Southern China International MUN

World Health Organization: On measures to foster equitable access to vaccine research and distribution in LEDC.
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1. Description of the Issue

1.1 History of the Issue

Vaccines have long been recognized as one of the most effective public health interventions, saving millions of lives annually by preventing infectious diseases such as smallpox, polio, measles, and tetanus. However, equitable access to **vaccine research and distribution** has historically been uneven, particularly between developed nations and **Less Economically Developed Countries (LEDCs)**. This disparity in rooted in structural inequalities related to economic capacity, technological infrastructure, intellectual property regimes, and global health governance frameworks[1].

Historically, inequitable access to vaccine research and distribution in LEDCs has been characterized by structural disparities in **global health governance**, economic capacity, and scientific infrastructure. Following decolonization, many LEDCs inherited under-constructed healthcare systems that were primarily oriented for disease control, rather than long-term research and innovation. As a result, vaccine development remained concentrated in industrialized states where long-term stability can't be ensured. The World Heath Organization has consistently noted that limited domestic research capacity restricted the ability of developing countries to effectively participate in vaccine innovation, reinforcing reliance on external manufacturers for essential immunizations[2]. This dependence was further inflamed by unequal financing structures, as **biotechnology** and vaccine research shifted toward economically intensive methods that exceeded the capabilities of most LEDCs. International support structure largely prioritized delivery and marketing, rather than direct technology transfer or support, creating a negative cycle in which LEDCs received vaccines but lacked the criteria to produce or adapt them independently. Over time, this imbalance can leave low-income countries particularly vulnerable during periods of global health crisis.

During the mid-20th century, large-scale immunization efforts were primarily driven by international cooperation. The World Health Organization's **Expanded Programme on Immunization (EPI)**, launched in 1974, aimed to ensure that everyone in the world has access to essential vaccines, particularly targeting children in LEDCs[3]. While the initiative significantly increased global immunization coverage, it relied heavily on donor funding and external manufacturing, leaving many LEDCs dependent on foreign vaccine supplies, rather than advocating for local research and production capacity.

The emergence of modern biotechnology in the late 20th century transformed vaccine research, making development more costly and increasingly dominated by private pharmaceutical companies based in high-income countries. Intellectual property protections under the World Trade Organization's Agreement on **Trade-Related Aspects of Intellectual Property Right (TRIPS)**, adopted in 1995, further solidified control over vaccine technologies within a small number of multinational corporations[4]. Although this agreement included flexibilities such as **compulsory licensing**, many LEDCs lacked the legal expertise or manufacturing ability to utilize these provisions effectively and efficiently.

The disparity in vaccine access between high-income and low-income countries has been present due to the structural imbalances in global healthcare systems. One of the key reasons LEDCs struggle to maintain equitable access to vaccines is the lack of domestic vaccine manufacturing capability. Vaccine production requires significant investments in research infrastructure, skilled labor, and complete regulatory frameworks, all of which are often unavailable for lower income nations. As a result, LEDCs are forced to depend on the supply chains of developed nations, leaving them vulnerable to supply chain disruptions and vaccine cost fluctuations. Additionally, the global pharmaceutical industry is heavily concentrated in a few high-income countries, with production largely taking place in the private sector. These companies often prioritize profits over usability and secureness, and their pricing are often set extremely high in which LEDCs can't afford the expense. The global focus of the international health system on distribution rather than production capability has meant that LEDCs are left out from the discussion of vaccine research and biotechnology innovation. This dependency worsens the inequity, as LEDCs are tagged to the role of "recipients" in the vaccine market, unable to influence, access, or contribute meaningfully to the research and development of new vaccines. The COVID-19 pandemic has only intensified these issues, highlighting the vulnerabilities of LEDCs in a global health crisis where early and reliable access to vaccines is essential. In order to break this cycle, there must be a reform in the global health policy that emphasizes sustainable vaccine production in LEDCs, allowing these countries to not only receive vaccines during emergencies, but also build their own research infrastructure to prepare themselves for future health crisis and challenges.

Previous global health emergencies highlighted this inequity. During the HIV/AIDS crisis in the late 1990s to the early 2000s, life-saving treatments remained inaccessible to much of the developing countries due to its high cost and patent protection, resulting in mass mortality[5]. Similar patterns occurred during the 2009 H1N1 influenza pandemic, when wealthier countries secured purchase agreements for vaccines, limiting its availability for lower income states[6]. These precedents demonstrated that without structural reforms and improvements in the future, inadequate vaccine distribution would continue to revisit LEDCs during global health crises.

1.2 Recent Developments

In recent years, the **COVID-19** pandemic brought unprecedented global attention to the inequities in vaccine research, production, and distribution. Despite the rapid development of vaccines in such a short time, access to them was highly unequal throughout the world. High-income countries secured the majority of early vaccine supplies, while many LEDCs faced severe shortages well into 2021 and 2022[7]. According to the World Health Organization (WHO), by mid-2021, over 75% of all administered COVID-19 vaccines had been concentrated in just ten countries, further highlighting the presence of global vaccine disparity[8].

In response, initiatives such as **COVAX** – co-led by WHO, Gavi, and the **Coalition for Epidemic Preparedness Innovations (CEPI)** – were established to ensure fair vaccine allocation and support the distribution of them in lower income countries[9]. While COVAX succeeded in fulfilling its mission, it faced challenges including supply disruptions, funding shortages, and competition with wealthier nations. These limitations underscored the constraints of voluntary initiatives within an unequal global market.

Regardless of COVID-19, international organizations have emphasized the importance of regional manufacturing stations and sustainable research environments. WHO's Global Strategy for Vaccine Research and Development and the establishment of mRNA technology in Africa showed the effort of organizations in addressing this issue[10].

Key Terms

Vaccines – Biological preparations that protect individuals from a specific infectious disease by helping the immune system recognize and fight harmful pathogens prior to the actual infection.

Vaccines are essential tools in preventing disease outbreaks and reducing mortality rates worldwide.

Vaccine Research – The scientific process of developing vaccines, including laboratory studies, clinical trials, safety testing, and approval stage. Vaccine research requires technological expertise and funding.

Vaccine Distribution – The process of delivering vaccines from producers to the populations. This includes allocation, transportation, storage, and administration.

Less Economically Developed Countries (LEDCs) – Countries with lower income levels and limited access to healthcare, technology, and financial resources. LEDCs often face challenges in accessing vaccines and participating in vaccine research.

Global Health Governance – The system through which countries, international organizations, and institutions cooperate to address global health issues.

Biotechnology – The use of biological science and technology to develop medical products, including modern vaccines. Advances in biotechnology have improved vaccine effectiveness but increased development costs.

Expanded Programme on Immunization (EPI) – A World Health Organization initiative launched in 1974 to improve access to essential vaccines, particularly aiming for children in low-income countries.

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) – A World Trade Organization agreement that establishes international standards for intellectual property protection, including patents on pharmaceutical products.

Compulsory Licensing – A legal mechanism that allows governments to allow the production of patented medicines without the consent of the patent holder himself, usually during public health emergencies.

COVAX – A global initiative co-led by the World Health Organization, Gavi, and CEPI that aims to ensure equitable access to COVID-19 vaccines, particularly for low-and-middle income countries.

Coalition for Epidemic Preparedness Innovations (CEPI) – An international partnership that funds and supports vaccine research and development for emerging infectious diseases.

2. Emphasis of the Discourse

2.1 Right-Wing Approach

The right-wing approach to equitable vaccine access prioritizes market-driven solutions and innovation, and the protection of intellectual property. Advocates of this perspective argue that strong intellectual property rights, as enforced through the TRIPS agreement, are essential for encouraging private-sector investment in vaccine research. According to this view, the protection of patents ensures that companies are incentivized to develop new vaccines by providing them with exclusive rights over their discoveries. This system, proponents assert, allows for faster and more efficient development, as pharmaceutical companies are motivated by profit and the potential to retrieve the costs of high-risk research. From the right-wing perspective, the free market, rather than government intervention, is the best method to promote the global availability of vaccines, ensuring that companies are allowed to operate without unnecessary restrictions.

However, critics of the right-wing approach remark that this market-driven model often results in unequal access to vaccines, particularly for LEDCs. Wealthier nations are able to secure vaccines early through advance purchase agreements, while poorer countries struggle to obtain the necessary supplies. This system intensifies global inequities, as wealthier countries can afford to prioritize domestic vaccine needs, leaving LEDCs to rely on donations or delayed shipments. In the case of the COVID-19 pandemic, many high-income countries locked in vaccine contracts before production began, leaving COVAX and other international initiatives struggling to meet the needs of low-income states. Right-wing policymakers argue that such agreements are necessary for the protection of national health security and economic stability, yet this often leads to frustration among the LEDCs, who see their populations as being left behind in the global vaccine development.

2.2 Left-Wing Approach

The left-wing approach emphasizes vaccine equity as a moral imperative, rather than relying on market mechanisms. Supporters of this perspective argue that vaccines should be considered a global public good and must be accessible to all people, regardless of their economic status. Left-leaning governments and organizations have strongly insisted for the suspension of intellectual property protections during health emergencies through compulsory licensing, allowing developing countries to produce vaccines locally without waiting for patents to expire. This approach prioritizes global health equity over profit, reflecting a commitment to ensuring that all countries, especially LEDCs, have the tools to protect their populations from infectious diseases. Supporters of this model believe that TRIPS waivers and technology transfers can reduce the dependence of low-income countries on external suppliers, enabling them to develop their own capacity to manufacture vaccines and better respond to future health crises.

In addition to patent flexibility, the left-wing approach advocates for comprehensive global health governance that includes stronger international cooperation. COVAX was created as part of this effort, with the goal of ensuring that all countries, particularly those in the Global South, receive vaccines in a timely and equitable manner. Despite challenges such as inadequate funding and technological barriers, COVAX represents a reform toward a more inclusive model of global vaccine distribution. Left-wing policies argue that while private companies can play a role in vaccine development, the public sector must step in to ensure that global health needs are met. This approach often calls for governments to increase investments in vaccine research and manufacturing capacity, not just within their own expertise, but also in collaboration with other nations, to ensure that public health is not driven entirely by profit motives, but by the well-being of all people in the world.

2.3 Stance of Intergovernmental Organizations

Intergovernmental organizations such as the World Health Organization (WHO), Gavi, and CEPI play a crucial role in advocating for cooperation between governments, international institutions, and the private sector to ensure equal vaccine access around the world. These organizations advocate for a sustainable approach to vaccine distribution that prioritizes health equity and addresses the needs of the most vulnerable populations. The creation of COVAX in response to the COVID-19 pandemic exemplifies the efforts of these organizations to ensure that vaccines are distributed globally in a fair and timely manner. COVAX was designed to gather resources from wealthy countries and organizations to procure vaccines and distribute them to lower-income countries, with a focus on achieving the United Nations' Sustainable Development Goal of universal health coverage. By facilitating collective action, intergovernmental organizations aim to reduce vaccine nationalism and ensure that all countries, regardless of

income level, have access to life-saving vaccines during global health crises.

Despite the good intentions of these organizations, their ability to achieve equitable access has been limited by several factors. One of the main challenges is that participation in multilateral initiatives like COVAX is largely voluntary, and wealthier nations are still able to secure advance vaccine contracts, often violating international agreements. This undermines the goal of equitable distribution, as high-income countries are able to buy up large quantities of vaccines, leaving limited supplies for lower-income nations. Additionally, intergovernmental organizations often lack enforcement power and must rely on the goodwill of states to ensure that commitments to equity are fulfilled. As a result, these organizations continue to face challenges in ensuring that LEDCs are not left behind in the vaccine distribution process and that international agreements are followed in a fair and transparent manner.

2.4 Stance of Developed Countries

Developed countries often take the position that securing vaccines for their own populations should be the primary priority, especially in the early stages of a global health crisis. These nations typically argue that maintaining a strong, healthy workforce is essential for economic stability, which in turn benefits the global economy. This viewpoint was clearly reflected in the COVID-19 pandemic, where wealthy countries signed advance purchase agreements with vaccine manufacturers to secure early doses for their citizens. Developed nations argue that such actions are necessary to protect public health and maintain the functioning of their economies. At the same time, many high-income countries have also promised to donate vaccines to LEDCs once their domestic needs are met. These donations are often framed as acts of generosity, with wealthy countries highlighting their contributions to initiatives like COVAX and other global health programs.

However, the approach of developed countries has come under criticism for prioritizing national interests over global health equity. Critics argue that while vaccine donations are important, the delay in providing vaccines to lower-income countries leave them vulnerable to the continued spread of disease. Moreover, the emphasis on securing large vaccine stocks in the early phases of the pandemic exacerbated existing inequalities, as LEDCs were left to wait for supplies while wealthier nations were able to rapidly roll out their vaccination campaigns. Developed countries' approach to vaccine distribution often highlights the tension between national self-interest and the moral imperative to promote global health equity. This conflict points to the need for greater international cooperation and structural reforms in global health governance.

2.5 Stance of Developing Countries

Developing countries have consistently argued that vaccine equity is a matter of fundamental fairness and global health security. They emphasize that the inability to access vaccines during a pandemic undermines the health and well-being of their populations and that international efforts is greatly needed. In the case of COVID-19, many LEDCs argued that early access to vaccines was crucial for containing the virus, and that equitable distribution was essential to prevent the global spread of new variants. These countries advocate for compulsory licensing, which would allow them to produce vaccines locally without the constraints of patent protections, enabling them to reduce reliance on foreign suppliers and gain greater control over their own public health responses[5]. This position is also supported by international organizations, who call for a more flexible approach to intellectual property rights during public health emergencies.

Developing countries also stress the importance of building domestic vaccine manufacturing capacity so that they are not reliant on external suppliers in the future. They argue that addressing

global health inequities requires not only equitable distribution during crises but also long-term investments in infrastructure, education, and technical expertise. COVAX was widely supported by developing nations as a potential model for vaccine equity, though many of these countries have criticized the initiative for its slow pace and funding shortfalls. Developing nations maintain that global health governance needs to be restructured to better include their needs, advocating for a more inclusive decision-making process that allows LEDCs to contribute meaningfully to vaccine research and development.

3. Possible Solutions

3.1 In Favor of Developed Countries

From the perspective of developed countries, a key solution lies in reinforcing existing frameworks while expanding voluntary international cooperation. Developed states emphasize that past efforts such as public–private partnerships, advance market commitment, and large-scale funding for vaccine research have proven effective in accelerating vaccine development. Initiatives supported by developed countries, including funding through CEPI and collaboration with private pharmaceutical firms, played a significant role in the rapid development of COVID-19 vaccines[11]. From this standpoint, maintaining intellectual property protections under TRIPS is viewed as necessary to preserve incentives for private-sector investment in biotechnology. Developed countries therefore support voluntary licensing and knowledge-sharing partnerships as mechanisms to improve access without undermining innovation[12].

Looking ahead, developed countries often advocate for expanding global manufacturing capacity through investment rather than compulsory legal measures. This includes financing regional vaccine production hubs, strengthening regulatory systems, and supporting workforce training in low- and middle-income countries[13]. Increased financial contributions to multilateral initiatives such as COVAX are also seen as a practical way of improving distribution during future health emergencies. Additionally, developed countries support improved global surveillance systems and preparedness platforms to enable early response to emerging diseases. From this perspective, equitable access can be achieved through sustained funding, coordinated donations, and incentive-based partnerships that preserve the existing global innovation ecosystem while gradually expanding access.

3.2 In Favor of Developing Countries

Developing countries prioritize solutions that address long-term structural inequalities in vaccine research and production. While past efforts such as vaccine donation programs and pooled procurement mechanisms improved short-term access, developing states argue that these measures did not resolve underlying dependency on external suppliers[14]. As a result, they advocate for increased investment in domestic manufacturing capacity, regional cooperation, and scientific infrastructure. Developing countries also emphasize the importance of technology transfer and skills development to enable meaningful participation in vaccine research. From this perspective, equitable access cannot be achieved solely through redistribution but requires building sustainable systems that allow countries to respond independently to future health crises.

In terms of future resolutions, developing countries call for greater flexibility in the application of intellectual property rules during public health emergencies. Proposals to use compulsory licensing or temporary TRIPS agreements are viewed as effective tools to expand production during global crisis. Developing states also support international interventions that ensure immediate access to vaccines, rather than relying on voluntary donations. Strengthening regional manufacturing networks and increasing representation of developing countries in global health

decision-making bodies are also important areas that needed immediate reform[15]. Ultimately, developing countries argue that global health security depends on reducing structural dependence and ensuring that all states possess the capability to protect their populations in times of crisis.

4. Keep in Mind the Following

While researching this topic, first understand and look through the profiles and the stance of your county. Put extra focus on your country's recent developments in vaccine research and biotechnological advances and propose solutions that address the problems presented in said areas. Make sure that your country can afford to implement those solutions and check the feasibility of such solutions. Last but not least, consider potential external and internal factors that might affect your solutions. Here are some guiding questions that you might want to think about while doing your research:

1. *What legal and regulatory frameworks can be implemented or strengthened to ensure equitable and immediate access to vaccines globally?*
2. *What role is your country playing or was playing in the long run?*
3. *What mechanisms can be established to ensure cooperation between MEDCs and LEDCs to address the problem of vaccine distribution and development?*
4. *How can your country balance economic stability and domestic welfare?*
5. *In what ways can your country ensure long-term development and security in vaccine research, and, if feasible, support other countries when they are in urgent need of vaccines?*

5. Evaluation

The issue of fostering equitable access to vaccine research and distribution in LEDCs remains a complex and challenges rooted in historical inequalities, economic disparities, and structural limitations within global health systems. While past attempts have succeeded in expanding immunization coverage and accelerating vaccine development, they have also exposed potential issues in access, decision-making power, and domestic capacity, particularly during global health emergencies. The COVID-19 pandemic underscored the interconnected nature of global health security, demonstrating that inequitable access to vaccines not only undermines public health outcomes in developing regions but also prolongs global crises. As international discourse continues to intensify, the central challenge lies in balancing national interests with global responsibility. Addressing these tensions will require consistent international cooperation, inclusive global health governance, and a commitment to strengthening research and manufacturing capability worldwide. Expand your knowledge and think critically about how to mitigate such concerns. Build your thinking upon prior knowledge and innovate beyond boundaries to create new possibilities. Good luck delegates.

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