Forum: World Health Assembly

Issue: Addressing the global shortage of, and access to, medicines and vaccines

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Introduction

Access to Healthcare is a human right, and yet at least half the people worldwide don't have access to medicines and vaccines, facing a lack of access to essential health services. Vaccine shortages in particular is a grave public health issue. Diseases that were once eliminated through immunization are re-emerging as convergence levels drop. Data collected by the Secretariat claims that only 10% of facilities in some countries have all the essential medicines for treating non communicable diseases, putting lots of lives at risk. According to the world health organisation (WHO), 100 million people are being pushed into extreme poverty because of health expenses, forcing them to live on $1.90 a day. In LEDCs medicine is the largest family expenditure after food, emphasising the fact that it isn't accessible to all. Most problems in terms of medical shortages are in LEDCs, which leads to higher mortality rate, hindering economic development even further. Whilst this issue seems to mostly affect LEDCs, it also affects MEDCs.

Some countries are facing difficulty obtaining both traditional and new vaccines in the quantities needed as well as facing difficulty accessing sufficient finances to meet the increasing costs of medical services and its delivery, leading to conflict between the consumers and producers. The main reason why this issue is so severe is that there are numerous causes causing the shortages and limiting the access to medicines and vaccines such as: fluctuations in global demand, market conditions, the funding of vaccines, limited number of manufacturers, long lead times, quality-related delays and lack of knowledge on alternative solutions. The combination of all the causes is what makes this such a complex issue to address.

Definition of Key Terms

Traditional Medicines
Medicines that have been developed over generations using beliefs, theories, experiences and culture as well as knowledge and skills. They were used to treat both physical and mental illnesses and was developed before modern medicine. Traditional medicines consist of more natural products.

**Modern medicines**

Modern medicines are based on science, health care professionals use modern medicines to treat their patients, they use drugs, surgery or radiation. Antibiotics and vaccines are examples of modern medicines.

**Microbial resistance**

Antibiotic resistance. It is when the bacteria causing an illness become immune to a drug, this makes existing drugs less effective.

**World health**

World health is when the whole world is at a good physical and mental state, not just the absence of disease but also social well being.

**Vaccines**

Are substance injected into the body used to prevent the spread of harmful diseases by providing lifelong protection from diseases, making people immune to them.

**Shortage**

When there’s a lack of supply, the supply is insufficient to meet the public’s needs.

**Background Information**

Over the years, there has been a slight improvement in the availability and ability of obtaining medicines and vaccines. However, the progress is uneven. The number of shortages are increasing constantly and worsening over time whilst shortages are still being reported in countries of all income levels. In some countries the medicine shortages tripled between 2005-2010. The greatest shortages of medicines and vaccines are in LEDCs where the people live in poverty. One of the main issues regarding access is a global concern for rising prices of new medicines, This has led to the creation of falsified medicines, which has become available to global markets and places the public’s health at risk. The 1948 universal declaration of human rights mentioned health as part of an adequate standard of living, and the right to health was recognized as a human right again in 1966. And the key components of the
Universal Health coverage were: quality primary healthcare, access to medicines and vaccines, invest more and invest better.

Vaccines

Vaccines are vital to the health system and is an essential resource that all people should have access to. Immunization saves 2-3 million lives each year. Immunisation and vaccines are known to be the most cost-effective and most successful way of preventing the spread of harmful diseases such as measles, mumps, tetanus, tuberculosis and many more. Vaccines also provide lifelong protection from these diseases, thus saving lives. Currently, immunization prevents 2-3 million deaths every year. No other technology has proven to be as instrumental or cost effective in saving lives. Immunization does not only save lives and improve health but it also allows the community to reach its full potential. This is because if children spend less time sick, they achieve more school hours and parents can be more productive. This is because they will have to spend less time taking care of their children, increasing productive. According to the IFPMA, there was a study in the Philippines that established a positive correlation between immunization and the quality of learning. There are numerous benefits to vaccines, most importantly saving lives and yet 18.7 million infants are missing out on basic vaccines. Because of the numerous benefits of vaccines, access to vaccines and immunisation programs are prioritized in some countries.

Organizations such as GAVI and UNICEF are currently making large efforts to obtain affordable vaccines in low income countries. Despite the benefits of vaccines, there's still limited access to it and therefore WHO member states have adopted the Global Vaccine action plan (GVAP) in hopes of achieving the goal of universal access to immunisation worldwide. The shortage and lack of access to vaccines is becoming an even greater issue as diseases that were once eliminated through immunization are re-emerging as coverage levels drop, this was evident in 2014 in the West Pacific region where large measles outbreaks were reported in places such as China and the Philippines, with over 52,000 reported cases.

Doha Declaration

The WTO adopted a declaration in Doha to clarify uncertainties regarding public health. The Declaration responds to the concerns of MEDCs about issues faced when they tried to promote access to affordable medicine. The declaration insists the TRIPS agreement (trade-related aspects of intellectual Property rights) should not stop members from taking measures to protect public health, they reaffirmed flexibility. This was done in order to protect public health and improve access to medicines in poorer countries and for better access to essential medicines. The declaration addresses real and urgent problems faced by developing countries and it also clarifies the relationship between the trips agreement and public health. However, it is said to have very ambiguous and have unclear wording, open to
interpretation. For example licenses are given out to developed countries to manufacture medicines and export them to least developed countries in emergency cases. The issue with this is that the licenses are only given out when a “national emergency” is declared and each member has the right to decide what are emergency cases is. The only diseases that were agreed on to be emergencies were HIV/AIDS and malaria epidemics. The rest of diseases/emergencies are left to interpretation. This can be a problem as different members will see different diseases as severe and therefore not respond to all severe issues. Another issue with this declaration is that there is no real legal binding status in the framework of the WTO law. However, due to context and motif approval is said to be authoritative and set a binding precedent for future reports. Therefore, it is said that inorder for the declaration to meet its objective of providing access to medicines the members must take further legislative action to ensure their objective is met.

**Vaccines and medicine in the economic market and Regional shortages**

In countries such as India, there are regions which face a shortage of one-hundred-thirty medicines from the regional essential medicines list, making the citizens prone to numerous diseases which can lead to deaths as appropriate medication is not available. This is due to many reasons including financial and economic theories, such as the supply chain. In developing countries, up to 90% of the population purchase medicines through out-of-pocket payments, making it the largest family expenditure after food, which is too expensive for some families. Furthermore, the insufficiency of all essential medicines puts lives at risk. The supply chain is one of the biggest issues with regards to access to medicines and vaccines. According to the IFPMA it takes 300 days for a drug to get from production to the patient, 1.5 years is the shortest timeline for drug licensure and 5.5 years the longest time for drug licensure. This is an issue because bacteria is always evolving, and so microbial resistance increases, if it takes 5 year for a drug licensure to be approved the drug may be ineffective once its released. Furthermore, the development of vaccines is a costly and a very long process.

Below are two images comparing regional shortages of vaccines in 1998 and 2018:
As shown in the images there has been an overall increase in the number of shortages between 1998 and 2018 in America and Europe. This is because of the increase in the rise of people that stand against vaccines and do not want to get their children vaccinated. As evident on the maps, the highest amount of shortages are in Africa, in LEDCs highlighting the issues severity differs in different regions. According to the world bank 80% of all Africans rely on public health facilities, these public health facilities however suffer chronic shortages of important medicines leading to patients dying from curable diseases. Furthermore, as there are not many workers in the tertiary sector in LEDCs there is a lack of skilled personnel as well as a lack of resources, leading to frequent stockouts as well as inadequate prescription and use of medicines. According to the world health organisation (WHO), 100 million people are being pushed into extreme poverty because of health expenses, forcing them to live on $1.90 a day. In LEDCs medicine is the largest family expenditure after food, one of the reasons for the cost of medicines being so high is that the supply system is usually plagued by poor obtaining medicine practices that make drugs very expensive or unavailable. As mentioned previously, the supply chain is one of the biggest issues regarding access of medicines, Africa imports 70% of its pharmaceutical products and 80% of the world’s antiretroviral drugs (ARVs) according to trade data. As a result of the issue with supply chain and transport, most shortages are in Africa as they import almost everything.

**Consumer, producer conflict**

This conflict between the consumers and producers is increasing the pressure on health systems to provide affordable access to healthcare for reasonable prices. This global issue is also due to the rise of microbial resistance which highlights the need for appropriate prescribing and dispensing of medicines to ensure appropriate use. The lack of antibiotics under development to combat the growing threat of microbial resistance calls for greater investment, research and development of medicine, linking to the issue of pricing policies.
Major Countries and Organizations Involved

World Health Organisation

The World Health Organisation (WHO) is the United Nations specialized agency concerned with public health. The WHO initiated an expanded program on immunization (EPI) with the goal of vaccinating children around the world. The WHO then got together with other UN agencies such as UNICEF and the World Bank as well as NGOs to form an alliance called the Global Alliance for Vaccines and Immunisation (GAVI). This was created to improve children’s healthcare in poorer countries by extending the reach of EPI. The current goal of the EPI is to insure full immunization of children under the age of 1 year, to extend preventative health intervention to all children worldwide and to reduce deaths as well as globally eradicating diseases such as poliomyelitis.

The WHO has found out that one of the top major threats to global health is the refusal or reluctance to get vaccinated. The WHO has been doing a lot of research and finding ways to solve this issue, mostly by partnering with NGOs and other UN bodies which they put into reports.

UNICEF

UNICEF works around the world to help children survive. UNICEF provides emergency food and healthcare to mothers and children in countries that need it, and its supply division serves as the primary point of distribution of vaccines and medicines. UNICEF has created an immunization program, working with NGOs, partners in government and other UN agencies to provide immunization to the children who need it. Wherever a child is not immunized their life and community is at risk and therefore UNICEF is trying to find new ways to vaccinate every child in every community and ensure the vaccines reach all children without losing their effectiveness from exposure to extreme weather conditions. UNICEF has also managed to drop the price of a number of essential childhood vaccines which facilitates the introduction of vaccines to children living in poorer countries, UNICEF also works with partners to invest in new vaccines, health technologies and diagnostics. In 2018, UNICEF managed to reach almost half of the world’s children with life saving vaccines.

Kenya

In Kenya a coalition was formed by local and international NGOs, journalists, health care providers and other individuals, in order to primarily help people with HIV/AIDS to get access to medications and treatments. This coalition is called the ‘Kenya Coalition for Access to Essential Medicines’ (KCAEM) and it was formed in 2001. It calls for pharmaceutical businesses to reduce the prices of medications. This coalition has gotten support from important government officials as well as
organisations such as the Kenyan Ministry of Trade. This coalition has welcomed the decision of the parliament of Kenya to reverse an amendment that blocked commercial importation of cheaper medicines. This means that they will now be able to access cheaper antiretroviral drugs so that many more people living with AIDS will have access to them. Last year, Kenya adopted an Intellectual property law (IP) which made it possible to purchase cheapest medicines on the legal market anywhere worldwide. However, this law was changed in June, requiring importers or producers to seek permission from the patent holder and as the patent holder may not want to grant the permission it can be impossible for Kenyans to get cheaper, equal quality medicines.

International federation of pharmaceutical manufacturers and associations (IFPMA)

The IFPMA represent all research based pharmaceutical companies and associations worldwide. The way they work is that they facilitate collaboration between companies in the industry, by bringing the health community together to foster innovation and advocate sustainable health policies to meet human needs. IFPMA tackle global health issues involving the supply chain, vaccines, universal health coverage and diseases such as but not limited to HIV/AIDS, cancer and malaria. The IFPMA believe maintaining supply chain assurance is an important component of a strong regulatory system. As their biopharmaceutical manufacturers face numerous challenges in regards to the global supply chain when producing and delivering medicines, they advocate for regulatory systems strengthening worldwide in order to allow for timely and reliable access to medicines. IFPMA tackle the issues regarding vaccines by having its members work with key partners (who enable IFPMA to deliver innovation to the supply and development of vaccines) in order to expand immunization programs to deliver vaccines to communities effectively and efficiently. The global vaccine community is a network which hopes to bring the vital resources (human, technical, financial) to protect people against infectious diseases through immunization. Furthermore, they are also trying to improve vaccines by developing them to protect against more diseases to improve the protection to individuals, by exploring new technologies that help vaccines work better and combining new formulas, and have over 300 vaccines currently being tested by its members.

Timeline of Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of event</th>
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<tr>
<td>May 14\textsuperscript{nd}, 1796</td>
<td>Discovery of vaccines</td>
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<tr>
<td>April 5\textsuperscript{th}, 1902</td>
<td>The Biologics Control Act was formed. It included regulations of vaccine and antitoxin producers and required both licensing and inspections of manufacturers.</td>
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The federal immunization grant program was established. It was made to provide states with funds to purchase vaccines and to support immunization programs.

May, 1974
WHO initiated the EPI

1999
Establishment of GAVI

August 26th, 1998
The children’s vaccine program was established at WHO’s PATH program

February 5, 2016
National Vaccine Program office released an adult immunization plan

Relevant UN Treaties and Events

- Agreement on the establishment of the international vaccine institute, May 28th 1997 (333836)
- Paediatric Medicines Regulation, (1901/2006)
- regulation on orphan medicinal products, December 16th 1999 (141/2000)
- Doha declaration, September 1st 2003
- Access to medicines and vaccines, April 4th (A72/17)
- Addressing the global shortage of, and access to medicines, January 12 2018 (EB142/13)
- Access to medicine in the context of the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, 2009 (RES/12/24)
- Access to essential vaccines, 2014 (WHA67.22)
- Better vaccines for children, 2007 (WHA60.20)
- Regulatory system strengthening, 2014 (WHA67.20)
- Global vaccine action plan, 2012 (WHA65.17)

Previous Attempts to solve the Issue

Trust in vaccination programs is crucial in order to maintain high immunity rates. However, in the EU there have been lots of cases of people refusing and delaying vaccines and this is contributing to a rise in disease outbreaks. Ignorer to solve this issue in France, the french parliament passed a law extending vaccination mandates for children up to 2 years of age and it is stated that the parents who disobey the rules cannot have their children be admitted to child services such as schools or nurseries. This has increased the number of children getting vaccinated, however, some people remain unhappy as they feel forced to get their child vaccinated.

The WHA have discussed the issue of global shortages and access to vaccine shortages many times and have created a couple resolution. However, there is no evident action being taken. Despite the severity of the issue, there haven’t been many attempts to solve the issue besides the declaration, EPI
and GAVI. A reason for this may be that because there are so many causes causing the shortages and limiting the access to medicines and vaccines such as: fluctuations in global demand, market conditions, the funding of vaccines, limited number of manufacturers, long lead times, quality-related delays and lack of knowledge on alternative solutions. The combination of all the causes is what makes this such a complex issue to address. It's complexity makes it extremely difficult to come up with solutions. Furthermore, in some developed countries where the issue of shortages and access to medicines and vaccines isn't grave may not worry about the issue as it isn't having a large impact on them, this lack of focus on the issue leads to not enough help being given to the people in those nations where the issue is severe, leaving those in greatest need for vaccines, who can't afford them in danger, those in good health positions disregard the issue even though it may affect them in the future as it doesn't affect them at the current moment.

**Possible Solutions**

One of the biggest issues regarding shortages and access to medicines is the lack of knowledge about both, the existence of the issue and what can be done to solve these issues as well as the lack of knowledge on alternative healing methods or medicines. The problem of having a lack of knowledge on alternative solutions to cure illnesses is that people may become increasingly dependent on vaccines and medicines that they will not know any other ways of helping themselves and completely forget about other ways such as traditional medicines which could also save lives or at least reduce pain or be a short term solution to the disease. The problem of lack of knowledge on alternative healing methods could be resolved by increasing awareness, teaching people and informing them of short term alternatives to vaccines when there are shortages.

Some families do not recognise the benefits of vaccines and refuse to believe that that they are necessary. They may still try to delay vaccines as much as possible and a solution to ensure that they try to get their children vaccinated on time could be to fine them for every day that they are late in addition to not being allowed to get their children admitted to child services. The money received from the fines can be reinvested in the development of vaccines and medicines.

Some recommendations to tackle medicine shortages include that each country should publish a publicly accessible means of providing information on shortages of medicines, this could also be used to inform people of alternatives to certain medicines and it would also identify the shortages. This means of information will not only help suppliers respond to shortages and be aware of the shortages but it would also help the public by providing them with details of alternative medicine or healing methods.

A possible solution to the issue of the Doha declaration involving the ambiguity of the declaration could be to develop a global process to create a list of the 'national emergencies' to provide the license...
to the least developed countries in emergency cases. A global process should also be developed to
determine the list of important/vulnerable medicines to develop products further- there should move
towards processes that assures continuity of supply of quality/important medicines. All countries should
investigate the potential to establish a body charged with gathering and sharing information about supply
and demand for medicines.

Guiding Questions

1. How have medicine and vaccine shortages affected your country?
2. Is there limited access to vaccines and medicines in your county?
3. Has this issue had an impact on your country?
4. What are the reasons for shortages and limited access in your country?
5. Does your country participate in any programs or organisations to combat this issue?
6. Does your government believe this is a big issue that must be solved?
7. How may your delegation tackle the issue?
8. How can shortages be reduced?
9. How can multiple countries and organisations come together to manage the supply and demand
of medicines and vaccines?
10. Are there any short term solutions to the issue, whilst a long term solution is being developed?
11. Is your government doing anything to help solve this issue

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Appendix or Appendices

Please include any materials that you may wish to Appendix in this section. Also, Roman numerals must be used in labeling the different appendices. It is highly recommended that any useful links be placed in this section.

For Example:


Why this website is useful ..........

*If you have any questions, please do not hesitate to ask the DSGs, PGA or SG*

Please be aware that you are expected to only use the sections mentioned (below is a summary which you could use as an outline).

1. Introduction
2. Definition of Key Terms
3. General Overview
4. Major Parties Involved and Their Views
5. Timeline of Events
6. UN Involvement, Relevant Resolutions, Treaties and Events
7. Evaluation of Previous Attempts to Resolve the Issue
8. Possible Solutions
9. Bibliography
10. Appendix or Appendices