The COVID-19 Vaccination Problem and Its Solutions in the United States

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Abstract. With COVID-19 coming to an end, the challenges faced in its epidemic prevention process will undoubtedly play an exemplary role in the large-scale public health crisis that may be faced in the future. Among them, the promotion of vaccination is the first to bear the brunt. As one of the most effective means to curb the spread of the COVID-19 epidemic, the complete vaccination rate is not satisfactory in some countries, such as the United States. This is because, as a complex issue, the reasons for its emergence involve conflicts and trust between government credibility, race, culture, and religion. This article provides a detailed analysis of the reasons for the low complete vaccination rate in the United States and corresponding solutions. At the same time, it is expected that when other countries encounter similar government credibility crises or large-scale public health crises in the future, the example of the United States can be used as an effective reference.

Keywords: COVID-19, vaccination, government credibility, white paper.

1. Introduction

The coronavirus pandemic has been plaguing governments worldwide for more than three years. As the number of vaccinated individuals continues to rise, and the epidemic tends to abate in general, it becomes crucial to reflect on the shortcomings in COVID-19 vaccination efforts. As a representative of developed countries, the United States has significant reference value in addressing the challenges and handling methods faced by such epidemics. The US quickly implemented corresponding measures to address the vaccination issues: First, the federal government provides all vaccinations for free; Second, four vaccines have passed the emergency vaccine license of the federal government, namely Pfizer Biotechnology, Modern, Novavax, and Johnson & Johnson Janssen vaccines; Last, there are now free testing sites in 21500 locations across the United States.

The CDC of the United States declared that "Hispanic, black, and Asian adults now have the same vaccination rate as white adults" [1]. This is worth discussing because it is mentioned in the report after the COVID-19 Action in Kings County, Seattle. Extended Summary records from all over the United States show that the COVID-19 epidemic has affected colored communities and people with disabilities to varying degrees. In Kings County, data analysis shows that compared with whites, Hispanic/Latino, Hawaiian/Pacific Islander, black, and American Indian/Alaska native COVID-19 cases, hospitalization rates are higher. Historical inequalities, discriminatory practices and policies, and many institutions persist. Discrimination and injustice have worsened the opportunities and risks for many people to access services. These measures should have taken the United States one step toward complete vaccination.

However, as pointed out in the report, there is still a problem of inadequate implementation of complete vaccination for ethnic minorities. Therefore, this paper, takes the United States as a case study to fully comprehend the underlying causes and solutions of the obstacles encountered in popularizing COVID-19 vaccination. The findings of the study can serve as a practical reference for governments of other countries facing similar challenges in promoting vaccination efforts.

2. Case Description

When it comes to epidemic prevention, the most important consideration should be the complete vaccination rate. According to data as of May 9, 2023 (as is shown in Fig.1), the United States

reported a total vaccination rate of 69.47 percent, much lower than France (78.43 percent), a fellow developed country [1]. The UK, based on the latest data that are available, had 75.19 percent on September 11, 2022, compared with 76.14 percent in Germany, 78.43% in France, 82.07% in Canada, and 67.94% in the US. Furthermore, as of February 2, 2023, the United States' vaccination rate of 69.28 percent pales in comparison to Canada's 82.6 percent, a fellow North American country [2]. These data underscore that the United States generally lags behind other developed nations in terms of vaccination coverage during the same periods.

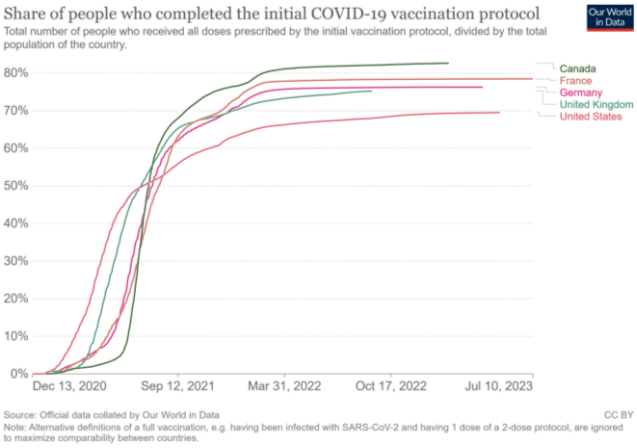

Figure 1. Complete vaccination rates by country (USA, UK, Canada, France, Germany)

As of May 9, 2023, the complete vaccination rate in the United States is about 69%, and another 12% are partially vaccinated, for about 81% of the population has been vaccinated [2]. Compare that with Canada and France (as is shown in Fig.2, Fig.3 and Fig.4). As a developed country, with one reference for North American countries and the other as a reference for immigrant countries, Canada's complete vaccination rate reached 83% on February 2, 2023, with 7.8% of the population partially vaccinated and 90% of the total vaccinated population. In France, the full vaccination rate as of July 10, 2023, is 78%, 2.44% of the population is partially vaccinated, and the total vaccination rate reaches about 81%. The conclusion from this data comparison is that although the final total vaccination rate in the United States is almost the same as that in France, the number of people who are genuinely entirely vaccinated, and protected against infection, is much lower in the United States. This means that the current vaccination promotion policy in the United States needs improvement and considerable room for improvement. There are three main reasons for this problem: opposition from ethnic and religious minorities, a crisis of confidence in the government, and a sizeable vaccination-hesitant population. In the following sections, these specific reasons will be analyzed individually.

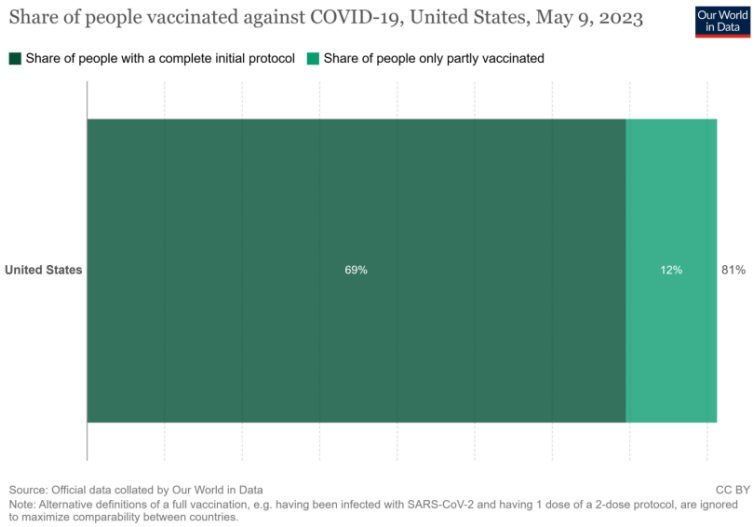

Figure 2. Vaccinated Individuals (by dose) of US

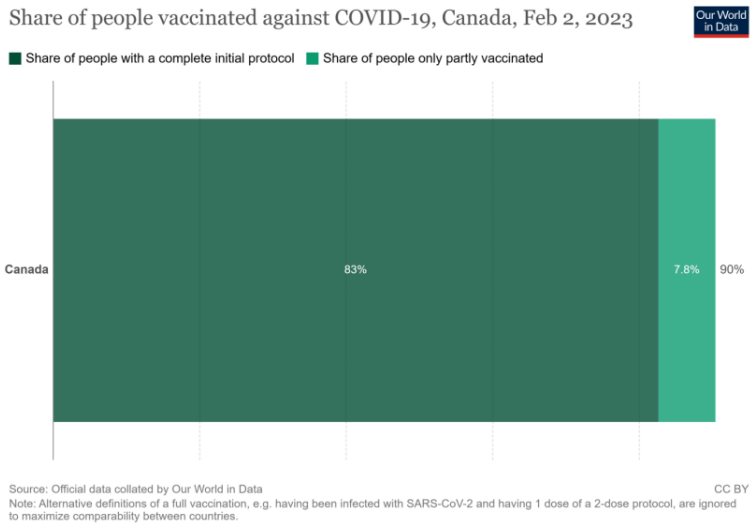

Figure 3. Vaccinated Individuals (by dose) of Canada

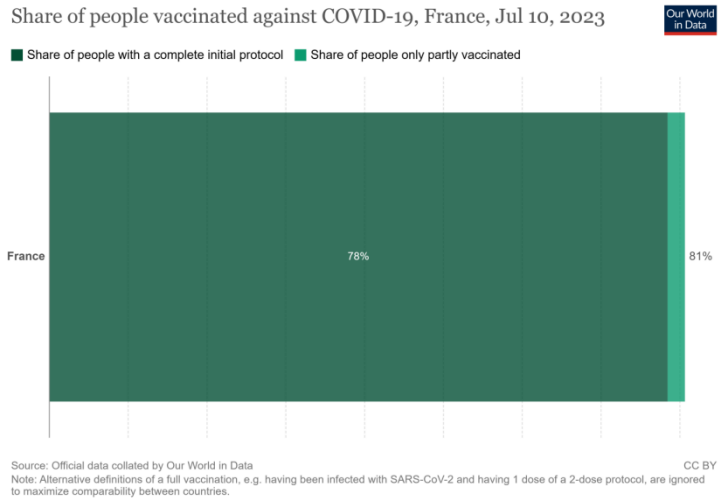

Figure 4. Vaccinated Individuals (by dose) of France

3. Analysis of the Problems

3.1. Ethnic and Religious Minorities Opposition

The hesitation and even resistance of ethnic minorities and religious groups towards vaccination is understandable - and there are sufficient reasons. From gynecological experiments on black slave women in the 19th century to the 40-year-long Tuskegee syphilis study (observing but not treating infected black men), history is filled with examples of medical abuse against African Americans [3]. The New York Times commented that after the experiment, the trust of African Americans in the US healthcare system gradually collapsed, and other healthcare efforts were also in vain due to this incident [3].

Another point is reflected in the structural racism of the healthcare system. According to the website of the Brookings Institution, an American COVID-19 vaccine Poll conducted by African American Research Cooperative shows that many of the respondents have experienced discrimination in the health system, and this experience affects their decision whether to vaccinate [4]. This poll also found that discrimination against ethnic minorities is expected in the healthcare system. A survey shows that over 40% of Latino, African American, and Native American adults have experienced discrimination, with the most precise experience being that they do not receive the best treatment. African American and Indian community members are most likely to report their unfair treatment;

Latinos are most likely unable to access medical services due to language barriers; Asia-Pacific people are the least likely minority group to report their unfair treatment.

The next step is to explore the relationship between these discriminatory experiences and the attitude toward Vaccine hesitancy hesitation. The results showed that the experience of being unfairly treated in the healthcare system significantly impacted vaccine willingness among African Americans, Latinos, and Native Americans [5].

Among the interviewees, people who have not been vaccinated will be asked about their reaction to the statement that "members of the same ethnic group have experienced discrimination in the medical insurance system, which will make them hard to believe the safety and effectiveness of COVID-19 vaccine" [6]. Among all ethnic minority respondents, 39% reported hearing such a statement, while 16% said it was why they were less interested in getting vaccinated. If a more detailed classification is conducted, it will be found that 27% of African Americans and 22% of Indian respondents stated that their experience of discrimination makes them unwilling to be vaccinated, with a significantly higher proportion compared to Latinos (14%) and Asia-Pacific (12%) [7]. The survey results show that racial discrimination is still an essential factor affecting the life of the colored, especially in medical insurance. For many colored, the decision to vaccinate means trusting a health system that does not treat their community fairly.

Christians' opposition to vaccination mainly lies in how the vaccine itself arises. Because cell lines from aborted fetuses may be used for vaccine development, which is difficult for Christians to accept, despite this contradiction, Christians have traditionally supported vaccination as an expression of love for their neighbors, stating that its benefits far outweigh the likelihood of harm. In the 1700s, Puritan missionary Cotton Mather urged his congregation to undergo smallpox vaccination, even though the vaccine had not yet been successfully developed [8]. Nowadays, renowned Christian medical experts and ethicists are also advocating vaccines. Some vaccines have taken other alternatives that religious organizations more readily accept to replace fetal cell lines, such as Modena and Pfizer's mRNA vaccines. Although these two companies did use fetal cell lines in testing to detect potential side effects or potential cell damage, this is the standard practice for verifying vaccines. The fetal cell line itself does not contain fetal tissue. They were cultured in the laboratory from fetal cells obtained decades ago. The Christian Medical and Dental Association also praised the practices of these two companies [8].

Moreover, the development of new vaccines has gradually stopped using fetal cell lines, as scientists have found that viable vaccines can be developed using animal cells and other non-fatal human cells as substitutes. However, there is still a long way to go to make all believers accept vaccination because, according to the latest survey by the Pew Research Center, 50% of white evangelicals and 59% of black Protestants still said they would not vaccinate. In comparison, most Americans (60% of the population) said they would [9].

These issues have evolved into a general lack of trust in the government and even a subconscious lack of trust. For ethnic minorities, it is because of what the government has done before, while for religious groups, it is more like the vaccine hesitancy population mentioned later that they are in a wait-and-see attitude and critical attitude towards vaccination without knowing the specific situation, which brings a large number of unvaccinated population and the trust crisis of the government.

3.2. Large Vaccine-Hesitating Population

In 2019, the World Health Organization listed Vaccine hesitancy as one of the top ten threats to global health. The World Health Organization defines Vaccine hesitancy as "people who may receive vaccines but will choose to wait and see them change or refuse vaccines" [10]. It explains that vaccine hesitators are "influenced by arrogance, convenience, and confidence" [10]. Therefore, the government must fully recognize this group's existence and impact. However, Vaccine hesitancy should also be recognized separately from anti-vaccine. Melinda Wenner Moyer, a science journalist, said: "The anti-vaccine crowd is different from the Vaccine hesitancy crowd" [4]. She wrote an article for the New York Times about vaccines and the Vaccine hesitancy hesitating crowd [10]. She

described the anti-vaccine crowd as "stubbornly spreading false information and trying to convince others that vaccines are dangerous".

However, most people are not so extreme against vaccines. Most people are within a certain range and may only have one question unanswered. Most people's doubts will be dispelled if their questions can be reliably answered. Emory University Human Health Research Center (Emory University's Center for the Study of Human Health) Maryn McKenna, a senior science journalist, writer, and researcher, said, "Everyone is very different among people who are hesitant about Vaccine hesitancy" [10]. The current state of this group is biased towards vaccination, and the government's responsibility is to keep them in this state rather than the opposite.

4. Suggestions

The problems mentioned above may seem simple but are challenging to solve. On the one hand, it is not easy to establish the credibility of the government in a short period, and the government must implement policies in various fields in a long-term and complete manner to improve it. On the other hand, if a new policy is implemented, the public's acceptance of it will primarily affect its final effect, and in some specific scenarios, fully respecting the will of the public may lead to poor policy effectiveness. Therefore, we can summarize the necessary conditions for the new policy, which can be successful if all of these conditions are met.

4.1. Effectiveness

Establishing the new policy should increase the complete vaccination rate to 75% or above within one year. This is because, compared to Canada and France, 69% of the data cannot support the image of the United States as a country with good vaccination coverage, nor can it provide the public with a complete sense of peace of mind. Although the 75% target is slightly lower than the complete vaccination rates in Canada and France, it is still realistic and achievable data [4]. It is worth noting that effectiveness should be the first consideration factor for new policies. If effectiveness cannot be met, the new policy loses its significance.

4.2. Public Acceptance

The existing vaccination policy is too inclusive, leading to a considerable number of groups not vaccinating. However, at the same time, they will hesitate to spread their negative ideas about vaccination without hindrance, leading the government to be unable to fully reach further cooperation with all Vaccine hesitancy. Either it is too strict, such as some mandatory vaccination policies. It is undeniable that Wanzhong has contributed indelibly to implementing public health policies for humanity. However, it has also caused some damage to the government's image, leading some people to doubt and oppose vaccination.

4.3. Cost

If implementing a policy incurs excessive costs, it is unacceptable for the government to use a financial problem to solve the vaccination problem. The appropriate financial burden brought by the new policy is acceptable. However, the high implementation cost proves that the policy is too cumbersome and requires too much time, workforce, and material resources. Under the premise that the COVID-19 epidemic policy focuses on efficiency and time cost, the high policy cost will harm the implementation of the new policy.

5. Conclusion

On the basis of above analysis, how to formulate new policies should be summarized. Firstly, it cannot be denied that the success or failure of any policy is a composite result of multiple factors. Therefore, to achieve the goal of increasing the complete vaccination rate, it is not only necessary for

the government and CDC to cooperate but also for the help of the media and non-governmental organizations. In its role, the media can serve as the government's mouthpiece, promoting the advantages of vaccination to the outside world, purposefully surpassing negative news about vaccines compiled by unscrupulous media in terms of coverage intensity. In this way, we can simultaneously abide by the laws of freedom of speech and make the public opinion orientation towards vaccination more favorable, thus making our policy implementation smoother.

For non-governmental organizations, their responsibilities are mainly reflected in two aspects. Firstly, as "non-governmental" organizations, they have avoided the suspicion of being "bought by the government" in some people's eyes and have a natural nature of objectivity and rationality. Secondly, as the most potent promoters of today's social movements, non-governmental organizations can call for social campaigns on comprehensive vaccination through new media and community promotion. This can be linked with other social movements to penetrate better some minority or religious communities, such as the Black Lives Matter movement.

For the government, the underlying logic of the new policy is to re-establish mutual trust with the people, so practical and transparent communication is essential. Therefore, the first thing to be established is a two-way feedback mechanism, also known as a hearing mechanism. The hearing should be held at a fixed frequency, specifically to answer citizens' questions about the vaccine and its vaccination coverage to ensure transparent communication between CPD and the public.

Secondly, a white paper on vaccination exemptions should be established. The book should stipulate that specific religious beliefs and ethnic minority communities have the right not to receive vaccinations, but actual personal information should be registered for declaration. The collection of exemption examples for the white paper lasted three months, with a trial run of three months, and officially began operation after six months. Those with reasons not listed in the white paper must undergo mandatory vaccination. Those with poor economic conditions can receive relevant living subsidies after confirming the correct economic registration after vaccination. The white paper fully respects the willingness of the public to receive vaccinations, understands the vaccination concepts of ethnic minorities and special religious groups, and serves as a strong countermeasure for the anti-vaccination group.

On the one hand, cooperation with the media can reduce the number of people affected by the anti-vaccine group. On the other hand, this semi-mandatory mechanism can also effectively promote the Vaccine hesitancy group to make decisions ideologically. The brainstorming and collecting reasons for exemption during the first three months have also indirectly reduced the subsequent resistance to vaccination.

The third is to combine social insurance and public transportation to drive people to receive complete vaccination indirectly. A fully vaccinated person can receive a fully vaccinated card, which allows them to travel on public transportation and receive treatment at a considerable discount, thus making people willing to receive the vaccine on an economic level. Those who hesitate to receive the vaccine will also be more inclined to receive the vaccine due to the driving force of the overall environment.

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