



World Health Organization

BACKGROUND GUIDE 2

Development & Distribution of Vaccines

Director's Letter:

My name is Renee Tung, and it is my utmost pleasure to be directing the World Health Organization (WHO) at OakridgeMUN II. I am honoured to be serving alongside your Chair, Anya Trivedi, and Assistant Director, Owen Hu. We are excited to witness a conference filled with passionate debate over the weekend.

I am currently a senior at Little Flower Academy and I have participated in Model United Nations as a delegate since my freshman year. I remembered attending my first ever conference. I was nervous but was intrigued by the heated debate and the world of international affairs. Model UN has been the highlight of my high school experience, as I gained many lessons and lifelong friendships along the way. It has helped me improve my public speaking skills, as well as confidence.

For this upcoming iteration of OakridgeMUN II, WHO will be exploring the two important topics: Mental Health in War-Conflict Zones, and Development and Distribution of Vaccines. For a long time, citizens in war-conflict zones have to face mental illness each day. Furthermore, immunizations have been known to save many lives. However, not many people have proper access to vaccines. This is why it is urgent for us to find immediate solutions to these global issues. I encourage everyone to take the time to read the backgrounder and do further research and preparation for this conference.

Although position papers are not mandatory, they are highly recommended and necessary for any delegates wishing to be considered for an award. Position papers are due who@oakridgemun.com by March 12th, 11:59 PM PST.

With that being said, I welcome you with words of encouragement and wish you all the best of luck. I am confident that this conference will be memorable for all of you. If you have any questions, concerns, and position papers for this committee, please do not hesitate to email me. On behalf of the rest of your dais team, we are excited to be welcoming you to the World Health Organization (WHO) at OakridgeMUN II!

Sincerely,

Renee Tung
WHO | Director

Committee Overview

Founded in 1948, the World Health Organization is a key body of the United Nations, and acts as an agency that specializes in international public health. Its aim to public health is to promote the well-being of global citizens in various distinct fields through many means. These fields include the field of vaccines, controlling and eradicating diseases, health sciences, and mental and physical health. Ultimately, the WHO serves as a medium to foster global cooperation and funding for the aforementioned fields - this is reflected in the constitution that participating countries must sign.¹

Funding comes from two main ways:

1. Members nations, who must pay a set percentage of their GDP to the WHO as laid by their agreement.
2. Voluntary contributions by countries - the voluntary donations make up more than 80% of the total funding of the WHO².

However, the WHO is limited to “strongly recommending” its member states to act upon certain developments and take select actions - it has no legal authority or jurisdiction to actually impose obligated guidelines or administer repercussions³ to countries who fail to comply. As such, delegates are encouraged to refrain from utilizing binding terminology in their resolution papers.

¹ https://www.who.int/governance/eb/who_constitution_en.pdf

² www.who.int/about/funding

³ <https://cil.nus.edu.sg/the-world-health-organization-and-covid-19-how-much-legal-authority-does-the-who-really-have-to-manage-the-pandemic-by-dr-ayelet-berman/>

Topic Overview

As evidenced by recent events in the past year, the development and proper distribution of vaccines is of utmost importance to preserving global health. Before the pandemic, immunizations have prevented millions of deaths each year, and is one of the leading causes for a dramatic plunge in global mortality rates.¹ With the COVID-19 pandemic still in full power, vaccines are expected to play a major role in resolving this perilous situation.

In our lives today, the importance in having proper access to vaccines and having vaccines of top notch quality cannot be overstated. There is immense urgency, especially in current times, to securely provide safe vaccines with minimal compromises to all who wish to receive them. Although the short-term consequences of a lack of vaccines are hardly noticeable, they are the key to saving numerous lives in the long-run, and should be treated as such.

Nearly every global citizen is impacted by vaccines. Despite some less-developed locations, such as sub-Saharan Africa, being more prone to poor vaccine quality and access, every single country has been, and will continue to be, depending on the proper development and distribution of vaccines.

Even though our world recognizes how important standard vaccines are, one of the major challenges that they face, even to this day, regards how they may be distributed. It is already incredibly difficult to source funding to rapidly develop vaccines, but it may be even more difficult to provide them to those who need it most. More specifically, many areas in the world are too rural to reach, despite these lands collectively containing hundreds of millions of people. This may be due to a lack of infrastructure, difficulties involving contacting, or geographical barriers, such as mountain ranges or jungles. Every single one of these people are at risk of losing their lives due to their lack of correct immunizations. Because of this key challenge, it is of paramount importance that the process regarding the distribution of vaccines be overseen with much scrutiny.

Finally, as a final layer of complexity this committee faces, how may we combat those who *refuse* to take vaccines, and actively advocate *against* their usage?²

Timeline

1796 - After careful experimentation, English physician Edward Jenner developed the first vaccine. He observed how milkmaids with cowpox didn't catch smallpox, and used his findings to deliver the first vaccination against smallpox.¹

1802 - The usage and distribution of vaccines is officially endorsed by the Massachusetts government, the first state to do so. Thus begins the first attempts at widespread vaccination.²

1853 - The United Kingdom becomes one of the first European nations to mandate the vaccination of infants. Consequences for parents who failed to abide include fines or imprisonment.³

1882 - One of the earliest anti-vaccination groups, the Anti-Vaccination League of America, promotes scientifically inaccurate claims on the nature of vaccines, advocating against mandatory vaccines.⁴

1905 - Addressing the concerns raised by the Anti-Vaccination League, the US Supreme Court upholds the constitutionality of compulsory vaccines in the historical *Jacobson v. Massachusetts* case.⁵

1935 - Scrutiny regarding the supply of vaccines begins as some physicians suggest that more than one shot is necessary to achieve full immunization against a disease.⁶

1947 - New York City sees its final cases of smallpox. Over 6.35 million people, or around 80% of the city's population, had been successfully vaccinated against smallpox. However, the hefty sum of over \$500,000 raised questions regarding the cost and funding of vaccination programs.⁷

1955 - The vaccination campaign against polio is officially suspended following investigations relating to the safe manufacturing of vaccines. With insufficient funds, it was found that the production methods failed to comply with health instructions and guidelines, resulting in the death of around a dozen people.⁸

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1967 - The WHO begins the eradication progress of smallpox through mass-vaccination programs. Emphasizing the importance of cooperation, the program required the participation of all countries to fully eradicate the disease.⁹

1980 - Smallpox is officially declared eradicated by the WHO. There have no naturally occurring cases since.¹⁰

2000 - During the period from 1988 to 2000, there was a 99% reduction in polio cases, with polio being the second disease almost eradicated.¹¹

2016 - Measles is eradicated in the Americas. However, concerns were raised regarding the access to vaccines in less-developed nations who have insufficient resources to vaccinate hard-to-reach areas.¹²

2020 - The first COVID-19 vaccine is developed in less than a year, proving that with sufficient funding and high public interest, research and distribution can go significantly smoother.¹³

Historical Analysis

Vaccines originated with humble beginnings based on the universal scientific concepts of experimentation. After picking up steam, more and more countries began endorsing and even funding the development of these, seeing the potential vaccines may bring on the front of eradicating diseases and ultimately saving lives.

However, many of the hurdles vaccines have encountered in the past still exist, and are just as strong, in the modern day. There have been numerous alliances and groups dedicated solely for the purpose of advocating against vaccines, a significant roadblock to successfully vaccinating every human. Furthermore, ethical concerns regarding how more developed nations can afford and vaccinate more people than poorer nations has always been a point of significant controversy that has yet to be resolved.¹

Historically, the quality of the vaccines were poor and unsanitary. As evidenced by the fight against polio, the entire campaign had to be shut down due to concerns regarding the safety and standards that the vaccines adhered to. However, ever since the creation of the World Health Organization, the conditions regarding vaccine development and distribution have notably improved, with strict regulations and trials vaccines must pass in order for the general public to access the vaccination doses.²

The WHO has fundamentally altered the history of vaccines. Before the creation of this committee, many countries worked at their own pace, without much coordination or cooperation between the international community. Ever since, the WHO has acted as a method of communication and exchange between governments, and has been at the forefront of synchronizing inter-governmental involvement and organizing effective strategies to distribute vaccines to the entire world.⁴

With that said, the WHO can be considered a massive success for the topic of vaccines. Factoring in the complicated process that vaccines face - from funding, research, assembly, to distribution - it is truly a remarkable feat the challenges our world has overcome. There may remain more, but it may be favorable to take a step back and understand how far we have come.

An interesting disease to note is smallpox. This is the only disease that has been successfully eradicated. Although other diseases, such as polio, are close, only the fight against smallpox has taken the final step towards complete eradication.³ This is the

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result of a heightened interest from society, as well as an abundance of funding, both from private researches and government-sponsored programs. These two variables are what is lacking in the fight against other diseases. The high public interest, along with other mechanisms such as personal benefit, incentivized many people to travel long distances out from rural areas to receive vaccinations, and the funding allowed for quality development with rapid distribution of sufficient doses.

Current Situation

The present circumstances are complicated. Funding still remains a key issue, even though the world has proven that with enough funding, rapidly developing efficient vaccines is very much a possibility. Furthermore, the rise of sentiments against vaccines, as evidenced by anti-vaccination groups and organizations, remains a threat to the public health of affected nations. Misinformation and myths surrounding vaccines frequently circulate around the internet,¹ making it difficult to find accurate information regarding where and when one should take a vaccine. Finally, as emphasized by the World Health Organization time and time again, only with global cooperation can diseases be truly eradicated. Leaving hard-to-reach countries behind will only increase the risk of endemic diseases, mutated variants, or the jeopardization of public health.

As such, it is of utmost importance to separate the discussion into the two main subtopics of “development” and “distribution”.

Development

The WHO is a significant contributor to the funding and the development of vaccines. As discussed in the committee intro, the WHO receives its funding mainly from voluntary contributions of nations. However, this has proven to be an extremely fragile and unreliable method of funding. Countries may voluntarily choose to drop out, as the United States considered prior to the election,² or may also choose to decrease the amount they provide, especially during times of economic crisis. Because of this, the WHO is fiscally challenged to cease its operations at any point.

With the US, whom is by far the largest donor to the WHO,³ proving how countries may threaten to leave at any time, numerous questions have risen on the WHO’s volatility. Because of this, the future of vaccine development remains uncertain, considering how the main UN organ responsible for past vaccination efforts may collapse without warning.

Furthermore, direct financial support to develop vaccines has been on a steady decline for several decades.⁴ In pre-pandemic days, there just was not enough public interest to fund the complete eradication of diseases, with some even questioning if such a task is worth the hefty costs. Therefore, renewing public interest to justify the funds involved

in the research and testing process of vaccines is of crucial importance if the international community wishes to eradicate more diseases.

Finally, many companies face limited contributions to vaccine development from the private sector.⁵ Many corporate companies, as well as NGOs, cannot engage with these scientific advancements due to both a lack of interest and a lack of funds. Billions are poured into creating effective vaccines, and private companies simply have no incentives to work on such proposals. If governments are somehow able to tap into the private sector to encourage more diversity in the development and funding of vaccines, the world may see exponential progress on eradicating diseases.

Distribution

Although this challenge may not appear as obvious as its previous counterpart, it remains just as difficult and important to overcome. Many citizens are unable to access vaccines for a variety of reasons - whether that be geographical isolation, a lack of supportive infrastructure or medical professionals who can administer vaccines, or because their government is unable to secure enough doses. Each of these adversities have proven exceptionally demanding to tame.

For one, the lack of infrastructure to reach rural and geographically isolated areas is a top priority to address. Nearly half of the world lives in rural areas,⁶ a massive obstacle in the effort to vaccinate every single citizen. With a significant proportion of rural citizens living in areas such as deserts, mountain ranges, or jungles, to even contact or access them is a major task in itself. Needless to say, the best remedy is to improve the transportation and infrastructure situation of these areas, which will require a immense amount of funding.

Trained medical professionals may also be a rarity.⁷ Many remote areas have no citizens who can do the task of monitoring and administering vaccines. Delegates are encouraged to explore possible solutions on how more people of this professional may be either trained or hired for hard-to-reach areas.

Finally, there are ethical concerns to the distribution of vaccines. Richer and more developed countries often have top access to vaccines, whereas lesser developed nations may be left behind in the dust.⁸ With the eradication of diseases requiring a joint, global effort to accomplish, the current system that we see will not suffice into

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the future. Additionally, who gets to decide which group of people should receive vaccines first? For groups that are more prone to certain diseases, such a moral dilemma is a massive frustration, especially when the livelihood of the citizens is at risk.

With this outlined, we hope to have provided a deeper and more thorough understanding of the current challenges that face the development and distribution of vaccines. Being a multifaceted topic, there are numerous pathways that the debate may take.

International Involvement

As aforementioned, the role of the WHO cannot be overstated. The majority of the WHO's funding sources from the top ten most developed nations - it is equally true that the same list is involved the most in the development and distribution of vaccines.

However, the rise of private investment to join the international cause has grown. For example, the Bill and Melinda Gates Foundation has pledged \$10 billion to help fund and develop vaccines and eradicate diseases in the susceptible areas, such as sub-Saharan Africa.¹ And although private investments are rising, the rate is still slow.

North America, Europe and East Asia contribute the most to the WHO and the development of vaccines, with the top ten combined making up nearly three quarters of the WHO's entire budget.² However, the ones who benefit the most from the WHO are the less-developed countries. It takes the involvement of the entire international community to help to fight against diseases, and the world's poorest nations are at the forefront of the fight.

In terms of the United Nations, the World Health Organization is the only main organ that addresses the issue of vaccines.³ Whilst other committees may oversee the ethicality and politics regarding policies, the WHO bears the sole responsibility on supervising the funding, research, and development of vaccines, and has been at the helm of directing the response to the COVID-19 pandemic.⁴ For example, the WHO has helped completely eradicate polio through aggressive vaccination campaigns, receiving funding from donor nations, as well as help speedily distribute said vaccines. Having taken the historical burden of past diseases, the WHO and all contributing nations collectively fund and distribute vaccines.

Cooperation is an important concept to understand. Only with the involvement of every country and with the united contributions of everyone can the issues regarding vaccines be solved. If countries are left behind, there will be risks for every global citizen.

Possible Solutions

It is important to note that the potential solutions listed below should not serve as a comprehensive list of all that can be done, but rather as a way to inspire delegates to further research on their inquiries. All delegates are persuaded to broaden the scope of their research using the list below as stepping stones throughout a broader journey for this topic.

Increased Incentives to Contribute to the WHO

With the WHO being the body responsible for most work involving vaccines, if countries are incentivized to increase their monetary contributions, the WHO will have more funds to work with. Although such a task is difficult, it is not impossible. An incentive may be the promise of improved diplomatic relations with the WHO, UN, and potentially other countries. Furthermore, countries may consider dedicating a set percentage of their GDP to the WHO, as many nations currently lack such a policy. Finally, with issues on negotiations holding many countries back from supporting the WHO, a summit program where nations can meet with the WHO annually to discuss progress and funds management will encourage more countries to trust and contribute to the WHO.

Note that not all countries will be able to contribute to the WHO. Underdeveloped countries may consider voluntary contributions rather than a set amount due to their circumstances.

Improving Public Interest

The race for the COVID-19 vaccine has proved that with high public interest and large public incentives, the funds related to developing vaccines will be more justified for governments, private companies, and everyday citizens. Revamping public interest may be done through several ways, including implementing educational curriculum regarding vaccinations in schools, actively promoting information on the importance of vaccines to circulate through social media, or expanding media attention on vaccines in general. When there is sufficiently high public interest in the development and distribution of vaccines, many challenges that we have seen in the past will be resolved, paving the way for more vaccinations in the world.

Combating Anti-Vaccination Groups

Anti-vaccination groups are a threat to fully immunizing a country. With much misinformation spreading on the internet, more and more people are persuaded to not take a vaccine, effectively halting the distribution of this cycle. Because of this, it is of utmost importance to crackdown on the misinformation that may be circulating online. This may include recommending private companies to update their content policy on misinformation, promoting increased governmental involvement on the web in appropriate countries, or improving education programs for students on the true nature of vaccines. These efforts can all help stop the danger of anti-vaccination groups, which will ultimately lead to improved public health for every citizen of a country.

It is important to not class all anti-vaccination groups into a single category and reiterate the problems they cause. Instead, improving education may help develop more scientific thinking within these groups, effectively resolving this issue.

Expanding the Distributional Reach of Vaccines

Because of many rural citizens lacking access to vaccines, countries may consider expanding the reach of immunization efforts. This may be done by improving infrastructure to help the range of vaccine capabilities, recruiting or training more medical doctors or volunteers to safely execute the immunization process, or promoting information on the importance of vaccines in rural areas to incentivize citizens to travel for a vaccine. Alternatively, countries may look towards setting dates where public transportation may be subsidized, allowing more citizens to travel the distance to receive their shots. The difficulty of reaching and distributing vaccines to rural citizens has no one set solution, and delegates are encouraged to consider which actions will best fit their country's policies, and which actions are feasible considering their country's economic status.

Bloc Positions

Despite the challenges surrounding the development and distribution of vaccines being universally acknowledged by every nation, some are more willing than others to take action. Furthermore, many nations have notably different attitudes towards vaccines, with some advocating heavily for increased funding and support to the WHO for vaccines, whilst others do not share those beliefs. As such, the following bloc positions have been outlined based on their willingness and ability to fund and aid in developing and distributing vaccines.

Again, these are merely suggestions and should by no means be viewed as binding groups that must be adhered to. Delegates are encouraged to do their own research on their country's policies to help decide which bloc they fit in.

Developed Nations

Developed countries (countries with most of their citizens already vaccinated, sufficient funding to help financially support the WHO, and with the ability to aid other countries), such as Canada, the United States, Australia, and most of Europe, are at the forefront of vaccine development. This bloc was outlined based on how developed nations both have the ability and are willing to aid other countries who are less fortunate. These will be the ones with funds they can use to help the WHO, and ones who do not need to focus on their own citizens as much because they have already been vaccinated. The priorities of this bloc would be effectively distributing their extra vaccines to those who need it most, incentivize both the government and private sector of other countries to help their citizens in distribute vaccines, as well as serve as the leaders in the research and development phase of vaccines.

Underdeveloped Nations

Again, there is no universal consensus on which countries fit into the category of “underdeveloped”. Using the above criteria, these nations will follow the contrary:

1. Countries that do *not* have most of their citizens vaccinated
2. Countries *without* sufficient funding to help financially support the WHO
3. Countries *without* the ability to aid other countries

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Underdeveloped nations (countries without the majority of their citizens vaccinated, sufficient funding to help financially support the WHO, and without the ability to aid other countries), such as most of sub-Saharan Africa, most of Latin America, and parts of Asia, may rely more on aid from more developed nations. This bloc consists of those whose priority is not to help others, but to focus on helping themselves first. Many countries may also have degrading and insufficient infrastructure, as well as a lack of trained medical professionals who can help administer vaccines. Finally, the main focus these countries will have is to allow the WHO and more developed countries to help them in their fight to eradicate troublesome diseases.

Of course, delegates are more than welcome to propose their own blocs during the committee, or shift around as they see fit based on the flow of the debate. This should serve only as a starting point to further their understanding of this topic.

Discussion Questions

1. How can vaccines be properly funded, seeing that many developments lack governmental or private support?
2. In what methods can vaccines be effectively distributed to hard-to-reach areas?
3. What are some incentives countries have to help fund the WHO and aid other nations?
4. How will governments resist the rise of misinformation and combat anti-vaccination groups?
5. What are the long-term consequences of countries being left behind in vaccination efforts?
6. How may countries renew public interest in vaccines to help source more rapid development and interest?
7. What methods to develop and distribute vaccines have worked in the past, and what methods have *not* worked?

Extra resources

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