

Forum: First Human Rights Council

Issue: Ensuring access to safe, effective, quality and affordable vaccination for all

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Introduction

Since the first appearance of vaccines against smallpox in 1796 by Edward Jenner, and Louis Pasteur's 1885 rabies vaccine, the rapid development of bacteriology has greatly benefited humanity. Made from the germs that cause the very disease, vaccines contained weakened or killed cells that will stimulate humans' immune systems to produce antibodies against those germs and develop immunity to that disease. Public health has seen great improvement since the appearance of vaccines: lower infant fatality rate, longer lives, improved quality of life, and more. According to the World Health Organization (WHO), vaccines are estimated to save around two to three million lives every year. Seeing the positive externalities that vaccines bring to society, some governments and organizations even provide certain vaccines for free. For example, in the United States, The Vaccines for Children (VFC) program in Centers for Diseases Control and Prevention (CDC) vaccinates at no cost to eligible children through health care providers.

However, not all communities can enjoy the benefits of vaccines. In an article from WHO states that "1 in 5 children in Africa do not have access to life-saving vaccines". Vaccine-preventable diseases, such as, but not limited to, measles, polio, whooping cough, tuberculosis, and pneumonia, are still predominant causes of death in Africa. Vaccines in Africa are only limited to populated urban areas, and even if available, they are exorbitantly priced for an average African. On the other hand, some communities refuse the privilege of vaccination. A phenomenon called 'Vaccine Hesitancy', more commonly known as the 'Anti-Vax Movement', is turning people away from the benefits of vaccines and endangering children's lives. The spread of misinformation of vaccines and their effects are putting the United States in public health hazard; the vaccination rate for the measles, mumps, and rubella (M.M.R.) injection in kindergartners dropped for two consecutive years.

Definition of Key Terms

Vaccination

Treatment with a vaccine to produce immunity against a disease; inoculation.

Immunization

The action of making a person or animal immune to infection, typically by inoculation..

Vaccine Hesitancy

Reluctance or refusal to be vaccinated or to have one's children vaccinated

Measles

An acute and contagious disease caused by a virus and characterized by the outbreak of small red spots on the skin

Background

First discovery of vaccines

Edward Jenner

Edward Jenner first discovered vaccines against smallpox in 1796, one of the most devastating diseases to mankind. Jenner's work now serves as the early foundation of immunology. Before Jenner, the process called inoculation was used, which was to wet a lancet with a pustule of some person who contracted smallpox, then to contact the lancet on someone who is not immune to smallpox. Inoculation seldom spread smallpox to nonimmune individuals, or even create new bloodborne diseases such as syphilis.

Louis Pasteur

Pasteur's experiments and discovery of rabies vaccines substantiated Jenner's discovery as well. Pasteur found out that injecting dead or weakened pathogens of the very disease into human bodies will trigger the creation of antibodies, thus make individuals immune against the disease. Pasteur developed the earliest vaccines against fowl cholera, anthrax, and rabies.

Various countries' stance regarding vaccination

After the vaccines are proven effective, many countries have encouraged the use of vaccination. However, individuals who question the validity of vaccines or their potential risks have avoided vaccinations, which might cause health risks in the future.

The United States

All state schools require proof of vaccinations before a child's enrollment, including preschools. It wouldn't be a problem if vaccine hesitancy was a minority, but since the recent trend has shown that the Anti-Vax group is gaining momentum, the United States government has shown concerns regarding its public health

France

Agnes Buzyn, France's minister of health, announced a new policy that requires all children in France born January 1, 2019, or later to receive 11 mandatory vaccines. This was to meet the WHO's recommended vaccination rate: 95%.

Europe

European countries have experienced increased cases of measles compared to the past. Extreme cases such as Greece, the UK, and the Czech Republic even got their measles-free status revoked by the WHO.

Italy

Similar to the United States, children attending schools in Italy are required to submit proof of vaccinations before enrollment. Italy intends to stop the spread of measles, therefore it will fine the parents who are not vaccinated, while parents in the United States can conscientiously object.

Canada

About eighty-five percent of the total Canadian population is vaccinated, about ten percent lower than the WHO's recommended vaccination rate. Approximately two percent of its population is strongly against vaccination. Canada should focus on the accessibility of vaccines, as people are well educated about the importance of vaccines but vaccines are not as available as they are in other developed countries.

DR Congo

CDC states that all travelers to DR Congo must get vaccinations for measles, routine immunization, yellow fever, and polio. After an Ebola outbreak, the second biggest outbreak of the disease in the record that killed more than two thousand people, DR Congo shows a positive attitude towards vaccines and intends to vaccinate about two hundred thousand people, prioritizing citizens who lived in populated areas. The measles outbreak in DR Congo has also killed about four thousand people; the WHO and Congolese government have cooperated to start an emergency program that aims to vaccinate about eight hundred thousand children throughout the nation.

Rise of the Anti-Vax Movement

According to the WHO, vaccine hesitancy “threatens to reverse progress made in tackling vaccine-preventable diseases.” Some people theorize the relationship between MMR (measles, mumps, and rubella) vaccines and autism, as the number of autism cases has increased as well as the vaccination rate. The suggested correlation has been rejected by scientists; in fact, a study of over 650,000 children in Denmark concluded that there was no concrete evidence that proves a connection between MMR and autism. The Anti-Vax community shows distrust towards their current health system, questions the safety of vaccines that contain certain compounds or chemicals, and demands transparent data from medical professionals. Even in many developed countries with solid infrastructure, the suspicion against healthcare system seems prevalent and invasive. Parents who do not

believe in the benefits of vaccines are not likely to vaccinate their kids, which would put an entire nation at great public health risk.

Countries' revoking measles-free status

The World Health Organization (WHO) has announced that it no longer considers measles to be eradicated in the UK, Albania, the Czech Republic, and Greece. While measles is highly contagious, it can be easily eradicated through cheap, accessible vaccines. According to recent WHO data, from six months of 2019, there has been already ninety thousand reported measles cases. What's worse, the United States is experiencing its biggest measles outbreak in 27 years. This data raise concerns regarding the countries' public health and potential outbreak of diseases that were almost eradicated.

Individual efforts to stop misinformation

There has been a rise of young individuals who got vaccinated against their families' wills. In 2019 March, a teen in Ohio, Ethan Lindenberger, got vaccinated against his Anti-Vax mom's beliefs. Lindenberger blamed social media for spreading misinformation and putting millions of kids under health hazards. He later testified his brave action in U.S. Congress and warned against social media platforms that do not filter Anti-Vax contents.

Major Parties Involved

World Health Organization (WHO)

The World Health Organization has been one of the most crucial, if not only, force of eradicating vaccine-preventable diseases. During the Ebola outbreak, WHO was directly involved in trials of the VSV-EBOV vaccine, which shows the potential of future Ebola vaccines. WHO also established a department called R&D Blueprint for Action to Prevent Epidemics to minimize the time delay between the declaration of a public health emergency and the effective medicinal measures to save lives.

The United States

As the United States was the first country to mandate vaccination, many countries followed suit by implementing vaccination as part of their healthcare systems. Now, in most of the developed countries, vaccinations are accessible and cheap, if not free, and some are mandatory before a child is to receive public education.

Anti-Vaccine Movement (Anti-Vax)

A movement that encourages to refuse vaccines as the members believe that vaccines could induce autism or other lethal health issues. The solution to countries' decreasing vaccination rates would be to debunk Anti-Vax claims and correct the misinformation spread by the media.

Nigeria

As only thirty-eight percent of African countries kept their promise to vaccinate ninety percent of their children, almost half of children in Africa remain under neglect and risks of unvaccinated. African countries need to provide cheap and accessible vaccines to rural areas through means such as medical drives to ensure that families do not get trapped in the cycle of poverty. Nigeria is one of the African countries that provide poor access to regular polio vaccination. Though its measles vaccines delivery is higher than that of polio, thanks to SIA (supplemental immunisation activity) campaign. There is a need for more sustainable delivery systems, such as better road infrastructure and accurate data of the routine immunization coverage and geography.

Mozambique

However, not all African countries share this positive improvement. Mozambique is one of the many African countries that held fewer campaigns compared to other African countries, and the result was not fruitful. Similar to Nigeria, spatial scale and regional maps will help governments to better understand the vaccination coverage throughout the nation. Seeing that there were not many campaigns held, raising the government's awareness and urging the government to take immediate action to protect its citizens are some of the priorities.

Timeline of Events

The history of vaccines dates back to 1796 when Edward Jenner first discovered that infection with cowpox could immunize someone from smallpox. From then, bacteriology quickly developed for the past two centuries. Most of the contagious diseases are vaccine-preventable, and many countries benefit from vaccines through higher productivity and an individual's dignified life.

Date	Description of event
May 14, 1796	Edward Jenner discovers vaccination against smallpox
1802	Massachusetts becomes the first U.S. state to encourage smallpox vaccination
July 6, 1885	Pasteur's rabies vaccines used in humans
1900	U.S. Army discover the cause of Yellow Fever
1922	U.S. schools start to require smallpox vaccination before attending
1926	An armed protest against vaccination in Georgetown, Delaware
1948	Kyoto Disaster
1951	Greenland mass measles epidemic
January 1, 1967	WHO launches the Intensified Smallpox Eradication Programme
May 8, 1980	WHO declares that the world is free from smallpox

Previous Attempts to Resolve the Issue

Since vaccines are proven to be beneficial and safe, many governments and organizations have mandated vaccination for kids. According to the History of Vaccines, supported by the college of physicians of Philadelphia, “The judicial branch of U.S. federal government has had a role as well in vaccination. A variety of court decisions have considered the validity of vaccination mandates and have attempted to address the conflict between individual rights and protection of the public’s health.” In 1905, the United States Supreme Court mentioned of mandatory smallpox vaccines to preserve public health. From 1922, U.S. schools started to require immunization records prior to enrollment. Failure to submit the supporting documents could lead to violation of the fourteenth amendment. This shows that the United States hopes to improve public health by recognizing the importance of vaccination. After the United States, other developed countries such as the Great Britain, France, Italy, and Canada are following the United States’ example of successful vaccination and educating the public.

In Africa, seventy seven percent of children were vaccinated by 2014, which is a shocking difference compared to five percent in 1980. World Health Organization collaborated with PATH and initiated the Meningitis Vaccine Project, which provided an affordable, tailor-made vaccine. The project successfully eradicated polio in Africa, although vaccine-preventable diseases could be worsened by malnutrition and unsafe drinking water, commonalities in some parts of Africa. The African health community then recognised the potential of immunisation, and established the Global Vaccine Action Plan. However, its goal to vaccinate ninety percent of children by 2015 has failed, as only about sixty percent of children in Africa were vaccinated. The challenge is to break the distrust toward the healthcare system and provide accessible vaccines at affordable costs. Non governmental organizations have organized vaccine drives into rural areas of Africa, which has proven to be greatly effective to stop the spread of vaccine-preventable diseases.

Below are some relevant and helpful WHO resolutions regarding immunization, vaccines, and biologicals (IVB) that provide solid context:

- Global Immunization Strategy (WHA58.15)
- WHO-UNICEF Joint Statement on Vaccine Donations (WHO/IVB/10.09)
- Adopting global vaccine management policies for national use (WHO/V&B/02.32)
- Assessing the Programmatic Suitability of Vaccine Candidates for WHO Prequalification - Revision 2014. (WHO/IVB/14.10)
- Guide for standardization of economic evaluations in the field of vaccine-preventable diseases (WHO/IVB/08.14)

Possible Solutions

- World Health Organization announced the vaccine hesitancy as one of the Top 10 global threats in 2019. Some countries that were close to eliminating the outbreak of measles have seen a resurgence. Despite not

all cases of vaccine-preventable diseases are from vaccine hesitancy, educating children from a young age about the benefits of vaccination to individuals and their communities seems crucial. To stop the spread of misinformation and debunk the Anti-Vax's beliefs, medical professionals need to provide credible sources and opinions regarding vaccines, substantiated by the government's infrastructure that will allow people to easily access vaccines.

- Vaccines in less developed countries are inaccessible to low to middle-income class, which weakens the working class and the country as a result. Contagious vaccine-preventable diseases also bring a great financial burden to the family, as they would lose a huge source of income. This puts the family in the cycle of poverty, which eventually makes the nation as a whole harder to develop. Providing cheap, accessible vaccines across the country, including suburban and rural areas, will greatly boost the productivity of the developing nations and aid destitute families to set a financial foundation based on their labor.
- The governments can provide free vaccines for new contagious diseases for children below the age of 18 and encourage parents of their children as soon as possible. The statistics show that the earlier that kids are vaccinated, there is a higher chance that they will get all the vaccinations required for schools.
- With developed countries' reduced emphasis on immunization, WHO expects a decrease of accessible vaccines in LEDCs (Less Economically Developed Countries), which rely on MEDCs' (More Economically Developed Countries) technology for vaccines. Despite correlation not quite evident, correcting the vaccine hesitancy in MEDCs will also increase awareness in LEDCs and avail more vaccines to kids. One way that LEDCs can break the cycle of poverty and dependence is to have a robust population of the working class; as a result, domestic outputs will increase. Increased outputs can be exported or used domestically to strengthen the country's infrastructure.

Bibliography

“1 In 5 Children in Africa Do Not Have Access to Life-Saving Vaccines.” *World Health Organization*, World Health Organization, www.afro.who.int/news/1-5-children-africa-do-not-have-access-life-saving-vaccines.

“All Timelines Overview.” *Timeline / History of Vaccines*, www.historyofvaccines.org/timeline#EVT_100335.

“Basics of Vaccines.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 14 Mar. 2012, www.cdc.gov/vaccines/vpd/vpd-vac-basics.html.

Epstein, Kayla. “This Teen Got Vaccinated against His Mother's Wishes. Now, He'll Testify before Congress.” *The Washington Post*, WP Company, 5 Mar. 2019, www.washingtonpost.com/health/2019/03/03/teen-got-vaccinated-against-his-parents-wishes-now-hell-testify-before-congress/.

Hoffman, Jan. “How Anti-Vaccine Sentiment Took Hold in the United States.” *The New York Times*, *The New York Times*, 23 Sept. 2019, www.nytimes.com/2019/09/23/health/anti-vaccination-movement-us.html.

“Immunization Policy Documents.” *World Health Organization*, World Health Organization, 17 Oct. 2019, www.who.int/immunization/documents/policies/en/.

Kennedy, Jonathan. “The Anti-Vax Movement Is Effectively Reversing Decades of Progress in Disease Prevention.” *Quartz*, Quartz, 11 Sept. 2019, qz.com/1706261/the-anti-vax-movement-is-reversing-decades-of-scientific-progress/.

Medical Society of the State, and State Board of Health and Vital Statistics of the Commonwealth. “Government Regulation.” *History of Vaccines*, www.historyofvaccines.org/content/articles/government-regulation.

Riedel, Stefan. “Edward Jenner and the History of Smallpox and Vaccination.” *Proceedings (Baylor University. Medical Center)*, Baylor Health Care System, Jan. 2005, www.ncbi.nlm.nih.gov/pmc/articles/PMC1200696/.

Scutti, Susan. “Encouraging Vaccination around the World.” *CNN*, Cable News Network, 2 Jan. 2018, www.cnn.com/2017/06/06/health/vaccine-uptake-incentives/index.html.

“Vaccines: A Global Health Success Story That Keeps Us on Our Toes.” *World Health Organization*, World Health Organization, 16 May 2016, www.who.int/mediacentre/commentaries/vaccines/en/.

Wysonge, Charles Shey. “Why Africa Is Lagging behind in Child Vaccination.” *The Conversation*, 22 Aug. 2019, theconversation.com/why-africa-is-lagging-behind-in-child-vaccination-48699.