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INTERNATIONAL TRADE IN MEDICAL GOODS: LESSONS FROM THE COVID-19 PANDEMIC

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Abstract

The article provides a detailed analysis of the global trade in medical goods, with a particular focus on the challenges and lessons learned from the COVID-19 pandemic. Particular emphasis is placed on the role of the World Trade Organisation (WTO) in regulating trade in medical goods. It examines the dynamics of trade in medical goods before and during the pandemic, focusing on changes in the structure of supply and demand. It analyses the political and economic measures taken by governments to ensure access to medical supplies during the pandemic, and assesses their effectiveness and impact on global supply chains. The authors found that unequal access to vaccines was linked to geopolitical interests and economic imbalances between countries. It concludes that the system for regulating international trade in medical goods needs to be reformed to ensure fairer and more efficient access to vital medical goods in the future.

Keywords

international trade, medical goods, pandemic, COVID-19, exports, imports.

Problem statement

In the 21st century, pandemics are becoming more frequent, spreading over larger areas of the world and affecting millions of people. Despite advances in medicine and science, new challenges such as climate change, population migration and globalisation are increasing the risk of new epidemics. The COVID-19 pandemic has become a vivid example of how quickly and widely infectious diseases can spread. It has also revealed deep inequalities in access to medical goods and services. This includes general access to the health system as well as access to newly developed critical medical products, including vaccines.

Relevance of the chosen topic

Studying the impact of the pandemic on international trade in medical goods is key to understanding global economic processes. The COVID-19 pandemic demonstrated the importance of supply chain stability and the need to adapt trade policies to unforeseen circumstances. Analysing international trade in medical goods in the context of the pandemic allows us to assess the economic impact on different regions of the world and to identify effective strategies to ensure global security and economic well-being.

Analysis of recent research and publications

International trade in medical goods during the COVID-19 pandemic has been the subject of in-depth analysis and numerous studies by national and international researchers (University of Applied Sciences Mittweida, 2024). In particular, (Baldwin & Weder di Mauro, 2020) analysed key issues of international trade in the context of the pandemic response; (Teremetskyi & Duliba, 2020) considered the specificities of international trade in medical goods, highlighting the importance of the WTO in the global response to the pandemic; (Evenett & Baldwin, 2020a) identified problematic issues of foreign trade policy in the fight against the pandemic; (Evenett & Baldwin, 2020b) examined the use of export restrictions and import taxes on COVID-19-related goods; (Chugaiev, 2020) described the peculiarities of foreign trade during the pandemic. These studies play a key role in designing effective trade policies and understanding their impact on global health.

Purpose of the article

The purpose of this article is to provide a comprehensive analysis of the impact of the COVID-19 pandemic on international trade in medical goods and to examine the lessons that can be learned from this crisis. In particular, the study aims to:

- assess the changes in international trade in medical goods caused by the pandemic, and identify the main problems and risks encountered during the crisis;
- analyse the effectiveness of international and national trade policies in response to the crisis;
- evaluate political and economic measures to support trade and access to medical goods;
- identify, based on the results obtained, areas for improving international cooperation in the field of health and further developing international trade in medical goods.

Presentation of the main research material and results obtained

International trade in medical goods is an important part of the global economy and requires careful regulation to ensure that necessary goods are available worldwide. The World Trade Organisation (WTO) system of agreements plays a central role in this process by establishing rules that balance free trade with the protection of national health interests. The General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS), the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), the Agreement on Technical Barriers to Trade (TBT), the Trade Facilitation Agreement (TFA), and the Pharmaceuticals and Government Procurement Frameworks are the main instruments that allow WTO members to regulate international trade in medical goods. These agreements establish rules that promote access to medical goods while allowing countries to take measures to protect the health and safety of their citizens. The WTO recognises health risks as a legitimate argument for restricting trade. The establishment of trade barriers as exceptions to general WTO rules can be motivated by the protection of human, plant, animal and environmental health, as long as they are not used as disguised barriers to trade. However, as the COVID-19 pandemic demonstrated, existing mechanisms may not be sufficient to respond rapidly to crisis situations, such as sudden shortages of medical supplies. The lack of effective mechanisms to deal with such crises has led to problems with the implementation of World Health Organisation recommendations and other international standards. Ensuring the availability of medical goods during the COVID-19 pandemic tested international trade and WTO regulatory mechanisms.

Even before the COVID-19 pandemic, trade in medical goods had been growing steadily and significantly. In the decade before the COVID-19 pandemic, trade in medical products grew by an average of 4.7% per year (compared with 2.8% for total merchandise trade), and its share of international trade increased from 4.9% to 9.5%, reaching USD 1.5 trillion in 2021 (Fig. 1). Trade in medical goods has been more stable than trade in general, indicating the stability of demand for essential medical goods.

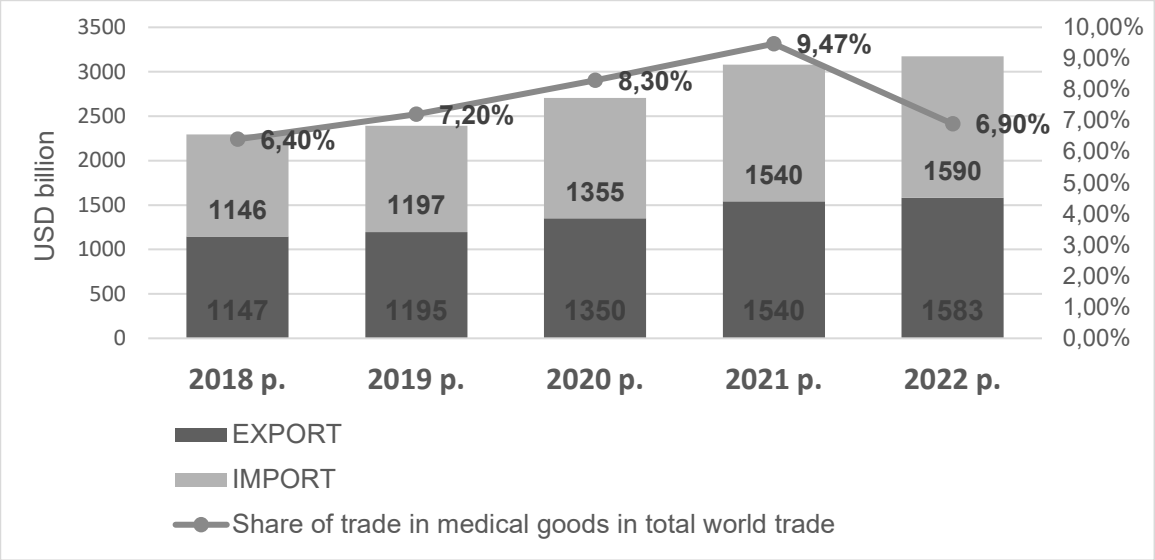

Fig. 1: Trade in medical goods, 2018-2022
Source: prepared by the authors according to (World Trade Organization, 2023)

While international trade has always been important for health and infectious disease control, it became even more so during the COVID-19 pandemic. As the global economy came to a near standstill due to quarantines, border closures and other measures to stop the infection, overall trade in goods declined in 2020. However, trade in medical goods grew by 13.2% and accounted for 8.3% of total merchandise trade. In 2021, the medical goods sector continued to show strong growth, increasing by 14.1% compared to the previous year. In 2022, the situation of global trade in medical goods stabilises and its share in total merchandise trade falls to 6.9%, which is in line with pre-pandemic levels and may indicate a gradual recovery of the global economy and the effectiveness of the measures taken to contain the pandemic.

Between 2018 and 2022, pharmaceutical products held the leading position among the categories of international trade in medical goods (Fig. 2). Their share in total turnover increased from 54.90% in 2018 to 56.70% in 2022. At the same time, the share of medical equipment decreased from 16.90% to 14.90%. Orthopaedic equipment remains the least represented category, with its share fluctuating slightly from 5.60% in 2018 to 4.70% in 2022. A significant increase in the share of personal protective equipment was recorded in 2020 - 16.70%, but it returns to its initial level of 12.8% in 2022. The share of other medical devices remains relatively stable over the analysis period.

The COVID-19 pandemic has led to global changes in the production and trade of personal protective equipment (PPE). Governments around the world responded to the crisis by introducing mandatory masks and raising hygiene standards, leading to a significant increase in demand for medical masks, disinfectants and rubber gloves. In 2020, exports of face masks increased by 481%, disinfectants by 199% and rubber gloves by 113%. Monthly export growth rates peaked in April 2020, when the WHO reported 1 million cases of COVID-19 worldwide. The supply deficit pushed up prices, which was partly responsible for the sharp increase in export prices in 2020, especially for medical masks. The deficit was exacerbated by trade policy interventions by most governments, which restricted exports of medical goods to meet their own needs. In 2021 and 2022, trade in personal protective equipment falls slightly, by 5.7% and 5.2% respectively, due to increased domestic production and lower prices.

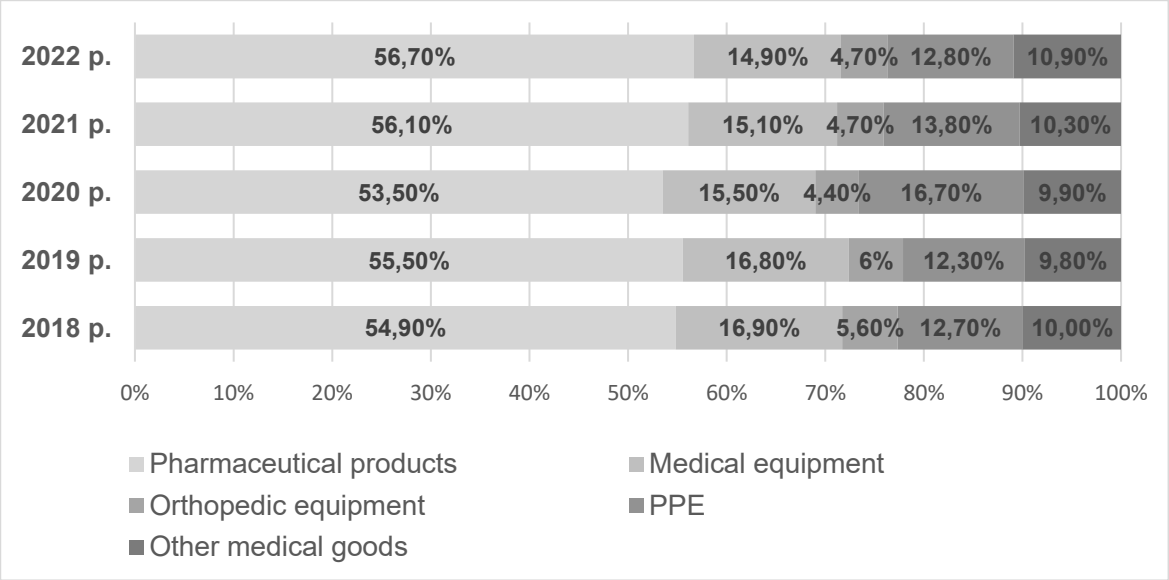

Fig 2. Structure of trade in medical goods in 2018-2022, %*

*Source: *prepared by the authors according to (World Trade Organization, 2023)*

In addition to personal protective equipment, trade in lung ventilators (up 80%) and testing systems (up 43.3%) increased significantly during the first year of the pandemic (World Trade Organization, 2022). On the other hand, the re-profiling of medical facilities to deal with the pandemic led to the postponement of scheduled procedures and diagnostic tests, resulting in a decline in demand for dental and orthopaedic equipment, as well as imaging equipment.

As the global health situation has changed, so has the demand for medical goods, reflecting the importance of these products at each stage of the pandemic. By 2021, the trade profile has changed, with vaccines and medicines replacing personal protective equipment as the fastest growing group with a 20% increase. As most healthcare facilities have already purchased critical equipment, demand for ventilators has declined. At the same time, the number of planned surgeries and hospital admissions recovered in countries such as the US, Canada and Germany, increasing the volume of orthopaedic, dental and other planned procedures that had been cancelled or postponed as a result of anti-epidemic measures. The surge in planned procedures increased demand for medical equipment (Fortune Business Insights, n.d.). Although the use of face masks remained officially mandatory in most countries, trade in face masks fell by almost 13%. With the start of vaccination, the trade in syringes and needles increased by 18.8% (World Trade Organization, 2022).

Global exports of medical devices are concentrated in a small number of countries, mostly members of the Organisation for Economic Co-operation and Development (OECD). In 2022, the top 10 exporters of medical devices accounted for almost three quarters of the world total. Germany was the largest exporter of medical goods with a total volume of USD 202.6 billion. This represented 12.9% of global exports (Table 1). The United States and China ranked second and third with USD 189.6 billion (12% of world exports) and USD 137.3 billion (8.7% of world exports) respectively.

Table 1 - Top 10 exporters/importers of medical goods, 2022 (USD billion and %) *

Rating	Countries	Exports in 2022	
		USD billion	Share, %
1	Germany	202,6	12,9
2	USA	189,6	12
3	China	137,3	8,7
4	Belgium	125,9	8
5	Switzerland	118,8	7,5
6	Netherlands	109,1	6,9
7	Ireland	105,4	6,7
8	Italy	67,5	4,3

Rating	Countries	Imports 2022	
		USD billion	Share, %
1	USA	306	19,2
2	Germany	134,2	8,4
3	Belgium	103,4	6,5
4	China	94,3	5,9
5	Netherlands	85,3	5,4
6	Japan	70,4	4,4
7	France	64,3	4
8	Switzerland	60,3	3,8

9	France	59,3	3,8
10	United Kingdom	46,4	2,9
	Other	412,7	26,2

9	United Kingdom	58,4	3,7
10	Italy	57,4	3,6
	Other	556,9	35

**compiled by the authors according to (World Trade Organization, 2023)*

The structure of exports by product category differs between countries (Table 2). While Germany was the largest exporter of pharmaceutical products, the United States was the largest exporter of medical and orthopaedic equipment. China was the largest exporter of personal protective equipment. The pandemic has shifted the centre of trade in certain medical products from the United States and Europe to Asia. Asia's exports increased mainly due to the production of personal protective equipment, the least technologically sophisticated group of medical products. In this category, Asia accounted for 61% of exports in 2020. Malaysia has long dominated rubber glove exports, accounting for more than half of global shipments. The economies of China, Hong Kong, Japan, Korea, Malaysia, Thailand, Vietnam and Taiwan were among the world's top 15 suppliers of personal protective equipment, with a combined share of 58% in 2020, up 16% from 2019. Other Asian economies accounted for a further 3% (World Trade Organization, 2022).

Between 2019 and 2022, China will significantly improve its position in the medical supplies market, moving from fifth to third place among exporters. This is mainly due to an increase in exports of personal protective equipment. Over the same period, Belgium rose from seventh to fourth place, becoming the second largest exporter of pharmaceuticals. Between 2019 and 2022, the rest of the world, with the exception of Asia, Europe and North America, was poorly represented in global trade in medical goods, with an average export share of 2.4%. In fact, Africa, Latin and Central America, the Middle East, the CIS and the rest of the world consistently account for less than 5% of exports in any category of the medical goods group (World Trade Organization, n.d.-a). These data suggest that the participation of these regions in the global exchange of these products is very limited. This situation may be due to the low level of economic development in many countries in these regions, lack of investment in healthcare, limited infrastructure for the production and trade of medical products, political instability and conflict.

Table 2 - Top 20 medical goods exporting by group (2019, 2022, USD billion) *

Countries	Pharmaceutical products		Medical equipment		Orthopaedic equipment		Personal protective equipment		Other medical goods	
	years									
	2019	**2022**	**2019**	**2022**	**2019**	**2022**	**2019**	**2022**	**2019**	**2022**
Germany	91	125	30,6	33,4	5	5,6	17,1	20	14,3	18,6
USA	58,7	87,5	38,5	43	10	10,7	13,5	17,3	23,7	31,1
Switzerland	86,9	102	7,1	7,6	5	5,4	1,4	1,7	1,6	2,2
Netherlands	49,7	53,2	17,3	22,3	8	9,8	5,7	7,4	11,1	16,4
China	16,5	23,2	15,8	22,8	5,1	6,8	33,7	62,8	7,6	21,6
Ireland	55,4	83,4	6,5	7,2	3,4	3,9	2,7	2,9	6,1	8
Belgium	55,6	105,2	6,4	6,5	3	3,4	4,1	5	4,8	5,9
France	36,1	38,2	6,8	6	2,6	2,1	5,8	7,2	4,4	5,8
Italy	35,4	48,9	4,7	5,5	2,2	2,5	5,2	6,3	3,1	4,4
United Kingdom	28,6	29,2	6	6,6	2,6	2,1	3,5	3,8	4,1	4,8
Japan	6,7	7,8	10,9	11,2	0,5	0,4	6,5	7,3	3,3	3,6
Singapore	9,1	10,5	7,9	9	2,7	2,3	1,8	2,5	3	3,5
India	17,9	21,5	1,1	1,4	0,3	0,4	1,6	1,9	1,9	2,1
Spain	13,3	28,8	1,1	1,2	0,5	0,6	1,8	2,4	1,9	2,6
Austria	12,2	14	2	2,2	0,5	0,4	1,9	2,1	1,2	1,7
Mexico	1,5	1,5	6,5	8,1	1,9	2,1	2,7	4	4,4	5,4
Sweden	11,1	13,7	1,6	1,8	0,4	0,4	1,3	1,6	1,8	2,5
Canada	8,5	10,8	2,3	3,1	0,3	0,3	2,2	2,5	1,9	2,3
South Korea	4,2	6,9	3,5	4,2	0,9	1,1	2,9	3,9	1,2	4,5
Poland	4,1	5,6	1,9	2,6	1,4	2	3	4,2	2,1	2,5

**compiled by the authors according to (World Trade Organization, 2023)*

In 2022, the United States was the largest importer of medical products across all categories, with a value of USD 306 billion (Table 3). This is a significant market share, accounting for 19.2% of the global volume. Germany

ranked second with USD 134.2 billion, almost half the value of the United States. Belgium became the third largest importer in 2022, with the majority of imports being pharmaceuticals. China ranks fourth.

The structure of medical imports reflects global trends and changes in health needs. Pharmaceuticals, as the main category of imports, underline the need for international access to medicines. The growth in medical equipment imports reflects innovative changes in medicine that require modern equipment to improve diagnosis and treatment. As for orthopaedic equipment, its lower share in imports may be related to the specificities of the local market and the development of domestic production to meet the needs of the national health system.

An analysis of intra-industry trade indicators shows that there is a high degree of convergence in imports and exports of medical products from leading suppliers. Countries tended to be both importers and exporters of medical goods. This means that a country may be a leading exporter of one type of medical product, but at the same time be dependent on imports of other types. Such a high level of aggregate intra-industry trade indicates that countries are interdependent in meeting demand and production needs. This suggests that countries are highly specialised in the production of certain types of medical goods, allowing them to use their resources more efficiently and be more competitive on the world market.

Table 3 - Top 20 medical goods importers by group (2019, 2022, USD billion) *

Countries	Pharmaceutical products		Medical equipment		Orthopaedic equipment		Personal protective equipment		Other medical goods	
	years									
	2019	**2022**	**2019**	**2022**	**2019**	**2022**	**2019**	**2022**	**2019**	**2022**
USA	134,6	175	39,1	49,7	15,3	17,9	26,2	37,9	16,3	25,5
Germany	58,9	80,8	15,7	17,4	5,5	5,5	11,9	14,9	10	15,6
China	35,6	42,2	20,4	23,3	3,3	3,5	10	13,8	7,2	11,4
Netherlands	33,5	40,7	12,2	16,9	5,2	7,7	4,7	6,4	8,2	13,6
Belgium	47,2	84,9	6,1	6,5	2,3	3	3,3	4,2	4,2	4,9
Japan	28,3	40	9,8	9,7	4,2	4,1	7,1	8,9	4,3	7,6
France	29	35	7,8	9,1	4,1	4	6,6	8,4	5,5	7,8
United Kingdom	28,3	33,1	6,4	8,5	2,9	2,7	5,2	6,9	4	7,1
Italy	31,2	39,1	5	5,5	2,5	2,6	4	5,3	3,3	4,9
Switzerland	32,5	49,5	3,4	4	1,8	1,6	1,9	2,5	1,8	2,7
Canada	15,2	20,9	5,1	6,2	1,8	2	4,4	6	3,2	6,3
Spain	16,5	24,8	3,6	4,4	1,4	1,8	3,4	4,2	2,6	3,4
South Korea	7,6	11,6	4,9	5,9	0,8	1	3,8	4,9	2	2,9
Australia	9,3	13,7	3,8	4,5	1,3	1,5	2,2	3,4	1,4	3,8
Mexico	4,3	4,9	3,9	4,6	0,7	0,8	5,4	8,9	3,1	4
Austria	10,7	12,2	1,9	2,1	0,6	0,7	2	2,5	1,4	1,6
Poland	7,7	10,5	2,1	2,7	0,9	1	3,3	4,6	1,8	2,2
Brazil	8,3	11,4	2,1	2,6	0,6	0,7	1,5	2,3	2,1	2,3
Ireland	8,6	12,1	1,4	2	0,5	0,8	0,8	1,2	1,5	2,6
Singapore	3,6	5,5	4,3	4,8	0,9	0,9	1,7	2	1,6	2,1

**compiled by the authors according to (World Trade Organization, 2023)*

On the other hand, for many developing and low-income countries, trade in medical goods is one-sided. This means that trade in medical goods between such countries is relatively limited, resulting in significant dependence on OECD and G20 countries for access to these products. This situation carries serious risks associated with dependence on geographically concentrated supplies of critical goods and the need for resilience planning.

The dominance of the United States and Europe in the global trade of medical goods has remained unchallenged, although the centre of trade has shifted to Asia for some less technologically sophisticated products. Both regions are renowned for their respective development and patenting, production and export of medical devices, pharmaceuticals and other medical products. Both the US and EU countries have favourable business legislation and well-developed infrastructure for the production and transport of medical goods. In recent years, however, these countries have faced challenges related to the globalisation of medical goods. The high demand for medical goods, the globalisation of production chains, the dependence on imported raw materials and the economic benefits of relocating production to countries with lower labour costs have created a complex system of international trade. This requires countries to strike a balance between supporting domestic production and

making efficient use of partner countries' resources (Dzyad & Mykhailenko, 2024).

The uncertainty of the extent, intensity and duration of the COVID-19 pandemic, as well as the need to overcome severe domestic shortages of medical products, led to restrictions on trade in medical products and allowed countries to apply discriminatory policies as an exception to WTO principles. At the beginning of the pandemic, one of the most pressing issues for national governments was to ensure access to personal protective equipment, critical medical devices and medicines, given the growing global demand for these goods. A wide range of policies can directly affect trade, such as tariffs, bans, import and export licensing. Others affect trade indirectly, such as trade facilitation measures, policies on trade in services (transport, logistics, insurance), regulatory frameworks, intellectual property rights, which can promote innovation and access to health technologies, and the promotion of technology partnerships, technology transfer through production chains and knowledge sharing.

However, there are issues that complicate the regulatory process. On the one hand, globalisation is increasing international trade, leading to greater accessibility of medical goods. On the other hand, it makes regulation more complex as the number of regulations increases and their complexity grows. The difficulty of regulatory procedures can be a barrier to effective trade, and high regulatory requirements can affect pricing. Delays in licensing and import procedures can have a negative impact on the availability of medical goods, especially when there is a need to respond quickly to changes in supply and demand for medical goods. The multitude of different instruments introduced by different countries creates an additional barrier to international trade, which requires harmonisation of standards and procedures. In addition, the problem of illegal trade in medical goods remains relevant and requires increased attention from regulatory authorities as it poses a direct threat to the health of consumers.

Since the beginning of the pandemic, governments have taken measures to restrict the export of medical products to ensure the availability of these goods in domestic markets. By 2020, almost 100 countries had imposed temporary restrictions or bans on the export of medical goods, raising many concerns, particularly in countries that rely on foreign trade for access to essential goods. The EU, for example, has banned the export of medical equipment to third countries. Italy's only ventilator manufacturer, Siare Engineering, which used to export 90% of its products, has stated that all of its products are reserved for domestic use under government guidelines (Berlinger, 2020). India has restricted the export of dozens of medicines, including acetaminophen and various antibiotics. Switzerland began requiring licences for the export of personal protective equipment. A number of other countries followed suit, imposing various forms of restrictions, ranging from outright bans to extensive licensing requirements that made exports much more difficult.

The main purpose of these protectionist policies was to protect the health of their citizens. Although such measures were ostensibly temporary and covered by international trade rules because they reduced shortages of medical goods and services at the national level, they created huge market failures that harmed both the countries that imposed them and their trading partners. Export restrictions were risky for many countries for several reasons. First, they restricted the availability of goods on international markets. This threatened countries that relied heavily on medical exports. High import concentration in certain products made developing countries extremely vulnerable to changes in exporters' policies. As a result of export restrictions, countries that desperately needed medical supplies and other critical products were deprived of them. Second, by restricting supply on the world market, exporters raised prices, leading to speculation and worsening the supply situation. Third, the restrictions imposed on intermediate products significantly complicated the supply chain, leading to delays or even stoppages in the production of goods and higher production costs. Finally, the countries that imposed export restrictions provoked reactions. Other countries followed suit and 'blocked' access to their own medical products and components. The reaction of foreign partners could even lead to the disruption of regional and global value chains for key products.

In response to the devastating COVID-19 crisis, the search for a vaccine led to an unprecedented level of public investment in global research and technology. As a result of these efforts, the first COVID-19 vaccines were approved and entered the market in an unprecedentedly short time. However, global demand for vaccines far outstripped supply, resulting in an uneven distribution of these life-saving products among countries of different income levels. High-income countries had an advantage in ordering and receiving vaccines.

The COVID-19 vaccine sector was very diverse, with companies offering different technologies and platforms for vaccine production. The largest exporters were the EU, China and the United States, which together accounted for about 87% of world exports (Table 4). Other important exporters were India, South Africa and Russia, although their shares were much smaller.

Table 4 - Total number of vaccine doses exported by producing countries by 31 May 2022

Country of manufacture	Number of doses (million)	Share of global exports, %
European Union	2.440,4	39,6
China	1.986,4	32,2
USA	968,0	15,7
Republic of Korea	240,4	3,9
India	140,2	2,3
South Africa	110,4	1,8
russian federation	102,4	1,6
Japan	67,0	1,1
Other	113,4	1,8

**Source: (World Trade Organization & International Monetary Fund, n.d.)*

Some governments, such as the United States, the United Kingdom and the EU, have sought to purchase (monopolise) all production of candidate vaccines or to ban their export outside their borders in order to cover their own populations first (an operation known as 'vaccine nationalism') (Velásquez, 2022). The United States, for example, has signed at least six bilateral agreements totalling more than one billion doses, far in excess of the needs of its 328 million people. The EU, UK and Canada have signed seven bilateral agreements with the potential to cover two, four and six times their respective populations (Launch and Scale Speedometer, n.d.).

Vaccine shortages due to production difficulties have led not only to an unevenly distributed market, but also to geopolitical power games known as 'vaccine diplomacy'. Countries have used access to vaccines as a diplomatic tool to strengthen their foreign policy positions and influence. This included providing vaccines to friendly countries or using them as leverage to pressure others for political or economic concessions. For example, China's Sinovac vaccine reached Brazil, russia's Sputnik vaccine reached Argentina, and India's Covishield (from Oxford-AstraZeneca) reached several countries in the Global South (Launch and Scale Speedometer, n.d.).

In addition, a major barrier to getting vaccines from manufacturers to the people in developing countries has often been poor trade infrastructure and logistics, as vaccines have a short shelf life and require proper storage. This is particularly challenging in sub-Saharan Africa, where only 28% of health facilities have a reliable electricity supply (Peacocke, Heupink, Frønsdal, Hoffmann Dahl, & Chola, 2021).

Global production restrictions and direct deals by high-income countries (and some middle-income countries) meant that low- and middle-income countries were left at the end of the supply chain. The first procurement for low-income countries took place in January 2021, thanks to the participation of the African Union in pooled purchases. Many countries in Latin America, Africa and Asia were unable to purchase enough vaccine for their populations. These challenges led to a decline in vaccination coverage, threatening gains made in the fight against infectious diseases.

In summary, in today's world where globalisation and international trade play a key role in ensuring access to medical goods, it is important to understand that the efficiency and fairness of these processes have a direct impact on the health of billions of people. Key issues that need to be urgently addressed include:

- the high cost of medical goods, which remains a serious problem for many countries, especially developing countries;
- the inequitable distribution of research and development of new medicines means that most people in the world do not have access to new and innovative treatments;
- customs duties, tariffs and other trade barriers severely hamper international trade in medical products, leading to shortages and lack of essential medicines;
- complex and bureaucratic procedures for registering and approving medical products prevent them from reaching the market in a timely manner;
- strict intellectual property rules limit access to medicines, and patent abuse leads to inflated drug prices.

The regulation of international trade in medical goods has become a particularly pressing issue in the face of global challenges. The need for a new Agreement on Trade in Health Products arose from the need to adapt to the changing global trade environment and to ensure more effective access to essential health products and services. The current environment requires flexibility and the ability to respond quickly to crisis situations, which has highlighted the shortcomings of existing regulatory mechanisms. Some provisions of the WTO Agreements, which were designed to stabilise and predict international trade relations, may not be conducive to trade liberalisation in the modern era. For example, the rules on domestic market protection and the application of tariffs

have restricted access to essential medical products, especially in developing countries. The complexity of conformity assessment and standardisation procedures has also created barriers to the rapid introduction of new medical products. In addition, intellectual property rules have complicated or restricted access to modern medicines, in particular through excessive patent protection.

In response to these challenges, the international community is considering ways to modernise and update the Agreements to provide greater flexibility and facilitate efficient trade in medical goods. This includes a review of the provisions on temporary measures, which allow countries to impose export restrictions to protect their own populations in emergency situations. Other issues under discussion include trade facilitation, tariff reduction and mutual recognition of conformity assessment standards, which could facilitate faster access to medical products worldwide. In particular, issues related to the pandemic and trade in medical products were discussed at the recent WTO Ministerial Conferences in Geneva in 2022 and in Abu Dhabi in 2024. Despite considerable efforts, attempts to liberalise trade in medical goods have not produced the desired results. This illustrates the difficulty of reaching consensus among WTO members on global trade rules.

Key issues that should be considered and presented in a Health Trade Agreement include

1) ensuring transparency to share information on markets, policies and stocks of key commodities to prevent crises such as panic buying, hoarding or export restrictions. Such transparency, for example through information sharing with the WTO, can increase confidence in global supply and facilitate efficient allocation of resources;
2) reduce tariffs on essential medicines. Countries could consider WTO initiatives to eliminate tariffs on an agreed list of essential medical goods (similar to the agreement on information technology products). Rather than closing markets or relying on domestic production, the elimination of import duties on these goods would allow health systems to receive medical products without interruption;
3) discipline on export restrictions, ranging from an agreement to prohibit export restrictions on certain types of goods to strict conditions on their use. The experience of the pandemic has shown that the imposition of export restrictions at a time of critical need for medical supplies has hampered global supply and seriously undermined supply chain coordination. The overall goal is to strike a fair and beneficial balance between national and global interests, while ensuring compliance with international norms and standards;
4) initial investment in collective solutions. The creation of global stockpiles of medicines that can be used in emergencies, such as pandemics or natural disasters, will ensure access to essential medicines for all countries, especially the most vulnerable. Supporting international research projects to develop new medicines and vaccines and to combat infectious diseases will promote innovation and scientific progress in this field;
5) the protection of intellectual property rights requires the creation of a balanced system that takes into account the interests of both producers and consumers of medical products. On the one hand, it is necessary to stimulate innovation and provide guarantees and incentives for the development of new medicines, vaccines, etc. On the other hand, it is necessary to ensure access to medical products for all population groups, especially for the poorest countries and groups;
6) it is also important to combat counterfeit products, which threaten the rights of intellectual property owners and patient safety. This requires the strengthening of mechanisms for monitoring, control and sanctions in the case of infringements.

Conclusions

The issue of international trade in medical goods is particularly relevant in the context of current global challenges. The COVID-19 pandemic has been an unprecedented test for the global health system and international trade. Demand for personal protective equipment (PPE), COVID-19 tests, vaccines and medical equipment has increased dramatically, outstripping the production capacity of many countries. Global supply chains have been severely disrupted by export restrictions, logistical challenges and other factors. These disruptions have affected the speed and reliability of medical supplies, creating additional challenges for countries most dependent on exports. Asian countries have become major producers of PPE, changing the traditional geography of trade. This shift points to new centres of production and their growing role in the global supply of medical goods. Supply shortages have led to significant increases in the price of medical goods, which has become a serious barrier for many countries in securing the resources needed to fight the pandemic. Low- and middle-income countries have struggled to access the medical supplies they need. Unequal access to vaccines has highlighted existing economic inequalities and raised global concern.

The concentration of production of critical medical supplies in a few countries has made the system vulnerable to shocks. This vulnerability has highlighted the need to diversify sources of supply and production to

increase resilience. The lack of a unified system for collecting and sharing data on production, stocks and distribution of medical supplies has made it difficult to coordinate efforts across countries. The need for transparent and harmonised information systems became apparent. Many countries imposed export restrictions that hampered international trade. Although aimed at protecting national interests, these measures created additional barriers to trade.

Taking into account the lessons of the COVID-19 pandemic, the international community is faced with the need to develop new strategies and policies to ensure greater resilience and efficiency in international trade in health products. In this regard, there is a need to develop a new multilateral Agreement on trade in health products. Such an agreement should aim to ensure the safety, accessibility and quality of medical products in the context of globalisation. The main aspects that should be considered and presented in the new agreement are: ensuring transparency in the exchange of information, reducing tariffs on essential medical products, disciplining export restrictions, initial investment in common solutions, WTO reform and protection of intellectual property rights. The importance of international cooperation, monitoring and analysis of trade measures, and engagement with all stakeholders is key to creating an adaptive system that can effectively respond to future global challenges, while ensuring equitable access to health products for all. In this way, the global goal of ensuring health and well-being, which is key to the sustainable development and prosperity of societies around the world, can be achieved.

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