

Forum: World Health Assembly

Issue: Constructing a sub-structure to ensure the health and safety of citizens against new outbreaks of dormant diseases stemming from the Anti-Vaccination movement

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Introduction

The World Health Organization describes the term Vaccination as a simple, safe, and effective way of protecting people against harmful diseases before they come into contact with them. It wasn't until the late 18th century, where the world saw the very first vaccine for smallpox, created by an English Doctor, Edward Jenner. His ideology behind the development and effects of the vaccine changed the field of medical science, with countries eventually adopting his method to prevent the further escalation of the smallpox virus. Eventually, countries such as the United Kingdom and the United States of America introduced and implemented new laws and regulations surrounding the usage of vaccines, making it compulsory for new infants and young teenagers to take a vaccine shot, adding on to penalties if not obliged. This sparked the increase and creation of Anti Vaccination leagues and organizations. Initially, protestors believed that vaccination was an invasion of privacy, but in recent times, criticisms of vaccination include issues of safety, alleged links between vaccination and autism, religious reasons, etc

Vaccination opposition has been discussed more frequently in the news in recent years. Concerned parents are choosing not to vaccinate their children for a variety of reasons. This has resulted in a resurgence of infectious diseases that had previously been eradicated or were on the verge of being eradicated. The criticism stemmed from sanitary, religious, and political concerns. Some clergy believed that the vaccine violated their

faith. When the DTP vaccine was linked to neurological disorders in the 1970s, it sparked a wave of opposition. Vaccine opposition has been described as a global health risk by the world health organization. This risks not only their health and well-being but also the health and well-being of others, as they bring a factor of a possible resurgence of viruses, with mutations that scientists would need to invest time and finance to avoid further epidemics.

Definition of Key Terms

Vaccine

A vaccine is a substance consisting of antibodies that grant a person immunity from a deadly disease or reduce the severity/lethality of a disease. Vaccines consist of the same antigens as a disease-causing microorganism causing the immune system to produce antibodies against those organisms hence ensuring that the body can fight an invasion by the non - weakened disease-causing microorganism. Vaccines are injected into human beings via a process called vaccinations.

Mutation

An alteration in the genes of any organism changes how the organism works, looks or adapts to its surroundings. A mutation can be caused by addition, subtraction or modification of its ribosomes and can make microorganisms immune to medicines and treatment against the disease they cause.

Conspiracy Theory

A belief that any particular event is not actually what it seems to be but rather the doing of a covert organization that controls the world. People who believe in or spread conspiracy theories are known as conspiracy theorists.

Anti Vaccine Movement

Also known as Anti-Vaxxers, they do not support taking vaccines and oppose mandatory vaccine drives needed to achieve herd immunity. Anti Vaxxers often believe that vaccinations aren't beneficial in protecting people from diseases, as some vaccinated individuals do tend to fall sick after their shot. In addition, Anti-Vaxxers also believe that the medical science surrounding Vaccine development cannot be trusted, thinking that government and pharmaceutical companies are only generating a profit at the expense of the general public well-being.

Herd Immunity

Herd immunity is a form of indirect protection from infectious disease that can occur with some diseases when a sufficient percentage of a population has become immune to an infection, whether through previous infections or vaccination, thereby reducing the likelihood of infection for individuals who lack immunity.

Super Spreaders

A person who is responsible for transmitting the disease to multiple people, causes its spreading to increase exponentially.

Vectors of Transmission

Methods by which a disease spreads amongst the population. Vectors of Transmission include, but are not limited to land, sea, air, animals and body fluids.

Patient Zero

The first person to be infected with a particular disease.

Key Issues

Achieving Herd Immunity

The Concept of Herd Immunity has been defined in key terms above. The world has achieved herd immunity from various diseases such as Polio or Tuberculosis ensuring that very few people die or are left disabled from these diseases. It is essential to remember that people who refuse to vaccinate themselves generally amount to a small minority of the world population.

Human Rights regarding vaccines

The international community and national governments have a shared responsibility to ensure that those in need have access to effective, affordable preventative health care. In the early 19th century, where vaccination was first being used, many governments decided to enact mandatory vaccination of young children and teenagers, with strict penalties if parents were not to abide by this. Many have called out this kind of action to be a breach of Human Rights, where individuals aren't even allowed to voice their say if they want to be vaccinated or not. Over time, countries started to relax vaccination policies, ensuring that each individual is responsible if they want to be vaccinated or not. However, the question of Human Rights surrounding the vaccine is still present even with countries making vaccination optional.

Many consider the usage of Vaccines as a form of treatment. The right to refuse medical treatment is universally recognized as a fundamental principle of liberty and in medicine. However, this right is not always honoured. A refusal can be thwarted either because the patient is unable to competently communicate or because providers insist on continuing treatment. This situation may lead to a violation of the person's fundamental rights.

In addition, various workplaces, private firms and even public firms have started to indirectly discriminate against unvaccinated employees, which makes employees feel obliged to take the vaccine. There is no mention in civil rights that employers cannot

suspend or redundant employees for not being vaccinated, as such employers can exercise this motion.

Misinformation & the Online Anti Vaccination Movement

The Internet and Social Media platforms have provided new grounds for conspiracy theories with regards to vaccines. Theories that have been proven false such as vaccines causing Autism or an overload of vaccines in a person's body killing them. Theories such as these circulating at a rapid speed could influence tons of people who already have limited knowledge about vaccines, thus accelerating its spread even more and increasing the number of people willing to take vaccines hence reducing the chance of achieving herd immunity against any pandemic.

An organization known as the Center for Countering Digital Hate Briefing Note (CCDH) conducted research on the rise of the Online Anti Vaccination Movement. Their research found out that 65% of anti-vaccination movement spread are accounted to 12 accounts, they have labelled the Disinformation Dozen. According to the CCDH recent report, anti-vaccine activists from The Disinformation Dozen on Facebook, YouTube, Instagram and Twitter have reached more than 59 million followers, making them one of the largest and most important social media platforms for anti-vaxxers. Research has also found anti-vaxxers using social media platforms to target Black Americans, exploiting higher rates of vaccine hesitancy in that community to spread conspiracies and lies about the safety of Covid vaccines. The rise of these anti-vaccination groups online can be seen with social media platforms not being able to take down the majority of the posts online, despite a majority of these accounts violating guidelines they have set for all users. While the CCDH has been working to report on these accounts, active participation from social media groups, regarding anti-vaccination groups seems limited. This creates more confidence in individuals in creating more accounts with similar agendas of the Disinformation Dozen, which creates a burden for social media groups to track and increase the possibility of vaccine hesitancy.

Major Parties Involved and Their View

World Health Organization

The World Health Organisation has listed Vaccine hesitancy as one of the major threats in 2019. This is due to their statistics of the resurgence of the virus in certain countries. An example is an increase in 30% of Measles, even though its vaccine has been present for a long time. While the reasons don't necessarily state the reason is solely due to vaccine hesitancy, it is a key factor that could potentially cause resurgence. “Immunization is a key component of primary health care and an indisputable human right. It’s also one of the best health investments money can buy. Vaccines are also critical to the prevention and control of infectious-disease outbreaks”, The WHO have also released guidelines on how to communicate properly with anti-vaxxers. At the same time, it has also been one of the most approachable organizations in helping individuals of the importance of vaccination, as well as providing information on safety and efficiency.

People's Republic of China

The People's Republic of China has experienced multiple public health emergencies, including SARS in 2003 and COVID-19 in 2019. By January 12th, researchers in China had shared the genome of the COVID 19 virus, allowing other countries to begin working on a cure and vaccine. Sinopharm, a Chinese pharmaceutical company, developed the world's first inactivated COVID 19 vaccine and had initiated a Phase III clinical trial for people living in the United Arab Emirates and Bahrain. The Middle Eastern countries were chosen because the company needed places with active outbreaks, as outbreaks in China, have been limited and contained. According to the Law, China is to implement a state immunization program, and residents living within the territory of China are legally obligated to be vaccinated with immunization program vaccines, which are provided by the government free of charge.

China does have its share of anti-vaxxers. A survey by Peking University, the Chinese Center for Disease Control and Prevention (CDC), and the NHC found that only 23 percent of respondents wanted to get inoculated as quickly as possible once the virus was under control, down from 58 percent at the height of the outbreak last year. To meet targets, China has prepared its organization of neighbourhood councils to thump on entryways, empowering residents to join, while additionally carrying out a progression of portable inoculation centres to work with endeavours. Some neighbourhood authorities have gone to inventive lengths, for example, offering merit-great things to the individuals who get inoculated or in any event, going house to house helping the older book spaces on their cell phones. Others, for example, authorities in Wanning have taken steps to boycott unvaccinated people, keeping them from taking public vehicles.

Many point out that this is due to the lack of information given directly from China, as most of the information surrounding the vaccine's efficiency have come from other nations authorizing the trials. In addition, the head of China's CDC Gao Fu also commented on how there were low vaccine efficacy numbers with the vaccine being developed and even suggested that scientists examine whether a combination of shots from two different makers could improve the numbers. The sheer lack of information around China's vaccine has also led some countries to not even recognize them for usage, while also labelling those who have taken it part of the unvaccinated category.

Russian Federation

On August 11th, 2020, Russia claimed that it had approved the world's first COVID-19 vaccine, as the country's Ministry of Health issued a registration certificate for a vaccine candidate that had only been tested in 76 people. The certificate allows the vaccine, developed by Moscow's Gamaleya Research Institute of Epidemiology and Microbiology, to be given to "a small number of citizens from vulnerable groups," such as medical personnel and the elderly. However, the certificate states that The vaccine will

not be widely available until January 1, 2021, presumably after larger clinical trials are completed.

Scientists and medical professionals around the world are sceptical about the vaccine and its certification processes referencing the pace at which it was tested and approved. Highlighting potential side effects which may not have been discovered yet. However, President Vladimir Putin has stated to the media that his daughter has been administered the vaccine, therefore encouraging Russians to do the same. Russia is a country in which Immunization is voluntary, so people have the option to not get vaccinated.

Development of Issue/Timeline

Date	Event	Outcome
1796	The first vaccine is created	Edward Jenner, An English Doctor, ran a test in which he showed that he could protect a child from smallpox if he infected him or her with lymph from a cowpox blister.
1853	The 1853 Act	The United Kingdom amended its 1840 Act. New infants up to 3 months were to be vaccinated, with penalties and fines if not obliged.

<p>1866</p>	<p>The formation of the Anti-Compulsory Vaccination</p>	<p>In response to the 1853 act, Richard Gibbs, his brother George Gibbs and cousin John Gibbs. Their main motive was to oppose the government for making vaccines compulsory for the general public. They believed that the ideology of the Smallpox vaccine was a “physiological absurdity and medical tyranny”. The Anti-Compulsory Vaccination League had 103 branch leagues and claimed 10,000 members in 1871.</p>
<p>1867</p>	<p>The 1867 Act</p>	<p>The new amended act would increase strict penalties for not vaccinating children. In addition, smallpox spreaders were also penalized for spreading the virus, however, the age restriction for vaccination increased to 14 years.</p>
<p>1885</p>	<p>The Leicester Demonstration</p>	<p>A march protest of 80,000-100,000 in Leicester.</p>

		<p>This was a retaliation protest in response to The 1867 Act. Medical professionals and law enforcers ultimately had to change their approach surrounding the Vaccine, fearing a possible epidemic of the smallpox virus.</p>
<p>1898</p>	<p>The 1898 Act</p>	<p>Reforms were made to the previous acts passed. Parents could now apply for an exemption certificate from taking the vaccine if their case seems just. Harsh penalties were also reduced for not taking the vaccine for non-exempted parents and individuals.</p>
<p>07/04/1948</p>	<p>WHO was founded</p>	<p>The World Health Organization was founded. A Specialized agency of the United Nations, with a goal of “the attainment by all peoples of the highest possible level of health”.</p>

<p>1963</p>	<p>Measles vaccine discovered</p>	<p>John Edners and his colleagues declare their vaccine for Measles capable of preventing infections. Nearly 19 million people would receive a dose to prevent measles.</p>
<p>1971</p>	<p>MMR Vaccine</p>	<p>Merck & Co would develop an improved version of the Measles Vaccine. This new vaccine would prevent measles, mumps and rubella.</p>
<p>1990</p>	<p>The Lancet uploads article linking Vaccine and Autism</p>	<p>Andrew Wakefield and 12 co-authors published an article in the Lancet, a medical journal. They claimed that there was a link between autism and the MMR vaccine. The article would lead to a fall in vaccination rates in certain countries, with anti-vaxxers still using this article as evidence to support their cause.</p>

<p>2004</p>	<p>The Lancet retracts partially of Andrew Wakefield article</p>	<p>In response to the allegation by Andrew Wakefield, various medical specialists conducted their own research to find any evidence of Andrew Wakefield's claim. It was reported that his research evidence was found to be manipulated and breaking ethical codes. 10 out of the 12 authors retracted from the publication, stating that the MMR vaccine wouldn't have caused autism.</p>
<p>2010</p>	<p>The Lancet completely removes Andrew Wakefield's Article</p>	<p>After a period of a long investigation, the Lancet completely removed Andrew Wakefield's article. However, its impact still remains in anti-vaxxers today.</p>
<p>31/12/2019</p>	<p>The First Case of Covid-19</p>	<p>Wuhan, China reports a cluster of cases of pneumonia. A novel coronavirus was eventually identified.</p>

<p>11/03/2020</p>	<p>WHO declares a Pandemic</p>	<p>After the initial few cases at the start of the year, Covid 19 would eventually reach a global level. Profoundly concerned both by the disturbing degrees of spread and seriousness and by the disturbing degrees of inaction, WHO made the appraisal that COVID-19 can be portrayed as a pandemic.</p>
<p>2020</p>	<p>Race for the Covid-19 Vaccine</p>	<p>In response to the rising case of Covid 19, various countries and pharmaceutical companies began a race to develop the Covid 19 vaccines. By the end of the year, around 13 different vaccines were developed across 4 platforms</p>
<p>Present Day</p>	<p>Response to Covid-19 vaccine</p>	<p>As of now, WHO has recognized 13 vaccines. Countries have started to vaccinate their population, after going through initial trials and phases. People are</p>

		<p>still recommended to follow guidelines their governments have set to avoid further spread, to prevent new waves and eradicate the virus before mutation. However, Anti-Vaxxers have found new methods of spreading misleading information or creating conspiracy theories to the general public. Many have come out with the claims of the virus being a man-made virus from Wuhan labs. Political agendas have also played a role in the use of vaccines. An example certain countries do not accept vaccines created in china, not giving them the same rights compared to others</p>
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Previous Attempts to Solve the Issue

World Health Organization Practice Guidelines

The World Health Organization, to tackle the anti-vaccination movement, in 2016, created a complete guide for individuals to use as a way to convince the general public of the importance of being vaccinated, and how to resolve the rising queries surrounding the vaccination process. Guidelines include how to approach vocal deniers of vaccines, the characteristics a person should have to deal with in discussion, and how to deal with the counterarguments anti-vaxxers bring to the table. The importance that comes with the guidelines is to ensure misinformation isn't being spread, and bring in an active trust between individuals and the country's healthcare providers.

Global Vaccine Safety Blueprint

In 2011, WHO, alongside a gathering of accomplices, fostered an essential record on antibody wellbeing called the Global Vaccine Safety Blueprint. The Global Vaccine Safety Blueprint focuses on vaccine safety after a product has been licensed for use and, in particular, on the need to monitor vaccinated populations for the occurrence of adverse events following immunization (AEFI) and to address vaccine safety concerns when they arise. The Global Vaccine Safety Blueprint has eight targets that, together, point to construct and bolster compelling vaccine pharmacovigilance in all Less Economically Developed Countries and advance a systemic approach to so doing. Goals 1 to 4 relates straightforwardly to the components of the vaccine pharmacovigilance, whereas goals 5 to 8 relate to supporting components that must be in place for the immunization security framework to operate viably.

The time period of this blueprint was set from 2011 to 2020, during which the Global Vaccine Safety Initiative, the department responsible for implementing said blueprint, had been monitoring its progress and development. The Blueprint vision of effective vaccine pharmacovigilance systems established in all countries has progressed steadily. Countries are reporting AEFI and are meeting indicators of improvement in safety surveillance

capacity. However, results of the blueprint usage have also brought upon key factors, mainly on how Less Economically Developed Country socio-economic difference and their dependency on More Developed Countries prevents them from using the full capacity of the blueprint.

The Global Vaccine Safety Initiative is planning on improving the blueprint by proposing an updated version, which aims to focus on areas not limited to governance and systems development; coordination of safety systems; regulatory framework; AE following immunization (AEFI) surveillance, including analysis and causality assessment; enhanced vaccine safety communication; fragile states and crisis systems and an accountability framework.

Possible Solutions

Preventing the spread of misinformation

Misinformation surrounding vaccine development is one of the key factors of rising anti-vaccination movements. Training is vital to fight falsehood in each and every manner. We don't just need to consider showing youngsters the advantages of inoculation because regardless of whether it is significant, we need to handle the ones that take the choice first: the guardians. They are the ones who pay special attention to the unvaccinated youngsters and are simply the ones that will show profound reluctance.

Appropriate instructive activities must be profoundly itemized to be effective. They need to state how they will be self-supportable, open for every country and assurance that they will affect the populace. Additionally, they must be public-friendly: everyone must have the option to comprehend the hypothesis of inoculation and the rationale behind it.

An example of its effectiveness was shown in Liberia. The country was successful in 2008 in vaccinating its population to prevent the spread of polio, however, with the rise of COVID 19, many of its original vaccination programs were suspended. With the new

vaccine for covid that was introduced, Liberia suddenly faced an increase in vaccine hesitancy for both covid and polio. To ensure the region is fully vaccinated, UNICEF and partners are supporting the Ministry of Health in providing accurate information about the polio vaccine through radio talk shows, community engagement meetings, SMS, and the printing and distribution of communication materials such as posters and banners. In addition, many volunteers, government officials and UNICEF representatives in the nation are visiting door-to-door in rural neighbourhood areas of the country, explaining the importance of why children need to be vaccinated. This initiative helps to clear doubt and prevents the spread of misinformation in all economic backgrounds of the country, ensuring a fall in Vaccine Hesitancy.

Vaccine Mandating

Across the world, action has been taken by countries' governments in controlling the spread of diseases. When it involves the usage of vaccines, the situation does become difficult to propose. The rise of the anti-vaccination movement was based on countries mandating the vaccine. This may make it seem as not an effective solution, however, if done right can be beneficial in vaccinating the population and limiting the spread of the virus. Nations across the world have made a legitimate move previously. By and large, it is restricted to public schools just conceding immunized kids or medical care labourers to ensure every child security. Laws and regulations have also been implemented in the past in cases of public health emergencies. Mandating Vaccines have worked in the past in countries like France in vaccinating the population against measles and other diseases, but with new diseases and new vaccines, the outcry is always present, where people call for the removal of such mandating. It is important for the nation to regularly change the mandate on the usage of vaccines, to provide comfort for society and prevent the further spread of diseases in the area.

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