

COVID-19 Vaccine Policy as an Effort to Achieve National Herd Immunity in Indonesia

HENNY JULIANI¹, KADEK CAHYA SUSILA WIBAWA², SOLECHAN³^{1,2,3}Faculty of Law, Universitas Diponegoro, Jln. Prof. Soedarto, S.H., No. 1 Semarang City, Indonesia, 50275;Correspondence to: Kadek Cahya Susila Wibawa, Email: kadekwibawa@lecturer.undip.ac.id, Cell: +62 819 0190 6163

ABSTRACT

Introduction: The rapid and extensive spread of COVID-19 has increased the number of confirmed cases even higher. The COVID-19 vaccine policy is one strategy for reducing COVID-19 spread by establishing a joint herd immunity pattern. The vaccine policy is one of the policies, along with the 3M and 3T policies.

Objectives: This paper aimed to analyze the implementation of the COVID-19 vaccination policy to achieve herd immunity.

Research Methodology: This research uses a normative method (qualitative) and descriptive-analytical (research specification). The choice of this method is based on the fact that this research examines the government's policies and their impact on the achievement of national herd immunity.

Conclusion: This study found that the COVID-19 vaccine policy was effective in encouraging people to get vaccinated immediately. The COVID-19 vaccine policy has achieved 94.71 percent coverage for dose I, 77.30 percent coverage for dose II, and 12.63 percent coverage for dose III. Herd immunity can be achieved if at least 70% of Indonesians have been vaccinated.

Keywords: policy, vaccine, COVID-19; herd immunity.

INTRODUCTION

In early 2020, the world was shocked by the new outbreak that came from Wuhan, Hubei Province. Furthermore, it spread quickly to 190 countries and territories.¹ This outbreak is named coronavirus disease 2019 (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2).² The COVID-19 virus has disease characteristics that are distinct from other types of disease outbreaks, and this virus does not consider age, gender, race, or ethnicity because this virus can be easily transmitted to anyone who is negligent with the health protocol rules.³

The consideration for determining a pandemic in Indonesia is due to the extraordinary spread of Coronavirus 2019 Disease (COVID-19). It was marked by the number of cases and/or the number of deaths that have increased across regions and countries and have an impact on political, economic, social, cultural aspects, defense and security as well as the welfare of the people in Indonesia.⁴ The COVID-19 pandemic, which has afflicted every country in the world has changed the way people live. People are being forced to adopt new habits.⁵

The rising number of COVID-19 cases has compelled the Indonesian government to implement various efforts to reduce the number of positive COVID-19 cases in the country.⁶ In this case, government intervention is required. The Indonesian government has established three steps as a control strategy against the spread of the COVID-19 Virus, including: (1) Implementation of the 3T (testing, tracing, and treatment) program; (2) The community's obligation to follow health protocols (washing hands, wearing masks, maintaining distance, staying away from crowds, and reducing mobility); and vaccination program.

These various government efforts are intended to break the chain of COVID-19 spread. This is because health is a vital aspect that must be guaranteed by the government in accordance with Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia (UUDNRI 1945), which states that "Each person has a right to a life of well-being in body and mind, to a place to dwell, to enjoy a good and healthy environment, and to receive medical care."⁷ Furthermore, Article 28H paragraph (3) of the Republic of Indonesia's 1945 Constitution regulates human rights related to the community's right to obtain social security that allows self-development in the community as a dignified human being.⁷

According to data as of January 31, 2021, there were 1,151,314 cases recorded in Indonesia, with the following details: 175,095 (16.24%) were confirmed positive; 973,221 (80.98%) recovered; and 29,998 (2.78%) died. Based on this data, vaccinating against COVID-19 is indeed the most rational way to break the chain of the virus spread.⁸ Based on the current state of COVID-19 cases, which are still endemic from 2020 to 2021, the

Indonesian government has made various policy efforts to mitigate the impact of this case, one of which is by administering the COVID-19 vaccine to members of society who have been identified as needing this vaccine.³

Based on these conditions, the Indonesian government enacted Presidential Regulation No. 99 of 2020 and its amendments, namely Presidential Regulation No. 14 of 2021 on Vaccine Procurement and Vaccination Implementation in the Context of Overcoming the COVID-19 Pandemic. These two regulations serve as the legal foundation for carrying out the COVID-19 vaccination policy.

Vaccination is defined as an effort to administer vaccines to specimens in order to stimulate the formation of an immune system in the body; if vaccination is administered in large numbers to the community, group community immunity, also known as herd immunity, can be formed.⁹ If herd immunity develops naturally, it will take a very long time and will undoubtedly result in many casualties. As a result, the World Health Organization (WHO) and other global health experts are targeting herd immunity through vaccination.⁶

Vaccines are designed to train the body to recognize, fight, and become immune to disease-causing agents such as viruses or bacteria. Vaccines are not drugs, but they can stimulate the development of specific immunity to COVID-19, allowing the virus to be eradicated.³ At the community level, there are pros and cons regarding the implementation of vaccination in Indonesia. A number of parties questioned whether vaccination for the community is a right or an obligation.⁵ Furthermore, the public questioned the efficacy and effectiveness of the COVID-19 vaccine on grounds such as ineffectiveness, conspiracy issues, causing side effects, and the halal aspect (despite it having been declared holy and halal by the Indonesian Ulema Council (MUI) regarding the halal aspect.¹⁰

Many articles on vaccination have been published, such as by Yusuf Abdul Rahman (2021) who discussed "Mass Vaccination for COVID-19 as a Community Effort in Implementing Obedience Law"⁹; Nada Nafira Almanzani (2022) who discussed "Implementation of the COVID-19 Vaccination Policy in Banda Aceh City"⁶; Niken, Putri Mia, et.al. (2021) which describes "Implementation of the COVID-19 Vaccination Policy in Boyolali City"¹¹. This paper takes the title "COVID-19 Vaccine Policy as an Effort to Achieve National Herd Immunity in Indonesia" with a focus on the problem of how is the implementation of the COVID-19 vaccination policy in Indonesia? And how is the correlation between the implementation of these policies in order to achieve national herd immunity in Indonesia? These two problems are what set this article apart from others that have been published.

MATERIAL AND METHODS

This study used normative juridical law research with a statutory approach. This method was selected based on the fact that the study examined the policies established by the government and their impact on the achievement of National Herd Immunity in Indonesia. This study analyzed secondary data to obtain answers to the problems in this study.⁴

The normative method was used to analyze Presidential Regulation No. 99 of 2020 concerning Vaccine Procurement and Vaccination Implementation in the Context of Overcoming the COVID-19 Pandemic, i.e. Presidential Regulation Number 14 of 2021, Presidential Regulation Number 50 of 2021; Presidential Regulation Number 33 of 2022; and Regulation of the Minister of Health of the Republic of Indonesia regarding the implementation of COVID-19 vaccination. Analysis of the results of studies to answer the issues was conducted using a qualitative constructive approach.¹² Qualitative research is research that is used to investigate, describe, explain, and discover the quality or features of social influence that cannot be explained, measured, or illustrated through a quantitative approach.^{12,13}

RESULTS AND DISCUSSION

The growing number of COVID-19 cases, which is increasing by the day, makes the Indonesian government increasingly worried. The Indonesian government has developed a strategy to control the COVID-19 pandemic in Indonesia through collaboration between the government, the private sector, and the community.¹⁴ The private sector assists the government in implementing the 3T program, namely Test, Treat, and Trace, while the general public is encouraged to implement the 3M, namely wearing masks, keeping a safe distance, and washing hands.¹⁵ The collaboration between the government and the 3T program, as well as the community and 3M, is expected to control the spread of COVID-19 in Indonesia.¹⁶

In addition to these two strategies, the Indonesian government believes that a COVID-19 vaccination program is both necessary and mandatory. This COVID-19 vaccination program serves as a link between the 3T and 3M strategies. Presidential Regulation No. 99 of 2020 concerning Vaccine Procurement and Vaccination Implementation in the Context of Overcoming the COVID-19 Pandemic, as updated by Presidential Regulation No. 14 of 2021 and Presidential Regulation No. 50 of 2021. These regulations are the legal basis for the COVID-19 vaccine's implementation in Indonesia. Given that Indonesia is a legal country, this arrangement is required. This is reflected in Article 1 paragraph (3) of the Republic of Indonesia's 1945 Constitution (UUDNRI), which states, "The State of Indonesia is a state based on the rule of law." As a result of Indonesia being a legal state, the highest power in the country is the rule of law.¹⁷

Regarding the COVID-19 vaccine policy, the President of Indonesia issued the following instructions: (1) The COVID-19 vaccine was given to the public for free; (2) The 2021 budget is prioritized for the COVID-19 vaccine program at all levels of the cabinet, government agencies, ministries, and local governments; (3) Priority is given to other budgets regarding the availability and free COVID-19 vaccines; (4) The President is the first person to be given the COVID-19 vaccine with the aim of making the public believe that the vaccine given is safe; and (5) the President asks the public to continue to comply with the 3M health protocol (wearing masks, maintaining distance, and washing hands).¹⁴ Furthermore, Article 4 of the Regulation of the Minister of Health Number 10 of 2021 concerning Provision of Vaccinations in the Context of Overcoming the COVID-19 Pandemic states that the objectives of administering the COVID-19 vaccine are as follows: (1) Reducing the spread of COVID-19 in Indonesia; (2) Reducing the symptoms of COVID-19 disease, as well as reducing the death rate due to COVID-19; (3) Meeting the number of herd immunity in Indonesian society; and (4) Protecting the community from COVID-19 in order to maintain social and economic stability in Indonesia.

The Indonesian government started the vaccination program on January 13, 2021. Based on the Decree of the Minister of Health Number HK.01.07/Menkes/12758/2020 concerning Determination of Vaccine Types for the Implementation of COVID-19 Vaccination; the types of COVID-19 vaccines that can be circulated and given to Indonesian people are: (1) Vaccines produced by PT Bio Farma; (2) AstraZeneca; (3) Sinopharm (manufactured by China National Pharmaceutical Group Corporation); (4) Moderna; (5) Novavax Inc; (6) Pfizer Inc and BioNTech; and (7) Sinovac. Over time, the types of vaccines used in Indonesia have increased. As of March 26, 2022, new types of COVID-19 vaccines can be used in Indonesia and have received permits from the Food and Drug Supervisory Agency (BPOM), including: (1) Sputnik-V; (2) Janssen; (3) Convidencia; and (10) Zifi Vax.18.

Due to the limited availability of the COVID-19 vaccine, the Indonesian government has established a priority scale for administering vaccines to the public. The criteria for receiving the COVID-19 vaccine are based on a study conducted by the Indonesian Technical Advisory Group on Immunization and/or the World Health Organization's Strategic Advisory Group of Experts on Immunization (SAGE WHO), which includes: (1) Health workers, assistant health workers, and supporting staff in health service facilities; (2) The elderly and officers working in the public service sector; (3) People who are vulnerable to social, economic, and geospatial aspects; and (4) other people who are not included in the priority groups 1,2, and 3. The legal basis for determining the priority scale for COVID-19 vaccine recipients is stipulated in the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/4638/2021 concerning Technical Guidelines for Vaccination Implementation In the Context of Overcoming the 2019 Coronavirus Disease (COVID-19) Pandemic. In addition to this, priorities for vaccine recipients are also compiled using data calculations that the government already owns, such as data on the number of targeted vaccine recipients, health service provider facilities or vaccination service posts, personnel or field workers who carry out vaccinations, stock of vaccine needs, and other equipment that support the implementation of the COVID-19 vaccination.

One of the objectives of implementing the COVID-19 vaccination program is to reduce the number of COVID-19 cases in Indonesia through herd immunity. Furthermore, Diana L.R stated that herd immunity is a condition in which an area is dominated by a population that is immune to a specific disease. When a region achieves herd immunity, the COVID-19 pandemic may be over.¹⁹ Herd immunity can develop by allowing the virus to spread so that many people become infected, and if they recover, many people become immune, and the outbreak will disappear on its own because the virus is difficult to find a host to keep it alive and growing.²⁰

The Indonesian government has set a national vaccination target of 208,265,720 people, including health workers, the elderly, public service workers, vulnerable communities and the general public, children aged 12-17 years, and other members of the general public. Up to April 8, 2022, the first dose of the COVID-19 vaccine had been administered to 197,243,959 people (94.71 percent); the second dose had been administered to 160,983,733 people (77.30 percent); and the third dose had been administered to 25,719,265 people (12.63 percent) of the national target.²¹

Based on these findings, the target for vaccination dose I is very high, the target for vaccination dose II is moderately high, and the target for vaccination dose III is still low. Based on the targets that have been achieved in Indonesia, these figures can be said to be quite high considering the vast territory of Indonesia and quite difficult to reach. Herd immunity develops after at least 70% of the population has been fully vaccinated. As such, based on the vaccination program's dose I and dose II, Indonesia should achieve herd immunity relatively soon. However, based on the third vaccination program, Indonesia will not achieve herd

immunity unless the third vaccination achieves a minimum of 70% coverage.

To achieve herd immunity, each country must identify potential obstacles and challenges in vaccination implementation so that appropriate strategies and policies can be developed to overcome them. Several obstacles to the implementation of COVID-19 vaccination in Indonesia can be minimized, including: limited availability of COVID-19 vaccine; groups of people who continue to refuse vaccine implementation for various reasons; and obstacles in the process of distributing the COVID-19 vaccine. These obstacles are then used to inform future policy decisions regarding the COVID-19 vaccination policy, ensuring that the goal of vaccination to achieve herd immunity is soon established in Indonesia and the community can resume normal activities.

CONCLUSION

Based on this description, the conclusion that can be drawn is that the COVID-19 vaccine policy is one of the strategies for controlling the spread of the COVID-19 virus with the main target of forming the community's herd immunity. The COVID-19 vaccine policy has achieved 94.71 percent coverage for dose I, 77.30 percent coverage for dose II, and 12.63 percent coverage for dose III. Herd immunity can be achieved if at least 70% of Indonesian people have been vaccinated. Policies need to be strengthened, particularly regarding the low dose III vaccination. Regulations must be capable of generating herd immunity in a short period of time or as soon as possible.

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REFERENCES

1. Sipayung YR, Cahya K, Wibawa S. The Role of Information Technology toward the Development of Online Learning Process in COVID-19 Pandemic Period in Indonesia. *PalArch's J Archaeol Egypt / Egyptol.* 2020;17(4):948-958. <https://archives.palarch.nl/index.php/jae/article/view/496>
2. Susilo A, Rumende CM, Pitoyo CW, et al. Coronavirus Disease 2019: Tinjauan Literatur Terkini. *J Penyakit Dalam Indones.* 2020;7(1):45-67. doi:10.7454/jpdi.v7i1.415
3. Fitriyana, Hamdi AN, Akhmad B. Implementasi Kebijakan Pemerintah Mengenai Pemberian Vaksin Terhadap Pengurangan Laju Pertumbuhan Kasus COVID-19 di Kelurahan Pekapuran Raya Kota Banjarmasin. *Univ Islam Kalimantan.* Published online 2021. <http://eprints.uniska-bjm.ac.id/8155/>
4. Sari Wijaya MP, Sipayung YR, Wibawa KCS, Wijaya WS. The Effect of Online Learning Policy toward Indonesian Students' Mental Health during COVID-19 Pandemic. *Pakistan J Med Heal Sci.* 2021;15(6):1575-1577. doi:10.53350/pjmhs211561575
5. Gandryani F, Hadi F. Pelaksanaan Vaksinasi COVID-19 Di Indonesia: Hak atau Kewajiban Warga Negara. *J Rechts Vinding Media Pembina Huk Nas.* 2021;10(01):23-41. doi:<http://dx.doi.org/10.33331/rechtsvinding.v10i1>
6. Almanzani NN. IMPLEMENTASI KEBIJAKAN VAKSINASI COVID-19

- DI KOTA BANDA ACEH. *J Ilm Mhs.* 2022;07(1):1-9. <http://www.jim.unsyiah.ac.id/FISIP/article/view/18980>
7. Amalia B, Kurniangingsih W, Dardiri AH. Kewajiban Hukum Vaksinasi Dalam Perpres No.14 Tahun 2021 Perspektif HAM di Indonesia. *J Huk dan Etika Kesehatan.* 2021;1(2):165-175. <https://jhek.hangtuah.ac.id/index.php/jurnal/issue/view/6/3>
8. Akbar I. Vaksinasi COVID-19 dan Kebijakan Negara: Perspektif Ekonomi Politik. *J Acad Praja.* 2021;4(1):244-254. doi:<https://doi.org/10.36859/jap.v4i1.374>
9. Rahman YA. Vaksinasi Massal COVID-19 sebagai Sebuah Upaya Masyarakat dalam Melaksanakan Kepatuhan Hukum (Obedience Law). *Khazanah Huk.* 2021;3(2):80-86. doi:10.15575/kh.v3i2.11520
10. Azhar & Din. Komisi Fatwa MUI Pusat Menetapkan Vaksin COVID-19 Produksi Sinovac Halal dan Suci. *Majelis Ulama Indonesia.* Published 2021. Accessed March 2, 2022. <https://mui.or.id/berita/29405/komisi-fatwa-mui-pusat-menetapkan-vaksin-covid-19-produksi-sinovac-halal-dan-suci/>
11. Niken N, Mia P, Septiana S, Reyhan R, Argha A, Putra P. Implementasi Kebijakan Vaksinasi COVID-19 di Kota Boyolali. *J Syntax Admiration.* 2021;2(11):2138-2144. doi:10.46799/jsa.v2i11.343
12. Cahya K, Wibawa S, Putrijanti A. The Reconstruction of Public Information Dispute Resolution as the Effort in Realizing Substantive Justice in Indonesia. *J Environmental Treat Tech.* 2021;9(1):110-116. <http://www.jett.dormaj.com/docs/Volume9/Issue1/html/TheReconstructionofPublicInformationDisputeResolutionastheEffortinRealizingSubstantiveJusticeinIndonesia.html>
13. Susanto SN, Susila Wibawa KC. The Existence of The Indonesia Peatland Restoration Agency in Perspective of Organization and Authority. *Adm Law Gov J.* 2020;3(1):92-103. doi:10.14710/alj.v3i1.92-103
14. Nadia S. Kebijakan Pelaksanaan Vaksinasi COVID-19. Vol 1.; 2020. https://persi.or.id/wp-content/uploads/2021/01/paparan_adinkes_rakernassus.pdf
15. Surya A. Kebijakan Pelaksanaan Vaksinasi COVID-19.; 2020. <https://rsudrsoetomo.jatimprov.go.id/wp-content/uploads/2021/01/KEBIJAKAN-VAKSINASI-COVID-19-UNAIR.pdf>
16. Kuswoyo D. Pencegahan Penularan COVID-19 dengan Pemberlakuan Perilaku 3M. *J Peduli Masy.* 2021;3(2):123-128. doi:10.37287/jpm.v3i2.502
17. Hamzani Al. Menggagas Indonesia sebagai Negara Hukum yang Membahagiakan Rakyatnya. *J Yust.* 2014;3(3):136-142. doi:<https://dx.doi.org/10.20961/yustisia.v3i3.29562>
18. COVID-19 SP. Data Jenis-jenis Vaksin COVID-19 tahun 2022. Published 2022. Accessed March 1, 2022. <https://COVID19.go.id/tentang-vaksin-COVID19>
19. L.R. D. Edukasi Mengenai Herd Immunity Dan Vaksinasi COVID-19 Kepada Tenaga Kefarmasian di Indonesia. *Berdikari.* 2020;3(2):1-5. <http://journal.uta45jakarta.ac.id/index.php/berdikari/index>
20. Putra ID, Deswinda, Hendra D, Kharisna D. PELAKSANAAN VAKSINASI COVID-19 DALAM PERCEPATAN HERD IMMUNITY DI STIKES PAYUNG NEGERI PEKANBARU. *J Pengabdian Kesehatan.* 2022;5(1):20-26. doi:<https://doi.org/10.31596/jpk.v5i1.188>
21. Indonesia KKR. Vaksinasi COVID-19 Nasional. Published 2022. Accessed April 8, 2022. <https://vaksin.kemkes.go.id/#/vaccines>