

World Health Organization

Chair: Rhia Nagale



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Letter from the Chair

Hello Delegates,

Welcome to LYMUN XI! My name is Rhia Nagale, and I am beyond excited to chair the World Health Organization (WHO) committee! Currently, I am a junior at Lyons Township High School, and as under-secretary general of LYMUN, I have been a part of Model UN for the last three years. At LT, I am involved in varsity tennis, math team, and student voice workshops. Outside of school, I am a member of the junior advisory board for a local food pantry, and I volunteer at the local hospital.

I chose to chair this committee because I am interested in pursuing a career in healthcare. Both topics I picked have always caught my interest. In particular, I selected antimicrobial resistance as a topic because it is relevant, thought-provoking and applicable to everyday life. On the other hand, I chose vaccine distribution as the other topic in light of the fairly recent Covid-19 pandemic. I hope to see a lot of creative solutions to these issues in committee.

To be considered for awards, delegates must write two position papers for each topic of this committee. Delegates should write from the perspective of their country and consider conducting additional research to strengthen their viewpoint. Position papers can be emailed to my school email (nag513388@d204.lths.net) prior to the conference, or a paper copy may be turned in at the start of committee. During committee, I will be looking for delegates who consistently maintain a professional composure, demonstrate leadership, and possess strong speaking abilities. Please reach out to me if you have any questions or concerns. Good luck!

Sincerely,

Rhia Nagale

Members in Committee

1. Afghanistan
2. Algeria
3. Argentina
4. Australia
5. Bangladesh
6. Brazil
7. Bulgaria
8. Canada
9. Cameroon
10. Chile
11. China
12. Colombia
13. Cuba
14. Democratic Republic of the Congo
15. France
16. Germany
17. Ghana
18. Guatemala
19. Haiti
20. India
21. Indonesia
22. Iraq

23. Kenya
24. Kuwait
25. Mexico
26. the Netherlands
27. Nigeria
28. Pakistan
29. Peru
30. Poland
31. Saudi Arabia
32. South Africa
33. Spain
34. Thailand
35. Russia
36. United Arab Emirates
37. United Kingdom
38. United States
39. Venezuela
40. Zimbabwe

Committee Background

The World Health Organization (WHO), a specialized agency of the United Nations, aims to protect the health of people across the globe. Working with 194 countries in over 150 locations, WHO leads the world's response to health emergencies, preventing disease, addressing the root cause of health issues, and expanding access to health care. Funded by member-states and voluntary contributions, WHO's mission is to promote health, keep the world safe, and serve the vulnerable. As a pioneer of health research, WHO is built up of public health experts such as doctors, epidemiologists, and scientists as well as significant public health leaders of member-states who work together to accomplish their goals.

On April 7, 1948, one year after the founding of the United Nations, the 26th member of the United Nations ratified the WHO Constitution, effectively establishing WHO as a specialized agency of the United Nations, on a day now celebrated as World Health Day. Outlined into the preamble, the writers include these core principles:

- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
- The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.
- The health of all peoples is fundamental to the attainment of peace and security and is dependent on the fullest co-operation of individuals and States.
- The achievement of any State in the promotion and protection of health is of value to all.
- Unequal development in different countries in the promotion of health and control of diseases, especially communicable disease, is a common danger.
- Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development.

- The extension to all peoples of the benefits of medical, psychological and related knowledge is essential to the fullest attainment of health.
- Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people.
- Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.

Two months later on June 24, 1948, the first Health Assembly opened in Geneva, Switzerland to discuss the issues of malaria, tuberculosis, child and maternal health, sanitary



engineering, and nutrition as priorities for the organization. Almost 77 years later, the Health Assembly still meets to determine the policies of the organization, appoint the Director-General, and review and approve the proposed budget. All

member-states of WHO attend the Health Assembly, which acts as the decision-making body of WHO.

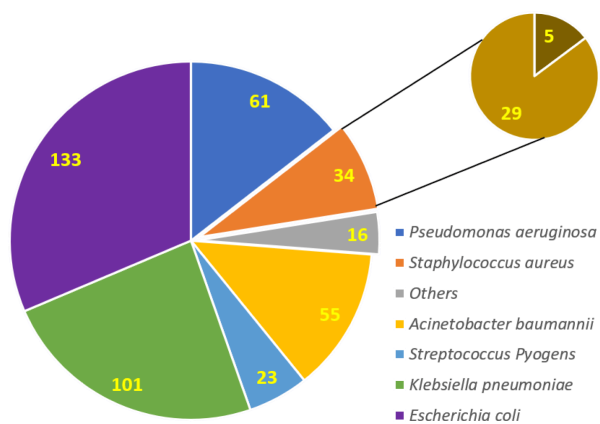
While the World Health Organization is composed of multiple governing bodies, **this committee will act as the World Health Assembly**. The Health Assembly is a policymaking body that cannot enforce. Therefore, this committee will pass working papers. Voting procedure and all other aspects of this committee will be determined by parliamentary procedure in all instances.

Topic A: Antimicrobial Resistance

Background:

Antimicrobial resistance (AMR) is a significant overarching issue that affects millions of people worldwide. AMR, which encompasses antibiotic resistance, occurs when bacteria, viruses, fungi, and parasites no longer respond to antimicrobial medicines: antibiotics, antivirals, antifungals, and antiparasitics. As a result of AMR, these medications essentially become ineffective in treating illnesses, which consequently exacerbates the spread of such illnesses, and the risk of disability or death. Every year, millions of people die directly from antimicrobial resistance or from related causes. Recently, estimates have put that number at close to 5 million deaths per year, which is higher than the HIV/AIDS epidemic. By 2050, this death toll is forecasted to double. Unique to other impending health issues, AMR is prevalent in all areas of the world and affects humans, animals, and the environment, making it a top priority to address worldwide.

The 6 deadliest resistant pathogens (*Staphylococcus aureus*, *Escherichia coli*, *Klebsiella*



pneumoniae, *Streptococcus pneumoniae*,

Pseudomonas aeruginosa, and

Acinetobacter baumannii) were responsible

for over 900,000 deaths. *Staphylococcus*

aureus (*S. aureus*) is one of the most

important bacteria that can cause disease in

humans. Commonly known as staph

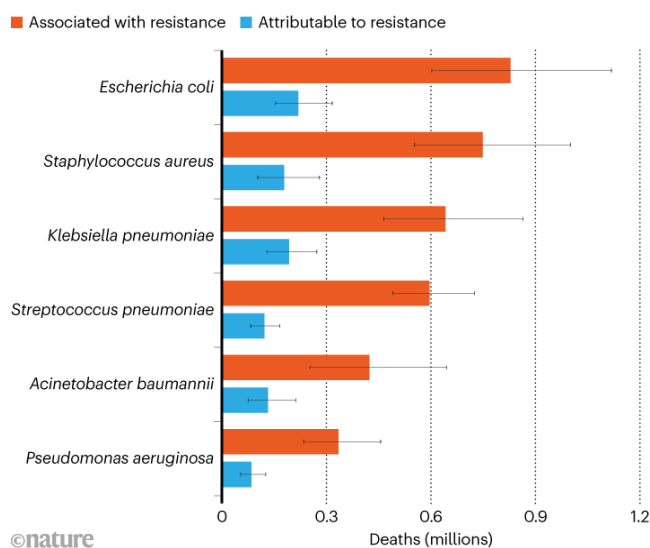
infections, *S. aureus* can lead to mild skin and soft tissue infections as well as serious

bloodstream, pneumonia, bone, and joint infections. Resistant *S. aureus* is most commonly found in hospital and nursing home settings. Next, *Escherichia coli*, more commonly known as *E. coli*, are bacteria that are found in the environment, foods, water, and the intestines of people and animals. While most kinds are harmless, *E. coli* can lead to urinary tract infections, pneumonia, sepsis, and other serious infections. Resistant strains of *E. coli* are most often found in the agriculture and livestock industries. *Klebsiella pneumoniae* (*K. pneumoniae*), like *E. coli* is usually harmless, and is commonly found in the intestines. However, *K. pneumoniae* is attributed to bloodstream, urinary tract, wound, surgical, and skin infections along with meningitis and abscesses in the liver. Similar to *S. aureus*, resistant, hypervirulent *Klebsiella pneumoniae* (hvKp), is most prevalent in healthcare facilities, especially in Asia. Furthermore, *Streptococcus pneumoniae* (*S. pneumoniae*) is carried by many people, especially children on their noses and in their throats. *S.*

pneumoniae can cause infection in the blood, brain, spinal cord membrane, lungs, bones, joints, tissues, and organs. Multi-drug resistant strains of *S. pneumoniae* are becoming increasingly more common: varying from 36% of all strains in Asia to 15% in Europe. Typically, multi-drug resistance refers to resistance to three or more antibiotics. *Pseudomonas aeruginosa* (*P. aeruginosa*) is a group of bacteria often found in the environment such as soil and water. Resistant *P. aeruginosa* infections pose the highest risk to hospitalized patients with open wounds from surgery. Lastly, *Acinetobacter baumannii* (*A. baumannii*) is also found in the

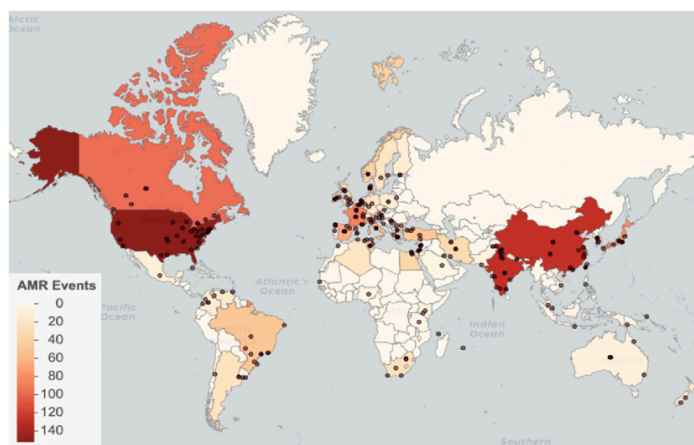
DEADLY INFECTIONS

These 6 pathogens were responsible for almost 80% of the 1.27 million deaths attributed directly to antimicrobial resistance in 2019.



environment. *A. baumannii* is associated with ventilator-associated pneumonia, urinary tract infection, and meningitis. Multi-drug resistant *A. baumannii* is recognized as one of the most difficult antimicrobial resistant bacterium to control. It is found in both healthcare and community settings.

Geographically, antimicrobial resistance exists on all 7 continents, affecting each in a varying degree. The highest death rate in the world due to AMR is attributed to sub-Saharan Africa where countries such as the Central African Republic, Lesotho, and Eritrea possessed a mortality rate of more than 200 deaths associated with AMR per 100,000 people. In South America, AMR-associated infections were the third leading cause of death in Bolivia, Brazil, Chile, Haiti, Dominican Republic, Uruguay, and Peru. Furthermore, in the Southeast Asia and Western Pacific regions, AMR was the cause of almost 700,000 deaths in 2019 alone and was most common in highly populated countries such as China, India, and Bangladesh. In Europe, while on average, less people die from AMR compared to other regions around the world, there



were 541,000 deaths due to AMR in 2019, and 800,000 infections in 2020.

Studies have even found in Europe that increases in temperature lead to higher AMR rates. In North America, AMR is most significant in the United States with 2.8 million resistant infections

every year, although Mexico possesses the highest mortality rate in North America (around 70,000 deaths). The effects of AMR are even as far reaching as the Great Barrier Reef, Australia, where sea turtles in the waters contaminated with human and animal waste were found carrying

resistant bacteria such as *E. coli*. Antarctica, often evaluated as an almost sterile environment due to its remote location and unfavorable climate. Yet, resistant bacteria has been found on Antarctic wildlife such as penguins and seals, which may lead to consequences still unknown by scientists. Ultimately, antimicrobial resistance is a crucial issue that has far reaching effects across the globe.

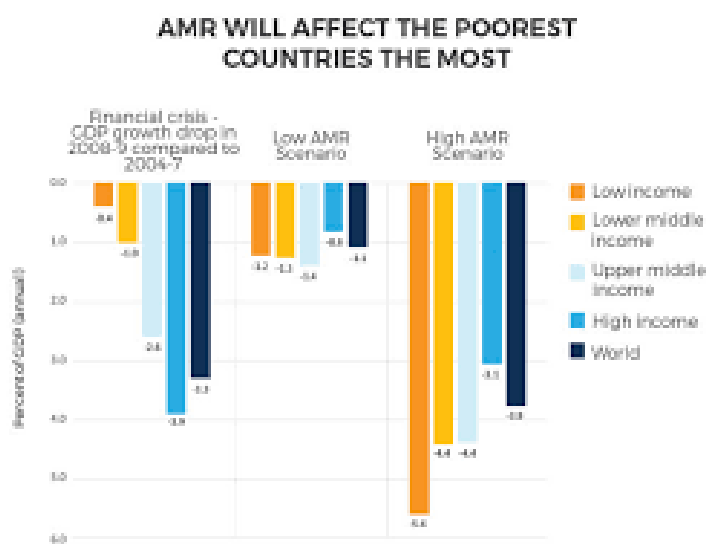
Not only is antimicrobial resistance attributed to a high death toll, but also a significant economic impact. For instance, the World

Bank estimates that AMR could result in \$1 trillion to \$3.4 trillion gross domestic product (GDP) losses per year by 2030. By 2050, there will be an estimated \$1 trillion additional healthcare costs, a total cost of \$100 trillion, and every individual in the world will be \$10,000 worse off. AMR costs the European Union (EU) alone more than 1.5 billion Euros

per year in healthcare expenses and productivity losses. However, the main burden of these economic costs will fall upon low-income countries who lack the infrastructure and funds to combat AMR. Globally, the economic effect of AMR could be comparable to that of the 2008 financial crisis.

Current Issues:

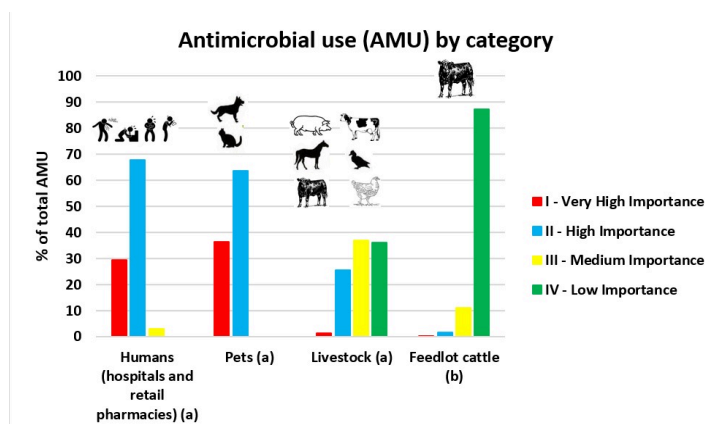
While antimicrobial resistance is a catastrophic issue that consists of many contributing factors, the cause of the bulk of the resistant bacteria can be narrowed down to a couple of



reasons. Several interconnected causes include the overuse and misuse of antimicrobials in healthcare settings, agricultural practices, poor infection control measures, and insufficient investment in research and development. Targeting these issues can control the widespread consequences looming on the horizon.

One of the primary drivers of antimicrobial resistance is the improper usage of antimicrobials. This factor is prevalent in both high-income and low-income countries alike, and falls on the shoulders of both healthcare workers and patients. For healthcare workers specifically, antimicrobials are too often prescribed incorrectly or unnecessarily, such as for viral infections where they are not effective. In some regions, up to 36% of children and 56% of adults were inappropriately prescribed an antibiotic. Sometimes, healthcare providers even give into the requests of patients who demand to be prescribed antibiotics. In 2017, inappropriate prescriptions of antibiotics for patients with common infections led to estimated excess costs of almost \$150 million in healthcare. Not only are healthcare workers held responsible for inappropriate usage of antimicrobials, but patients hold a significant role too. Frequently, patients fail to complete their prescribed courses of treatment, often stopping at the first signs of feeling better. When antibiotic treatments are incomplete, partially resistant microbes are able to survive and reproduce, which eventually leads to fully resistant strains.

Another important cause of antimicrobial resistance is the use of antimicrobials in the agricultural sector, particularly in livestock farming. In

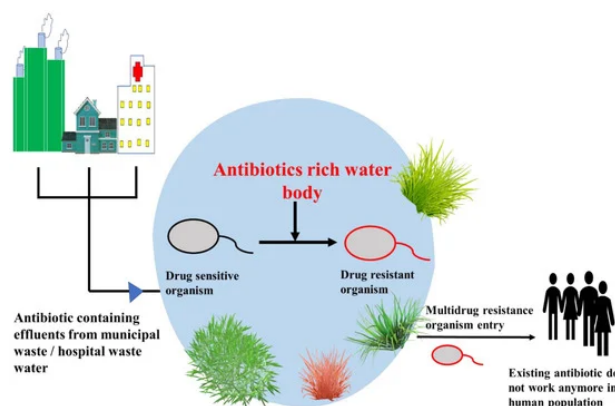


(a) Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) Annual Report, 2016
 (b) Evaluating the potential contribution of beef cattle to antimicrobial resistance (BCRC FOS.10.13)

Source: BeefResearch.ca

many parts of the world, antibiotics are routinely used in prematurely preventing infection, treating infection, and as growth promoters. In some countries, this extreme level of overuse can make up almost 80% of total consumption of antibiotics, and promotes resistance. When AMR develops as a result, some regions can experience serious effects such as mass livestock deaths, which can result in food shortages and an increase in meat prices. In addition, resistant bacteria can easily spread from livestock to humans when livestock are kept in close proximity to urban areas and are consumed by humans. Furthermore, other issues rise, especially in low-income countries with minimal wastewater treatment. Livestock farmers in these countries who dispose of animal waste in local waterways can cause AMR to spread.

Similar to sanitation issues with wastewater, antimicrobial resistance can spread as a result of improper hygiene measures. For example, in hospitals and clinics where inadequate hand washing and sterilization of medical equipment occurs, resistant bacteria can spread among patients. This is especially serious for patients with weak immunities and open wounds, where resistant bacteria can greatly increase the risk of death. When resistant bacteria spreads, it becomes increasingly harder to control AMR. Additionally, insufficient hygiene practices are common in communities, and AMR is exacerbated by close living conditions with minimal access to clean water and proper sewage disposal.



Finally, antimicrobial resistance is also impacted by the pharmaceutical industry's lack of investment in developing new antimicrobials. The process of discovering and bringing new antibiotics to market is lengthy, costly, and contains many scientific challenges. The return on

investment for new antibiotics is often considerably lower compared to other drugs for chronic conditions, as antibiotics are typically used for shorter periods. This economic disincentive has led to a reduction in the number of new antibiotics being developed, so there are fewer options available to treat resistant infections.

Current Solutions:

With many elements leading to increased antimicrobial resistance, there are some solutions to combat the issue. Focusing on one solution will likely be ineffective in dealing with such a large problem, so a multifaceted approach is necessary. Some solutions to consider are changes in policy, education, infection control, research, and innovation. By focusing on a variety of solutions, lessening the effects of AMR is possible.

A common strategy in dealing with antimicrobial resistance is the implementation of stewardship programs. These programs are designed to optimize the use of antimicrobials to treat



infections and consequently reduce the misuse and overuse of these drugs. Antimicrobial stewardship involves educating healthcare providers and the public about the appropriate uses of antimicrobials, ensuring proper prescription practices and treatment plans. Many hospitals and healthcare systems have already adopted these programs to educate people about AMR.

Second, preventing infections from occurring in the first place will reduce the global need for antimicrobial use and the subsequent development of resistance. This

can be achieved through policy implementations that cohesively direct the actions of public health officials of a country during times of disease outbreak. At a smaller level, promoting proper hand hygiene, proper use of personal protective equipment (PPE), proper sterilization of medical equipment, and isolation procedures for patients with contagious infections is necessary to fight AMR. When healthcare facilities implement these standards, positive change can occur.

Another solution to antimicrobial resistance is the research and development of new antimicrobials and other alternatives. When governments, private pharmaceutical companies, and international organizations invest in the development of new antimicrobials, multi-drug resistant strains of bacteria will become easier to treat. Lastly, researchers are exploring other alternatives to antimicrobials such as bacteriophages (viruses that target specific bacteria), antimicrobial peptides, and probiotics to fight AMR in new ways.

Questions to Consider:

1. How has your country been affected by antimicrobial resistance?
2. What is the driving force behind antimicrobial resistance in your country?
3. How has your country tried to prevent antimicrobial resistance?
4. How successful have combative measures been to deal with antimicrobial resistance?
5. How will antimicrobial resistance affect your country in the future?
6. Who is most affected by antimicrobial resistance in your country?

Topic B: Vaccine Distribution

Background:

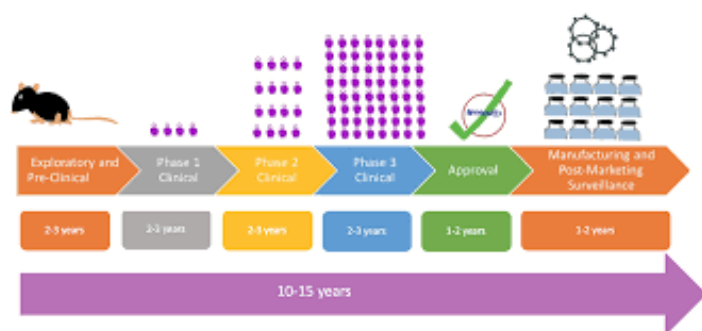
Vaccine distribution is a critical component of global public health, playing a pivotal role in the prevention and control of infectious diseases. Throughout history, vaccines have dramatically reduced the burden of infectious diseases such as smallpox, polio, measles, and influenza, where global immunization efforts have saved an estimated 154 million lives. However, the distribution of vaccines around the world has been a complex and often inequitable process, influenced by a variety of factors including economic disparities, political dynamics, infrastructure challenges, and varying technological advancements. Particularly in light of the recent COVID-19 pandemic, the production and distribution of vaccines has played a major role in the public health of the world.

Historically, the concept of vaccination dates back to the late 18th century when Edward Jenner developed the smallpox vaccine, which was the first successful attempt to provide immunity against a contagious disease. Over the following centuries, vaccines for a range of diseases were developed including diphtheria, tetanus, pertussis, polio, and measles. These vaccines were primarily distributed in high income countries where resources for development and production were more advanced. The development of vaccines then continued at a fairly slow rate until the last several decades when new scientific discoveries and technologies led to rapid advances in virology, molecular biology, and vaccinology.

In the mid 20th century, global immunization efforts became more equitable with the establishment of the World Health Organization. In 1974, WHO launched the Expanded

Programme on Immunization (EPI) to ensure that all children had access to vaccines for six key diseases: tuberculosis, polio, diphtheria, tetanus, pertussis, and measles. The EPI was a crucial step towards equity in global vaccination. Today, every country in the world has a national immunization programme and vaccines are viewed as one of the safest, most cost-effective, and successful public health interventions to prevent deaths and improve lives. Almost 50 years since the birth of the EPI, there are now 13 vaccines recommended by WHO for the EPI programme (Bacillus Calmette-Guérin (BCG), diphtheria, pertussis, tetanus, Haemophilus influenzae type B (Hib), Hepatitis B (HepB), polio, measles, rubella, pneumococcal disease (PNC), rotavirus (Rota), human papillomavirus (HPV), and Covid-19).

Creating and distributing vaccines is a lengthy and complicated process that involves multiple stages. First, the creation begins with extensive research and development, which involves identifying the pathogen—such as a virus or bacterium—that causes a particular



disease and understanding its biology and how it interacts with the human immune system. Scientists then study the pathogen to identify targets for the vaccine, like proteins or other molecules that can trigger a

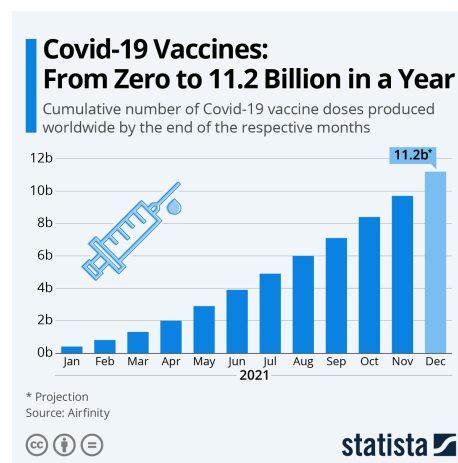
protective immune response without causing disease. Once the scientists identify a target, they can begin to create a vaccine by testing different approaches. Traditional vaccines such as the measles, mumps, and rubella (MMR), and smallpox vaccines utilize a weakened or killed form of the pathogen to stimulate immunity. Newer approaches like the Covid-19 vaccine use mRNA, which uses genetic material to instruct cells to produce a protein from the pathogen and prompt

an immune response as a result. After developing the vaccine through a variety of tests using cell structures and animal models, preclinical and clinical trials may begin. In preclinical testing, live animals are tested with the vaccine. If these trials work, clinical testing on humans is conducted. If all goes well, the vaccine must then receive approval from global organizations like WHO and national organizations like the U.S. Food and Drug Administration (FDA), and the European Medicines Agency (EMA). Finally, certain infrastructure must be put into place to produce the vaccine, and then distribute it to healthcare facilities across the globe.

As a result of the Covid-19 pandemic, efforts for universal vaccine distribution were at the forefront of WHO. When mentioning vaccine distribution, Covid-19 is a necessary element as a real life crisis that affected millions of people worldwide and

challenged healthcare systems. One of the most important responses to the pandemic was the rapid development and distribution of Covid-19 vaccines. In the past, vaccines could take decades to fully develop, yet the Covid-19 vaccine was seemingly developed in under two years. In one of the largest and most ambitious vaccination campaigns in history, several vaccines including those developed by Pfizer-BioNTech, Moderna,

AstraZeneca, and Johnson & Johnson received emergency use authorization within a year of the pandemic. However, this was mostly due to over 50 years of research on mRNA technology. In addition, the widespread production and roll-out of vaccines was crucial in quickly minimizing the impact of Covid-19. In 2021, an estimated 11 billion doses of the vaccine were produced, and G7 and EU countries were estimated to have a 1.4 billion surplus in doses. The Covid-19 vaccination has prevented over 14 million deaths.

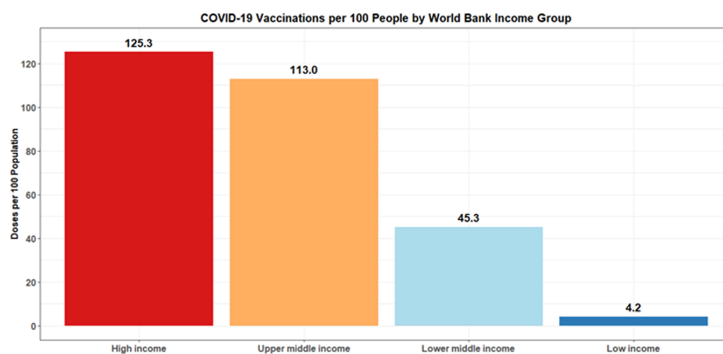


Current Issues:

Vaccines are vital in preventing infections and protecting the public health of many. However, there are many barriers to distributing vaccines because of the many steps and costs involved in administering them. For one, providing equitable access is difficult for countries lacking the proper infrastructure. Other challenges include logistical barriers, misinformation, and other political and economic factors. Too often, low-income countries are the most affected by these issues. No matter the differences in populations such as location or socioeconomic status, vaccines can be beneficial for many people.

Inequitable access is one of the most pressing issues related to vaccine distribution. There is often a stark inequity in access to vaccines between low-income and high-income countries. With private companies manufacturing vaccines, these companies frequently make deals with wealthier nations and overlook poorer countries who cannot afford large quantities of vaccines. Therefore, wealthier nations are frequently able to secure these vaccines, leaving fewer for lower-income countries in consequence.

As a result, low-income countries may not receive sufficient doses until much later. For instance, during the Covid-19 pandemic, while 69% of people globally received at least one vaccine dose at the



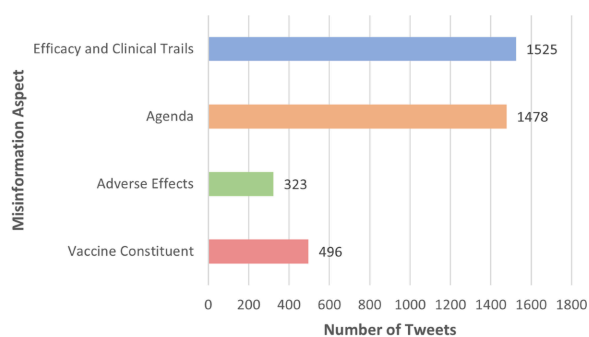
end of 2022, in low and middle income countries (LMICs), that percentage was just under 25%.

While these LMICs were struggling to procure enough vaccines for their populations, high-income countries had a surplus of vaccines. The estimated rate of wastage for these

Covid-19 vaccines was as high as 30% in high-income countries. This is approximately 5.6 billion doses discarded before use. When such disparities in distribution equity occur, more people are put at risk for contracting serious diseases that can lead to health complications.

A second issue for vaccine distribution, also especially in low-income countries, is logistical challenges in transporting and administering the vaccines. Vaccines require careful handling, storage, and transportation to maintain their efficacy. Many vaccines like the Covid-19 vaccine need cold storage at very specific temperatures. Maintaining these conditions is especially difficult in low-income countries with limited infrastructure, unreliable electricity, and rough terrain. In addition to these barriers, other problems like poor road networks and condition, inadequate transit options, regions of conflict, and a lack of healthcare facilities impair the efforts of distributing vaccines to all populations particularly in rural areas. Low-income countries many times cannot afford to fix these issues, causing these problems to sometimes worsen.

Next, vaccine hesitancy and misinformation plays an important role in the acceptance and



adoption of immunization. Vaccine hesitancy is the reluctance or refusal to vaccinate despite the availability of vaccines. Misinformation contributes to vaccine hesitancy when conspiracy theories are spread widely across social media and other platforms. The

reasons for the spread of misinformation usually result from a mistrust of governments and healthcare systems, along with cultural beliefs. As a result, fear and skepticism takes hold among certain populations. Vaccine hesitancy is not limited to any particular region or demographic, as the spread of misinformation can affect both low and high-income populations alike.

Current Solutions:

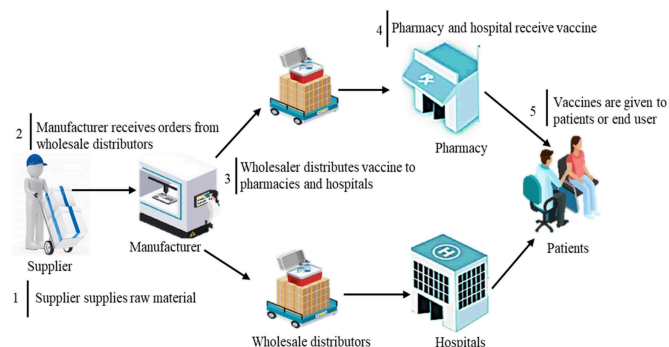
To solve the issues of inequitable access, barriers in the supply chain, and vaccine hesitancy, measures must be taken to protect people from illnesses and potentially save millions of lives. Some solutions to explore are global initiatives, policy changes, technological innovations, public-private partnerships, and programs to combat misinformation and enhance vaccine acceptance. If successful, these strategies have the ability to promote global health in both high-income and low-income countries alike.

Global initiatives are a leading solution in expanding equitable access to vaccines because they promote access to all countries, regardless of income level. One example to note is the COVAX initiative, created after the Covid-19 pandemic. Directed by the GAVI vaccine alliance, the Coalition for Epidemic Preparedness Innovations (CEPI), and the World Health Organization, alongside UNICEF, COVAX aims to accomplish worldwide equitable access to vaccines. As a result of COVAX, 92 lower income countries were able to receive free doses and support. Nearly 90% of the 2 billion doses provided through the COVAX Facility went to these lower income countries. This was significant for improving access in low-income countries who previously received a very limited amount of vaccine doses. On top of COVAX, there are other initiatives for vaccine distribution including the African Vaccine Acquisition Task Team (AVATT) and the Pan American Health Organization's Revolving Fund. These initiatives benefit both high and low income countries because they are collaborative organizations that purchase vaccines in bulk to improve access to vaccines and ultimately reduce costs for all member countries.

Another way to improve vaccine distribution is the strengthening of supply chains and investing in infrastructure. For vaccines that require cold storage, it is necessary to invest in

freezers, portable cold boxes, and temperature monitoring devices. Along with that, healthcare workers must be trained to handle and store vaccines properly. Since transportation issues are common particularly in low-income

countries, it is important that vehicles are equipped with the right technology to transport vaccines, and investing in road networks will ensure that all populations are reached. In addition, the usage of digital



technology to track vaccine shipments and monitor storage conditions in real time will be beneficial in quickly identifying and addressing potential supply chain disruptions.

Consequently, this will reduce the risk of vaccine wastage. For instance, the Vaccine Information Management System (VIMS) is one such digital platform that is already used by several countries to track vaccine inventory and distribution, which essentially improves supply chain transparency and efficiency.

Next, expanding global vaccine manufacturing capacity is critical for ensuring a steady supply of vaccines to meet global demand. This can be achieved by investing in existing manufacturing facilities to increase production and establishing new manufacturing sites in regions where vaccines are needed. To aid lower income countries, technology transfer agreements of vaccine manufacturing technology allow these countries to produce vaccines locally. This leads to a reduction in dependency on imports and increases self-sufficiency. While manufacturing is a large aspect in improving vaccine distribution, it is more beneficial for the technology to be transferred to low-income countries.

Alongside manufacturing, public-private partnerships and funding play a big role in vaccine distribution. Partnerships between governments, pharmaceutical companies, and international organizations are a joint effort in facilitating rapid vaccine development, large-scale manufacturing, and distribution. Typically, governments fund and support the efforts of private companies to develop, produce, and distribute vaccines as fast as possible. Financial support, not just from country governments, also enables countries to purchase vaccines, build healthcare infrastructure, and train healthcare workers. Such support can come from international institutions like the World Bank and the International Monetary Fund (IMF) who have provided loans and grants, or individual charities.

Lastly, combating vaccine hesitancy and misinformation is key to achieving high vaccination rates. Some ways to accomplish this include public health campaigns that teach accurate information about vaccines, their benefits, and potential side effects. Additionally, promoting these campaigns through community leaders, and religious figures can be more effective in promoting vaccine acceptance. When dealing with misinformation from digital platforms like social media, governments and health organizations can partner with technology companies to identify and remove false information and instead promote credible sources.

Questions to Consider:

1. How does income affect the vaccine distribution in your country?
2. How equitable is vaccine distribution in your country compared to other countries?
3. What are the ways in which vaccines are distributed in your country?
4. How is vaccine distribution funded in your country?
5. What are some challenges in distributing vaccines to all people in your country?

6. How is your country supplied with vaccines?

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