

*Written Testimony of*

Lori Wallach  
Director, Public Citizen's Global Trade Watch

*before*

U.S. International Trade Commission

*on*

“COVID-19 Related Goods: The U.S. Industry, Market, Trade, and Supply  
Chain Challenges”

*September 21, 2020*



Lori Wallach, Director  
Public Citizen's Global Trade Watch  
215 Pennsylvania Ave. SE  
Washington, D.C. 20003  
lwallach@citizen.org  
202-546-4996

Mister Chairman and Members of the Commission, thank you for the opportunity to testify today on the serious challenges that the COVID-19 pandemic has laid bare concerning the United States' capacity to produce and procure goods needed to combat the coronavirus public health crisis. I am Lori Wallach, director of Public Citizen's Global Trade Watch. Public Citizen is a national public interest organization with more than 500,000 members and supporters. For more than 45 years, we have advocated with some considerable success for consumer protections and more generally for government and corporate accountability.

The Commission is performing a vital service by elevating public attention and providing information about these challenges that have had a direct impact on the lives of every American, and which are undeniably linked to policies and practices that have left the United States largely dependent on other countries for access to the most essential goods to deal with a public health crisis. Decades of hyperglobalization have undermined our resilience against the COVID-19 crisis. With our economies organized to serve a production model focused almost exclusively on "efficiency" and reliant on long, brittle global supply chains and production of many goods in too few countries, even the world's wealthiest countries can neither produce nor obtain sufficient supplies of ventilators, respirators and masks and other essential medical supplies needed to save our parents, colleagues, friends and neighbors.

Even today, seven months into the pandemic, the United States cannot make or get critical goods people need with ongoing shortages of certain Personal Protective Equipment (PPE), including N-95 masks. In the past 25 years, more than 40,000 U.S. manufacturing facilities, some of which used to produce these goods, have been lost. Among the key factors that have contributed to the hollowing out of U.S. domestic production capacity are corporate-rigged trade policies that made it easier and less risky to move production overseas to pay workers less, a lack of disciplines against currency misalignments that undermined domestic firms trying to compete with imported products, and a merger mania enable by a lack of competition policy, which resulted in the elimination of "redundant" production facilities as a few dominant firms in key sectors sought to maximize "efficiency" by relying on thin, globalized supply chains with final production concentrated in a few locations.

The United States is extremely reliant on other countries to provide essential goods, a reality underscored by the United States maintaining the world's largest trade deficit year after year. This overreliance on imports in general and, increasingly with many critical goods now mainly made in one or two countries, poses fundamental risks. When workers in a country or countries on which much of the world is relying for critical goods fall ill or governments prioritize their own peoples' needs before exporting goods away, a worldwide shortage can quickly develop. Starting in early 2020, the United States experienced this critical supply chain vulnerability with respect to masks, gloves, medicine, and other goods necessary to combat COVID-19.

And, the hyperglobalized production model makes it difficult to quickly increase production elsewhere. Long, thin globalized supply chains mean there often are not redundant sources for inputs, parts, and components needed to scale up domestic production during a crisis. And, with respect to pandemic-related goods, such as medicine, ventilators and more, monopoly patent protections in many trade agreements expose countries to trade sanctions if they produce without approval and licensing by and payment to pharmaceutical and other firms.

As production of key parts and assembly of goods in diverse sectors has become both geographically concentrated and concentrated in fewer companies, when production in a key country, region or company is disrupted – whether by illness in the current instance or natural disaster, war or other calamity – world supplies are affected. Experts have warned about the perils of hyperglobalized supply chains for years. As Barry Lynn’s 2005 book “End of the Line” warned:

“In September 1999, an earthquake devastated much of Taiwan, toppling buildings, knocking out electricity, and killing 2,500 people. Within days, factories as far away as California and Texas began to close. Cut off from their supplies of semiconductor chips, companies like Dell and Hewlett-Packard began to shutter assembly lines and send workers home. A disaster that only a decade earlier would have been mainly local in nature almost cascaded into a grave global crisis. The quake, in an instant, illustrated just how closely connected the world had become and just how radically different are the risks we all now face.”<sup>1</sup>

The COVID-19 crisis forced people throughout the United States to recognize a problem previously mainly experienced by those in venues hurt by outsourcing and trade-related job loss: The United States no longer can make many basic goods it needs.

This submission includes:

1. Updated data showing that the U.S. has grown even more dependent on imports from China and the rest of the world for key medical goods during the COVID-19 era as the U.S.-China and U.S.-world deficits in key medical goods increased through July 2020 (latest data available as of September 2020).
2. Historical data showing the export countries of U.S. imports of critical COVID-19 response goods to demonstrate how the sources of critical goods have substantially shrank over the last decades.
3. New information about the countries from which the United States imports medicines in 2019 that show deep U.S. reliance on China and India for many categories of medicines.
4. Updated data showing that U.S. exports of critical medical goods to China continued to spike through July 2020 when U.S. domestic demand was highest.
5. Finally, to debunk two myths propagated by those seeking to maintain the current hyperglobalization regime of brittle, non-redundant supply chains and/or advocating for expanding the current model, for instance with a new WTO agreement further limiting governments’ roles in managing PPE and medicine productions and supplies:

---

<sup>1</sup> Barry Lynn, *End of the Line: The Rise and Coming Fall of the Global Corporation*, Doubleday, 2005.

- a. A timeline showing that U.S. restrictions on exports of key medical goods initiated in April 2020 did not trigger export restrictions of key medical goods in other countries. If anything, the United States was one of the last nations that undertook measures trying to guarantee domestic supply of these products.
- b. Data showing that U.S. Section 301 enforcement actions and tariffs on certain Chinese imports did not trigger shortages in PPE and other COVID-critical goods.

Public Citizen’s analysis of this data leads us to conclude that the United States must both increase domestic production and diversify import sources for critical goods in order to better manage what will be an ongoing COVID-19 crisis for some time, and also be better prepared for the next crisis, health or otherwise. To accomplish these goals will require the use of all of the tools available from taxation to government procurement to trade to the “industrial policy” mechanisms employed by Germany and other nations relating to government investment in research, training, and incentivizing development of local supply chains.

Two existing, underutilized domestic policy tools can be – and could have previously been - improved and harnessed quickly to promote greater domestic demand. First is tightening Buy American and other domestic procurement criteria for all U.S. government agencies. Second, and related, is the use of the Defense Production Act for the federal government to issue multi-year contracts to produce significant volumes of essential goods with contracts made with multiple firms per good so as to incentivize investment in equipment and hiring, in a way that invests in creating domestic competitors in sector now dominated by imports.

With respect to domestic procurement preferences, today, “Buy American” really means that goods and firms from 60 countries<sup>2</sup> obtain the same access to U.S. federal government contracts as U.S. goods and firms. That massive loophole is opened via domestic regulations that implement terms in U.S. trade agreements that undermine domestic procurement preferences.<sup>3</sup> The relevant statute does not require a president to waive domestic preferences for trade-pact partners, but authorizes discretion to do so and also explicitly authorizes presidents to alter the waiver list.<sup>4</sup> The waivers should be reversed, which can be achieved by executive action, and the underlying terms in trade pacts

---

<sup>2</sup> Products from and firms in the following 60 countries are treated as if they were American. Countries in formal font have obtained waivers from the Buy American Act, and similar domestic preference programs by being a signatory of the WTO’s Agreement on Government Procurement. Countries in italics are waived because they have a free trade agreement with the United States. Underlined countries have both. Armenia, Aruba, Australia, Austria, *Bahrain*, Belgium, Bulgaria, Canada, *Chile*, *Colombia*, *Costa Rica*, Croatia, Cyprus, Czech Republic, Denmark, *Dominican Republic*, *El Salvador*, Estonia, Finland, France, Germany, Greece, *Guatemala*, *Honduras*, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxemburg, *Mexico*, Moldova, Malta, Montenegro, *Morocco*, Netherlands, New Zealand, *Nicaragua*, Norway, *Oman*, *Panama*, *Peru*, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, Ukraine, and UK.

<sup>3</sup> For information on the trade pact provisions, see Public Citizen, “How Overreaching “Trade” Pact Rules Can Undermine Buy American and Other Domestic Preference Procurement Policies,” 2019 Available at: <https://www.citizen.org/wp-content/uploads/Procurement-from-FTAs.pdf>

<sup>4</sup> See 19 USC Section 2511(c): “*The President may modify or withdraw any waiver granted pursuant to subsection (a) or designation made pursuant to subsection (b).*”

renegotiated. In these renegotiations, the U.S. states<sup>5</sup> that are also forbidden to apply preferences for local or domestic firms must also be freed from obligations that result in the outsourcing of tax revenues, rather than their reinvestment in building domestic capacity. Even if the notion of offshoring our tax dollars in exchange for opportunities for individual U.S. firms to have better access to contracts from other nations were a good one, the way it is done in trade pacts is a losing proposition for the United States. A [recent GAO report](#) found that the United States opened twice as much procurement to foreign firms as the next five largest AGP signatories *combined* (European Union, Japan, South Korea, Norway and Canada).<sup>6</sup> Additionally, an across the board standard must be set for “public interest” waivers, which are another exception to the Buy American requirement that boils down to a price differential standard. Currently, some agencies only apply a 6% price preference for domestic goods. Perhaps if our only goal is cost efficiency, that makes sense. But in the context of the COVID-19 experience, clearly there is a greater value in reliable supply.

With respect to creating and maintaining more diverse import sources, the trade flow data following the termination of the Multi Fibre Arrangement has made clear, simply offering lower tariffs will not maintain geographically diverse supply chains. Even as textiles and apparel from China, Vietnam and the few other nations faced tariffs in accessing the U.S. and other markets, as the quota regime that managed worldwide market distribution phased out, an enormous share of production concentrated in those nations. Caribbean, Central American, African and Andean nations having duty-free access into the United States for such goods under various preference programs and trade pacts did not counteract the rapid loss of production capacity in those countries and the concentration of production in China and a few other nations. Given this was the case in the context of a sector with relatively high Most Favored Nation tariffs, there is little prospect that, absent some sort of managed trade regime guaranteeing market access for more countries or creating regional mechanisms, production of essential goods will become more geographically dispersed.

Finally, with respect to creating a more reliable supply of pharmaceuticals and Active Pharmaceutical Ingredients (API), a significant problem is the lack of merger and competition policy and a lack of mandatory reporting by producers on the sources of API and how many facilities they have making finished medicines and APIs. The lack of information about API sources or the sources of finished medicine production is stunning. The closest proximation is information on the geographic location of production facilities that the FDA has inspected, yet those data provides no insight into the volume or types of medicines or API being produced. And, with so many finished medicines being produced overseas, it is unclear that all API or finished medicines are even coming from FDA approved facilities. This is a longstanding problem on which the pandemic has shone a spotlight.

---

<sup>5</sup> For a list of U.S. states and a chart showing what procurement policy limits are imposed for each state in U.S. trade pacts, please see <https://www.citizen.org/wp-content/uploads/statesboundtointernationaltradeagreements.pdf>

<sup>6</sup> Government Procurement: United States Reported Opening More Opportunities to Foreign Firms Than Other Countries, but Better Data Are Needed; GAO-17-168: Published: Feb 9, 2017. Publicly Released: Mar 13, 2017. Available at <https://www.gao.gov/products/GAO-17-168>

Similarly, a decade before the COVID-19 crisis, the National Institutes of Health was already reporting growing shortages of commonly used medicines.<sup>7</sup> The Food and Drug Administration was reporting shortages in more than 100 essential drugs at the end of 2019, well before COVID-19 hit.<sup>8</sup> When workers in China, India and Italy became ill with COVID-19 and factories shut down, worldwide shortages escalated quickly as China produces both a large amount of finished drugs and API, India produces many generic medicines sold worldwide and Italy produced a significant share of antibiotics – even as the exact amounts remain highly contested with the best informed sources suggesting most API and finished drugs are coming from China and India and others contesting this conclusion. As reported in the *New York Times*: “Out of 21 antibiotics that would be critical for treating secondary infections in Covid-19 patients, 18 antibiotics have greater than 80 percent of their supply coming out of either China, India or Italy — all places that have had production disruptions,” said University of Minnesota’s College of Pharmacy professor Stephen Schondelmeyer, whose work with the [Resilient Drug Supply Project](#) involves trying to map supply chains for key medicines used in the United States.<sup>9</sup>

Part of the issue is that pharmaceutical firms have engaged in a merger mania,<sup>10</sup> which has now also hit the generic sector,<sup>11</sup> such that relative few large firms dominate many categories of medicines and in the course of their acquisitions, they shut down the production capacity of the competitors that they acquired. Also in the name of efficiency, many firms do not produce more than previous years’ sales indicate will be used. Thus, when a health crisis emerges, there are no stockpiles in drugmakers’ warehouses nor capacity to quickly gear up significantly larger volumes of medicines. This is an issue that extends beyond trade agreement rules, such as their patent terms, that could limit countries’ abilities to quickly produce key medicines.

The COVID-19 crisis has awakened people to the reality that under the current hyperglobalization regime, their governments do not have the means to protect the public interest. The mantra of just-in-time global supply chains maximizing efficiency has crashed into the reality that many governments and people now see that an obsession with efficiency has undermined resilience, reliable access, and public health. As most people understand, in addressing these problems, the choice is not between autarky and hyperglobalization. Rather, changes to trade, investment, procurement, tax, and other policies must be made to ensure that we both have more domestic production capacity for goods we deem essential for public health and security and that we diversify import sources so that if domestic production or that in one country or region is knocked off line, people can still be assured of reliable supplies of critical goods.

---

<sup>7</sup> C. Lee Ventola, “The Drug Shortage Crisis in the United States: Causes, Impact, and Management Strategies”, *P T*. 2011 Nov; 36(11): 740-742, 749-757. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3278171/>

<sup>8</sup> U.S. Food & Drug Administration, “FDA Drug Shortages”, last visited September 21 2020. Available at: <https://www.accessdata.fda.gov/scripts/drugshortages/default.cfm>

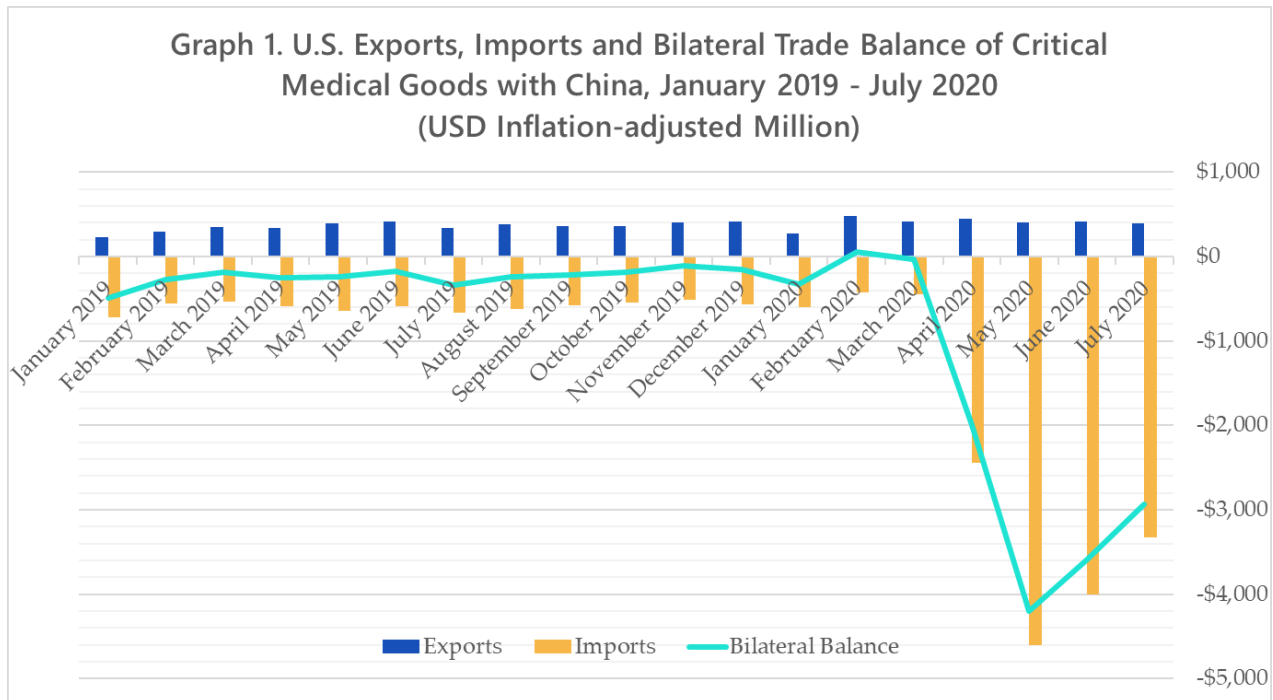
<sup>9</sup> Knavul Sheikh, “Essential Drug Supplies for Virus Patients Are Running Low”, *The New York Times*, April 2 2020. Available at: <https://www.nytimes.com/2020/04/02/health/coronavirus-drug-shortages.html>

<sup>10</sup> Robert Teitelman, “Big Pharma Can’t Resist Big Mergers. Here’s Why”, *Barron’s*, February 18 2019. Available at: <https://www.barrons.com/articles/pharmaceutical-companies-mergers-51550430327>

<sup>11</sup> Marc-André Gagnon & Karena D. Volesky, “Merger mania: mergers and acquisitions in the generic drug sector from 1995 to 2016”, *Global Health* 13, 62 (2017). Available at: <https://doi.org/10.1186/s12992-017-0285-x>

## 1. U.S. Grows More Dependent on Imports from China and the World for Key Medical Goods During COVID-19 Era

As the United States struggled to manage the COVID-19 crisis, the U.S. trade deficits with China and the world in pandemic-related PPE, medicines and other products dramatically increased. (See Annex A for a description of the methodology to identify pandemic-related goods.) This underscores how overly reliant the United States is on other countries for many essential public health goods, and also the difficulty in scaling up greater domestic production even in the face of a major crisis

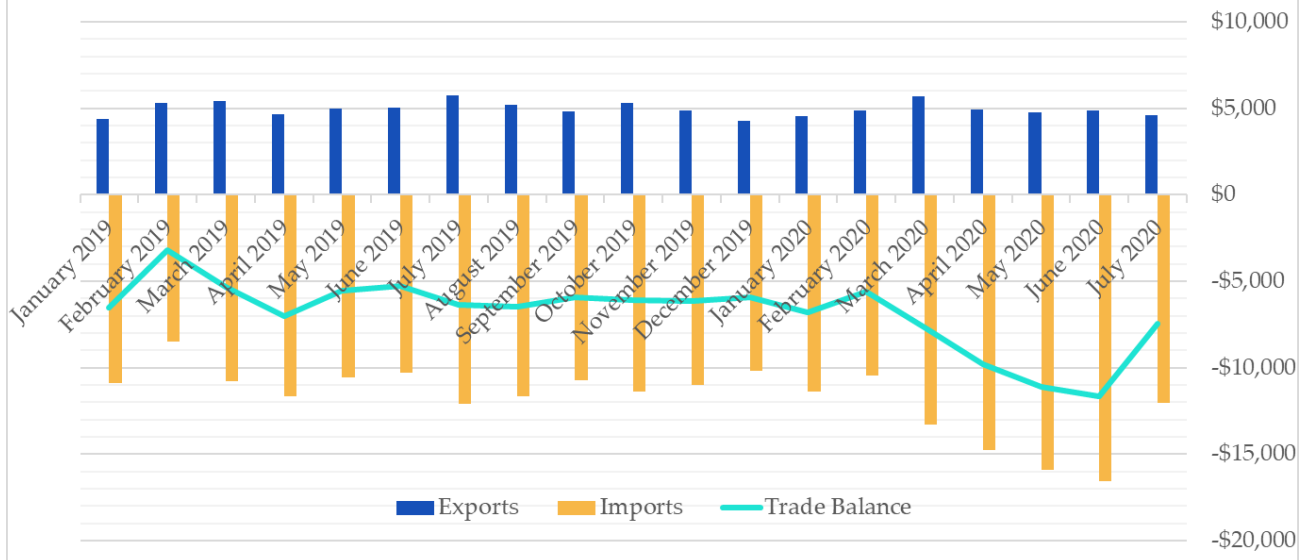


Source: U.S. Census Bureau

Starting in March 2020, the bilateral trade balance with China in critical medical goods clearly deteriorated. Whereas in February the United States had a surplus of \$49 million (largely explained by the fact that the U.S. firms continued exporting PPE and other essential goods while the pandemic was already starting to spread in its territory and China cut off its exports to redirect supply to meet domestic needs,<sup>12</sup> by March the balance turned into a deficit of \$31 million. The monthly U.S. trade deficit with China of key COVID-19 related goods increased, on average, 1,250% from April to July. The outcome of this trend is a seven-month deficit of \$6.5 billion in such goods, almost five times larger than the deficit for the same months in 2019.

<sup>12</sup> Public Citizen, “COVID-19 Trade Myth Debunks”, Sept. 10 2020. Available at: <https://www.citizen.org/article/covid-19-trade-myth-debunks/>

**Graph 2. U.S. Exports, Imports and Trade Balance of Critical Medical Goods with the World, January 2019 - July 2020**  
(USD Inflation-adjusted Million)



Source: U.S. Census Bureau

Export, import and trade balance trends for critical medical goods with the world do not offer a more comforting picture. For starters, the United States has sustained a trade deficit with respect to such goods for some time. However, the deficit exploded after March 2020, with month-to-month increases of over 100% in May and June. This resulted in a seven-month deficit of \$41 billion, which is 48% larger than the deficit for the same basket of goods for the same months in 2019.

In a word, the United States has increased its dependency on China and the rest of the world to get the critical medical goods that it desperately needs to fight the COVID-19 pandemic. A deeper dive into the import trend over time shows the continuous concentration of the supply chains in a handful of countries over the past few decades.

## 2. U.S. Imports' Sources of Key Medical Goods Have Shrank During the Last Decades

Corporate-led hyperglobalization' efficiency frenzy has generated extremely thin and brittle supply chains, where the production of most industrial goods, including key medical products, is concentrated in a few countries and producers.

The following tables show the evolution of the main sources of imports of selected critical medical goods. They exhibit how imports have progressively concentrated in a handful of countries. In the selected categories, namely PPE and test kits, and especially if imports are measured by volume, it is evident how countries like China and Mexico have gained a prominent role supplying critical medical goods to the United States. In 1989, Americans relied on a more diversified list of countries to import key medical goods and were less affected by events that could affect production in any other specific country or region. Now, a crisis in China, like the outbreak of the COVID-19 pandemic in the end of 2019, created mass shortages in basically all categories of medical goods that the country needed to prepare for its own fight against the virus.



Particularly, PPE import sources have dramatically concentrated. Whereas Chinese companies only represented 13% of the exports of the top 10 sources in 1989, by 2019 that number jumped to 75% percent. Thus, should not be surprising, as shown in the next sections, that when the Chinese government shutdown exports of such goods at the beginning of 2020, it greatly exacerbated critical shortages in the United States.

Wherever possible in the tables below, we include data showing volume, not only value. Volume more accurately represents what is actually being traded. The value data often reflects distortions in price caused by patents and corporate tax manipulations.

**Figure 1. U.S. Imports' Sources of Test Kits by Volume (Kgs)<sup>13</sup>**

Top 10 Import Sources	2019		Top 10 Import Sources	2009
China	4,985,037		United Kingdom	2,149,164
Sweden	4,772,927		China	2,113,339
Germany	3,348,967		Germany	2,100,540
Canada	2,692,757		Japan	2,022,971
Japan	2,663,110		France	1,599,280
United Kingdom	2,030,402		Ireland	1,292,289
Ireland	1,880,181		Canada	897,077
France	1,419,379		Taiwan	365,089
Singapore	1,026,249		Sweden	339,103
Hungary	805,122		Israel	197,273
<b>Total</b>	<b>25,624,131</b>		<b>Total</b>	<b>13,076,125</b>

<sup>13</sup> A comparison between the data by volume and by value shows the distortions in the value data.

**U.S. Imports' Sources of Test Kits by Value (USD) (Not adjusted for inflation)**

Top 10 Import Sources	2019	Top 10 Import Sources	2009	Top 10 Import Sources	1999	Top 10 Import Sources	1989
Germany	6,901,683,045	United Kingdom	468,050,590	Japan	295,564,146	Germany	55,924,100
Ireland	5,007,090,628	Germany	446,600,115	United Kingdom	279,556,088	United Kingdom	51,952,202
Netherlands	2,237,919,369	Japan	406,497,028	Germany	196,272,668	Japan	49,615,563
Japan	1,894,143,571	Canada	305,245,501	Canada	115,498,867	Switzerland	12,312,725
United Kingdom	1,545,915,430	China	193,477,648	France	50,417,946	France	10,209,192
Singapore	1,323,250,856	Sweden	172,295,617	Sweden	36,468,077	Canada	8,670,864
Switzerland	1,153,377,331	France	145,247,300	Switzerland	33,052,632	Denmark	8,222,986
South Korea	801,737,313	Singapore	112,194,365	Denmark	28,408,886	Mexico	5,198,179
Italy	720,964,002	Ireland	107,757,158	Ireland	28,269,705	Sweden	3,649,750
Austria	688,218,457	Taiwan	85,334,707	Finland	12,800,679	Ireland	3,438,036
<b>Total</b>	<b>22,274,300,002</b>	<b>Total</b>	<b>2,442,700,029</b>	<b>Total</b>	<b>1,076,309,694</b>	<b>Total</b>	<b>209,193,597</b>

Source: U.S. Census Bureau

Top 10 Import Sources	1999		Top 10 Import Sources	1989
United Kingdom	1,511,194		United Kingdom	311,433
Japan	1,198,286		Ireland	276,291
Germany	853,916		Canada	232,137
Canada	688,943		Germany	180,757
Ireland	665,890		Japan	155,969
France	437,401		Denmark	95,150
Netherlands	140,619		Netherlands	86,725
Italy	119,214		France	43,061
Switzerland	118,501		Taiwan	27,364
Sweden	113,258		Switzerland	25,158
<b>Total</b>	<b>5,847,222</b>		<b>Total</b>	<b>1,434,045</b>

Source: U.S. Census Bureau

**Figure 2. U.S. Imports' Sources of PPE by Volume (Kgs)<sup>14</sup>**

Top 10 Import Sources	2019		Top 10 Import Sources	2009
China	5,646,600,483		China	3,140,959,508
Mexico	719,432,906		Mexico	986,101,946
Canada	246,547,586		Thailand	123,413,641
Japan	246,348,452		Taiwan	50,514,065

<sup>14</sup> A comparison between the data by volume and by value shows the distortions in the value data.

**U.S. Imports' Sources of PPE by Value (USD)  
Not Adjusted for Inflation**

Top 10 Import Sources	2019	Top 10 Import Sources	2009	Top 10 Import Sources	1999	Top 10 Import Sources	1989
China	6,851,684,907	China	3,301,460,066	China	1,096,612,603	Taiwan	199,858,750
Malaysia	1,691,536,092	Malaysia	795,559,462	Mexico	571,199,311	China	168,997,426
Vietnam	951,863,400	Thailand	495,651,365	Malaysia	544,384,490	Malaysia	143,830,131
Mexico	918,767,475	Mexico	468,834,497	Thailand	291,077,475	South Korea	115,458,165
Thailand	662,136,111	Vietnam	186,665,971	Taiwan	157,175,114	Mexico	91,324,047
Canada	336,624,794	Indonesia	152,293,355	Canada	83,736,351	Hong Kong	44,424,750
Bangladesh	303,822,993	Canada	114,505,059	Indonesia	78,981,896	Thailand	42,827,720
Indonesia	271,958,852	Dominican Rep	82,377,587	India	75,762,653	Canada	34,268,996
Sri Lanka	183,977,208	Honduras	81,820,457	South Korea	50,792,952	United Kingdom	29,680,102
India	129,028,766	Sri Lanka	64,715,155	Sri Lanka	50,269,325	Japan	18,862,399
<b>Total</b>	<b>12,301,400,598</b>	<b>Total</b>	<b>5,743,882,974</b>	<b>Total</b>	<b>2,999,992,170</b>	<b>Total</b>	<b>889,532,486</b>

Source: U.S. Census Bureau

India	199,353,137	India	44,187,321
Thailand	150,365,445	Canada	37,973,956
Vietnam	128,304,442	Colombia	35,145,625
Israel	72,970,558	Pakistan	31,624,599
Pakistan	58,057,419	South Korea	21,401,978
Taiwan	54,067,141	Indonesia	20,647,179
<b>Total</b>	<b>7,522,047,569</b>	<b>Total</b>	<b>4,491,969,818</b>
<b>Top 10 Import Sources</b>	<b>1999</b>	<b>Top 10 Import Sources</b>	<b>1989</b>
China	939,746,410	China	17,892,743
Mexico	394,035,316	Taiwan	4,946,203
India	140,026,520	South Korea	4,547,640
Taiwan	83,521,261	Mexico	3,573,976
Thailand	37,209,995	Hong Kong	3,294,444
Dominican Rep	33,634,768	Indonesia	1,461,859
Haiti	29,075,867	Pakistan	887,975
Indonesia	25,990,330	Philippines	761,066
Hong Kong	24,465,955	Haiti	593,837
United Kingdom	22,382,604	Dominica	473,789
<b>Total</b>	<b>1,730,089,026</b>	<b>Total</b>	<b>38,433,532</b>

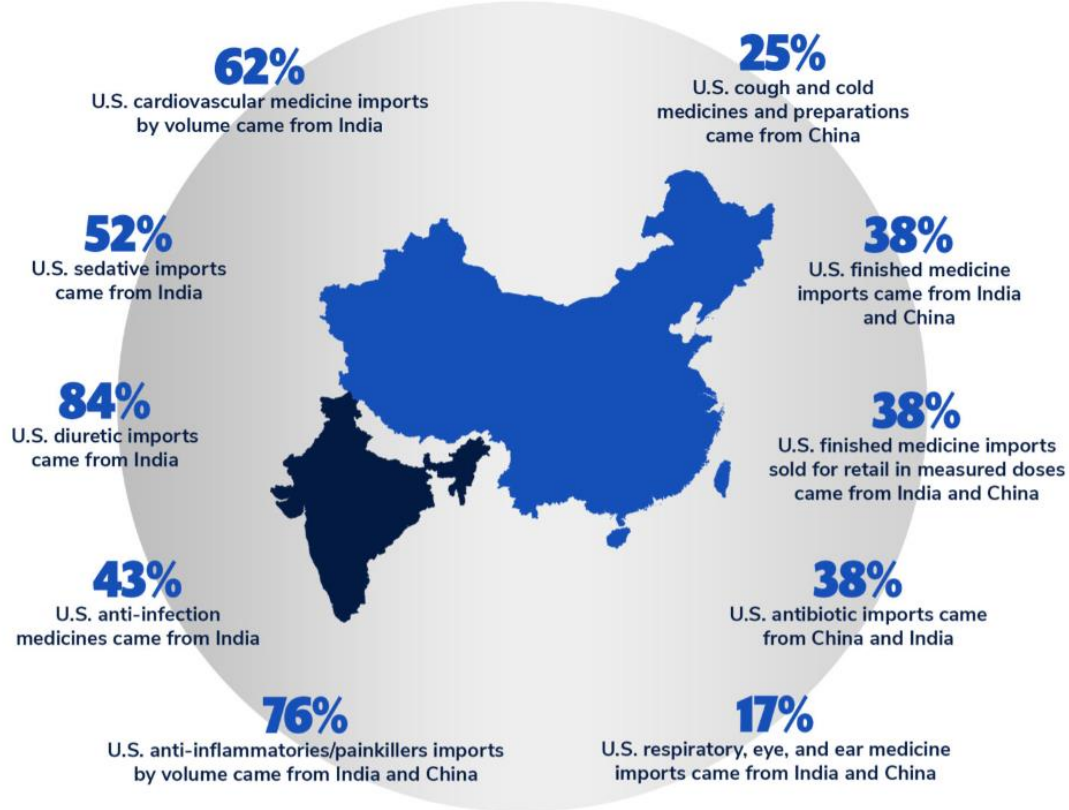
Source: U.S. Census Bureau

### 3. The United States is especially dependent on Chinese and Indian exports of pharmaceuticals

The overdependence on China, but on India too, is also acute regarding pharmaceuticals. A close look to the imports' sources, measured by volume to counter the distortions in price caused by patents and corporate tax manipulations, show how the United States is especially dependent on China and India to access vital pharmaceutical products (See Appendix B).

The following figure spotlights some of the drugs on which the United States is reliant on China and India as import sources.

## U.S. Import Reliance on China & India for Particular Drugs by Volume, 2019



Source: Global Trade Watch with U.S. Census Bureau data

#### 4. While Americans Faced Shortages, U.S. Firms Continued Exporting Critical Medical Goods

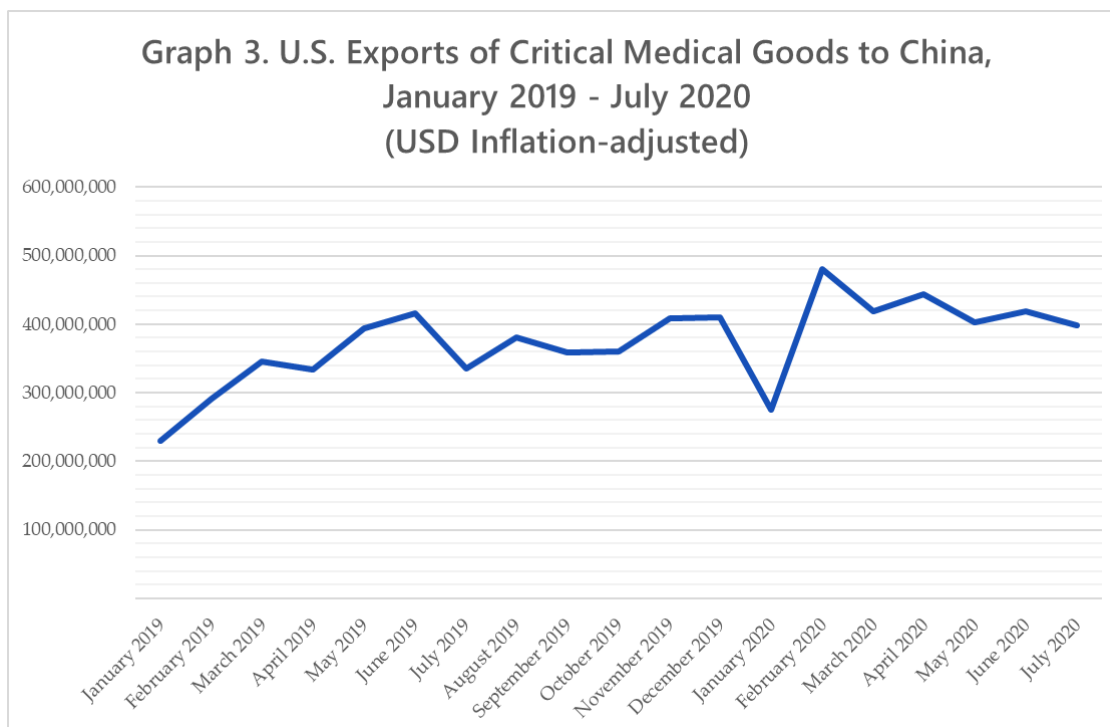
As the COVID-19 crisis emerged at the start of 2020, U.S. government officials urged U.S. firms to expand exports to China of the limited U.S. domestic production of key medical goods instead of considering U.S. residents' needs. The U.S. [Commerce Department alerted domestic manufacturers urging them](#) to exploit relaxed regulatory standards and import rules in China to export their production to China even after China had cut off supplies for the U.S.<sup>15</sup> Representative Lloyd Doggett received a copy of the Commerce Department flyer. According to a Washington Post exposé:

“On Feb. 26 — when total deaths had reached 2,770, nearly all in China — the Commerce Department published [a flier](#) titled “CS China COVID Procurement Service,” guiding American firms on how to sell “critical medical products” to China and Hong Kong through Beijing’s fast-tracked sales process. Doggett obtained the flier — from the division of the International Trade Administration’s Commercial Services Office in China — and other Commerce communications. On March 3, a commercial officer in the U.S. Embassy in Beijing notified colleagues about the “new service” Commerce was offering, according to [an email](#). “The CS China healthcare team

<sup>15</sup> United States Congressman Lloyd Doggett Website, “Trump Commerce Department Pushes for America Last in Coronavirus Medical Supplies”, February 28 2020. Available at: <https://doggett.house.gov/media-center/press-releases/trump-commerce-department-pushes-america-last-coronavirus-medical>

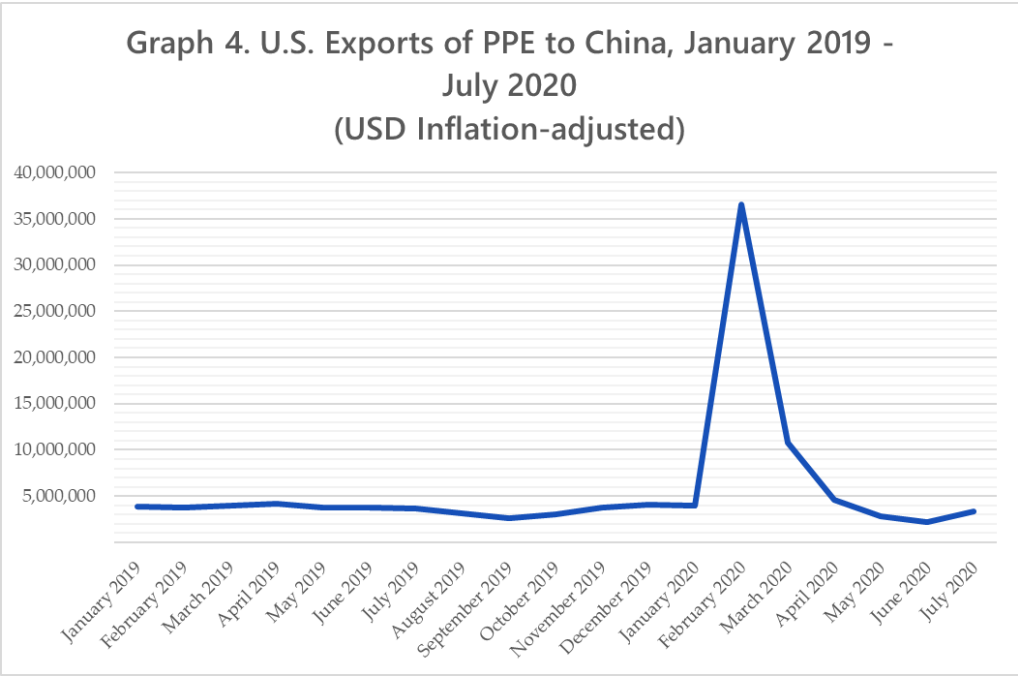
has been busy working with Chinese government procurement agents and U.S. companies to address local healthcare needs. We created the China and Hong Kong COVID Procurement Service — please find the flyer attached. We welcome you to send this flier to relevant U.S. manufacturers and suppliers.”<sup>16</sup>

The following graphs show the spike in exports to China of critical medical goods, as a whole, and particularly, concerning PPE, disinfectants and sterilization products, and pharmaceuticals.

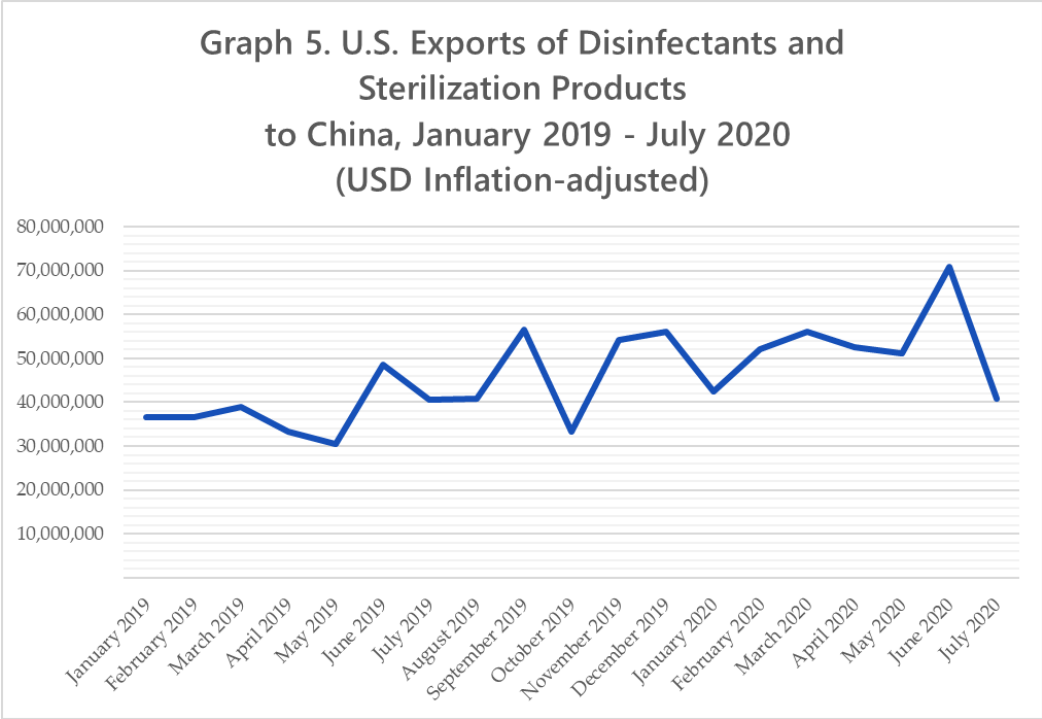


Source: U.S. Census Bureau

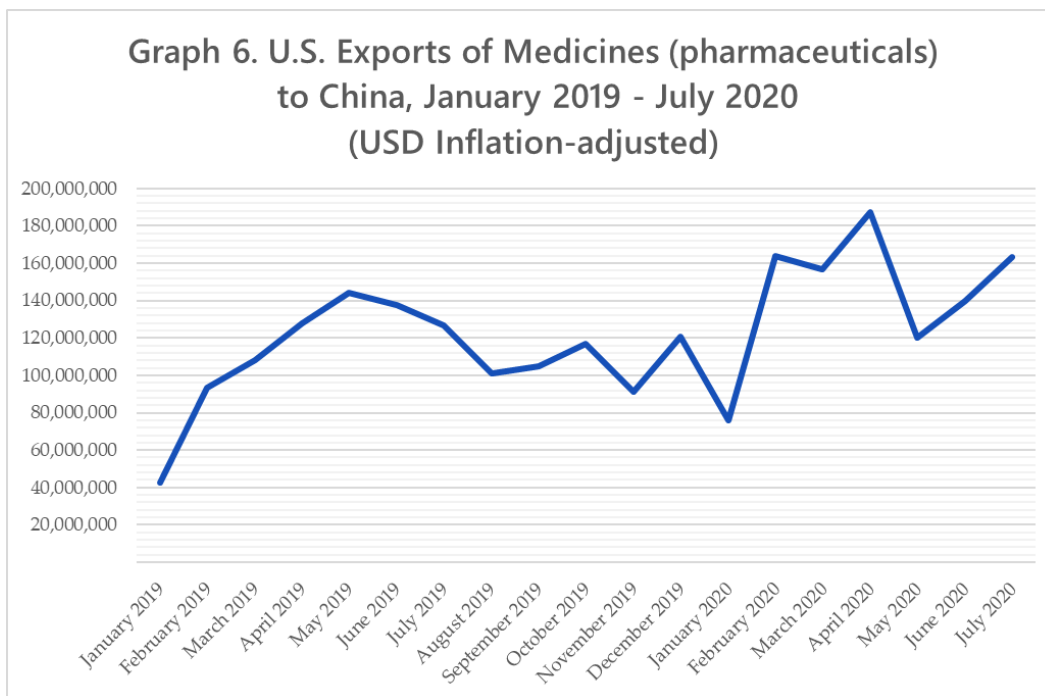
<sup>16</sup> Juliet Eilperin, Jeff Stein, Desmond Butler and Tom Hamburger, “U.S. sent millions of face masks to China early this year, ignoring pandemic warning signs”, Washington Post, Apr. 18, 2020 Available at: [https://www.washingtonpost.com/health/us-sent-millions-of-face-masks-to-china-early-this-year-ignoring-pandemic-warning-signs/2020/04/18/aaccf54a-7ff5-11ea-8013-1b6da0e4a2b7\\_story.html?fbclid=IwAR3zLzjkHZx00ioG0Kosg1Y-K\\_o0zJmbq0-vMgqZR2Pj6ZOOScmViGvjQrs](https://www.washingtonpost.com/health/us-sent-millions-of-face-masks-to-china-early-this-year-ignoring-pandemic-warning-signs/2020/04/18/aaccf54a-7ff5-11ea-8013-1b6da0e4a2b7_story.html?fbclid=IwAR3zLzjkHZx00ioG0Kosg1Y-K_o0zJmbq0-vMgqZR2Pj6ZOOScmViGvjQrs)



Source: U.S. Census Bureau



Source: U.S. Census Bureau



Source: U.S. Census Bureau

## 5. Debunking Key Myth About COVID-19 Essential Goods and Trade

### A. U.S. Export Reviews Did Not Lead Other Countries to Retaliate and Cut Off Exports – the United States Was Among the Last to Enact Policies Focused on Meeting Domestic Needs

Most people understand why a government would prioritize domestic needs for PPE and other COVID-19 response products or those of small or vulnerable countries or neighboring nations unable to produce such goods domestically instead of allowing domestic firms to sell goods needed to respond to COVID to whatever global interest can pay the highest price. Indeed, most people think that governments have a responsibility—to meet their residents’ needs. Moreover, there is no global health agency to distribute PPE and other COVID-19 response goods around the world.

However, free market fundamentalists have been outraged that numerous governments worldwide enacted policies to try to meet domestic or regional needs that included restricting exports of such goods. They argued that the “market” must decide where medical supplies and PEE should be distributed. Given there were, and still are, significant shortages of many categories of such products, that approach would result in critical goods only going to wealthy nations or wealthy individuals in poor nations who can pay the most. So, defenders of hyperglobalization have concocted arguments for why governments should not intervene.

Their attack on the U.S. government decision to begin reviewing exports of COVID-19 response goods is typical, if absurd. The primary claim is that if the United States government intervened and limited exports, other countries would retaliate and stop sending exports of critical goods to the United States. Except, in the real world most governments were rightly focused on their residents’ needs and were



screening for domestic needs and already had imposed export restrictions or reviews because that was their appropriate role, not because they were retaliating against other countries.

When the United States finally announced on April 7, 2020 that it would review medical exports to determine if domestic needs were being met before goods could be sent outside the United States, Chad Bown, from the Peterson Institute for International Economics, published a study that simultaneously claimed that the U.S. review policy and limits on exports that resulted would trigger retaliation with countries limiting sales to the United States and denounced the domestic-needs tests and other actions *previously taken* by the majority of the world's governments.<sup>17</sup> While the U.S. Commerce Department was urging U.S. firms to take advantage of COVID-19 demand in China to export critical medical goods to the country that manufactures most such products,<sup>18</sup> most of the world's governments were planning to meet their residents' needs. By mid-March the EU already had enacted an export review policy. The EU's shipment review and approval process contrasted with the export *bans* that China and India had applied yet earlier during the coronavirus pandemic.

As the Table in Annex D of this testimony shows, starting with China, virtually every country that saw COVID-19 cases spiking in its territory took precautionary measures to assure domestic supply of critical goods to meet the demand of its healthcare system. On January 24, Taiwan's government announced a one-month ban on the export of specialist masks designed to be used for medical personnel. A few days later, the Indian government banned exports of masks and gloves. The first week of February, Thailand follow through and prohibited masks exports. In March, the European Commission required that exports of PPE outside of the European Union are subject to an export authorization by Member States. And many others took similar measures. The chronological list of all such actions in Annex D is based on a combination of all of the listings and reports by various agencies and organizations, much of which was redundant but each of which caught an item or two missed by the others.

And, yes, as some commentators have noted, such restraints on exports could be viewed as violating WTO rules. However, as dozens of nations large and small, rich and poor from around the world demonstrated with their action in a global health emergency, countries are not going to prioritize WTO rules over ensuring their residents have needed medical supplies. In both a nod to reality and a further spotlighting of the constraints imposed on governments' serving their publics needs by the current rules of the global economy, the G-20 trade ministers issued a statement [indicating](#) that they viewed measures that countries deemed necessary to combat the crisis as qualifying writ large for WTO exception.<sup>19</sup>

- B. U.S. Section 301 enforcement actions and tariffs on certain Chinese imports were not the cause of shortages in PPE and other COVID-critical goods.

---

<sup>17</sup> Chad Bown, "COVID-19: Trump's curbs on exports of medical gear put Americans and others at risk", Peterson Institute for International Economics, April 9 2020. Available at: <https://www.piie.com/blogs/trade-and-investment-policy-watch/covid-19-trumps-curbs-exports-medical-gear-put-americans-and>

<sup>18</sup> United States Congressman Lloyd Doggett Website, "Trump Commerce Department Pushes for America Last in Coronavirus Medical Supplies", February 28 2020. Available at: <https://doggett.house.gov/media-center/press-releases/trump-commerce-department-pushes-america-last-coronavirus-medical>

<sup>19</sup> G20 Trade and Investment Ministerial Statement, March 30 2020. Available at: [https://g20.org/en/media/Documents/G20\\_Trade%20&%20Investment\\_Ministerial\\_Statement\\_EN.pdf](https://g20.org/en/media/Documents/G20_Trade%20&%20Investment_Ministerial_Statement_EN.pdf)

Some defenders of our current trade regime claim that the significant decline in monthly imports from China of medical-related goods was entirely *caused* by Section 301 tariffs.<sup>20</sup> First, ventilators, oxygen masks and other medical goods were never covered by the Section 301.<sup>21</sup> So, the significant fall off in imports of goods in these categories visible in Figure 4 below during February and March of 2020 is entirely unrelated. The September 2019 additional Section 301 sanctions did cover some face masks, protective garments and other medical supplies. But a review of the same months over past years show a significant “seasonality” effect: *Every year* there is a falloff in Chinese imports of these goods during the last quarter of the year.

**Figure 4. Monthly Imports of Critical Medical Goods  
Jan. 2019 - Mar. 2020**

	China (constant USD)	Monthly Percentual Variation	Rest of the world (constant USD)	Monthly Percentual Variation
Jan. 2019	890,320,148	-	11,658,158,352	-
Feb. 2019	691,739,046	-22.3%	9,649,446,437	-17.2%
Mar. 2019	612,879,139	-11.4%	12,171,780,799	26.1%
Apr. 2019	710,328,127	15.9%	13,553,140,749	11.3%
May 2019	796,677,350	12.2%	12,507,123,307	-7.7%
Jun. 2019	829,571,957	4.1%	12,154,928,313	-2.8%
Jul. 2019	935,274,797	12.7%	13,862,149,526	14.0%
Aug. 2019	933,642,135	-0.2%	13,687,492,173	-1.3%
Sept. 2019	864,330,224	-7.4%	12,139,557,805	-11.3%
Oct. 2019	776,796,235	-10.1%	13,514,406,745	11.3%
Nov. 2019	684,371,716	-11.9%	12,265,048,213	-9.2%
Dec. 2019	714,169,818	4.4%	12,088,471,559	-1.4%
Jan. 2020	756,861,075	6.0%	12,059,228,242	-0.2%
Feb. 2020	563,563,584	-25.5%	12,501,433,745	3.7%
Mar. 2020	500,430,383	-11.2%	16,195,735,383	29.6%

Source: U.S. Census Bureau, monetary values are inflation-adjusted to Jul. 2020

A close review of the data year-over-year reinforces the conclusion that Section 301 tariffs cannot explain the sudden decline in imports. Rather, the Chinese government’s decision to stop exports of goods it needed to handle a growing coronavirus crisis at home at the beginning of 2020 caused the noticeable drop in imports from China of medical goods that was greater than the usual seasonal effect. While imports of critical medical goods from the rest of the world (excluding China) during the first

<sup>20</sup> Chad Bown, “Trump’s trade policy is hampering the US fight against COVID-19”, Peterson Institute for International Economics, March 13 2020. Available at: <https://www.piie.com/blogs/trade-and-investment-policy-watch/trumps-trade-policy-hampering-us-fight-against-covid-19>

<sup>21</sup> Ernesto Hernandez Lopez, “Trade War, PPE, and Race”, July 10 2020. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3647947](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3647947)

quarter of 2020 grew 21.74% compared to the same period in 2019, imports from China fell 17% comparing the same periods.

As the COVID-19 crisis started in the United States, in early March 2020 the U.S. Trade Representative's (USTR) office began excluding additional COVID-related items via a "List 4" of exclusions from Section 301 tariffs, with duties lifted retroactively to September 2019. When USTR launched a March 25, 2020 request for additional exceptions related to COVID-19, additional medical goods and medicines were not among the items proposed, as they already had been excluded.

That China's government would prioritize residents' needs and withhold exports is understandable. That the Chinese government was not forthcoming about doing so created new difficulties for countries that were reliant on Chinese imports and did not know to find alternative sources. However, the main problem that the COVID-19 crisis exposed is that the United States is overly reliant on imports in general and imports from China in specific to meet domestic needs for basic medical goods. This was true even before the coronavirus epidemic.

## **CONCLUSION**

The COVID-19 pandemic has thrown light to the structural deficiencies of the global supply chains system. With the objective to maximize corporate profits and efficiency, governments and corporations developed an unreliable system prone to failure and without any kind of resilience when it faces crises. However, the pandemic has also created the opportunity to rethink the policies that have led us to this point. We can imagine a different world economy, which main goal should be creating the conditions necessary to develop healthy, resilient communities and economic well-being for more people – not the current priority of maximizing corporate profits.

## ANNEX A: DETERMINATION OF CRITICAL MEDICAL GOODS

The data for this testimony was sourced from the U.S. Census Bureau and the U.S. International Trade Commission (USITC).

The identification of critical medical goods was based on the U.S. International Trade Commission’s study “COVID-19 Related Goods: U.S. Imports and Tariffs (Updated)”, which used the World Customs Organization’s (WCO) reports “HS Classification Reference for Covid-19 Medical Supplies” and “List of Priority Medicines for Customs During COVID-19 Pandemic”.<sup>22</sup>

The Commission’s report identifies the 10-digit codes of COVID-19 related goods in the Harmonized Tariff Schedule of the United States (HTS) for merchandise imported into the United States. Specifically, the study is based on the June 2020 (revision 13) version of the HTS. It is worth noting that the government data reporting U.S. exports does not use the same version of the HTS. Therefore, in some instances and whenever possible, it was necessary to use different HS codes to identify exports of Covid-19 related goods when the codes mentioned in the USITC report did not match export data statistics, provided that the description was identical or sufficiently similar so as to confirm that the older version had the same scope as the one used by the USITC.

The following table contains the HTS codes used to retrieve recent import and export data:

Critical Medical Goods Categories	HTS-10	Exports HTS Codes (when different)	USITC Category for subset of COVID-19 related goods in the HTS-10	HTS-10 statistical reporting number description	Example of COVID-19 related product within the HTS-10
Test kits	3002.15.00 00		COVID-19 test kits/testing instruments	Immunological products, put up in measured doses or in forms or packings for retail sale	Certain diagnostic reagents and test kits
	3821.00.00 00		COVID-19 test kits/testing instruments	Prepared culture media for development of microorganisms	Viral transport medium
	3822.00.50 90	3822.00.0000; 3822.00.0002	COVID-19 test kits/testing instruments	Composite diagnostic or laboratory reagents other than those of heading 3002 or 3006, not elsewhere specified or included	Certain COVID-19 test kits and reagents
	8421.19.00 00		COVID-19 test kits/testing instruments	Centrifuges, including centrifugal dryers, not elsewhere specified or included	Centrifuges

<sup>22</sup> U.S. International Trade Commission, COVID-19 Related Goods: U.S. Imports and Tariffs (Updated), Inv. No. 332-576, June 2020. Available at: [https://www.usitc.gov/sites/default/files/publications/332/covid-19\\_related\\_goods\\_us\\_imports\\_and\\_tariffs\\_commission.xlsx](https://www.usitc.gov/sites/default/files/publications/332/covid-19_related_goods_us_imports_and_tariffs_commission.xlsx)

	8543.10.0000		COVID-19 test kits/testing instruments	Particle accelerators, not elsewhere specified or included	Particle accelerators
	9027.50.4015	9027.50.5000; 9027.50.9000	COVID-19 test kits/testing instruments	Other chemical analysis instruments and apparatus using optical radiations	Blood analyzers
	9027.80.2500		COVID-19 test kits/testing instruments	Nuclear magnetic resonances instruments and apparatus (except those of heading 9018)	COVID-19 diagnostic test instruments and apparatus
Disinfectants and Sterilization Products	2207.10.6090		Disinfectants and sterilization products	Ethyl alcohol, undenatured, of an alcoholic strength by volume of 80 percent volume or higher, for nonbeverage purposes, excluding for fuel use	Alcohol solution (at least 80 percent alcoholic strength)
	2208.90.8000	NA	Disinfectants and sterilization products	Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 percent volume, not elsewhere specified or included	Alcohol solution (less than 80 percent alcoholic strength)
	2828.90.0000		Disinfectants and sterilization products	Hypochlorites, chlorites, and hypobromites, not elsewhere specified or included	Bleach (sodium hypochlorite), non-retail sale
	2847.00.0000		Disinfectants and sterilization products	Hydrogen peroxide, whether or not solidified with urea	Hydrogen peroxide in bulk
	2905.12.0050		Disinfectants and sterilization products	Propan-2-ol	Isopropyl alcohol
	3004.90.9210		Disinfectants and sterilization products	Anti-infective medicaments put up in measured doses or forms or packings for retail sale, not elsewhere specified or included	Chlorhexidine; hydrogen peroxide presented as a medicament; imipenem and cilastatin; lopinavir; oseltamivir; povidone-iodine; remdesivir; ribavirin; ritonavir
	3402.19.1000	NA	Disinfectants and sterilization products	Organic surface active agents, other, aromatic or modified aromatic	Wipes (disinfecting or antibacterial), with aromatic or modified aromatic organic surfactants, non-retail sale
	3402.20.1100	NA	Disinfectants and sterilization products	Preparations containing any aromatic or	Wipes (disinfecting or antibacterial), with aromatic

			modified aromatic surface-active agent, put up for retail sale	or modified surfactants, retail sale
3402.20.5100		Disinfectants and sterilization products	Surface-active, washing and cleaning preparations, whether or not containing soap, put up for retail sale, not elsewhere specified or included	Bleach (sodium hypochlorite), retail sale
3808.94.1000	NA	Disinfectants and sterilization products	Disinfectants containing any aromatic or modified aromatic disinfectant	Disinfectants (containing aromatics), including certain disinfecting wipes
3808.94.5000	NA	Disinfectants and sterilization products	Disinfectants, not elsewhere specified or included	Disinfectants (other), including certain disinfecting wipes
3824.99.9295	3824.99.9270	Disinfectants and sterilization products	Chemical products and preparations and residual products of the chemical or allied industries, not elsewhere specified or included	Hand sanitizer
3824.99.9297	3824.99.9270	Disinfectants and sterilization products	Chemical products and preparations and residual products of the chemical or allied industries, not elsewhere specified or included	Hand sanitizer
5603.12.0010	5603.12.0000	Disinfectants and sterilization products	Nonwovens, of man-made filaments, weighing more than 25 g/m <sup>2</sup> but not more than 70 g/m <sup>2</sup> , impregnated, coated or covered with material other than or in addition to rubber, plastics, wood pulp or glass fibers; "imitation suede"	Disinfectant wipes

	5603.92.00 10	5603.92.0000	Disinfectants and sterilization products	Nonwovens, other than of man-made filaments, weighing more than 25 g/m <sup>2</sup> but not more than 70 g/m <sup>2</sup> , impregnated, coated or covered with material other than or in addition to rubber, plastics, wood pulp or glass fibers; "imitation suede"	Wipes with isopropyl alcohol (e.g., alcohol prep pads)
	8419.20.00 10	8419.20.0000	Disinfectants and sterilization products	Medical or surgical sterilizers	Medical or surgical sterilizers
	8419.20.00 20	8419.20.0000	Disinfectants and sterilization products	Laboratory sterilizers	Laboratory sterilizers
Ventilators and Oxygenation Products	9018.19.95 50		Oxygen therapy equipment and pulse oximeters	Electro-diagnostic apparatus, used in medical, surgical, dental or veterinary sciences, not elsewhere specified or included	Fingertip pulse oximeter (for use by medical professionals)
	9018.39.00 40	9018.39.0030	Oxygen therapy equipment and pulse oximeters	Bougies, drains and sondes, and parts and accessories	Intubation equipment; parts and accessories
	9018.90.60 00		Oxygen therapy equipment and pulse oximeters	Electro-surgical instruments and appliances and parts and accessories	Extracorporeal membrane oxygenation (ECMO)
	9019.20.00 00		Oxygen therapy equipment and pulse oximeters	Ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus; parts and accessories	Medical ventilators (artificial respiration apparatus); extracorporeal membrane oxygenation (ECMO); Continuous Positive Airway Pressure (CPAP) units; bilevel positive airway pressure (BiPap or BPap) units; oxygen concentrators; oxygen humidifiers for oxygen therapy applications; oxygen delivery devices to supply oxygen from the device to the patient; flow splitters
	9026.80.40 00	9026.80.0000	Oxygen therapy equipment and pulse oximeters	Heat meters incorporating liquid supply meters, and anemometers	Flowmeter, Thorpe tube for oxygen 0-15L/min
	9029.20.40 80	9029.20.5000	Oxygen therapy equipment and pulse oximeters	Speedometers and tachometers (excluding	Fingertip pulse oximeters

				bicycle speedometers), not for use in civil aircraft	
Personal Protective Equipment (PPE)	3926.20.1010		Personal protective equipment	Gloves, seamless, surgical and medical, of plastic	Seamless surgical and medical gloves
	3926.20.1020	3926.20.1060	Personal protective equipment	Gloves, seamless, except surgical and medical, disposable, of plastic	Seamless disposable gloves
	3926.20.9010	3926.20.9050	Personal protective equipment	Aprons, of plastic	Plastic aprons
	3926.20.9050		Personal protective equipment	Articles of apparel and clothing accessories, of plastic, not elsewhere specified or included	Protective unisex garments, such as medical and surgical gowns; plastic sleeve protectors
	4015.11.0110	NA	Personal protective equipment	Surgical gloves, of natural rubber, other than hard rubber	Surgical gloves (natural rubber)
	4015.11.0150	4015.11.0000	Personal protective equipment	Surgical gloves, of vulcanized rubber other than hard rubber, not elsewhere specified or included	Surgical gloves
	4015.19.0510	NA	Personal protective equipment	Medical gloves, mittens and mitts (except surgical) of natural rubber, other than hard rubber	Medical gloves (natural rubber)
	4015.19.0550	NA	Personal protective equipment	Medical gloves, of vulcanized rubber other than hard rubber, not elsewhere specified or included	Medical gloves
	4015.19.1010	4015.11.0100	Personal protective equipment	Seamless, disposable gloves, of vulcanized rubber other than hard rubber	Other seamless rubber gloves
	4015.90.0010	NA	Personal protective equipment	Aprons, of vulcanized rubber other than hard rubber	Protective aprons
	4015.90.0050	4015.90.0000	Personal protective equipment	Articles of apparel and clothing accessories, excluding	Protective unisex garments made of rubber sheeting, textile reinforced rubber or textile backed rubber.



			aprons, for all purposes, of vulcanized rubber other than hard rubber, not elsewhere specified or included	
4818.50.00 20		Personal protective equipment	Articles of apparel and clothing accessories of paper pulp, paper, cellulose wadding or webs of cellulose fibers	Hospital/medical gowns or scrubs
4823.90.86 00	NA	Personal protective equipment	Articles of uncoated paper or paperboard or of webs of cellulose fiber, cut to size or shape, not elsewhere specified or included	Paper shoe covers
6113.00.10 12	6113.00.0012	Personal protective equipment	Garments, knitted or crocheted, outer surface impregnated, coated, covered, or laminated with rubber or plastic material, surface completely obscured	Unisex surgical gowns
6116.10.65 00	6116.10.0000	Personal protective equipment	Other gloves, knitted or crocheted, containing less than 50 percent by weight of cotton, man-made fibers or other textile fibers, or any combination thereof, no fourchettes, impregnated	Gloves impregnated or covered with plastics or rubber
6210.10.20 00	6210.10.0000	Personal protective equipment	Garments, made up of fabrics of heading 5602 or 5603: of fabrics formed on a base of paper or covered or lined with paper	Protective garments
6210.10.50 00	6210.10.0000	Personal protective equipment	Garments, made up of fabrics of heading 5602	Disposable garments for use in hospitals, clinics, laboratories, etc.

			or 5603: nonwoven disposable apparel designed for use in hospitals, clinics, laboratories and other areas	
6210.10.90 10	6210.10.0000	Personal protective equipment	Garments, made up of fabrics of heading 5602 or 5603: coveralls and overalls, not knitted, of impregnated fabric	Protective garments (coveralls and overalls)
6210.10.90 40	6210.10.0000	Personal protective equipment	Garments, made up of fabrics of heading 5602 or 5603: not knit felt and non-woven fabric, except coveralls and overalls, of impregnated fabric	Protective garments
6210.50.55 55	6210.50.1000; 6210.50.2000	Personal protective equipment	Women's or girls' not knit man-made fiber other apparel, impregnated fabric not elsewhere specified or included	Unisex surgical gowns
6211.42.10 81	6211.42.0000	Personal protective equipment	Women's or girls' other apparel, of cotton, not knitted not elsewhere specified or included	Patient gowns; unisex surgical gowns
6211.43.10 91	6211.43.0000	Personal protective equipment	Women's or girls' other apparel, of man-made fibers, not knitted, not elsewhere specified or included	Patient gowns; unisex surgical gowns
6216.00.54 20	6216.00.5000	Personal protective equipment	Gloves, mittens and mitts: of man- made fibers: no fourchettes, sidewalls, less than 36 percent of wool or fine animal hair	Gloves

	6307.90.98 89	6307.90.9995	Personal protective equipment	Other made-up articles, not elsewhere specified or included	N95 particulate respirators; other respirators; other textile face-masks, including surgical and disposable masks; shoe covers; textile face masks with plastic face shield
	6505.00.01 00		Personal protective equipment	Hair-nets, any material, whether or not lined or trimmed	Disposable hair nets
	6505.00.80 15		Personal protective equipment	Nonwoven disposable headgear without peaks or visors of manmade fibers	Disposable headgear
	6505.00.90 89	6505.00.8600	Personal protective equipment	Hats and other headgear, knitted or crocheted, or made up of lace, felt or other textile fabric, in the piece, whether or not lined or trimmed, not elsewhere specified or included	Other headgear
	9004.90.00 00		Personal protective equipment	Spectacles, goggles and the like, corrective, protective, not elsewhere specified or included	Protective goggles
	9020.00.60 00	9020.00.8000	Personal protective equipment	Other breathing appliances and gas masks	Gas masks with mechanical parts or replaceable filters for protection against biological agents; masks incorporating eye protection or facial shields; powered air purifying respirators (PAPRs)
	9020.00.90 00	9020.00.8000	Personal protective equipment	Parts and accessories for breathing appliances and gas masks	Parts of gas masks and masks incorporating eye protection or facial shields; parts of powered air purifying respirators (PAPRs)
Gas & Face Masks with Filters	6307.90.98 89	6307.90.9995	Personal protective equipment	Other made-up articles, not elsewhere specified or included	N95 particulate respirators; other respirators; other textile facemasks, including surgical and disposable masks; shoe covers; textile face masks with plastic face shield
Pharmaceutical products	2501.00.00 00		Medicines (Pharmaceuticals)	Salt (including table salt and denatured salt) and pure sodium chloride, whether or not in aqueous	Saline solution

			solution or containing added anti-caking or free-flowing agents; sea water	
2907.19.8000	2907.19.9000	Medicines (Pharmaceuticals)	Other monophenols	Propofol
2922.29.2700	2922.29.0000; 2922.29.9000	Medicines (Pharmaceuticals)	Amino-naphthols and other aminophenols and their derivatives used as drugs	Dobutamine
2922.50.1300	NA	Medicines (Pharmaceuticals)	Isoetharine hydrochloride; isoxsuprine hydrochloride; nylidrin hydrochloride; phenylephrine hydrochloride; salbutamol (albuterol); and terbutaline sulfate	Salbutamol (albuterol)
2923.90.0100		Medicines (Pharmaceuticals)	Quaternary ammonium salts and hydroxides, whether or not chemically defined, other	Suxamethonium chloride
2924.29.6210	2924.29	Medicines (Pharmaceuticals)	Acetaminophen	Acetaminophen (Paracetamol)
2924.29.6250	2924.29	Medicines (Pharmaceuticals)	Other aromatic cyclic amides and derivatives for use as drugs	Metoclopramide; oseltamivir
2925.29.2000		Medicines (Pharmaceuticals)	Aromatic imines and their derivatives; salts thereof, for use as drugs	Chlorhexidine
2930.90.9135	NA	Medicines (Pharmaceuticals)	Other non-aromatic organo-sulfur compounds used as drugs	Cilastatin
2932.19.5100	2932.19.0000; 2932.19.0002	Medicines (Pharmaceuticals)	Non-aromatic compounds containing an unfused furan ring (whether or not hydrogenated) in the ring	Ranitidine
2933.29.2000	2933.29.0000	Medicines (Pharmaceuticals)	Aromatic or modified aromatic drugs containing an unfused imidazole ring (whether or not hydrogenated) in the structure	Ondansetron

2933.33.00 00		Medicines (Pharmaceuticals)	Alfentanil (INN), anileridine (INN), bezitramide (INN), bromazepam (INN), difenoxin (INN), diphenoxylate (INN), dipipanone (INN), fentanyl (INN), ketobemidone (INN), methylphenidate (INN), pentazocine (INN), pethidine (INN), pethidine (INN) intermediate A, phencyclidine (INN) (PCP,PE), phenoperidine (INN), pipradrol (INN), piritramide (INN), propiram (INN) and trimeperidine (INN); salts thereof	Fentanyl
2933.39.31 00	NA	Medicines (Pharmaceuticals)	Antidepressants, tranquilizers and other psychotherapeutic agents with an unfused pyridine ring (whether or not hydrogenated) in the structure	Haloperidol
2933.39.41 00	2933.39	Medicines (Pharmaceuticals)	Drugs containing an unfused pyridine ring (whether or not hydrogenated) in the structure, not elsewhere specified or included	Omeprazole; vecuronium bromide;
2933.49.26 00	2933.49.2250	Medicines (Pharmaceuticals)	Drugs containing a quinoline or isoquinoline ring-system (whether or not hydrogenated) not further	Atracurium besylate (atracurium besilate)

			fused, not elsewhere specified or included	
2933.59.36 00	NA	Medicines (Pharmaceuticals)	Other aromatic or modified aromatic anti-infective agents	Lopinavir
2933.79.08 00	2933.79	Medicines (Pharmaceuticals)	Lactam products described in additional U.S. note 3 to section VI, not elsewhere specified or included	Milrinone
2933.91.00 00		Medicines (Pharmaceuticals)	Alprazolam(in n), camazepam (inn), chlordiazepoxide (inn), clonazepam (inn), clorazepate & other heterocyclic compounds with nitro atom(s) only	Lorazepam; midazolam
2933.99.53 00		Medicines (Pharmaceuticals)	Cardiovascular drugs, not elsewhere specified or included	Levosimendan
2934.10.10 00	2934.10.0000	Medicines (Pharmaceuticals)	Aromatic or modified aromatic products described in U.S. note 3 to section VI containing an unfused thiazole ring (whether or not hydrogenated)	Ritonavir
2934.30.23 00		Medicines (Pharmaceuticals)	Antidepressants, tranquilizers and other psychotherapeutic agents	Levomepromazine
2934.99.30 00	2934.99	Medicines (Pharmaceuticals)	Aromatic or modified aromatic heterocyclic compounds used as drugs, not elsewhere specified or included	Remdesivir
2934.99.47 00	2934.99	Medicines (Pharmaceuticals)	Heterocyclic compounds used as drugs, not elsewhere specified or included	Ribavirin; sulbactam;

2937.19.0000		Medicines (Pharmaceuticals)	Polypeptide, protein and glycoprotein hormones, their derivatives and structural analogues, not elsewhere specified or included	Vasopressin/vasopressin injection
2937.21.0020	2937.21.0000	Medicines (Pharmaceuticals)	Hydrocortisone	Hydrocortisone
2937.29.0095	2937.29.0000	Medicines (Pharmaceuticals)	Steroidal hormones, their derivatives and structural analogues, not elsewhere specified or included	Methylprednisolone
2937.90.0500		Medicines (Pharmaceuticals)	Epinephrine	Epinephrine
2937.90.0200	2937.90.1500	Medicines (Pharmaceuticals)	Catecholamine hormones, their derivatives and structural analogues, not elsewhere specified or included	Norepinephrine
2939.11.0000		Medicines (Pharmaceuticals)	Concentrates of poppy straw; buprenorphine (INN); codeine, dihydrocodeine (INN), ethylmorphine, etorphine (INN), heroin, hydrocodone (INN), hydromorphone (INN), morphine, nicomorphine (INN), oxycodone (INN), oxymorphone (INN), pholcodine (INN), thebacon (INN) and thebaine; salts thereof	Codeine; morphine
2939.19.0500	2939.19.0000	Medicines (Pharmaceuticals)	Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters, and other derivatives, not elsewhere	Morphine glucuronide

			specified or included	
2939.79.00 00		Medicines (Pharmaceuticals)	Vegetable alkaloids, natural or reproduced by synthesis, their salts and other derivatives, not elsewhere specified or included	Atropine methonitrate; atropine oxide; ipratropium bromide
2941.10.10 00		Medicines (Pharmaceuticals)	Ampicillin and its salts	Ampicillin
2941.10.50 00	2941.10.2000; 2941.10.6000	Medicines (Pharmaceuticals)	Other penicillins and their derivatives with a penicillanic acid structure; salts thereof	Amoxicillin; piperacillin; tazobactam
2941.30.00 00		Medicines (Pharmaceuticals)	Tetracyclines and their derivatives; salts thereof	Doxycycline
2941.90.10 50	2941.90.6000	Medicines (Pharmaceuticals)	Natural antibiotics, not elsewhere specified or included	Amphotericin B
2941.90.30 00	2941.90.6000	Medicines (Pharmaceuticals)	Aromatic or modified aromatic antibiotics (excluding natural)	Ceftazidime; vancomycin
2941.90.50 00	2941.90.6000	Medicines (Pharmaceuticals)	Other antibiotics (excluding natural, aromatic or modified aromatic antibiotics)	Amikacin; azithromycin; ceftriaxone; clavulanic acid; meropenem; imipenem
3001.90.01 90		Medicines (Pharmaceuticals)	Heparin and its salts; other human or animal substances prepared for therapeutic or prophylactic uses, not elsewhere specified or included	Enoxaparin; enoxaparin sodium; heparin sodium
3002.13.00 00		Medicines (Pharmaceuticals)	Immunological products, unmixed, not put up in measured doses or in forms or packings for retail sale	Interferon alfa
3002.14.00 00		Medicines (Pharmaceuticals)	Immunological products, mixed, not put	Mixed bulk immunologicals (medicines that trigger the immune system)



			up in measured doses or in forms or packings for retail sale	
3002.19.00 00		Medicines (Pharmaceuticals)	Blood fractions, not elsewhere specified or included	Other immunologicals (medicines that trigger the immune system)
3002.20.00 00		Medicines (Pharmaceuticals)	Vaccines for human medicine	Human vaccines
3003.10.00 00		Medicines (Pharmaceuticals)	Medicaments (excluding goods of 3002, 3005, or 3006) containing penicillins or derivatives thereof, or streptomycins or their derivatives	Amoxicillin and clavulanic acid; ampicillin and sulbactam
3003.20.00 00		Medicines (Pharmaceuticals)	Medicaments containing other antibiotics (excluding penicillins and streptomycins)	Amikacin; amphotericin B; azithromycin; ceftazidime; ceftriaxone; doxycycline; imipenem and cilastatin; meropenem; piperacillin and tazobactam; vancomycin
3003.39.50 00	3003.39.0000	Medicines (Pharmaceuticals)	Other medicaments containing hormones or other products of heading 2937 but not containing antibiotics	Epinephrine; hydrocortisone; methylprednisolone; norepinephrine; vasopressin/vasopressin injection
3003.49.00 00		Medicines (Pharmaceuticals)	Other medicaments containing alkaloids or derivatives thereof	Atropine methonitrate; atropine oxide; codeine; ipratropium bromide; morphine; morphine glucuronide
3003.90.01 00		Medicines (Pharmaceuticals)	Other medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of two or more constituents which have been mixed together	Acetaminophen (paracetamol); atracurium besylate (atracurium besilate); chlorhexidine; dobutamine; enoxaparin/enoxaparin sodium; fentanyl; haloperidol; heparin sodium; levomepromazine; levosimendan; lopinavir; lorazepam; metoclopramide; midazolam; milrinone; omeprazole; ondansetron; oseltamivir; povidone-iodine; propofol; ranitidine; remdesivir; ribavirin; ritonavir; salbutamol (albuterol); suxamethonium chloride; vecuronium bromide
3004.10.50 45		Medicines (Pharmaceuticals)	Combination antibiotics containing penicillins or derivatives thereof, with a	Amoxicillin and clavulanic acid; ampicillin and sulbactam; piperacillin and tazobactam

			penicillanic acid structure, or streptomycins or their derivatives, not elsewhere specified or included	
3004.20.00 60		Medicines (Pharmaceuticals)	Medicaments containing other antibiotics, not elsewhere specified or included	Amikacin; amphotericin B; azithromycin; ceftazidime; ceftriaxone; doxycycline; meropenem; vancomycin
3004.32.00 00		Medicines (Pharmaceuticals)	Medicaments containing corticosteroid hormones, their derivatives and structural analogues	Hydrocortisone; methylprednisolone
3004.39.00 50		Medicines (Pharmaceuticals)	Medicaments containing hormones or other products of heading 2937 but not containing antibiotics, not elsewhere specified or included	Epinephrine; Norepinephrine; vasopressin/vasopressin injection
3004.49.00 20		Medicines (Pharmaceuticals)	Anticonvulsants, hypnotics and sedatives, in measured doses or in forms or packaging for retail sale	Morphine glucuronide
3004.49.00 40		Medicines (Pharmaceuticals)	Other medicaments primarily affecting the central nervous system, not elsewhere specified or included	Atropine methonitrate; atropine oxide; codeine; fentanyl; morphine
3004.90.92 20		Medicines (Pharmaceuticals)	Cardiovascular medicaments put up in measured doses or in forms for retail sale	Dobutamine; enoxaparin; enoxaparin sodium; levosimendan; milrinone
3004.90.92 28	3004.90.9225	Medicines (Pharmaceuticals)	Analgesics, antipyretics and nonhormonal anti-inflammatory agents, not elsewhere specified or included	Acetaminophen (paracetamol)

3004.90.92 30		Medicines (Pharmaceuticals)	Anticonvulsants, hypnotics and sedatives, primarily affecting central nervous system, put up in measured doses or in forms or packings for retail sale	Midazolam; propofol
3004.90.92 35		Medicines (Pharmaceuticals)	Antidepressants, tranquilizers and other psychotherapeutic agents, primarily affecting the central nervous system, put up in measured doses or in forms or packings for retail sale	Haloperidol; levomepromazine; lorazepam;
3004.90.92 40		Medicines (Pharmaceuticals)	Medicaments primarily affecting the central nervous system, put up in measured doses or in forms or packings for retail sale, not elsewhere specified or included	Atracurium besylate (atracurium besilate); suxamethonium chloride; vecuronium bromide
3004.90.92 60		Medicines (Pharmaceuticals)	Medicaments primarily affecting the digestive system put up in measured doses or in forms or packings for retail sale, not elsewhere specified or included	Metoclopramide; omeprazole; ondansetron; ranitidine
3004.90.92 70		Medicines (Pharmaceuticals)	Medicaments primarily affecting electrolytic, caloric or water balance, put up in measured doses or in forms or packing for retail sale, not elsewhere specified or included	Ringer's lactate; saline solution
3004.90.92 85		Medicines (Pharmaceuticals)	Medicaments primarily affecting the eyes, ears or respiratory	Ipratropium bromide; salbutamol (albuterol)

				system, put up in measured doses or in forms or packings for retail sale, not elsewhere specified or included	
	3004.90.92 90		Medicines (Pharmaceuticals)	Medicaments consisting of mixed/unmixed products put up in measured doses or in forms or packings for retail sale, not elsewhere specified or included	Heparin sodium; saline solution
	3905.99.80 00		Medicines (Pharmaceuticals)	Other vinyl polymers in primary forms, not elsewhere specified or included	Povidone-iodine

The periodical modifications and revisions of the HTS prevent assessing import and export trends and sources of imports at this level of detail. Therefore, the 1989-2019 data was retrieved using 6-digit **Harmonized Commodity Description and Coding System (HS)** codes. Furthermore, these figures were not adjusted for inflation because doing so is not necessary to compare the relative rank of import sources and export destinations. In contrast, the 2019-2020 data, which measures growth in value over time, is adjusted for inflation to base month July 2020 so that the measurement is growth in real terms.

## ANNEX B: UNITED STATES TRADE BALANCE IN CRITICAL MEDICAL GOODS WITH CHINA AND THE WORLD

U.S. Trade Balance in Medical Goods with China									
Month	2019 Exports	2020 Exports	% Change in Exports	2019 Imports	2020 Imports	% Change in Imports	2019 Trade Balance	2020 Trade Balance	% Change in Trade Balance
January	\$ 230,575,606.42	\$ 274,574,342.04	19.1%	\$ 721,077,815.18	\$ 601,749,637.02	-17%	\$ (490,502,208.76)	\$ (327,175,294.98)	-33%
February	\$ 291,688,719.24	\$ 479,649,149.44	64.4%	\$ 559,761,478.63	\$ 430,388,231.31	-23%	\$ (268,072,759.39)	\$ 49,260,918.13	-118%
March	\$ 345,395,495.19	\$ 419,142,898.64	21.4%	\$ 531,907,332.24	\$ 450,113,339.50	-15%	\$ (186,511,837.05)	\$ (30,970,440.86)	-83%
April	\$ 333,806,317.81	\$ 443,159,328.32	32.8%	\$ 590,429,869.40	\$ 2,441,114,042.89	313%	\$ (256,623,551.60)	\$ (1,997,954,714.56)	679%
May	\$ 394,502,991.50	\$ 402,288,619.09	2.0%	\$ 639,047,390.73	\$ 4,601,114,372.43	620%	\$ (244,544,399.22)	\$ (4,198,825,753.34)	1617%
June	\$ 415,682,872.07	\$ 418,076,437.76	0.6%	\$ 592,916,944.25	\$ 4,005,694,822.68	576%	\$ (177,234,072.18)	\$ (3,587,618,384.92)	1924%
July	\$ 335,691,322.97	\$ 397,582,333.00	18.4%	\$ 669,642,669.18	\$ 3,330,481,206.00	397%	\$ (333,951,346.21)	\$ (2,932,898,873.00)	778%
<b>Jan-July Total</b>	<b>\$ 1,595,969,130.16</b>	<b>\$ 2,018,814,337.53</b>	<b>26.5%</b>	<b>\$ 3,042,223,886.18</b>	<b>\$ 8,524,479,623.15</b>	<b>180%</b>	<b>\$ (1,446,254,756.02)</b>	<b>\$ (6,505,665,285.62)</b>	<b>350%</b>

U.S. Trade Balance in Medical Goods with the World									
Month	2019 Exports	2020 Exports	% Change in Exports	2019 Imports	2020 Imports	% Change in Imports	2019 Trade Balance	2020 Trade Balance	% Change in Trade Balance
January	\$ 4,388,366,027	\$ 4,568,632,231	4.11%	\$ 10,890,889,196	\$ 11,363,825,317	4%	\$ (6,502,523,169)	\$ (6,795,193,086)	5%
February	\$ 5,293,488,417	\$ 4,879,250,039	-7.83%	\$ 8,490,406,990	\$ 10,462,454,503	23%	\$ (3,196,918,573)	\$ (5,583,204,464)	75%
March	\$ 5,428,193,546	\$ 5,665,539,364	4.37%	\$ 10,764,327,395	\$ 13,319,842,303	24%	\$ (5,336,133,849)	\$ (7,654,302,939)	43%
April	\$ 4,628,563,094	\$ 4,952,643,488	7.00%	\$ 11,631,556,557	\$ 14,777,880,829	27%	\$ (7,002,993,463)	\$ (9,825,237,341)	40%
May	\$ 4,977,121,382	\$ 4,778,087,975	-4.00%	\$ 10,545,193,976	\$ 15,915,957,334	51%	\$ (5,568,072,593)	\$ (11,137,869,359)	100%
June	\$ 5,035,526,184	\$ 4,879,452,171	-3.10%	\$ 10,314,960,427	\$ 16,552,356,790	60%	\$ (5,279,434,243)	\$ (11,672,904,619)	121%
July	\$ 5,731,775,472	\$ 4,580,789,084	-20.08%	\$ 12,117,855,227	\$ 12,016,780,600	-1%	\$ (6,386,079,755)	\$ (7,435,991,516)	16%
<b>Jan-July Total</b>	<b>\$ 24,715,732,467</b>	<b>\$ 24,844,153,097</b>	<b>0.52%</b>	<b>\$ 52,322,374,113</b>	<b>\$ 65,839,960,286</b>	<b>26%</b>	<b>\$ (27,606,641,646)</b>	<b>\$ (40,995,807,190)</b>	<b>48%</b>

## ANNEX C: SOURCES OF U.S. IMPORTS OF MEDICINES

### Top Source of U.S. Medicines by Volume, 2019 (kg)

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	95,131,474
Mexico	77,503,808
China	39,733,621
Canada	39,476,690
Italy	28,770,801
Germany	21,052,544
United Kingdom	13,906,757
Israel	12,502,123
Spain	11,905,196
Ireland	11,109,221
<b>Top 10 Import Sources</b>	<b>351,092,235</b>

*SOURCE: U.S. INTERNATIONAL TRADE COMMISSION*

### Top Sources of U.S. Drugs Sold in Measured Doses for Retail by Volume, 2019 (kg)

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	82,428,488
Mexico	77,445,137
China	30,665,416
Canada	29,091,313
Italy	24,235,269
Germany	14,392,733
United Kingdom	11,533,205
Spain	10,523,851
Ireland	9,666,880
Israel	7,882,120
<b>Top 10 Import Sources</b>	<b>297,864,412</b>

*SOURCE: U.S. INTERNATIONAL TRADE COMMISSION*

### Top Sources of U.S. Sulfonamides (Antibacterials) by Volume, 2019 (kg)

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
South Korea	153,403
Ireland	144,429
China	98,725
India	52,398
Mexico	49,530
Germany	19,567
Canada	11,360
Italy	486
Belgium	166
Switzerland	25
<b>Top 10 Import Sources</b>	<b>530,089</b>

*SOURCE: U.S. INTERNATIONAL TRADE COMMISSION*

**Top Sources of U.S. Anti-Infective Medicines by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	3,093,018
Mexico	789,875
Canada	779,604
Singapore	398,201
France	303,670
United Kingdom	293,441
Taiwan	216,549
Croatia	183,488
Germany	157,739
China	154,696
<b>Top 10 Import Sources</b>	<b>6,370,281</b>

*SOURCE: U.S. INTERNATIONAL TRADE COMMISSION*

**Top Sources of U.S. Cardiovascular Medicines by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	16,403,076
Canada	3,258,870
China	1,017,999
Singapore	784,454
Czech Republic	767,832
Italy	529,828
Israel	461,786
France	419,683
Bangladesh	317,996
Portugal	312,855
<b>Top 10 Import Sources</b>	<b>24,274,379</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Anti-Inflammatory Drugs and Painkillers by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
China	10,558,922
India	5,588,839
Canada	2,067,981
Japan	786,779
Germany	555,001
Italy	261,706
Israel	256,285
Spain	212,678
Sweden	188,958
Czech Republic	128,347
<b>Top 10 Import Sources</b>	<b>20,605,496</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Sedatives by Volume, 2019 (kg)**



<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	9,850,985
Austria	2,749,435
Italy	1,782,049
Sweden	1,731,923
Israel	675,319
Norway	482,706
Czech Republic	309,118
China	191,332
Switzerland	161,641
France	157,379
<b>Top 10 Import Sources</b>	<b>18,091,887</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Diuretics by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	1,480,688
Canada	128,988
Czech Republic	86,315
Croatia	61,784
Italy	5,347
Israel	3,627
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
<b>Top 10 Import Sources</b>	<b>1,766,749</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Cough & Cold Medicines by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
Canada	20,111,036
China	13,631,559
Switzerland	7,155,109
United Kingdom	6,981,467
Mexico	4,699,574
India	992,727
Spain	504,460
Italy	368,045
Germany	106,705
Pakistan	23,171
<b>Top 10 Import Sources</b>	<b>54,573,853</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Drugs Affecting the Respiratory System, Eyes, and Ears by Volume, 2019 (kg)**

<b>Imports by Volume (kg)</b>	
<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
Ireland	3,400,505
France	1,419,181
India	1,371,653
Canada	905,788
South Africa	766,990
Belgium	597,824
Germany	481,949
China	475,788
Switzerland	354,227
Israel	302,786
<b>Top 10 Import Sources</b>	<b>10,076,691</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

**Top Sources of U.S. Antibiotics by Volume, 2019 (kg)**

**Imports by Volume  
(kg)**

<b>Top 10 Import Sources</b>	<b>2019 Imports</b>
India	4,564,164
Italy	2,574,386
Jordan	1,858,484
China	1,765,892
Canada	1,076,038
Switzerland	962,067
Germany	780,248
United Kingdom	607,031
Brazil	515,999
Austria	442,149
<b>Top 10 Import Sources</b>	<b>15,146,458</b>

*SOURCE: U.S. INTERNATIONAL TRADE*

## ANNEX D: CHART OF EXPORT CONTROLS OF CRITICAL MEDICAL GOODS BY DATE

COUNTRY	CATEGORIES OF GOODS	COVID-19 EXPORT RESTRICTION TAKEN	MEASURE	START DATE	END DATE OR OPEN ENDED
<b>CHINA</b>	Face masks, personal protective equipment	Export Prohibition	China stops exporting masks and PPE to stockpile medical supplies and tried to obscure its actions by withholding trade data according to media reports and DHS. U.S. trade data supports this contention.	1/1/2020	Unknown
<b>TAIWAN</b>	Masks	Export Prohibition	Taiwan's government announced a one-month ban on the export of specialist masks designed to be used for medical personnel	1/24/2020	Open Ended
<b>INDIA</b>	Face masks, gloves, clothing	Export Prohibition	Face masks, protective clothing; 02/09 India removes some masks and gloves from export ban list	1/31/2020	Open Ended
<b>IRAN</b>	Masks	Export prohibition	Iranian government has banned export of protective face masks for a three-month period.	2/3/2020	5/3/2020
<b>KYRGYZSTAN</b>	Medicines and medical equipment	Export prohibition	Temporary export ban on medicines and medical equipment from the Kyrgyz Republic.	2/3/2020	8/2/2020
<b>THAILAND</b>	Masks	Export Prohibition	Thailand bans the exports of masks.	2/5/2020	2/4/2021
<b>OMAN</b>	Masks, hand sanitizers	Export Prohibition	Directorate-General of Pharmacy and Drug Control bans exports of masks and hand sanitizers.	2/26/2020	Open Ended
<b>TURKEY</b>	Masks	Licensing or permit requirements to export	Turkey regulates the export of masks and personal protective equipment.	2/28/2020	Open Ended
<b>KAZAKHSTAN</b>	Masks	Export prohibition	Kazakstan bans export of masks.	2/29/2020	Open Ended
<b>ECUADOR</b>	Masks	Export Prohibition	Temporary export prohibition on protective masks	3/2/2020	Open Ended
<b>SAUDI ARABIA</b>	Medical supply products, masks	Export Prohibition	Saudi Arabia stops all exports of coronavirus detection and prevention products.	3/2/2020	Open Ended
<b>KENYA</b>	Masks	Export prohibition	Kenyan firms banned from exporting face masks.	3/3/2020	Open Ended
<b>CZECH REPUBLIC</b>	Masks	Export Prohibition	The ministry of health ordered a ban on exports of masks	3/4/2020	Open Ended
<b>RUSSIA</b>	Medical supply products, masks	Export Prohibition	Russia bans export of masks and personal protective suits.	3/4/2020	Open Ended
<b>MOROCCO</b>	Masks	Export Prohibition	The Moroccan Ministry of Industry and Trade has imposed an export license for medical protective masks.	3/5/2020	Open Ended

<b>MALAYSIA</b>	Masks	Export prohibition	The government imposes a temporary ban on the export of face masks to meet local demand.	3/7/2020	Open Ended
<b>ALBANIA</b>	Medicines and Medical devices	Licensing or permit requirements to export	Prohibition of export of medicines and medical devices. It will be allowed only upon the authorization of the Minister of Health.	3/9/2020	Open Ended
<b>SOUTH KOREA</b>	Medical supply products, masks	Export Prohibition	A new law completely bans the exports of South Korean masks and requires producers to distribute 80 percent of masks through official public channels.	3/9/2020	Open Ended
<b>BULGARIA</b>	Medical supply products, masks	Export Prohibition	Bulgarian government immediately banned the exports of personal protective equipment.	3/11/2020	Open Ended
<b>MOLDOVA</b>	Masks, gloves and disinfectants	Export Prohibition	April 10: Measure has been extended to May 15. March 11: Export ban on masks, gloves and disinfectants.	3/11/2020	5/15/2020
<b>UKRAINE</b>	Laboratory suits, medical gloves, medical masks, goggles, protective shields, respirators	Export Prohibition	The government of Ukraine has temporarily restricted exports of anti-epidemic supplies.	3/11/2020	6/1/2020
<b>VIETNAM</b>	Masks	Licensing or permit requirements to export	Export licenses for medical masks	3/11/2020	Open Ended
<b>KUWAIT</b>	Foodstuffs, medicines, medical supplies and equipment	Export prohibition	Export prohibition for all foodstuffs, medicines, medical supplies and equipment, unless authorized by Ministry of Trade and Industry.	3/12/2020	Open Ended
<b>INDONESIA</b>	Medical supply products, masks	Export prohibition	Indonesia to ban face-mask exports	3/13/2020	Open Ended
<b>BANGLADESH</b>	Medical supply products	Export Prohibition	April 02: Ministry of Commerce has lifted the ban on export of locally-made face masks and hand sanitizers. March 14: The commerce ministry has imposed a ban on the export of locally-made face masks and hand sanitizers as a part of precautionary measures taken in response to the growing domestic demand for the items amid the global coronavirus outbreak.	3/14/2020	4/2/2020
<b>PARAGUAY</b>	Hand sanitizer and face masks	Licensing or permit requirements to export	Export licensing requirement on hand sanitizer and face masks	3/14/2020	Open Ended
<b>SERBIA</b>	Essential commodities	Export Prohibition	Temporary prohibition of exports of essential commodities.	3/14/2020	Open Ended
<b>EUROPEAN UNION</b>	Personal protective equipment, medical supplies	Licensing or permit requirements to export	The Commission has taken immediate steps to protect the availability of supplies of personal protective equipment (PPE), by	3/15/2020	4/26/2020

			requiring that exports of such equipment outside of the European Union are subject to an export authorisation by Member States.		
<b>ISRAEL</b>	Alcohol, face masks, oxygen, swabs, lithium batteries, non-woven fabrics	Licensing or permit requirements to export	Temporary export licensing requirements on personal protective and medical equipment.	3/15/2020	4/30/2020
<b>BELARUS</b>	Medical supply products	Export Prohibition	Temporary export ban on medical supply products	3/16/2020	6/1/2020
<b>LIBYA</b>	Face masks, respiratory ventilation aids, sterilizing products	Export prohibition	The Minister of Economy and Industry of the Government of National Accord (GNA), Ali Al-Essawi, issued a decree forbidding the export of sterile and non-sterile face masks, and also that of respiratory ventilation aids along with sterilizing products of any type or size.	3/16/2020	Open Ended
<b>UZBEKISTAN</b>	Masks and medical suits	Export Prohibition	Export ban on masks and medical suits.	3/16/2020	Open Ended
<b>EGYPT</b>	Masks, gloves, disinfection alcohol	Export prohibition	Egypt bans exports of medical masks and rubbing alcohol	3/17/2020	Open Ended
<b>AUSTRALIA</b>	Face masks, disposable gloves, hand sanitizers, goggles, eye visors and alcohol wipes	Export Prohibition	Temporary export ban on certain personal protective equipment. Effective for 3 months.	3/18/2020	6/18/2020
<b>BRAZIL</b>	Medical and hospital products	Licensing or permit requirements to export	Temporary implementation of special export licensing requirement on certain products.	3/18/2020	Open Ended
<b>COSTA RICA</b>	Face masks, disinfectants and medical equipment	Export Prohibition	Temporary export control requirements for statistical purposes on certain personal protective equipment (e.g. face masks, gloves).	3/18/2020	Open Ended
<b>ARMENIA</b>	Medical supplies and equipment	Licensing or permit requirements to export	Export restriction on a range of medical supplies	3/19/2020	Open Ended
<b>UNITED KINGDOM</b>	Medcines, drugs	Export prohibition	Exports of more than 80 vital drugs have been banned by ministers to prevent NHS shortages of medicines needed to treat coronavirus.	3/19/2020	Open Ended
<b>ARGENTINA</b>	Medical Ventilators	Licensing or permit requirements to export	Temporary implementation of export licensing requirement on medical ventilators.	3/20/2020	Open Ended
<b>SRI LANKA</b>	Masks	Export Prohibition	April 14: Regulations, No. 2 of 2020 published in the Gazette Extraordinary No. 2167/17 of March 20, 2020 are hereby rescinded March 20: Exports of all types of surgical masks are prohibited.	3/20/2020	4/11/2020

<b>ALGERIA</b>	Food products, medicines, medical supply product	Export Prohibition	List of products temporary suspended from export	3/22/2020	Open Ended
<b>COLOMBIA</b>	Medical supply, medicines	Export Prohibition	Temporary export ban on certain personal protective equipment.	3/22/2020	9/21/2020
<b>LEBANON</b>	Personal protective equipment, medical supply	Export Prohibition	Lebanon suspendeds export of certain personal protective and medical goods.	3/22/2020	Open Ended
<b>NEPAL</b>	Medicines, masks and sanitizers	Export Prohibition	Government has banned the export of the medicines, masks and sanitizers.	3/22/2020	Open Ended
<b>EURASIAN ECONOMIC UNION</b>	Protective equipment, protective and disinfectants, medical supplies	Export prohibition	A temporary ban has been introduced on the export of personal protective equipment, protective and disinfectants, medical supplies and materials from the EAEU.	3/24/2020	Open Ended
<b>PAKISTAN</b>	Masks	Export Prohibition	Pakistan bans the exports of masks.	3/24/2020	Open Ended
<b>HUNGARY</b>	Hydroxychloroquine drugs	Export prohibition	Hungary has banned the commercial export of hydroxychloroquine sulfate.	3/25/2020	Open Ended
<b>EL SALVADOR</b>	Beans	Export prohibition	Temporary export ban on certain dried leguminous vegetables (frijol rojo en grano).	3/26/2020	12/31/2020
<b>FRANCE</b>	Hydroxychloroquine medicaments	Export prohibition	France has banned exports of hydroxychloroquine.	3/26/2020	Open Ended
<b>SWITZERLAND &amp; LIECHTENSTEIN</b>	Personal protective equipment, masks	Licensing or permit requirements to export	Medical protection products need export authorisation when exported outside EEA. Affected: Non-EEA countries.	3/26/2020	Open Ended
<b>CYPRUS</b>	Medicines	Export Prohibition	The export of all medicines from Cyprus to any other country has been banned with immediate effect.	3/27/2020	Open Ended
<b>IVORY COAST</b>	Hand Sanitizers	Export prohibition	Ministry of Commerce bans the export of hydro-alcoholic gels	3/27/2020	Open Ended
<b>PHILLIPINES</b>	Rice	Export prohibition	The province of Bukidnon will stop exporting rice to ensure food security during its lockdown period. This measure is only applied by Bukidnon.	3/27/2020	Open Ended
<b>BOTSWANA</b>	Face masks, hand sanitizer	Licensing or permit requirements to export	The DTIC will need to be consulted prior to the export of certain selected goods including face masks and hand sanitizer.	3/28/2020	Open Ended
<b>ESWATINI</b>	Face masks, hand sanitizer	Licensing or permit requirements to export	The DTIC will need to be consulted prior to the export of certain selected goods including face masks and hand sanitizer.	3/28/2020	Open Ended
<b>LESOTHO</b>	Face masks, hand sanitizer	Licensing or permit requirements to export	The DTIC will need to be consulted prior to the export of certain selected goods including face masks and hand sanitizer.	3/28/2020	Open Ended

<b>NAMIBIA</b>	Face masks, hand sanitizer	Licensing or permit requirements to export	The DTIC will need to be consulted prior to the export of certain selected goods including face masks and hand sanitizer.	3/28/2020	Open Ended
<b>SOUTH AFRICA</b>	Face masks, hand sanitizer	Licensing or permit requirements to export	The DTIC will need to be consulted prior to the export of certain selected goods including face masks and hand sanitizer.	3/28/2020	Open Ended
<b>NORWAY</b>	Personal protective equipment	Licensing or permit requirements to export	An export permit issued by the Directorate of Health is required for the export of personal protective equipment.	3/30/2020	Open Ended
<b>HONDURAS</b>	Beans	Export prohibition	Temporary export ban on certain dried leguminous vegetables	3/31/2020	Open Ended
<b>NORTH MACEDONIA</b>	Wheat, meslin, wheat flour	Export Prohibition	Measure on the prohibition of exports of wheat and meslin, as well wheat flour, is taken in the emergency situation due to the COVID-19.	4/1/2020	Open Ended
<b>MYANMAR</b>	Rice	Export Prohibition	Ministry of Commerce is temporarily suspending the issuance of rice export permits.	4/3/2020	Open Ended
<b>UNITED STATES OF AMERICA</b>	Respirators, surgical masks and surgical gloves	Licensing or permit requirements to export	Administration issued executive order directing federal emergency management and health officials to use the law's authority to preserve respirators, surgical masks and surgical gloves for domestic use.	4/3/2020	Open Ended
<b>CAMBODIA</b>	Rice, fish	Export Prohibition	Cambodia bans some rice and fish exports to ensure local food security during the coronavirus crisis.	4/5/2020	Open Ended
<b>SYRIA</b>	Food commodities, sterilization and cleaning materials	Export Prohibition	Syrian Ministry of Economy decided to prohibit exports of a series of food commodities, sterilization and cleaning materials.	4/5/2020	5/4/2020
<b>JORDAN</b>	Food products	Export prohibition	The Jordanian Ministry of Industry, Trade and Supply decided to stop granting export and re-export licenses for food products.	4/6/2020	Open Ended
<b>BAHRAIN</b>	Face masks, face shields	Export Prohibition	Ban to export of all types of protective face masks without prior permission of the Minister. The decision valid is 3 months.	4/9/2020	6/8/2020
<b>AZERBAIJAN</b>	Medical supply products, sterile gloves, masks and goggles, disinfectants	Export Prohibition	Temporary export ban on certain medical supplies products.	4/10/2020	Open Ended
<b>ROMANIA</b>	Cereals, flour, sugar, vegetable oil	Export Prohibition	Romania suspended/banned the exports of cereals, flour, sugar, oil	4/10/2020	Open Ended



			and other agri-food products. Affected: Non-EEA countries.		
<b>SUDAN</b>	Maize, sorghum	Export Prohibition	Sudanese Ministry of Industry and Trade has temporarily banned exports of maize.	4/15/2020	Open Ended
<b>MALI</b>	Personal protective equipment, food products	Export Prohibition	The government bans exports of personal protective equipment (e.g.masks, gels) and certain food products (rice, millet, sugar, milk, pasta).	4/17/2020	Open Ended
<b>ZIMBABWE</b>	Medical supply products	Export Prohibition	Zimbabwe bans exports of medical supplies.	4/22/2020	Open Ended
<b>TAJKISTAN</b>	Grains, beans, wheat, flour, rice, eggs, potatoes and meat	Export Prohibition	Exports of certain food products such as grains, beans, wheat, flour, rice, eggs, potatoes and meat are prohibited.	4/30/2020	Open Ended

*Additional Submission of*

Lori Wallach  
Director, Public Citizen's Global Trade Watch

*before*

U.S. International Trade Commission

*on*

“COVID-19 Related Goods: The U.S. Industry, Market, Trade, and Supply  
Chain Challenges”

*October 2, 2020*



Lori Wallach, Director  
Public Citizen's Global Trade Watch  
215 Pennsylvania Ave. SE  
Washington, D.C. 20003  
lwallach@citizen.org  
202-546-4996

Mister Chairman and members of the Commission, thank you for the opportunity to testify on September 23, 2020 on the serious challenges that the COVID-19 pandemic has laid bare concerning the United States' capacity to produce and procure goods needed to combat the coronavirus public health crisis. I am Lori Wallach, director of Public Citizen's Global Trade Watch. Public Citizen is a national public interest organization with more than 500,000 members and supporters. For more than 45 years, we have advocated for consumer protections and more generally for government and corporate accountability.

With the objective of providing further information in response to questions posed by the commissioners during the hearing, this submission includes:

1. In response to Chairman Kearns request, information about the way in which the intellectual property (IP) regime now in place poses challenges for widespread production and distribution of the COVID-19 vaccines that are under development.
2. Detailed information concerning the volume of key pharmaceuticals imported into the United States during 2019, which shows excessive reliance on India and China to access critical medicines to deal with the COVID-19 pandemic.
3. A response to the concerns expressed by the medical goods industry representatives regarding Buy American laws.

### **1. The Intellectual Property Regime Obstructs Widespread Production and Distribution of COVID-19 Vaccines**

Public health experts agree we will not escape from the pandemic until we have an effective vaccine. However, too little attention is being paid to the problem of scaling up vaccine production to worldwide scale with sufficient dosages. This will be impossible if one or a couple of firms maintain exclusive control over a vaccine's (or multiple vaccines') intellectual property and associated know-how.<sup>1</sup>

For starters, no corporation has the production capacity necessary to supply the whole world. The head of the world's largest vaccine manufacturer, the Serum Institute, recently said that under current plans he expects it will take four to five years to manufacture vaccines for everyone in the world.<sup>2</sup>

A path to accelerating widespread access to a COVID-19 vaccine is technology licensing and knowledge sharing, which would enable all qualified manufacturers to contribute to global supply. Patents and other IP exclusivities are direct obstacles to this scale up of manufacture, as they allow the corporations holding such monopoly rights to block this means to expand manufacturing capacity.

Specifically, patents grant their holder the right to exclude others from making, using, selling, or importing the patented invention. Corporations developing COVID-19 vaccine candidates claim to

---

<sup>1</sup> Public Citizen's Access to Medicines Program, "Backgrounder: Scaling-up COVID-19 Treatment and Vaccine Access", April 16, 2020. Available at: <https://www.citizen.org/wp-content/uploads/COVID-backgrounder-April-16.pdf>

<sup>2</sup> Stephanie Findlay and Anna Gross, "Not enough Covid vaccine for all until 2024, says biggest producer", *Financial Times*, September 14, 2020. Available at: <https://www.ft.com/content/a832d5d7-4a7f-42cc-850d-8757f19c3b6b>

have patents essential to making those vaccines—from patents on modifications of the virus that are the basis of some vaccines being tested to the processes and methods for actually producing the vaccine. This means that they can prevent others from making their vaccine

Unless governments assert rights to license and make use of the technology, patents and other exclusivities will give these corporations monopoly control over when, how and whether the pandemic is tamed. A few companies would be empowered to determine when and what people in what countries will live and die. The answer is for governments to make the corporations share this technology and know-how, potentially using public manufacturing powers<sup>3</sup> as well as compulsory licensing.<sup>4</sup> Absent governments taking such measures, one or a few pharmaceutical corporations with patents covering safe and effective COVID-19 vaccines would not only be empowered to charge governments what they want, but would create a choke point in global supply.

There are sound reasons to believe that this is a real risk.

Dr. Anthony Fauci, director of the NIH's National Institute of Allergy and Infectious Diseases, said the amount of time needed to start scaling up vaccine production could be “as problematic” as the time to develop the vaccine itself.<sup>5</sup>

Corporations have already used patents and other government-granted exclusivities to charge excessive markups for their products in the midst of the pandemic. For instance, after receiving FDA's Emergency Use Authorization for a rapid COVID-19 test that delivers results in just 45 minutes, the U.S. diagnostic test maker, Cepheid, announced that it will charge \$19.80 per test in developing countries. Yet, according to Médecins Sans Frontières (MSF), the cost of production for each cartridge, including manufacturing, overhead, and other expenses, is as low as \$3.<sup>6</sup>

Furthermore, MSF has also documented how, even before the COVID-19 pandemic, patents related to pneumococcal conjugate and human papillomavirus vaccines have dramatically increased the cost to fully immunize children, hence, obstructing the widespread dissemination of these lifesaving vaccines. Particularly, MSF found that while human papillomavirus vaccines could be manufactured for as little as \$0.50, the selling price charged by companies like GSK or Merck ranged from \$4.5 up to \$193 per dose.<sup>7</sup>

---

<sup>3</sup> 28 USC 1498 provides for government use of patents, including the manufacture, import, export and sale of patented inventions on behalf of the U.S. government. The Pandemic All Hazards Preparedness Act and Defense Production Act provide for public manufacturing of medical tools including vaccines.

<sup>4</sup> A compulsory license allows the government or other manufacturers to use and produce patented inventions, including medical tools, treatments and vaccines, in exchange for royalty payments to the patent holder. Whereas, the U.S. patent code does not include a general compulsory licensing provision, the United States has multiple federal statutes directly authorizing compulsory and government use licenses and has regularly issued such licenses in the past.

<sup>5</sup> Eric Sagonowsky, “Calling vaccine makers: Moderna, NIH need a partner to produce their coronavirus shot”, *Fierce Pharma*, February 12, 2020. Available at: <https://www.fiercepharma.com/pharma/amid-deadly-outbreak-nih-hasn-t-found-its-pharma-partner-to-manufacture-coronavirus-vaccines>

<sup>6</sup> Médecins Sans Frontières, “MSF calls for no patents or profiteering on COVID-19 drugs, tests, and vaccines in pandemic”, March 27, 2020. Available at: <https://msfaccess.org/msf-calls-no-patents-or-profiteering-covid-19-drugs-tests-and-vaccines-pandemic>

<sup>7</sup> Médecins Sans Frontières, “A Fair Shot for Vaccine Affordability: Understanding and addressing the effects of patents on access to newer vaccines”, September 2017. Available at: <https://msfaccess.org/fair-shot-vaccine-affordability>

There is no question that patents and other forms of IP protection raise prices of brand drugs compared to generics, which, on average, are 80 to 85 percent less expensive.<sup>8</sup> Classic examples of these price disparities are Prilosec and omeprazole, both of which are used for treating the stomach and esophagus problems of reflux. While the patented brand name medicine Prilosec costs \$3.31 per unit the generic competitors selling omeprazole charge on average \$0.06. Another example is Zofran and ondansetron, medicines used for cancer patients undergoing chemotherapy, with a price differential of 99%.<sup>9</sup>

If COVID-19 vaccines – as well as treatments – are subject to patent and other monopoly protections, and thus production, distribution and price follow the usual brand name drug patterns, ending the pandemic will take much longer and cost many more lives than it must. To that extent, the U.S. government should lead in insisting on open licensing for the world, with intellectual property related to this severe global health emergency from patents, trade secrets, know-how, cell lines, copyright, software, data and all other relevant intellectual property - committed to the public domain.

The following concrete actions by the U.S. government could achieve this end:

- Negotiate licensing agreements with the companies that hold patents related to the most effective vaccines, or, alternatively, order compulsory licenses to manufacture vaccines through public capacity and compel patent holders to license out to other private firms that could complement the supply. Canada, Germany, Brazil, Chile and Ecuador have already taken some steps to facilitate compulsory licensing to support the fight against COVID-19 and Israel issued a compulsory license on a possible treatment due to supply concerns.<sup>10</sup>
- Join and support the World Health Organization’s COVID-19 Technology Access Pool (C-TAP),<sup>11</sup> which aims at the public sharing of research and development outcomes, as well as data and intellectual property to accelerate innovation, scale up production and mitigate shortages of medical goods developed to fight back the COVID-19 pandemic.
- Avoid pushing for enhanced IP protection in other jurisdictions. In 2019, the United States Trade Representative (USTR) criticized compulsory licensing by trading partners regarding pharmaceuticals.<sup>12</sup> These actions disregard that compulsory licensing is not only legal under international law but probably necessary to fight effectively the COVID-19 pandemic.

---

<sup>8</sup> Harvard Men's Health Watch, “The cost of generic and name-brand drugs”, August 2016. Available at: <https://www.health.harvard.edu/aging/the-cost-of-generic-and-name-brand-drugs>

<sup>9</sup> Association for Accessible Medicines, “2020 Generic Drug & Biosimilars Access & Savings in the U.S. Report”. Available at: <https://accessiblemeds.org/sites/default/files/2020-09/AAM-2020-Generics-Biosimilars-Access-Savings-Report-US-Web.pdf>

<sup>10</sup> Public Citizen’s Access to Medicines Program, “Backgrounder: Scaling-up COVID-19 Treatment and Vaccine Access”, April 16, 2020. Available at: <https://www.citizen.org/wp-content/uploads/COVID-backgrounder-April-16.pdf>

<sup>11</sup> World Health Organization, “COVID-19 technology access pool”. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/covid-19-technology-access-pool>

<sup>12</sup> U.S. Trade Representative, “2019 Special 301 Report”, April 2019. Available at: [https://ustr.gov/sites/default/files/2019\\_Special\\_301\\_Report.pdf](https://ustr.gov/sites/default/files/2019_Special_301_Report.pdf)

## **2. The United States is especially dependent on Chinese and Indian exports of pharmaceuticals**

During the first day's final panel, one commissioner asked another witness about the concerns expressed by Public Citizen about U.S. reliance on China and India for finished pharmaceuticals and Active Pharmaceutical Ingredients (API). During the exchange, there seemed to be confusion about the source of Public Citizen's data regarding the volume of medicine imports from different countries. The source is the USITC!

As we noted in our written and verbal testimony, there is an undeniable lack of information regarding the sourcing of the total U.S. medicine supply or the sourcing of all active pharmaceutical ingredients (API) for the U.S. medicine supply. However, the USITC does provide volume data on sources of imported medicines.

These data show the overdependence on China, but on India too, regarding pharmaceuticals. A close look to the imports' sources, measured by volume to counter the distortions in price caused by patents and corporate tax manipulations, shows how the United States is especially dependent on China and India to access specific categories of vital pharmaceutical products.

What remains missing, and hopefully the USITC can unearth, is the data that certainly the industry has about what portion of each of these categories of medicines consumed in the United States is produced here and what portion of API going into medicines finished here and those finished elsewhere are manufactured domestically.

While the Alliance for Affordable Medicines' testimony helpfully spotlighted Dr. Janet Woodcock's, Director of the Center for Drug Evaluation and Research at the FDA, testimony to the House Energy and Commerce's Subcommittee on Oversight and Investigations on December 10, 2019 noting in what locations the FDA has approved manufacturing facilities, this provides no information about how much of medicines or APIs are produced in any one nor what variety of items are produced at any one.

Another data problem that we urge the USITC to recommend be addressed is the lack of distinctions in the HTS codes for many API with respect to such chemicals' medical versus industrial uses. Even at the most detailed HTS level, most are combined.

Absent information on the domestic medicine and API production share broken down by types of medicines consumed in the United States and the source of imported APIs measured by volume, neither policymakers nor the public can rest assured that supply chains are resilient and that we are not vulnerable to shortages. Indeed, industry testimony that U.S. medicine supplies are not a matter for concern are contradicted by the reality that prior to the COVID-19 crisis, the FDA documented 130 shortages of 163 medicines they deem essential between 2013 and 2017.<sup>13</sup> The American Society of Health-System Pharmacists has identified 2,804 national-scale drug shortages in the last two decades. That is to say that on average there is a supply shortage of 140 types of medicine each year.<sup>14</sup>

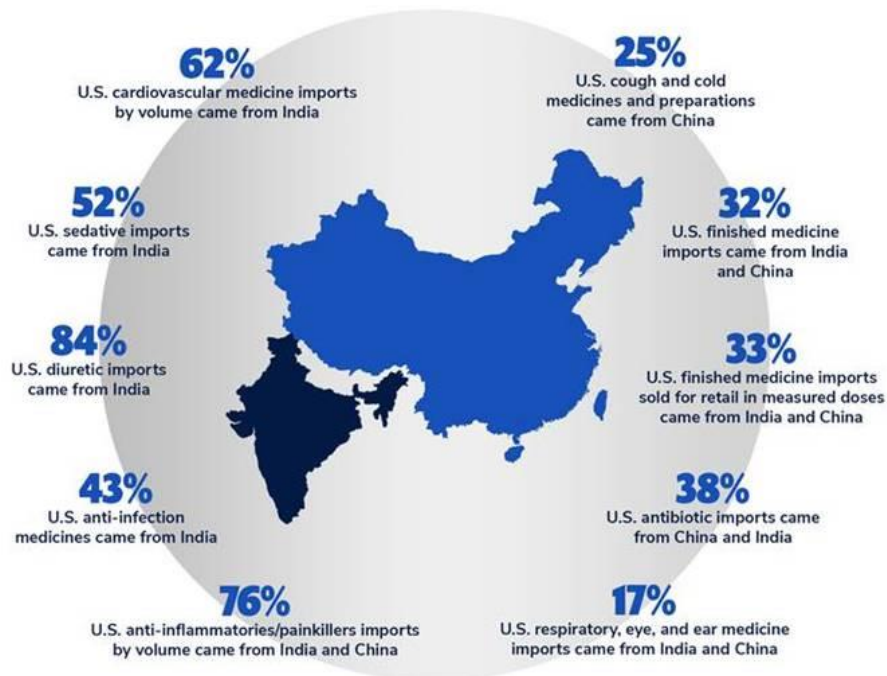
---

<sup>13</sup> U.S. Food and Drug Administration, "Drug Shortages: Root Causes and Potential Solutions, 2019", February 21, 2020. Available at: <https://www.fda.gov/media/131130/download>

<sup>14</sup> American Society of Health-System Pharmacists, "Drug Shortages Statistics", accessed on October 1, 2020. Available at: <https://www.ashp.org/Drug-Shortages/Shortage-Resources/Drug-Shortages-Statistics>

The following figure spotlights some of the drugs on which the United States is reliant on China and India as import sources (tables with the supporting USITC data used to make the figure can be found in Annex A).

**Figure 1. U.S. Import Reliance on China & India for Particular Drugs by Imported Volume in 2019**



Source: Global Trade Watch with U.S. International Trade Commission dataweb

### 3. Concerns about Retaliation for Enforcing Buy American Rules are Largely Exaggerated

During the hearing, representatives of the medical goods industries expressed concerns that enforcing domestic procurement preferences would trigger loss of access to public procurement markets abroad.

While the industry may seek to concentrate production in low-wage, low-cost venues, this retaliation concern is misplaced.

As the Government Accountability Office found in its 2017 study, the United States provided access to twice as much procurement for foreign firms as the next five largest World Trade Organization Agreement on Government Procurement (AGP) signatories *combined* (European Union, Japan, South Korea, Norway and Canada).<sup>15</sup> Thus, the industry would remain ahead by absorbing the increased demand for the much larger domestically manufactured product market were foreign countries to

<sup>15</sup> U.S. Government Accountability Office, “Government Procurement: United States Reported Opening More Opportunities to Foreign Firms Than Other Countries, but Better Data Are Needed; GAO-17-168” February 9, 2017. Available at: <https://www.gao.gov/products/GAO-17-168>

reduce access. That is to say that any loss would be marginal compared to the increased opportunities to provide products to federal and state entities in the United States.



## ANNEX A: SOURCES OF U.S. IMPORTS OF MEDICINES

### Top Source of U.S. Medicines<sup>16</sup> by Volume, 2019 (kg)

Sources	Volume	Participation
India	95,125,143	23%
Mexico	77,492,876	19%
China	39,462,531	9%
Canada	39,440,557	9%
Italy	28,756,717	7%
Germany	21,037,695	5%
United Kingdom	13,893,620	3%
Israel	12,485,452	3%
Spain	11,867,480	3%
Ireland	11,109,211	3%
Rest of the World	64,953,243	16%
<b>Total</b>	<b>415,624,525</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

### Top Sources of U.S. Drugs Sold in Measured Doses<sup>17</sup> for Retail by Volume, 2019 (kg)

Sources	Volume	Participation
India	82,430,392	24%
Mexico	77,434,205	22%
China	30,404,432	9%
Canada	29,080,578	8%
Italy	24,221,113	7%
Germany	14,393,453	4%
United Kingdom	11,529,728	3%
Spain	10,488,655	3%
Ireland	9,667,305	3%
Israel	7,882,120	2%
Rest of the World	49,153,437	14%
<b>Total</b>	<b>346,685,418</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

<sup>16</sup> HTS codes: 3003 and 3004.

<sup>17</sup> HTS code: 3004.90

**Top Sources of U.S. Anti-Infective Medicines<sup>18</sup> by Volume, 2019 (kg)**

Sources	Volume	Participation
India	3,093,018	43%
Mexico	789,822	11%
Canada	780,679	11%
Singapore	398,201	6%
France	303,670	4%
United Kingdom	293,441	4%
Taiwan	216,549	3%
Croatia	183,488	3%
China	159,638	2%
Germany	157,739	2%
Rest of the World	833,891	12%
<b>Total</b>	<b>7,210,136</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

**Top Sources of U.S. Cardiovascular Medicines<sup>19</sup> by Volume, 2019 (kg)**

Sources	Volume	Participation
India	16,402,787	62%
Canada	3,253,518	12%
China	1,017,985	4%
Singapore	784,913	3%
Czech Republic	767,832	3%
Italy	531,616	2%
Israel	461,786	2%
France	419,683	2%
Bangladesh	317,996	1%
Portugal	312,855	1%
Rest of the World	2,333,623	9%
<b>Total</b>	<b>26,604,594</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

<sup>18</sup> HTS Codes: 3004.90.9210, 3004.90.9110 and 3004.90.6010.

<sup>19</sup> HTS Codes: 3004.90.9220, 3004.90.9120 and 3004.90.6020.

**Top Sources of U.S. Anti-Inflammatory Drugs and Painkillers<sup>20</sup> by Volume, 2019 (kg)**

Sources	Volume	Participation
China	10,558,922	50%
India	5,588,839	26%
Canada	2,067,920	10%
Japan	786,779	4%
Germany	555,001	3%
Italy	261,707	1%
Israel	256,285	1%
Spain	212,678	1%
Sweden	188,958	1%
Czech Republic	128,347	1%
Rest of the World	673,040	3%
<b>Total</b>	<b>21,278,476</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

**Top Sources of U.S. Sedatives<sup>21</sup> by Volume, 2019 (kg)**

Sources	Volume	Participation
India	9,851,067	52%
Austria	2,749,435	15%
Italy	1,782,049	9%
Sweden	1,731,923	9%
Israel	675,319	4%
Norway	482,706	3%
Czech Republic	309,118	2%
China	191,250	1%
Switzerland	161,641	1%
France	157,379	1%
Rest of the World	830,443	4%
<b>Total</b>	<b>18,922,330</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

<sup>20</sup> HTS codes: 3004.90.6022, 3004.90.6024, 3004.90.6026, 3004.90.6028, 3004.90.9022, 3004.90.9024, 3004.90.9026, 3004.90.9028, 3004.90.9122, 3004.90.9124, 3004.90.9126, 3004.90.9128, 3004.90.9222, 3004.90.9224, 3004.90.9226 and 3004.90.9228.

<sup>21</sup> HTS codes: 3004.90.6030 and 3004.90.9230.

**Top Sources of U.S. Diuretics<sup>22</sup> by Volume, 2019 (kg)**

<b>Sources</b>	<b>Volume</b>	<b>Participation</b>
India	1,480,688	84%
Canada	129,007	7%
Czech Republic	86,315	5%
Croatia	61,784	3%
Italy	5,347	0%
Israel	3,627	0%
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Rest of the World	N/A	N/A
<b>Total Imports</b>	<b>1,766,768</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

**Top Sources of U.S. Cough & Cold Medicines<sup>23</sup> by Volume, 2019 (kg)**

<b>Sources</b>	<b>Volume</b>	<b>Participation</b>
Canada	20,093,636	37%
China	13,631,559	25%
Switzerland	7,155,109	13%
United Kingdom	6,969,467	13%
Mexico	4,699,574	9%
India	992,727	2%
Spain	504,460	1%
Italy	368,045	1%
Germany	106,705	0%
Pakistan	23,171	0%
Rest of the World	77,802	0%
<b>Total Imports</b>	<b>54,622,255</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

<sup>22</sup> HTS codes: 3004.90.9265, 3004.90.6065 and 3004.90.9165.

<sup>23</sup> HTS codes: 3004.90.9176, 1704.90.2500, 3004.90.3000, 2106.90.3900, 3004.90.6075 and 3004.90.9276.

**Top Sources of U.S. Drugs Affecting the Respiratory System, Eyes, and Ears<sup>24</sup> by Volume, 2019 (kg)**

<b>Sources</b>	<b>Volume</b>	<b>Participation</b>
Ireland	3,400,505	31%
France	1,380,423	13%
India	1,371,653	13%
Canada	905,788	8%
South Africa	766,990	7%
Belgium	597,824	5%
Germany	484,378	4%
China	476,962	4%
Switzerland	348,894	3%
Israel	302,786	3%
Rest of the World	885,830	8%
<b>Total Imports</b>	<b>10,922,033</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

**Top Sources of U.S. Antibiotics<sup>25</sup> by Volume, 2019 (kg)**

<b>Sources</b>	<b>Volume</b>	<b>Participation</b>
India	4,559,779	27%
Italy	2,604,267	16%
Jordan	1,858,484	11%
China	1,766,479	11%
Canada	1,076,038	6%
Switzerland	962,067	6%
Germany	760,658	5%
United Kingdom	607,031	4%
Brazil	515,999	3%
Austria	465,984	3%
Rest of the World	1,604,320	10%
<b>Total Imports</b>	<b>16,781,106</b>	<b>100%</b>

SOURCE: U.S. INTERNATIONAL TRADE COMMISSION

<sup>24</sup> HTS codes: 3004.90.9185 and 3004.90.9285.

<sup>25</sup> HTS codes: 3003.20 and 3004.20.