Expanding the TRIPS Waiver Is Unnecessary and Harmful

September 2022
Key Takeaways

- Biopharmaceutical manufacturers are already sharing their IP and remain committed to providing timely, equitable global access to safe and effective COVID-19 vaccines and treatments – Supply far exceeds demand

- Giving away American IP on treatments to foreign countries will outsource U.S. manufacturing jobs and weaken U.S. biopharmaceutical leadership

- Expanding the waiver to include COVID-19 treatments will undercut U.S. innovation and jeopardize our ability to fight COVID-19 and other conditions
Global Partnerships Are Fueling Production and Patient Access to COVID-19 Vaccines and Treatments
The Supply of COVID-19 Treatments Far Exceeds Demand

Governments and NGOs Purchased 80 Million Courses of COVID-19 Treatments for 2022 but Have Administered Only 18 Million Courses So Far

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**All Countries**

- **Supply:** 110
  - 66
  - 30
  - 14
- **Demand:** 50
  - 32
  - 18

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**High-Income Countries**

- **Supply:** 45
  - 45
- **Demand:** 17
  - 9
  - 8

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**Low-Income and Middle-Income Countries**

- **Supply:** 35
  - 14
  - 21
- **Demand:** 34
  - 24
  - 10

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**Sources:**

Estimates for purchases by governments and organizations (e.g., Global Fund, UNICEF) and potential surplus production are provided by Airfinity. Estimates of treatments administered to patients are based on published uptake rates available for countries that have received COVID-19 treatments. Estimates for potential additional demand are based on applying U.S. uptake rates (which are much higher than for other countries) to all countries, thereby estimating demand if all low-income and middle-income countries immediately started administering treatments at the same uptake rate as the United States. Estimates are based on data for Paxlovid®, molnupiravir, Evusheld®, bebtelovimab, remdesivir, favipiravir and umifenovir.
Industry Licensing Agreements Made Possible by Intellectual Property Are Meeting Demand for COVID-19 Treatments

143 COVID-19 Treatment Licensing Agreements Span 32 Nations

Source: Airfinity
U.S. Economic Impact of the Development and Manufacturing of COVID-19 Vaccines and Treatments
Over 400,000 U.S. Jobs Are Supported by the Development and Manufacturing of COVID-19 Vaccines and Treatments

Expanding the TRIPS Waiver Would Harm American Workers

Total Jobs Directly and Indirectly Supported by Development and Manufacturing

Total Jobs Impact from Clinical Trials for COVID-19 Vaccines and Treatments

- Scientific Research Jobs: 110,800 (55%)
- Biopharmaceutical Manufacturing: 310,900 (62%)
- Other Jobs: 31,200 (7%)

Total Jobs Impact from Manufacturing of COVID-19 Vaccines and Treatments

- Scientific Research Jobs: 110,800 (31%)
- Biopharmaceutical Manufacturing: 310,900 (41%)
- Other Jobs: 57,300 (4%)

Sources: Informa data used to identify clinical trials for COVID-19 vaccines and treatments in the United States. Evaluate data used to estimate clinical trial costs. PhRMA analysis of U.S. Department of Commerce (BEA) data on U.S. exports, gross output of biopharmaceutical goods and RIMS II (Type II) multipliers used to estimate the total (direct and indirect) impact of clinical trial spending and biopharmaceutical manufacturing in the United States.
Total Economic Impact Occurs Across Several Sectors

60% of U.S. Jobs Supported by COVID-19 Vaccines and Treatments Are Outside the Biopharmaceutical Industry

Composition of Jobs by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Jobs (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biopharmaceutical Manufacturing</td>
<td>99</td>
</tr>
<tr>
<td>Scientific Research</td>
<td>67</td>
</tr>
<tr>
<td>Other Services</td>
<td>58</td>
</tr>
<tr>
<td>Finance &amp; Real Estate</td>
<td>48</td>
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<tr>
<td>Business Services</td>
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<tr>
<td>Distribution</td>
<td>44</td>
</tr>
<tr>
<td>Health Care &amp; Education</td>
<td>38</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>20</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>20</td>
</tr>
</tbody>
</table>

Sources: Informa data used to identify clinical trials for COVID-19 vaccines and treatments in the United States. Evaluate data used to estimate clinical trial costs. PhRMA analysis of U.S. Department of Commerce (BEA) data on U.S. exports, gross output of biopharmaceutical goods and RIMS II (Type II) multipliers used to estimate the total (direct and indirect) impact of clinical trial spending and biopharmaceutical manufacturing in the United States.
Almost 90% of COVID-19 Clinical Trial Costs in the United States Are for Treatments

There Have Been Over 1,200 U.S. Clinical Trials for COVID-19 Treatments

U.S. COVID-19 Clinical Trial Costs:
$24 Billion to Date

- Over $24 billion has been spent on clinical trials for COVID-19 vaccines and treatments in the United States – supporting about 100,000 U.S. jobs

- Another $80 billion will be spent in the United States over the next several years if vaccines and treatments in the pipeline continue through clinical trials to approval – supporting approximately 110,000 U.S. jobs annually

Sources: Informa data used to identify clinical trials for COVID-19 vaccines and treatments in the United States. Evaluate data used to estimate clinical trial costs. PhRMA analysis of U.S. Department of Commerce (BEA) RIMS II (Type II) multipliers used to estimate the total (direct and indirect impact) of clinical trial spending in the United States.
Exports Drive Over 55% of COVID-19 Product Manufacturing in the United States

U.S. Exports of Biopharmaceutical Products Have Surged to Highest Levels on Record

- Over **300,000 U.S. jobs** are supported by the surge in U.S. biopharmaceutical manufacturing for COVID-19 vaccines and treatments
- **55%** of these jobs are supported by U.S. **exports** of biopharmaceutical products
- **U.S. exports** of biopharmaceutical products **increased over 60%** after the U.S. amended COVID-19 vaccine contracts in mid-2021

Sources: PhRMA analysis of U.S. Department of Commerce (BEA) data on U.S. exports, gross output of biopharmaceutical goods and RIMS II (Type II) multipliers used to estimate the total (direct and indirect impact) of biopharmaceutical manufacturing in the United States.
U.S. Scientific Research and Manufacturing Jobs Have Increased by More than 180,000 Since 2019

Scientific Research Jobs for New Medicines Create Manufacturing Jobs

U.S. Scientific Research Jobs (in thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td></td>
<td>616</td>
<td>607</td>
<td>649</td>
<td>728</td>
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</table>

+121,000 jobs since 2019

U.S. Biopharmaceutical Manufacturing Jobs (in thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td></td>
<td>563</td>
<td>591</td>
<td>669</td>
<td>654</td>
</tr>
</tbody>
</table>

+63,000 jobs since 2019

New Biopharmaceutical Industry Investment in the United States Increased 70% in 2021 – Half of the Global Total

Expanding the TRIPS Waiver Would Put at Risk U.S. Biopharmaceutical Leadership

New Biopharmaceutical Industry R&D and Manufacturing Facility Investment by Destination County
(in billions of U.S. dollars)

Source: FDI Markets data on new biopharmaceutical investment in manufacturing and R&D facilities. Estimates include green-field projects and expansions. Amounts for 2022 are annualized based on monthly data available through July 2022.
Expanding the TRIPS Waiver Would Undercut U.S. Medical Innovation and Our Ability to Fight Future Pandemics
Nearly 2,000 Clinical Trials Underway Across the Globe to Fight COVID-19

Industry Has a Diverse Research and Development Pipeline

Ongoing Clinical Trials Represent Many Approaches for Preventing and Treating COVID-19

Number of Clinical Trials Testing Different Types of COVID-19 Vaccines and Treatments

- Anti-inflammatory
- Antiviral
- Cell Therapies
- Convalescent Plasma
- Monoclonal Antibodies
- Genetic Materials (i.e., mRNA and DNA)
- Protein Vaccine
- Recombinant Vector Vaccine

Hundreds of Clinical Trials are Testing 176 Unique Investigational Treatments from PhRMA Member Companies

Most Treatments in the COVID-19 Pipeline Are Also Being Developed for Other Conditions

Expanding the TRIPS Waiver Would Put at Risk the Pipeline for Many Conditions

COVID-19 Treatments in Development

- COVID-19 Only: 41%
- Multiple Conditions: 56%
- Launched: 3%
- COVID-19 Only: 68%
- Multiple Conditions: 32%

Sources: Informa data used to identify clinical trials for COVID-19 treatments.
370 U.S. Clinical Trials Are Testing COVID-19 Treatments for Other Conditions

Oncology Accounts for 42% of these Clinical Trials

Sources: Informa data used to identify clinical trials for COVID-19 treatments.