

**Committee:** The World Health Organisation

**Question:** The issue of lack of immunisation

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**Position:** Deputy Chair



## PERSONAL INTRODUCTION

Dear Delegates,

The topic that we will be debating during the conference is a very significant issue as it concerns and impacts all of us. During the past decades, there is an increase in the number of people who lack of immunization. The main reasons for under vaccination are due to parental knowledge, beliefs and attitudes, as well as the reliability and access to health services. There are many anti-vaccination movements that take place all over the world, which oppose to the use of vaccines. However, the issue of lack of immunization has created numerous problems to society as diseases are spreading and affecting people even more.

I am certain that this topic will open a lot of discussion, leading to a fruitful debate. I am confident that this MUN conference will be a notable experience to all of us, which we will gain more knowledge and something we will consider worthwhile.

Kind regards,

Konstantina Grispou

## KEY TERMS

### **Immunization**

“The act of protecting a person or an animal from a disease, especially by giving them an injection of a vaccine”<sup>1</sup>

### **Vaccine**

“A substance that is put into the blood and that protects the body from a disease e.g. measles”<sup>2</sup>

### **Anti-Vaccine / Vaccine hesitancy**

An opposition to the use of vaccines.

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<sup>1</sup> [https://www.oxfordlearnersdictionaries.com/definition/english/immunization#immunization\\_inflg\\_2](https://www.oxfordlearnersdictionaries.com/definition/english/immunization#immunization_inflg_2)

<sup>2</sup> <https://www.oxfordlearnersdictionaries.com/definition/english/vaccine?q=vaccine>

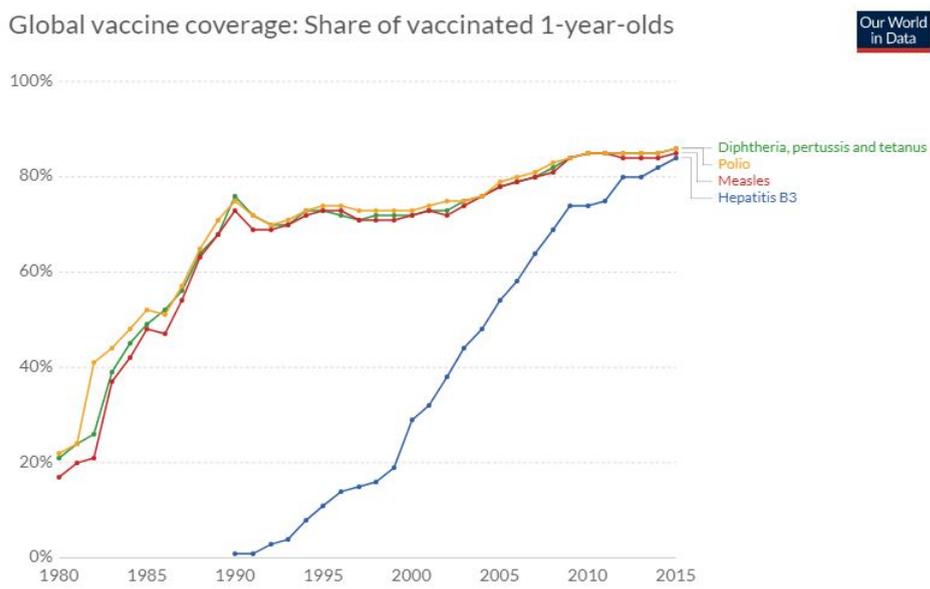
## TIMELINE

Date	Description of event
1796-1798	Invention of the smallpox vaccine by Edward Jenner in England. The vaccine did work but inoculated people with cowpox instead.
1853	The vaccination act of 1953 was introduced in England. The act made vaccination compulsory for infants, and there would be penalties if parents refused to vaccinate their child. This act led to the creation of the Anti Vaccine League.
1879	The Anti- Vaccination Society of America was founded by William Tebbs in the United States. The organization opposed to the compulsory smallpox vaccine through court battles in states in the USA
1885	The Leicester demonstration march in England occurred. Many demonstrations took place during that year in order to ban vaccination.
1889	Due to the Leicester demonstration march, a new vaccination act was introduced and removed the penalty for vaccine refusal.
1902	Public Health law introduced in the USA. The board of Health of Cambridge made vaccination compulsory after a smallpox outbreak.
1924	Progresses in technology allowed more vaccines to be available for tuberculosis, diphtheria, smallpox and tetanus.
1955	The Cutter Incident occurred in the USA, in California. A laboratory made Salk polio vaccines that contained polio viruses.
1974	The DTP vaccine controversy
1979-1996	“Sweden suspended vaccines against whooping cough. During that time, 60% of all children in Sweden contracted the disease before the age 10.” <sup>3</sup>
1998	The “Green our vaccines” movement. People did not want thiomersal to be present in vaccines as it contains mercury. However, no cases or evidence suggest that thiomersal in vaccines is harmful.
2007	A celebrity in the USA named Jenny McCarthy announced that her son has autism and blamed it on vaccination. McCarthy became an active member of the anti- vaccine movement influencing many people.
2013-2015	There were three large measles outbreaks in the USA in areas where parents refused to vaccinate their children.

<sup>3</sup> <https://measlesrubellainitiative.org/anti-vaccination-movement/>

## TOPIC DISCUSSION

Vaccination plays a very important role in global health as it reduces and prevents the spread and outbreak of diseases that can lead to someone's death. Vaccines create immunity to a person as they introduce a harmless pathogen (a bacterium or virus) to the body, and when the person encounters the real harmful pathogen, the body can defend itself. Immunization can save many lives and is considered one of the most effective, safe and successful health interventions.



**Figure 1:** Global vaccines coverage

Figure 1 shows that the global vaccine coverage has increased dramatically since 1980. In 1980, approximately 20% of 1-year-olds worldwide were vaccinated for DTP, Polio, Measles and Hepatitis B3. Whereas in 2015, 85% of 1-year-olds worldwide were vaccinated to these diseases.

Due to the progress of science and technology, more vaccines are available for diseases that in the 20<sup>th</sup> century could cause death or serious disabilities. However, there are many anti-vaccine activists (most are parents) who believe that vaccines can be harmful for our health and can cause autism. Even though these ideas have been proven through scientific evidence to be false, many people are concerned and skeptical of the effectiveness of vaccines and oppose to the use of vaccines. Today,

vaccine hesitancy is one of the reasons why the global vaccination coverage (for recommended vaccines) has not increased or changed over the past years, as it still remains at 85%. Unfortunately, over “1.5 million children”<sup>4</sup> die every year from diseases that could be prevented by vaccination.

The World Health Organization is working with many countries worldwide, attempting to increase the global vaccine coverage. The WHO acknowledges that the issue of lack of immunization is not only due to vaccine hesitancy, but also to the lack of vaccines in certain countries and weak health care systems. Thus, in order to propose measures to tackle this issue, there must be understanding of the global vaccine situation today and the causes of this issue.

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<sup>4</sup> <https://www.unicef.org/immunization>

## CAUSES

Firstly, lack of confidence in the health care system concerning vaccines and their effectiveness, has made parents refuse to vaccinate their children. There were many outbreaks in the 20th century that led to a decrease in the number of children getting vaccinated as vaccines caused many diseases and health issues. Vaccines such as the DTP have caused controversy as there was uncertainty of its safety. This was because thirty “six children in London suffered”<sup>5</sup> from neurological problems after the immunization for Diphtheria, Tetanus and Pertussis (DTP) in 1974. This made people distrust the effectiveness of vaccines as the percentage of children getting vaccinated in the UK decreased from “81% to 31%.”<sup>6</sup> Also, incidents such as the Cutter Incident in 1955 made the public distrust the health care system as the vaccine for polio had negative side effects to society, resulting to “40,000 cases of polio, 53 cases of paralysis and 5 deaths”<sup>7</sup>. Health issues arising from the use of vaccines has caused the anti- vaccination movements to still remain a problem in today’s society, as there is no significant increase of more children getting vaccinated over the past years on a global scale.

There are many false misconceptions regarding vaccines which contribute to the issue of the lack of immunization. Some parents believe that vaccines can be the cause for autism; however, it has been proven through scientific evidence that there is no link. The MMR vaccine had caused controversy after a UK researcher named Andrew Wakefield in 1998 claimed that the vaccine increases the chances of a child developing autism. This made parents very concerned over the safety of the vaccine which influenced more anti-vaccination movements to take place all around the world. The Global Advisory Committee on Vaccine Safety (GACVS) conducted a research to investigate if there was an association between autism and the MMR vaccine. GACVS concluded that there was no evidence suggesting that the vaccine can

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<sup>5</sup> <https://measlesrubellainitiative.org/anti-vaccination-movement/>

<sup>6</sup> <https://measlesrubellainitiative.org/anti-vaccination-movement/>

<sup>7</sup> <https://measlesrubellainitiative.org/anti-vaccination-movement/>

cause autism and it suggested that children should continue getting vaccinated with the MMR vaccine. The use of thiomersal in vaccines has also caused controversy regarding the safety of the vaccine leading to the “Green our Vaccines” movement. Anti-vaccination activists believe and promote that thiomersal causes autism, even though it has been proven that there is no link. However, in the USA, thiomersal is not used in vaccines as it may result to brain damage because it contains mercury. The false misconceptions have discouraged parents from getting their children vaccinated and thus, more children have health issues such as measles due to the lack of immunization.

The lack of availability of vaccines in some countries and regions has enhanced the problem of lack of immunization. In 2017, the World Health Organization (WHO) estimated that “19.9 million”<sup>8</sup> children worldwide have not been vaccinated with the DTP vaccine within three doses. Approximately 60% of these children live in Afghanistan, Angola, the Democratic Republic of the Congo, Ethiopia, India, Indonesia, Iraq, Nigeria, Pakistan and South Africa. The lack of access of vaccines, especially in LEDCs, has not prevented the spread of serious diseases such as yellow fever and tetanus.

Lastly, religious groups have started to oppose the use of vaccines. Even though, no major religions forbid the use of vaccines, there are religious groups who regard vaccination as an attempt to decrease the population of certain religious groups. In Pakistan from 2015, there have been attacks on vaccination workers because some Islamist preachers believe that vaccines are used to sterilize Muslims. The opposition to vaccines through violent means has caused the government in Pakistan to suspend the campaign to vaccinate “more than 40 million children”<sup>9</sup> in 2019. Therefore, the belief that vaccines will sterilize Muslims has caused fewer children to get vaccinated in Pakistan.

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<sup>8</sup> <https://www.who.int/news-room/fact-sheets/detail/immunization-coverage>

<sup>9</sup>

<https://www.theguardian.com/global-development/2019/apr/30/killings-of-police-and-polio-workers-halt-vaccine-drive-in-pakistan>

## **POSSIBLE SOLUTIONS**

Having noticed how the lack of vaccination is harmful for global health, raising awareness is essential in informing the public about the importance of vaccines. The media and campaigns are great ways to make the public understand that vaccines prevent illnesses and deaths, and are very important for our health. Newspapers, television and social media can influence many people globally to get vaccinated. Education can also be used to teach children more analytically how vaccines are effective in fighting a disease, through biology classes.

Health workers play a crucial role in influencing people to get vaccinated and trust the health care system. Health workers all around the world could inform the public (through the media) about the importance of vaccines. They could use graphs and statistics to show how vaccines prevent diseases. Also, graphs and statistics from reliable sources such as the WHO, can be used to show that there is no correlation between autism and vaccines. Doctors could directly inform parents about the importance of vaccines and address any parental concerns and misconceptions.

Governments could ameliorate the quality of health care services. Vaccines should only be available for the public if they have been tested that they do not contain any harmful viruses and are safe. This will encourage parents to trust health care services and vaccine hesitancy.

NGOs could ameliorate the health care system in LEDCs through funds and make sure that more children are vaccinated. Regions that have more diseases than in others could have more aid from certain NGOs that strive to vaccinate more children. For example, yellow fever is more common in Africa, and NGOs could provide more vaccines there which tackle that disease.

## MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

### USA

The USA has an immigration law which requires all visa applicants to have done certain vaccines in order to be able to come to the USA. Panel physicians make sure through medical examinations that visa applicants meet the vaccination requirements. The same applies for visitors.

Vaccine coverage in the USA is relatively low which has caused many diseases to spread. After the three large measles outbreaks in 2013 to 2015, in areas where parents refused to vaccinate their children, the USA requires all children to be vaccinated in order to attend school.

### EUROPE

Even though, the vaccination rates in Europe are high, there are still measles outbreaks as there are still children who are not vaccinated.

In 2017, a new policy was introduced in France which required all children “born on January 1st or later to receive 11 mandatory vaccines”<sup>10</sup>. Before the introduction of the new policy, it was compulsory in France for children to be vaccinated against diphtheria, tetanus and poliomyelitis. After the new policy, vaccines against whooping cough, hepatitis B, measles, mumps and rubella became mandatory.

Italy also requires children to be vaccinated in order to attend school, just like in the USA. This new requirement was introduced due to an outbreak of measles cases, where “89% of measles cases, were among unvaccinated people, and 6% of infections affected people who received only one dose of vaccine.”<sup>11</sup>

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<sup>10</sup> <https://edition.cnn.com/2017/06/06/health/vaccine-uptake-incentives/index.html>

<sup>11</sup> <https://edition.cnn.com/2017/06/06/health/vaccine-uptake-incentives/index.html>

European countries have different immunization programs, but all countries encourage vaccination and have made essential vaccines compulsory.

## **UNICEF**

UNICEF has created an immunization program, and is working with the UN and other NGOs to ensure that children who are in great need of immunization are vaccinated.

The immunization program's actions are:

- Using mobile technology and telemetrics to ensure that vaccines reach many regions without losing their effectiveness or safety due to cold or hot weather conditions.

- Making the cost of vaccines fairly cheap so LEDCs have access to essential vaccines for children

- Working with many partners to develop more safe and effective vaccines, and to distribute vaccines to LEDCs.

Achievements:

- In 2018, UNICEF provided essential vaccines to half of the world's children

- From 2000, approximately "2.5 million children"<sup>12</sup> had been vaccinated and "the number of polio cases has fallen by more than 99 percent, dropping to just 22 cases in 2017."<sup>13</sup>

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<sup>12</sup> <https://www.unicef.org/immunization>

<sup>13</sup> <https://www.unicef.org/immunization>

## UN INVOLVEMENT: RELEVANT RESOLUTIONS AND TREATIES

The WHO is actively involved in protecting people from harmful diseases through the use of vaccination. In 2017, the WHO created a campaign to urge more people to get vaccinated, and to inform the public about the importance of immunization.

The campaign's aims were to:

- “Highlight the importance of immunization, and the remaining gaps in global coverage
- Underscore the value of vaccines to target donor countries and the importance of investing in immunization efforts
- Highlight the ways in which everyone – from donors to individuals – can and must drive vaccine progress.”<sup>14</sup>

In order to complete its aims, the WHO set the Global Vaccine Action Plan (GVAP) which works to prevent millions of deaths from diseases through vaccines.

In 2017, a new resolution was passed by health ministers from 194 countries that aimed to complete the goals of the GVAP. The resolution urges countries to strengthen the influence and governance of immunization programs globally, as well as improve the quality and impact of vaccines. The resolution also encourages countries to make vaccines accessible to adults and children, and to strengthen international cooperation between countries concerning this issue. By 2020, the UN secretariat will write a report on the targets and aims that were achieved, according to the GVAP.

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<sup>14</sup> <https://www.who.int/news-room/fact-sheets/detail/immunization-coverage>

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**Figure:**

Vanderslott, Samantha, and Max Roser. "Vaccination." *Our World in Data*, 10 May 2013, ourworldindata.org/vaccination