



Revitalizing Antibody Immunity: Harnessing COVID-19 Vaccination to Foster Herd Immunity Activation

Ratna Mildawati¹, Faisal Akhmal Muslikh², Fendy Prasetyawan^{3*}, Yuneka Saristiana⁴, Chandra Arifin⁵, Abd Rofiq⁶, Emma Jayanti Besan⁷, Muhammad Nurul Fadel⁸, Yunita Dian Permata Sari⁹, Isma Oktadiana¹⁰

¹STIKES Ganesha Husada Kediri

²Institute Ilmu Kesehatan Bhakti Wiyata

^{3,4}Universitas Kadiri

^{5,6}Akademi Kesehatan Agra Husada

^{7,8}Universitas Muhammadiyah Kudus

⁹Politeknik Indonusa Surakarta

¹⁰Universitas Efarina

Corresponding Author: Fendy Prasetyawan fendy.pra@gmail.com

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ABSTRACT

The COVID-19 pandemic has profoundly affected various facets of human life, leading to widespread concerns and alterations in health services, economic activities, and social behaviors. Despite government regulations and vaccination initiatives, challenges such as uneven vaccine coverage and community resistance persist. This study focuses on a community service initiative for COVID-19 vaccination in Kediri, Indonesia, involving collaborative efforts among the police force, universities, and healthcare sectors. The vaccination process encompasses planning, implementation, and evaluation stages. Planning involves task distribution and determining locations, times, and vaccination targets. Implementation utilizes local government applications for registration, screening, and vaccination. Evaluation measures the initiative's success based on participant numbers, adverse events, vaccine stock, and follow-up activities. The vaccination event on August 14-15, 2021, at the Mojoroto Police Station successfully vaccinated 300 individuals, contributing to breaking the disease chain and reducing COVID-19's impact. The activity proceeded smoothly, achieving a 90% target, with participant conditions being a key factor in unmet targets.

INTRODUCTION

The significant impact of the COVID-19 pandemic has been felt across various aspects of human life. There is now heightened concern among the public regarding the spread of COVID-19 cases, leading to the closure or postponement of health facilities, economic downturn, a shift from physical to online activities, and the implementation of social restrictions. However, awareness of the 3M protocol (wearing masks, washing hands, maintaining distance) remains low, increasing the vulnerability of the population (Shang, 2020).

The Indonesian government has implemented various regulations and policies to address the spread of COVID-19, such as the New Normal and the COVID-19 Task Force at both central and regional levels (Triyo Rachmadi et al., 2021). Recognizing the urgency of swiftly addressing the virus's spread, the development of vaccines is considered an effective measure (Rachman et al., 2020). In this context, the government has organized mass vaccination campaigns for healthcare workers, public service personnel, members of the military, police, and community leaders, under specific regulations like Presidential Regulation of the Republic of Indonesia Number 99 of 2020. Although vaccination is considered a key step in managing the pandemic, challenges such as uneven vaccine coverage and resistance from certain community groups persist. Therefore, communication, information, and education (CIE) efforts by healthcare professionals are necessary to enhance vaccine acceptance (Nur and Rahman, 2021).

The implementation of COVID-19 vaccination in Indonesia is carried out by local governments using the primary care application (pcare) for registration, screening, and vaccine administration. The availability of vaccines and logistics is managed by each district/city (Kemenkes, 2021). In this context, Presidential Regulation of the Republic of Indonesia Number 99 of 2020 serves as the legal basis for the national vaccination program. In the city of Kediri, vaccination efforts involve various community elements, including the Kediri City Police collaborating with health education institutions such as Stikes Ganesha Husada and Universitas Kadiri Kediri. Lecturers act as vaccinators, while students are involved in screening activities. Officers from the Kediri City Police are responsible for data input and the organization of vaccination activities (Triyo Rachmadi et al., 2021).

IMPLEMENTATION AND METHODS

The implementation method of this community service is carried out through synergistic collaboration among various institutions, including the police force (Bhayangkara), several universities, local security sectors, Subdistrict Heads (Camat), and Village Heads (Lurah). Information about the vaccination process is conveyed through the Subdistrict Head and disseminated to the neighborhoods through a chain of circulars via WhatsApp messages to the neighborhood (kelurahan) and neighborhood unit (RT). Community members are requested to register through the provided link and fill out a Google Form to predict the number of targets and vaccine needs for this activity.



Picture 1. Data Collection and Preparedness for Vaccines

After registering, community members then come to the vaccination area at the Mojoroto Police Station in Kediri in an orderly manner. There, they wait in the waiting room while receiving information about the vaccine. The subsequent implementation involves the screening process and data input before the actual vaccination takes place. Post-vaccination, observations are conducted, covering the number of participants, Adverse Events Following Immunization (AEFI), vaccine stock, and follow-up related to vaccination.



Picture 2. The Medical Staff is Preparing the Equipment for Vaccination

This community service follows the stages of planning, implementation, and evaluation. In the planning phase, coordination meetings are held to distribute tasks and determine the location, time, and vaccination targets, particularly for the first dose. The implementation phase involves educational methods, recording, and reporting. Those who receive the first dose of the vaccine are reminded to come back for the second dose at the Mojoroto Police Station, with promotion through Instagram, Facebook, posters, invitations via WhatsApp groups, and direct notifications from the village apparatus.

RESULTS AND DISCUSSION

The community service initiative in administering COVID-19 vaccinations to the general public, carried out on August 14-15, 2021, from 08:00 to 14:00 WIB at the Mojoroto Police Station, successfully vaccinated 300 individuals. The objective of this COVID-19 vaccination activity is to enhance the body's immunity by activating antibodies, thereby reducing the impact of COVID-19 transmission and contributing to the effort of breaking the chain of the disease spread. As the organizer, the Mojoroto Police Station handled the technical aspects of the vaccination process, including the delivery of information to vaccine recipients and the preparation of the vaccination location. Stikes Ganesha Husada and Kadiri University, as educational institutions participating in this initiative, along with other healthcare agencies, provided medical personnel responsible for registration, screening, vaccination, and post-vaccination observation.



Picture 3. The Vaccination Implementation

The vaccination process consisted of four stages, with each stage conducted at a dedicated station. The initial phase involved registration at the first station, where target individuals were recorded based on pre-existing data. Participants received a queue number upon registration, presenting their e-ticket and ID for verification. Participation was cross-checked and recorded in the Peduli Lindungi application. The second station performed screening to determine the eligibility of individuals for vaccination, considering factors such as health conditions, physical examinations like body temperature and blood pressure, and any adverse effects from the first dose. Eligible individuals proceeded to the third station for the actual vaccination process, where vaccine information was documented on vials, and vaccination was administered according to safety principles. Following vaccination, recipients were directed to the fourth station for a 30-minute post-vaccination observation.

The final stage involved a 30-minute post-vaccination observation at the fourth station. Observations were recorded on a memo, including vaccine type and batch number received by the vaccine recipient. A manual vaccination card and a marker were provided to those who completed the vaccination. Individuals experiencing post-vaccination complaints (KIPI) received appropriate follow-up care based on their concerns.

The community service, involving planning, implementation, and evaluation, recognizes the crucial role of individual contributions in achieving specific goals. Planning, actuating, and evaluation are integral stages in the execution of this community service initiative. The overall objective is to contribute to the solution for halting the COVID-19 pandemic, emphasizing the importance of ongoing adherence to health protocols, including maintaining a safe distance of 1-2 meters, using masks, and regular handwashing. The administration of the vaccine aims to boost the body's immunity by activating antibodies to break the transmission of COVID-19. This initiative underscores the vital role of effective work management in both public and private sectors, essential for achieving specific objectives.

The planning involves a series of actions to be carried out to achieve a goal by utilizing existing resources to ensure the goal is achieved with maximum results. According to Siswanto (2009), the COVID-19 vaccination initiative is a community service activity aimed at supporting the government's program to minimize the consequences of the transmission of the Corona virus, the cause of COVID-19. The planning phase of this activity includes task distribution, determination of location, time, and vaccine recipient targets to maximize efficiency and effectiveness in achieving the goal.

According to R. Terry George (2009), actuating refers to the efforts of group members being mobilized in such a way that they have the desire and make an effort to achieve the set goals. In the context of this initiative, implementation involves providing information and reminders to the community to get vaccinated. The Sinovac vaccine, originating from China, is used in the vaccination process. The Sinovac COVID-19 vaccine is an inactivated virus type that has been imported to Indonesia in a quantity of 1.2 million doses. Sinovac's COVID-19 vaccine, classified as an inactivated vaccine, has obtained emergency use authorization (EUA) from the Indonesian Food and Drug Monitoring Agency (BPOM). Inactivated vaccines use a weakened or inactivated version of the virus to trigger an immune response. Inactivated vaccines require multiple doses over time to achieve sustained immunity against the disease. Additionally, there is education and socialization to continue practicing the 5M after vaccination. Moreover, during the implementation phase, data on vaccine recipients are recorded, and the health conditions post-COVID-19 vaccination are reported.

In the evaluation stage, as per Sukirman (2008), it involves measuring the extent to which the results of an activity align with the planned objectives. The thoughts of these experts imply that evaluation is conducted to gather information or insights into the implementation of the activity, serving as a determinant for the subsequent steps and decisions. Therefore, the evaluation

of this vaccination activity includes analyzing the number of targeted participants vaccinated, cases of adverse events following immunization, the quantity of vaccines utilized, and a summary report of the entire initiative. The outcomes of this community service initiative through COVID-19 vaccination for the surrounding residents have led to a change in the community's attitude and understanding regarding COVID-19 prevention, effectively breaking the chain of disease transmission and mitigating the escalating mortality rates (Rachmidi, 2021). The smooth execution of the initiative can be attributed to meticulous planning, orderly implementation, and thorough evaluation as the concluding phase.



Picture 4. Photo Together with the Security Personnel of the East Java Police

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSION

The activity proceeded in an orderly and smooth manner until the conclusion of the event. This was supported by the cooperation of various parties who performed their duties very well. The target was achieved by 90%, and the factors contributing to the failure to reach the target were the condition of the participants, such as illness, fever, a history of asthma, and ongoing complaints. Participants who did not meet the requirements were advised to seek medical attention and consult with a doctor before being allowed to be vaccinated again. The lack of a specific schedule for vaccination participants resulted in participants arriving simultaneously, leading to a relatively long queue.

The COVID-19 vaccination activity for the general public, targeting various community groups, conducted at the Mojoroto Police Station in collaboration with educational institutions in Kediri, is an effort to prevent the spread of COVID-19. This community service activity supports the

government's policy efforts to reduce the risk of COVID-19 transmission in the general community.

RECOMMENDATIONS

The public's understanding of the prevention and treatment of Covid-19 remains very limited. Not all segments of society, including professors and students, possess comprehensive knowledge about Covid-19. Therefore, guidance and education are needed to provide a better understanding of Covid-19 and the vaccination process. The varying information about Covid-19 vaccination has sparked debates within the community. Guidance and education are crucial to ensure that the public comprehends issues surrounding Covid-19 and vaccination effectively. This, in turn, facilitates a more efficient administration of vaccines.

Vaccination has broad impacts, extending protection to various societal groups, including the elderly, infants, and children. Efforts to prevent Covid-19 are anticipated to encompass all layers of society. Additionally, it is vital to ensure that vaccination efforts are not confined solely to government healthcare facilities but also involve private healthcare facilities and are accessible throughout the entire region.

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