



## **EDUCATIONAL VIDEO RELATED TO COVID-19 AND VACCINATION FOR THE COMMUNITY**

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### **ABSTRACT**

One of the efforts being promoted by WHO to prevent Covid-19 is vaccination. Vaccination aims to prevent the symptoms of a disease caused by pathogenic infection. In some cases, vaccination does not prevent infection but can limit the consequences of the infection. Some of the obstacles encountered in the community include the lack of public knowledge about vaccination, a lot of negative news that develops in the community about vaccination, and the availability of vaccines for the community is still limited. Efforts to educate the public have been carried out to increase public awareness about the benefits of vaccination, either through direct counseling by agencies engaged in the health sector or through social media. Such efforts need to be carried out massively and continuously so that education can reach all levels of society. This community service activity program is carried out by producing educational videos that will target all population levels to provide information about Covid-19 management and clarifications on some most common incorrect information or even myths about Covid-19 vaccination and give the public in Indonesia a chance to learn the facts about the Covid-19 vaccine.

**Keywords: Covid-19, Vaccination, Educational Video**

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### **INTRODUCTION**

The COVID-19 pandemic, which WHO has declared since March 2020, has significantly impacted people's lives. The SARS-Cov-2 virus, which causes various disease symptoms, especially causes damage to the respiratory tract, can lead to death. In addition, social and economic impacts also occur on the community due to the establishment of various policies to prevent the spread of the virus, such as the implementation of restrictions on community activities that cause limited economic and social activities of the community. Thus, it is essential to prevent and overcome the Covid-19 pandemic as soon as possible.

One of the efforts being promoted by WHO to prevent Covid-19 is vaccination. Vaccination aims to prevent the symptoms of a disease caused by pathogenic infection. In some cases, vaccination does not prevent infection but can limit the consequences of the infection (Leo et al., 2011). Many factors affect the immune response to vaccines, including the quality of the vaccination program (type of vaccine used, age at first



vaccination, interval between doses, potency of vaccine used, formulation and stability, vaccine administration, and vaccination schedule), host-related factors such as age, sex, genetic factors, smoking, and nutrition, as well as environmental factors (Ganji et al., 2018).

SARS Cov 2 has a spike protein (S) on its surface. The viral S protein will bind to its receptor, Angiotensin-Converting Enzyme 2 (ACE 2), on the host cell's surface. This attachment process relies on a specific domain on the S protein called the Receptor Binding Domain (RBD). Blocking viral binding to ACE 2 is the primary immune mechanism to prevent infection. Therefore, the development of vaccines that can induce antibodies against RBD is the strategy used by most COVID-19 vaccine candidates. The targeting antibody isotypes are IgG1 and IgG3. In addition, IgA is also important for reducing infections in the mucosa and epithelium of the respiratory tract and endothelial cells, which are also viral targets. Vaccines are considered successful when they induce the formation of antibodies that can neutralize viral particles in the extracellular space immediately after the virus enters and before infecting host cells. The vaccine must simultaneously induce B cells and T cells because B cell response and antibody production depend on CD4+ T helper cells. In addition, CD8+ T cells can also contribute to protection by reducing disease severity (Speiser & Bachmann, 2020). Several types of vaccines developed with different properties, including inactivated viral, mRNA, ssRNA, DNA, protein sub-units, non-replicating viral vectors, Virus Like Particles (VLP), and dendritic cells. Among these vaccines, the most widely developed are vaccines with non-replicating viral vectors (24%) and RNA (20%) (Rego et al., 2020). Some of these vaccines have received approval and are widely used in various countries.

Currently, vaccination efforts initiated by the government of Indonesia have covered almost all regions in Indonesia. However, up to now number of vaccinated people is still too low to achieve herd immunity. Some of the obstacles encountered in the community include the lack of public knowledge about vaccination, a lot of negative news that develops in the community about vaccination, and the availability of vaccines for the community is still limited. The government has made significant efforts to meet vaccine needs throughout Indonesia by bringing in several vaccines such as Sinovac, Astra Zeneca, Moderna, Pfizer, and others. This government effort needs to be positively responded by the community by actively participating in vaccination programs provided by public or private health sectors.

Efforts to educate the public have been carried out to increase public awareness about the benefits of vaccination, either through direct counseling by agencies engaged in the health sector or through social media. Such efforts need to be carried out massively and continuously so that education can reach all levels of society. This community service activity is carried out to increase public knowledge about the benefits of vaccination for themselves and the community and provide clarification about some negative news about vaccination. This activity aims to provide correct information and increase public awareness about coronavirus vaccine and further decrease vaccine hesitancy in confronting the disease.



## **METHODS**

This community service activity program is produced by educational videos discussing the latest issues around covid-19, especially related to vaccination. These educational videos can be in the form of an interactive dialogue with biomedical science experts to discuss, among other things, the role of biomedical science in handling covid-19, the role of herbal medicines in the fight against covid-19, and other exciting topics. This program will also produce an animated video with a narrated track that will provide a scientific answer to the myths or misconceptions that exist in the community about COVID-19 vaccination. This activity program involves five lectures of Faculty of Medicine University Sriwijaya (FK Unsri) from various biomedical science disciplines, especially Histology, Pharmacology and Medical Parasitology, and invited resource persons from the Indonesian Biomedical Sciences Consortium (KIBI). The educational videos produced by this program will be distributed through social media platforms to reach all levels of society.

## **RESULTS & DISCUSSION**

An educational program named “Pakar Biomedik Menjawab” in the form of educational video content was produced and launched in the KIBI YouTube channel. The first video entitled the role of Biomedical Science in managing the Covid-19 pandemic presenting the Head of KIBI Prof. Septelia Inawati Wanandi as the speaker, was launched in the first week of November 2021. The second video, entitled Herbal Medicine and Covid-19, presenting a senior pharmacologist from FK Unsri Prof. MT Kamaludin, was launched in the fourth week of November 2021. Another educational content for social media produced in this community service activity program is a narrated animation video about myths and facts surrounding the Covid-19 vaccination. The video that targeted all population levels will clarify some most common incorrect information or even myths about the Covid-19 vaccination and will give the public in Indonesia a chance to learn the facts about the Covid-19 vaccine. The video is being produced and expected to be available on YouTube in early December 2021.

Social media such as YouTube is an unlimited source of information that is most easily accessed by all levels of society. Educational content that is packaged in the form of short videos containing interactive interviews and animated tutorials related to COVID-19 embedded with short titles is believed to attract people's attention to open the video. Links to these short videos can be easily distributed through various social media communications (WA, Instagram, Line, Facebook, Twitter, etc.) to reach the wider community's target easily. The number of video viewers is a form of monitoring and evaluating the success of this program target.



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