

## Requirements for implementation of covid-19 vaccine through good management.

## Requisitos para la implementación de covid-19 vacuna a través de una buena gestión.

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### ABSTRACT

Several research institutes and companies are working hard to find a vaccine for COVID-19. The SARS-CoV-2 vaccine are available worldwide in early 2021. The quality of the vaccine on Covid-1 can be very important to rid the world of it. The main objective of this article is to implement the vaccine against COVID-19 infection through good management through social distance, hygiene.

Key Words: COVID-19, SARS-CoV-2, Vaccination, Vaccine, Social Distancing.

## RESUMEN

Varios institutos de investigación y empresas están trabajando arduamente para encontrar una vacuna para COVID-19. La vacuna contra el SARS-CoV-2 estará disponible en todo el mundo a principios de 2021. La calidad de la vacuna contra el Covid-1 puede ser muy importante para librar al mundo de ella. El objetivo principal de este artículo es implementar la vacuna contra la infección por COVID-19 mediante un buen manejo a través de distancia social, higiene.

Palabras clave: COVID-19, SARS-CoV-2, Vacunación, Vacuna, Distanciamiento social.

## INTRODUCTION

From December 2019 to December 2020, the world was covered by life-threatening COVID-19. The Coronavirus disease-2019 (commonly known in the world as COVID-19). The disease was reported in Wuhan, China in December 2019. The COVID-19 mainly spreads during close contact, coughing, sneezing, or exhalation by COVID-19 infected person.[1] Pneumonia, lymphopenia, exhausted lymphocytes, and a cytokine storm characterize COVID-19.[2] However, it remains to be determined if this is protective or pathogenic if significant antibody development is detected.[3] Defining the immune pathological changes in COVID-19 patients offers future drug development targets and is critical for clinical management. [4] COVID-19 is a disease caused by a new coronavirus called SARS-CoV-2.[1] It is a group of viruses that commonly cause colds and respiratory problems and other People with COVID-19 report a variety of symptoms including fever, cough, and shortness of breath. The WHO Emergency Committee declared a Global Health Emergency in the case of COVID-19. The number of COVID-19 victims varied daily and was tracked almost in real-time on a website provided by Johns Hopkins Universe. [5]

Studies on COVID-19 have shown that COVID-19 has a higher mortality rate in patients over 60 years of age than other age groups. [6] According to the World Meter Survey, the number of COVID-19 deaths worldwide as of December 2019 was 16, 81,249, while the number of COVID-19 patients was 7, 35, 75,202. The mortality rate was 2.2 - 2.3. [7]

Since there are not many established treatments for COVID-19 disease, many alternatives like social distancing, Lockdown, use of mass and sanitizer, washing hands with soap from time to time were used. The COVID-19 pandemic continues to escalate in the world and, in the absence of a vaccine or successful treatment, social distancing initiatives are necessary to delay the spread of the disease. [8]

According to WHO, Research on SARS-CoV-2 is in full swing in 172 countries around the world. BioNtech and Pfizer Inc, Moderna, the University of Oxford (in collaboration with AstraZeneca), and the Gamaleya Institute have begun final phase III vaccine research by November 2020 while researching the vaccine. Covid-19 emergency vaccine developed by Pfizer-BioNtech was approved for emergency use by 12 countries (United Kingdom, Bahrain, United Arab Emirates, Canada, Saudi Arabia, United States, Mexico, Kuwait, Singapore, Jordan, Oman and Ecuador) by the end of December 2020. [9]They are part of a global effort to prevent the spread of the deadly virus, which has already infected more than 1.14 million people worldwide. The vast majority of individuals continue to be vulnerable to SARS-CoV-2. By preventing us from catching the coronavirus or at least making SARS-CoV-2 less lethal, a vaccination will teach our bodies to combat the infection. Having a vaccine is "the" escape plan, alongside improved therapies. In December 2020, the COVID-19 vaccine approved for emergency use by Pfizer and BioNTech was subject to well-established protocols for the evaluation of vaccine safety by U.S. scientists. Administration of Food and Medicines and elsewhere. [10]

#### MATERIAL AND METHODS

To assess the impact of social distancing policies on Google-released aggregated, anonymized daily location data on movement patterns over time, we used difference-in-differences and event-study methodologies. Before and after these policies took effect between March 25 and November 25, 2020, we compared the result of interest in countries that implemented COVID-19-related policies with countries that did not adopt such policies. A lot of thousand articles on COVID-19, published up to December 2020 and listed in the PubMed databases, were screened for inclusion in this narrative review. In addition, manuscripts in the prepublication phase and available in the medRxiv and bioRxiv databases or in the grey literature were also reviewed.

From above serve, the studied of various articles, research papers, Google and media literature surveys and to evaluate the possible effects of social distancing during COVID-19 and COVID-19 vaccination have been studied and the message has been given as to why vaccination is needed and how to get rid of COVID-19. This article compares the ideas of various research articles on Google search, newspapers, and various television channels on the vaccine available on COVID-19. These articles consider how to implement the vaccine available on COVID-19 by using social distancing, sanitization, etc.

## RESULT AND DISCUSSION

According to the World Health Organization, between March 2020 and May 2020, the death rate in Covid-1 was very high. Lockdown has significantly reduced the number of deaths in Covid-1 in June 2020. But as a result of the economic downturn and jobs, lockdowns in almost all countries were gradually reduced after June 2020.[11].

Table1. Collected data of Number of New Cases and Number of Death in world due to COVID-19 according to WHO.

Months (A)	Number of New Cases due to COVID-19 (B)	Number of Death due to COVID-19 (C)	Number of Recovered Cases (D)	Total (E )	Death Rate  (F) = (C / B × 100)
January	846	265	581	846	-
February	84,557	2713	81844	85,403	3.20
March	665487	42,259	623228	750 890	6.35
April	2339555	1,93,757	2145798	30,90,445	8.28
May	2844491	1,47,196	2697295	5 9,34,936	5.17
June	4250438	1,40,170	4110268	1,01,85,374	3.29
July	6627389	1,67,722	6459667	1,68,12,763	2.53
August	8041377	1,76,907	7864570	24 854 140	2.19
September	7876805	1,55,382	7721423	3,27,30,945	1.97
October	12157924	1,76,322	11981602	4,48,88,869	1.45
November	17306405	2,72170	17034235	6,21,95,274	1.67
December	17036619	3,51,513	16685106	7,9 2,31,893	2.06
Total	7,9 2,31,893	18,26,376	77405617		

Social distance, as well as the use of facial masks and sanitizers, seems to reduce the mortality rate from time to time, but the number of patients suffering from Covid-19 has increased. With the vaccine available on Covid-19, if social distance, face mass, hygiene plan have been followed, diseases such as Covid-19 can be quickly prevented.

### Implementation of Covid-19 Vaccine through Good Management

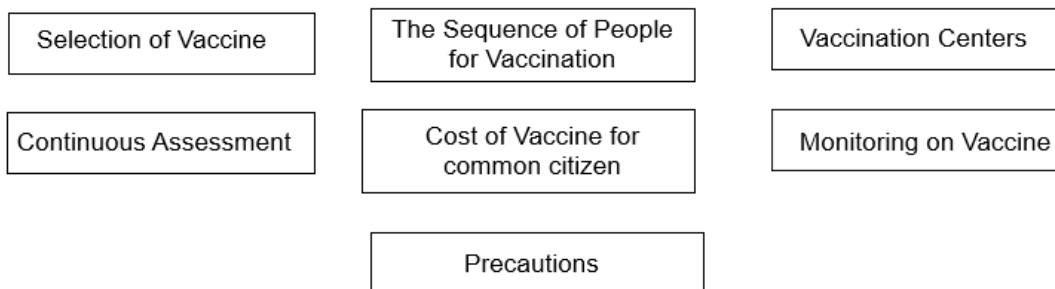


Diagram for Implementation of Covid-19 Vaccine

3.1 Selection of Vaccine: Many of the infection control measures were implemented concurrently due to the pace at which the COVID-19 epidemic arose, and enforcement varied from country to country. The efficacy of each particular intervention alone is thus difficult to assess. Researchers from Imperial College London used a mathematical model in mid-March to simulate the effect of a sequence of individually or jointly enforced disease control measures in the United Kingdom (specifically Great Britain) and in the United States. The efficacy of any single intervention appears to be minimal, suggesting that multiple steps must be used in conjunction to have a meaningful impact on the reduction of virus transmission. So it is possible that the SARS-CoV-2 varies in different forms, in some places, it is very dangerous and in others it is mild, so there is no guarantee that a vaccine that is useful in the US will be useful in other countries. [6] The vaccine to be selected on SARS-CoV-2 must have the following properties.

i. COVID-19 vaccine should be safe and useful. For this, testing of the COVID-19 vaccine needs to be done on some patients in three phases. The goal of these trials is to see if the candidates for the vaccine are safe and reliable. Researchers equate the wellbeing of those who receive the vaccine to those who don't during Phase 3 clinical trials. This allows researchers to recognize common side effects and see if those in the vaccinated community are less likely than those who received a placebo to get sick. A placebo is a "fake" harmless vaccine offered to half of the individuals in the clinical trial. People in the clinical trial of the vaccine do not know whether or not they are being tested for the vaccine. Tens of thousands of individuals, including people of color, have typically been included in COVID-19 vaccine studies performed so far. In clinical trials, doctors monitor everyone who receives the vaccine for at least two months after their last dose to ensure that there are no residual complications or side effects that may be caused by the vaccine.

ii. Corona vaccine should be stable for a long time or its lifetime should be known so that it can be used more effectively by adjusting the delivery time.

iii. DNA not be altered due to Vaccines. Some of the COVID-19 vaccines (such as the Pfizer and Moderna vaccines) are produced using RNA messengers (mRNA). mRNA is not capable of altering or modifying the DNA of a human, according to the CDC.[13] The mRNA from the COVID-19 vaccine never directly reaches the cell nucleus, which is where our DNA is processed. This implies that in no way does the mRNA interfere with our DNA. Instead, mRNA-using COVID-19 vaccines work with the natural defenses of the body to safely establish immunity against COVID-19 disease.

iv. It is important to know the duration of prevention of Covid-19 disease after vaccination. If this period is known, then the periodic method of vaccination can be used properly. [13]

3.2 The Sequence of People for Vaccination: The vaccine against COVID-19, which has spread across 222 countries, is hard to come by in such large quantities. Therefore, it would be advisable to vaccinate those suffering from coronavirus and those working in the risky zone of COVID-19 first. The Sequence of People for Vaccination will depend entirely on the number of COVID-19 Patients, vaccines available, population, etc. Also, the density of COVID-19 and population should be taken into consideration while implementing the sequence of People for Vaccination. Doctors, nurses, police, soldiers who work as COVID-19 Warriors, and the elderly who are at high risk of COVID-19 disease should be given priority for vaccination.

3.3 Vaccination Centers: Since all the citizens of the country want to be vaccinated, it is necessary to set up vaccination centers to bridge the social distancing. It will be convenient for people to be vaccinated in stages and it will be possible to make a continuous assessment of the quality of the vaccine and the nature of the vaccinator. Vaccination centers can also provide training on vaccination and vaccine storage and handling.

3.4 Continuous Assessment: External factors like Pressure, temperature, seasonal changes, and geographical changes may affect the vaccine or its quality, so continuous assessment of the vaccine is required.

3.5 Cost of Vaccine for common citizen: A lot of money is expected to be spent on vaccines as the country is close to vaccinating everyone. If the cost of the vaccine is to be borne by the citizen, then it should be affordable to the common citizen.

3.6 Monitoring on Vaccine: Due to vaccines, the possibility for the creation of some side effects in the body due to changes of internal and external conditions. The COVID-19 infection and the vaccine for COVID-19 are both recent. For those who get infected with COVID or those who get vaccinated, medical and public health experts do not yet know how long safety lasts. They do know, however, that COVID-19 for many people, here in the U.S. and around the world, has caused very serious illness and death. Continuous monitoring of the vaccine and its impact is therefore important.

3.7 Precautions: Even if the corona vaccine becomes available, it will be important for everyone to continue using masks, washing their hands often, social distancing, and control the crowd for some time to come. This decision would also be influenced by other variables, including how many individuals get vaccinated against COVID-19 and how the coronavirus spreads in populations.

As conclusions, the global health problem of COVID-19 is unprecedented and can only be addressed by an unprecedented collaboration between governments, researchers, producers, and multilateral partners. Planning is essential if the vaccine is to be implemented across the country for citizens of all ages. Because the COVID-19 infection and the COVID-19 vaccine are new, they can cause several many problems when using the vaccine. But with continuous assessment and monitoring of vaccines and the results that can be used, the whole world can get rid of COVID-19 infection very quickly. Also, if other diseases like COVID-19 occur shortly soon, the implementation of COVID-19 prevention will definitely come in handy.

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