

Special Conference Covid 19

*Evaluating COVID-19-vaccines and ensuring
availability of vaccines in future pandemics*



Research Report

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Forum: *Special Conference looking back at the Covid-19 Pandemic*

Issue: *Evaluating COVID-19-vaccines and ensuring availability of vaccines in future pandemics*

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Introduction

Vaccines are biological preparations that provide protection against specific infectious diseases. After receiving the necessary dose of a vaccine, when the body comes into contact with the virus again it recognizes the germs and can produce antibodies targeted to the virus. Antibodies are produced by B-cells and bind to pathogens. When your body is fighting off an infection, the number of white blood cells in your bloodstream multiplies. There are two main types of vaccines - live attenuated and mRNA. In both of these cases, the immune system builds up a defense against the virus.

Definition of Key Terms

Availability

The quality of being able to be used or obtained.

Vaccination

The World Health Organization defines vaccination as the management of safe, antigenic elements that patients who have been injected can gain immunity against the specific infection or virus.

Distribution

The Oxford dictionary defines distribution as the measure of giving out and sharing something between a certain number of beneficiaries.

Unvaccinated

Someone who is not vaccinated

Immunity

The Centers for Disease Control (CDC) and Prevention defines immunity as “protection against a disease”. Immunity can be proven through tests and antibodies inside the blood.

Booster shots

Another dose of the vaccination given after the original dose as an additional enhancer. Booster shots can be given more than once as well

Variant

A somewhat different type or form of a substance

Covax

COVID-19 Vaccines Global Access, abbreviated as COVAX, is a worldwide initiative aimed at equitable access to COVID-19 vaccines directed by the GAVI vaccine alliance, the Coalition for Epidemic Preparedness Innovations, and the World Health Organization, alongside key delivery partner UNICEF.

General Overview

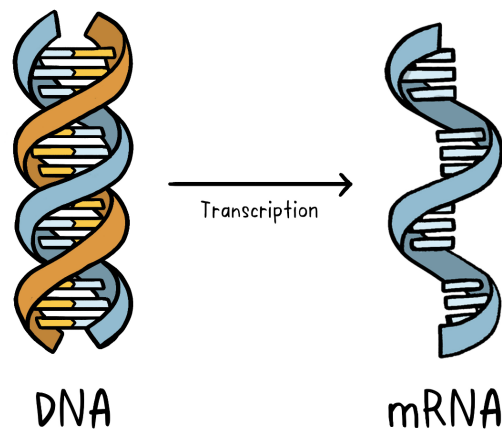
Vaccines were and are the key factor in significantly slowing down the rampaging coronavirus that had the world, and still does in some parts - in its grips. As mentioned in the introduction, there are two main types of vaccines, the mRNA and live attenuated vaccines.

mRNA Vaccines

Main Covid-19 Vaccines, Pfizer and Moderna are mRNA vaccines. mRNA stands for messenger RNA. The covid vaccine requires two shots, at specific intervals, in order to fully immunize the person - not including any booster shots. mRNA vaccines insert material from the virus which gives our cells instructions on how to make a harmless protein unique to the virus. After replicating this protein, they destroy the original material. They do this using synthesized messenger RNA. Figure 1 shows the difference between DNA and mRNA.

The advantages for this vaccine include no short term illness and they are safe for those with low immune systems and health issues. Limitations are that they are expensive and difficult to store, as they need to be stored in temperatures between 2 and 8C, as well as that the long term effects aren't known yet.

(Fig 1)



(who.int)

Live attenuated vaccines

Live attenuated vaccines are the most used vaccines, as they simulate an actual infection and the immune response is almost guaranteed. After an infection, some B cells become memory cells, so they can produce the specialized antibodies if the body comes in contact with the virus again. Advantages include a strong immune response and long immunity. Limitations with this

vaccine are that they are dangerous for those with low immune systems and health problems. There is minor risk for illness.

Effectiveness and further discoveries

The effectiveness of the mRNA vaccines in preventing COVID-19 disease progression in 2021 set new expectations about the role of prevention interventions for the disease. Efficacy observed in the trials was more than 90%. mRNA vaccines have been most widely distributed in wealthier settings while other vaccines, such as Sinopharm and Sinovac, with some exceptions,³ have been provided in low-income and middle-income countries. These two vaccines, which are the names of their producer companies, are Chinese developed. The W.H.O. Emergency use approval allows the Sinopharm vaccine to be included in Covax, a global initiative to provide free vaccines to poor countries. The possible inclusion in Covax raises hopes that more people – especially those in developing nations – will get access to shots at a crucial moment.

Vaccines Availability

Vaccine inequity is not a new problem the world is facing, especially in the case of pandemics. In 2009, the World Health Organization (WHO) declared swine flu as a pandemic. At this time, nations such as Switzerland, Brazil, Italy, Norway, the United States of America, Australia, New Zealand, United Kingdom, and France secured vaccines through independent deals with Pharmaceutical Companies. The nations then promised to donate around one hundred and twenty million doses to the World Health Organization to be passed on to lower income countries that were struggling to secure enough vaccines to cover their own populations. However, the corresponding nation's only started to donate their promises to the WHO after it was found that the pandemic was not as serious. This can be compared to the technological industry's situation, where the most recently developed technology can take decades to arrive and be used in poor countries.

Other than specific and special situations such as global pandemics, nations with not as much funding and political power also experience vaccine inequity when it comes to all types of vaccines and circumstances. The main issue with vaccine inequity in the market is the system of the vaccine market. The market starts from the pharmaceutical companies, manufacturing companies, before moving on to the actual distribution of the vaccine doses. The queue for the

vaccinations start from the beginning – with the companies paying pharmaceutical companies to reserve doses for them. Pharmaceutical companies usually accept this money in order to have more funds that will speed up the research, and therefore approval process. Nations that queue from the pharmaceutical companies are usually the most powerful and rich as they can handle possible losses if the vaccines do not get through approval, and is also the reason for many nations investing and making deals with a variety of companies that seem reliable to them. Nations also queue in the manufacturing companies through more bilateral deals. By the time vaccines start to become distributed after approval and safety tests, most of the doses have already been sold to these big nations. For example, Peru’s bilateral deal with Astrazeneca arrived months after vaccinations had started being given out to citizens in the US.

Vaccine equity should advocate for global collaboration in order to let the whole population be healthy and stop any widespread diseases, instead of the rich nations being able to give out and decide on how much vaccines are given out.

Major Parties Involved

People's Republic of China

China is at the forefront of every covid related issue, being the origin of the pandemic and the country that responded and continues to respond effectively and harshly. The whole pandemic, they have struggled to fully vaccinate domestically. China needs to keep its high position on the world's trade and economic ladder, while managing their huge population's health and access to the international world.

India

India was hit incredibly hard by the pandemic, with 44 million cases and half a million deaths. Like many places, there were not enough vaccines, and medical supplies. Currently, there are 12 approved vaccines for distribution.

United States of America

The USA has made significant progress in getting more of their population at least the first dose of the vaccine, and continues developing different vaccines for age groups and strains of the

virus. Pfizer-BioNTech Vaccines, Moderna Vaccine, Moderna Vaccine, Janssen/J&J Vaccine. VaccineNovavax are all American produced/developed vaccines.

COVID-19 Vaccines Global Access (COVAX)

System and organization to manage vaccination buying deals with companies, as well as provide vaccines to low income nations that are not able to have their own funds to receive enough vaccination doses.

Pharmaceutical Companies

Pharmaceutical companies are the most essential part of the process – the creators of the vaccines. They have made incredible sums of money from the whole pandemic, and stand to benefit more from potential future pandemics/epidemics. Companies include Pfizer, Astrazeneca, etc. For example, Pfizer is set to be worth 100B by next year.

The Vaccine Alliance (Gavi)

Global health management team that works to provide poor countries with an opportunity for immunization.

UN involvement, Relevant Resolutions, Treaties and Events

World Medical Association Resolution on the Equitable Global Distribution of Covid-19 Vaccine; This resolution generally called for no country to be left behind, called for coordinated efforts to increase public trust in vaccination in the face of disinformation campaigns, that clinical trials had to follow ethical principles, etc. Helpful link:

<https://www.wma.net/policies-post/wma-resolution-on-equitable-global-distribution-of-covid-19-vaccine/>

United Nations Security Council Resolution on the Equitable Distribution of the COVID-19 Vaccine, 26th February 2021 (Resolution 2565) - "United Nations Security Council Resolution 2565 for ceasefires in conflict zones to allow the delivery of coronavirus (COVID-19) vaccines was unanimously agreed. Foreign Secretary Dominic Raab said: We're proud to lead in securing the swift and unanimous agreement of today's UN Security Council ceasefires resolution, which will help get vaccines to people living in conflict zones. The resolution also builds support for COVAX, through which the UK is providing over a billion vaccine doses for the most vulnerable people around the world - because we need a global solution to a global pandemic." (Gov.uk)

Resolution on the Enhancement of International Cooperation in the Field of Human Rights (A/HRC/47/L.10/Rev.1) The resolution highlighted the importance of the enhancement of international cooperation in the field of human rights as an essential condition for the full achievement of the purposes of the United Nations and as an effective and practical contribution to the task of preventing violations of human rights and fundamental freedoms.

Ensuring equitable, affordable, timely and universal access for all countries to vaccines in response to the coronavirus disease (COVID-19) pandemic (A/C.3/76/L.55/Rev.1) This resolution called upon member states to prioritize the health of the world's citizens, and the need for universal well being. Among many other points, it also called for the accelerated provision of 550 million more doses of COVID-19 vaccines to the COVID-19 Vaccine Global Access (COVAX) Facility in order to get on track to reach the targets set by the World Health Organization.

Timeline of Events

December 31, 2020

China approves homegrown vaccine;
China and Singapore begin vaccinating high risk groups

December 2, 2020

The United Kingdom Approves Pfizer Vaccine.
In a state of emergency, the Pfizer vaccine gets approved. After approval, the UK's

	vaccination program is implemented shortly after this- being the first Western country to do so.
December 18, 2020	The USA approves the Moderna vaccine. Through this approval, millions more are given the accessibility to the vaccine.
January 4, 2021	UK Begins Distributing AstraZeneca/Oxford Vaccine
January 18, 2021	Reports of Racial Disparities in Vaccination Rates in the USA
April 2, 2021	CDC recommends that people who are fully vaccinated against COVID-19 can safely travel at lower-risk to themselves.
January 31, 2022	FDA fully approves the Moderna COVID-19 vaccine for all people ages 18 years and older.

Possible Solutions

Establish a commission

Establish a commission on the prevention and control of epidemics and pandemics. Establishing a commission of a UN or WHO committee would allow for a clearer approach to be designed in the face of another future pandemic. We can also delve into specifics of what specific nations should do, like certain countries need to send emergency response units to help prevent an outbreak. This committee would be held at a conference which occurs biannually, whereby they rate countries on preparedness and whether or not they're growing things like the hospital capacity, and emergency equipment ready.

Hold governments and companies accountable

An essential component of a democracy is that elected politicians and the government should be held accountable for their decisions, but this hasn't always been the case throughout this pandemic. Increasing government transparency could improve these officials' accountability and encourage them to use social media to interact effectively with their constituents and provide

more information about vaccination. In grave circumstances where governments show themselves to be incapable, international pressure through economic penalties may also be applied.

Moderna's vaccine was developed with significant public funding. For this reason, Moderna has an obligation to assist in global COVID-19 vaccination efforts, to work to prevent dangerous 'variants of concern' from taking hold, and to help end this pandemic. Dr Carrie Teicher, director of programs for MSF-USA says "The company must absolutely be accountable to the public effort to vaccinate the world, and the US must use its vast legal powers to force or compel Moderna to share the tech and help boost global production of the vaccine. Time is running out for the US to make good on its claim to be a global leader on COVID-19."

*Information from the other two research reports could be helpful as well

Source List

"Companies by Number of COVID-19 Drugs in Development." *Statista*, 23 July 2022, www.statista.com/statistics/1119090/coronavirus-drugs-in-development-by-leading-companies/.

"Moderna Posts Billions in Profit from COVID-19 Vaccine but Won't Share Technology."

Doctors without Borders - USA,

www.doctorswithoutborders.org/latest/moderna-posts-billions-profit-covid-19-vaccine-wont-share-technology.

“Pfizer to Become \$100B Behemoth next Year Thanks to COVID-19 Drug and Vaccine: Analyst.” *FiercePharma*,

www.fiercepharma.com/pharma/pfizer-to-exceed-100b-revenue-2022-thanks-to-covid-19-drug-and-vaccine-analyst.

“U.S. COVID-19 Vaccine Product Information | CDC.” *Www.cdc.gov*, 14 Jan. 2021,
www.cdc.gov/vaccines/covid-19/info-by-product/index.html.

“UN Security Council Ceasefires Resolution Passed Unanimously: Foreign Secretary’s Statement.” *GOV.UK*,

www.gov.uk/government/news/foreign-secretary-statement-unsc-ceasefire-resolution-passed-unanimously. Accessed 7 Nov. 2022.

World Health Organization. “The Different Types of COVID-19 Vaccines.” *Www.who.int*, 12 Jan. 2021,

www.who.int/news-room/feature-stories/detail/the-race-for-a-covid-19-vaccine-explained.