markets to freer trade will help save lives worldwide by hastening the flow of vaccines worldwide. Currently, vaccine production is concentrated in a handful of countries: the top 10 exporters of vaccines account for 93 percent of global export value (and 80 percent of global export volume). But, as the Organisation for Economic Co-operation and Development has observed:

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> There are strong trade interdependencies in the goods needed to produce, distribute and administer vaccines. Besides the active ingredients needed to produce vaccines, distribution and administration requires access to goods produced across a range of countries: vials to move the vaccines, syringes to administer, cold boxes to transport, dry ice to maintain cold temperatures, and freezers to store.[73]

Freeing international trade in medicines and medical goods is trading for health.

THE NEEDED WTO REFORMS ON TRADE AND HEALTH

In the new pandemic world, instead of imposing tariffs on and restricting exports of medicines and other medical goods, countries should be freeing up both exports and imports of those goods. The Group of Twenty (G20) trade ministers have urged countries to limit trade-restrictive measures taken to promote public health to those that are "targeted, proportionate, transparent and temporary."[74] This does not go nearly far enough. At the top of the to-do list of new trade rules that are needed should be rules that eliminate all existing trade restrictions on medicines and other medical goods and that provide new guidelines and disciplines that discourage WTO members from enacting additional rules.

With the lives of their citizens at stake, it is exceedingly difficult for politicians to resist the temptation to yield to medical nationalism. Yet, although restrictive national measures can be politically appealing, and although—depending on how they are applied and for how long they are applied—they may be legal under WTO rules, such

measures prevent medicines and other essential medical goods from going to where there is the greatest need for them. There may be sky-high stacks of protective masks in London but virtually none in Liberia. There may be plentiful supplies of a drug helpful in treating the virus in San Francisco but not nearly enough in South Sudan.

Some of the WTO members that depend heavily on medical imports have sought to encourage multilateral actions to write new rules to free up trade in medicines and other medical goods. Looking outward instead of inward, New Zealand and Singapore committed to continue to keep their own medical supply chains open in March 2020. Canada, Australia, Chile, Brunei, and Myanmar soon made similar commitments. In April 2020, New Zealand and Singapore entered into a bilateral agreement to eliminate tariffs, refrain from export restrictions, negotiate removal of nontariff barriers, and further trade facilitation for a long list of medical products. These conveners invited other countries to join them in the agreement.[75] In March 2021, New Zealand also pressed the leaders of the 21 Asia-Pacific Economic Cooperation (APEC) countries to agree to the free movement of medical supplies.[76]

> "With the lives of their citizens at stake, it is exceedingly difficult for politicians to resist the temptation to yield to medical nationalism."

Encouragingly, in November 2020, 13 WTO members working together on WTO reform, called the "Ottawa Group," announced that they had joined forces to urge all WTO members to suspend tariffs on medical equipment, refrain from export restrictions on essential medical goods, implement trade-facilitating measures in customs and services, and improve transparency in medical trade.[77] The Ottawa Group includes Australia, Brazil, Canada, Chile, the European Union, Japan, Kenya, the Republic of Korea, Mexico, New Zealand, Norway, Singapore, and Switzerland. The professed aim of these WTO members is to enhance global cooperation on the nexus of trade and health, strengthen global health supply chains, and agree on new WTO rules to facilitate trade in essential medical goods by the end of 2021.[78]

Notably absent from the Ottawa Group has been the United States. The political momentum of the United States under President Trump was not toward medical multilateralism but rather toward achieving more medical self-sufficiency. Trump's successor, President Biden, seems more inclined toward medical multilateralism—but only after all Americans have been vaccinated and have been assured of access to the medicines and medical supplies they need. Overall, early hopes that the Biden administration would quickly restore strong American support for freer trade worldwide have fallen short. On the other hand, Biden's commitments to provide more COVID-19 vaccines to Canada, Mexico, and countries in the Indo-Pacific, coupled with his decision to reverse Trump's previous decision and enroll the United States in the COVID-19 Vaccines Global Access (COVAX) initiative to provide vaccines to poorer countries, suggest that he may be willing to join with other countries to take meaningful multilateral action on trade and health.

In its initiative, the Ottawa Group pledges to

> make best endeavours to temporarily remove or reduce tariffs on goods that are considered essential to fighting the COVID-19 pandemic, as far as possible, taking into account national circumstances. Members may choose the method of implementation of such a temporary tariff removal or reduction, which could take the form of emergency duty relief programs.[79]

It suggests that "the indicative list of COVID-19 related goods, established by the [World Customs Organization] WCO and WHO could be helpful in the determination of the product scope."[80] Although commendable, this proposal is not nearly as ambitious as it must be during this time of a global health emergency.

WTO members should eliminate all tariffs on medicines and other medical goods. Practically speaking, this could be done in part by expanding both the membership and scope of the Pharma Agreement. All WTO members should become parties to the Pharma Agreement, making it fully multilateral. And the scope of coverage of the agreement should be expanded to cover trade in all medicines as well as all other medical goods. One enormously beneficial way in which the United States could once again show global

leadership on trade liberalization would be to cooperate with the Ottawa Group in reducing all worldwide medical tariffs to zero.

Needed also are new WTO disciplines on export restrictions. The Ottawa Group recommends that WTO members "review and promptly eliminate unnecessary existing restrictions on exports of essential medical goods necessary to combat the COVID-19 pandemic" and "exercise restraint in the imposition of any new export restrictions, including export taxes, on essential medical goods and on any prospective vaccine or vaccine materials."[81] In pursuing these recommendations, WTO members should consider whether any medical export restrictions can ever be necessary and, if so, under precisely what circumstances; and they should consider also whether it is sufficient simply to exercise restraint in imposing new export restrictions on medicines and other medical goods when global health would be best served by refraining from imposing such restrictions altogether.

The Ottawa Group rightly advises that, in taking such steps, WTO members should

> ensure that any measures deemed necessary to prevent or relieve critical shortages are implemented in a manner that is targeted, transparent, proportionate and temporary, and consistent with WTO obligations; gives particular consideration to the interest of the least developed and developing countries, many of which have scarce manufacturing capacities and are highly dependent on imports, in order to avoid a negative impact of such measures on their access to essential medical goods; and ensures that any trade measures, including export restrictions, do not disrupt the provision of humanitarian shipments of essential medical goods, nor the work of the COVAX facility in distributing vaccines.[82]

The former deputy director-general of the WTO, Ambassador Alan Wolff, has advised that there should be a code of conduct for export controls on medical products. Countries wishing to impose export controls should consider the potential impact on other countries before imposing them. Additionally, they should, where feasible, provide prior notice of such controls and allow opportunities for consultation and a way of reviewing such restrictions.

"The former deputy director-general of the WTO, Ambassador Alan Wolff, has advised that there should be a code of conduct for export controls on medical products."

As Wolff has said, "When export controls are being considered, both countries and businesses should recognize that they would pay a high price in terms of future participation in the world economy were they to become unreliable suppliers."[83]

Eliminating tariffs and export restrictions on trade in medicines and other medical goods should be just the start in new WTO rulemaking on medical trade. In a pandemic world, in which moving essential medicines and other medical goods quickly across borders is critical, more must be done to remove the red tape at the borders that impedes the flow of trade. As the Ottawa Group suggests, cooperation is needed among WTO members to share in the best practices of "digital customs procedures, and services such as freight, logistics, distribution and transport, which have proven an effective tool for members to facilitate the frictionless movement of essential medical goods across borders."[84]

In 2013, in one of their few real successes since the creation of the WTO, its members concluded an agreement on trade facilitation in Bali, Indonesia.[85] Although it is still being implemented, the Trade Facilitation Agreement cuts a lot of needless bureaucracy while modernizing trade and making it much more digital. Facilitating trade speeds trade and increases the flow of trade. Building on this agreement, WTO members should zero in on further facilitating trade in medicines and in other medical goods. As one example, China and the European Union have each created "green lanes" in their customs procedures to speed the inspection and release of medical goods.[86] This innovation should be emulated everywhere.

Other worthy ideas for new WTO rules include: promoting transparency in all national measures taken for dealing with COVID-19; waiving "buy local" requirements for medical goods; eliminating all the nontariff barriers that hinder trade in medicines and medical equipment; adopting

international standards to help ensure the safety and the quality of imported medical goods; giving the go-ahead to targeted subsidies for producing new medicines for COVID-19; and reaffirming that WTO rules permit compulsory licensing of needed medicines by developing countries.

All these new rules relating to trade in medicines and medical products should be combined into a WTO medical trade agreement. Ideally, such an agreement would be fully multilateral, including all 164 WTO members. If that is not at first achievable, then such an agreement could initially include some but not all members, and members could build toward the agreement being fully multilateral over time. The key to the success of such an agreement would be making it enforceable in WTO dispute settlement. As with other WTO agreements, members would be free to choose not to comply with an obligation in such a medical goods agreement, but choosing not to comply would invite, as a last resort, application of economic sanctions in the form of withdrawal of previously granted trade concessions by any WTO members harmed by that decision.[87]

CONCLUSION

The answer to the worldwide problem of obtaining enough medical supplies during the COVID-19 pandemic is not to break the links in global medical supply chains and replace them with an exclusive reliance on national medical production. During global health emergencies such as COVID-19, the flow of trade in medical and other essential goods must continue. For medical goods and for other essential products, supply chains linked to single sources or to only a few sources on the far side of the world should be made more redundant by diversifying them to include more sources of supply from reliable and perhaps not-so-distant locations.

Former WTO director-general Pascal Lamy has suggested that the "pre-Covid balance between efficiency and resilience will have to tilt to the side of resilience."[88] But the self-sufficiency that may be desperately needed during a health crisis remains impossible for almost all countries and undesirable for them all. Moreover, resilience poses its own risks. There is no reason for governmental actions that cut supply chains. Doing so would only deny people everywhere the many and undeniable advantages of the international division of labor.[89]

Restricting trade in medicines and other medical goods will undermine resilience. The right approach is the opposite one: eliminate trade restrictions. To help end the pandemic sooner, global medical trade must be liberalized. The WTO should be the agent and architect of this liberalization. The 164 members of the WTO must take immediate, positive actions in the global fight against COVID-19. A medical trade agreement that frees trade worldwide in medicines and other medical goods must be added to the current list of agreements that comprise the WTO treaty.

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