



PCR Test Juridical Review for Prospective Domestic Airplane Passengers

Hotmaria Hertawaty Sijabat^{1*}, Sardjana Orba Manullang², Asep Saepullah³, Karman⁴, Oskar Hutagaluh⁵

¹ Universitas Krisnadwipayana and Universitas 17 Agustus 1945 Jakarta

² Universitas Krisnadwipayana

³ Kementerian Pariwisata dan Ekonomi Kreatif

^{4,5} Institut Agama Islam Sultan Muhammad Syafiuddin Sambas

* Email: sijabathotmaria@gmail.com

Abstract

The mandatory Polymerase Chain Reaction (PCR) testing continues to be an interesting issue for many people. So the legality of the polymerase chain reaction test for local airline passengers is interesting for us to study. The data for this study were derived from secondary data from various journals and related literature readings that we obtained electronically. Then we explore as deeply as possible to understand the question and purpose of this study. So we also conducted a study through the evaluation system and data coding to draw valid conclusions and have high reliability. Sources of publication data include international and national journals. Based on the discussion of the findings, we can summarize that the regulatory status of mandatory testing for prospective passengers often changes, both in terms of price and legality, and other conditions. So along with this study, we report that there are still changes and the legal status of mandatory testing or not for prospective domestic passengers. It is hoped that this study will be helpful in the development of legal studies and business legality of PCR in Indonesia.

Keywords: PCR Test; Legality; Aviation; Publication Studies.

A. Introduction

The issue of the Polymerase Chain Reaction (PCR) test continues to be an issue of polemic and controversy among the Government and the public, especially prospective flight service users, with the rules for traveling by plane confirmed to be effective from Wednesday, November 3, 202 (Kadri, 2019). Travel rules by aircraft do not have to give a negative PCR test result but can use an antigen test (Yin et al., 2020). The government regulates local travel standards via airplanes with various ministerial circulars related to transportation on the grounds of guidelines for implementing domestic flight travel by airplane, so the issuance of these changing circulars indicates that there are new regulations that are difficult to observe and legalize in legality, even though the letter is not legal (Ridlo, 2020). This was issued by the minister related to the reason for efforts to eradicate the Coronavirus by imposing restrictions on the movement of people from various levels, especially on the island of Java and Bali, this is what makes flights and prospective passengers very disturbed, and this is interesting to study on the grounds of eradicating the covid 19 pandemic. For this reason, we think that this study needs an understanding of the general public about the importance of knowledge and the legal status of the government circular (Husni Awali, 2021).

According to the Ministry of Transportation, the latest standard for the PRC test for travel by air from November 3, 2021, is no longer an obligation. Departing with the nuances of the latest travel regulations by plane: But it is enough to show a signed card that they have passed immunization; basically, the principle in this segment is that passengers are expected to lead the affirmation of a negative Covid-19 test result, both with an antigen test and PCR depending on the vaccination segment (Sucahya, 2020). For travelers who have received the fundamental part of the vaccination, it is expected that they will show the results of the Covid-19 test, which is opposite from the PCR test whose model is taken in the most significant season 3x24 hours before departure. Explorers who already need a second neutralizer can show a negative Covid-19 result from an antigen test whose model is taken within 1 x 24 hours before departure (Juaningsih et al., 2020).

The latest travel guidelines apply to domestic travel between the Java-Bali area and between air terminals outside the Java-Bali area. This method also applies to departures from outside the Java-Bali area to the air terminal in Java-Bali, and vice versa. Arrangements indicate that immunization cards are prohibited for travelers under the age of 12 and travelers with extraordinary illnesses or comorbidities that prevent them from obtaining antibodies (Permana, 2021) However, tourists with health reasons are required to link a doctor's certificate from the administrative health clinic stating that the tourist has not or has the potential not to receive the Covid-19 vaccine. While completing the exercise in the open during the PPKM period, the general public is also asked to wear head coverings accurately and reliably. In addition, it is illegal to wear a face shield without wearing a cover (Novianti & Widigdo, 2020).

The Ministry of Human Development and Culture said there was an adjustment to the movement of travelers with domestic flights (Verdioa, 2021) This time, public authorities no longer require negative PCR test results as a condition for airplane flights. Airplane passengers can take advantage of negative antigen test results as a condition of flight. Travel rules for plane travelers are contained in the Corona Virus Disease 2019 Restrictions in the Java and Bali Regions (Wahyudi, 2021). The principle, updated on October 19, 2022, stipulates that local travelers traveling by plane must present an antibody card for the central portion. Also, passengers must show a negative Covid-19 test result. Travelers are required to show a Covid-19 negative statement from the results of the RT-PCR test whose samples were taken within 2x24 hours before the flight. Airline passengers' movement prerequisite guidelines apply to both travelers, with the central part of immunization and the second part of antibodies (Harahap et al., 2021; P. Putra et al., 2020; Sudarmo et al., 2021). Then, at that time, the Task Force for the Acceleration of Handling Covid-19 issued the Second Addendum to Circular Number 21 of 2021 concerning Provisions for Travel of Domestic People During the Covid-19 Pandemic. This supplement takes effect from October 28, 2021.

This situation implies that planned flight travelers who have recently gotten a solitary piece of the vaccination should have a PCR test declaration (Kusmana et al., 2020). Shows antigen (H-1) for explorers who have been vaccinated twice or PCR (H-3) for voyagers who have quite recently been immunized once for airplane transportation modes between the rules of Java and Bali. This standard correlates

with explorers wanting to enter/leave Java and Bali (Nanda, 2021). On the off chance that they have the majority of the antibodies, they can utilize the symptom of the fast antigen (H-1) test. The requirement for an alternate technique for transportation Apart from planes, travel essentials for various transportation strategies proceed as in the past, precisely the symptoms of the fast antigen test (H-1), both for private vehicle transportation and on ships. "Showing Antigen (H-1) for individual vehicles, cruisers, transports, trains, and sea liners (Nuraeny et al., 2021). Concerning drivers and other item transport vehicles, the symptoms of quick antigen tests are impressive during 14 days for home visits if they get the second piece of the immunization. Meanwhile, the rapid antigen test results are legitimate for seven days for drivers who just got the entire assortment of antibodies. Drivers who have never had a Covid-19 shot should finish the antigen for one day (Raudatul, 2021).

B. Method

In this method section, we will discuss how we carried out this study. The issue of required PCR testing continues to be an issue of interest to some. So the validity of the polymerase chain response assays for nearby carrier travelers was interesting for us to examine (Arevalo-Rodriguez et al., 2020) This review was obtained from optional information from various diaries and literature-related articles that we obtained electronically (Meyerowitz-Katz & Merone, 2020). Then, at that point, we delved as deeply as possible to understand the question and motivation behind this review. So we also steered the review through the assessment framework and coded the information to make significant conclusions and unshakable quality causes of distribution information combine worldwide and public diaries. From the discussion of these findings, it can be concluded that the status of mandatory testing administration for planned travelers frequently changes, both in terms of cost and legitimacy, and under different conditions (Kim et al., 2020).

C. Result and Discussion

1. Response from Various Parties

The mandatory prerequisite for the PCR test for airplane passengers occurred on Thursday (21/10/2021) on the sidelines of the implementation of the Restrictions on Community Activities. Likewise, there are advantages and disadvantages identified with the re-establishment of the commitment. Mandatory PCR test prerequisites for airline passengers, even though they have been inoculated against Covid-19 in total doses (Siregar & Sihombing, 2021). He rejected the public authority's choice to require all domestic airline passengers to have a negative PCR test result. The Government has stated that it denies the option of public authorities to require domestic flight travelers to undergo PCR first, even though they have already been immunized twice. Considering, the President Director of PT Garuda Indonesia Tbk Irfan Setiাপutra admitted that until now, his party is still reviewing the need for mandatory PCR tests. Next is a series of reactions from various groups regarding the mandatory requirements for PCR tests for airplane passengers (Usman et al., 2021).

Aviation observer Alvin Lie said the new arrangements concerning mandatory PCR for aircraft travelers were biased. The reason is that the required PCR settings only apply to air transportation modes. The rules identified with mandatory PCR for

flight travelers are contained in the regulation of the government of Home Affairs concerning the Implementation of Restrictions on public movement in the Covid-19 Level 3, Level 2, and Level 1 (Mukminin, 2021). Inmendagri 53/2021 is oppressive because it requires a PCR test which has a long and expensive cycle, only for air transportation travelers. For different modes of transportation, Bus, Train, and Ship, the antigen test is sufficient. Said Alvin, the administration of air quality of lodging for transport, trains, and ships is slightly below average compared to the administration of quality of housing for aircraft. They consider that current aircraft are equipped with HEPA ducts, which are channels for airflow inside the helicopter (Aulia et al., 2020).

The distance traveled by plane is also much more limited than using transportation, trains, and ships to cover the same distance. That way, the risk of transmission while in the aircraft cabin is also lower (Hutapea, 2020). Aviation observers added that the required PCR settings stipulated in the Minister of Home Affairs 53/2021 were problematic. Since it was mentioned that many districts had experienced improvements in controlling the spread of Covid-19, many regions have dropped their level from 3 to 2 and from 2 to 1. However, the need for air transportation administration clients is increasing has been fixed. This way is like obliging all tourists to do a PCR test. They no longer feel the antigen test.

As indicated by the air terminal administration, the Head of Soekarno Hatta International Airport has started implementing rules for passengers who will come on local outings, which are expected to carry out PCR tests starting October 24, 2021 (Yanna Pebriana, 2021). Handling Task Force Covid-19 Circular Number 21 of 2021 and Circular of the Ministry of Transportation Number 85 of 2021 oblige travelers to carry out PCR. First, it is not big enough at Soekarno Hatta Airport. Considering the SE Permenhub Number 85 of 2021, the Circular has become significant as of October 24, 2021. Furthermore, while believing in it, The regulation will create results; AP II chose to incorporate a new methodology for future travelers. Starting from online media, WhatsApp social events to various transporters. This way is a fleeting season for three days; we use it to partner with travelers or everyone in earnest (Churniawan & Rozak, 2021).

According to the Covid-19 Task Force, the Representative of the Task Force for the Acceleration of Handling Covid-19 explained that the PCR test needed by air pilots is more sensitive in capturing positive cases (Aswandi & Madjid, 2020). The PCR test has turned out to be the best level of quality compared to the antigen test. The arrangements required for PCR tests also apply to non-Java-Bali Levels 3 and 4. For data, the previous Covid-19 Task Force Regulation Number 17 of 2021 was still permitted to use antigen tests for flight prerequisites (Chaniago & Suwarso, 2021). Improvements to the PCR testing strategy only (for flights) in the Java-Bali and non-Java-Bali areas at Levels 3 and 4 are carried out, considering that seat removal has not been carried out in general. Currently, the changes are at the total limit. This system is essential for developing portability for monetary recovery amid a completely controlled Covid-19 case situation. PCR has become the highest level of quality and is more sensitive than antigen in capturing positive cases (Pandie, 2020).

Hidayani, (2021) believes that the PCR test as a state of flight can prevent transmission of Corona infection. All things being equal, the operator was approached

to give three rows of seats on the plane. "It is believed (the PCR test) can fill if any transmission holes may exist. The aircraft plans three routes for detachments (travelers) if suggestive explorers are found while traveling to fly to increase efforts to prevent transmission and the status of offices and foundations to assist the implementation of welfare conventions in the field (Hennida et al., 2020).

The opinion of PKB as a political ideology group, they reject the Government Instruction of the Minister of Home Affairs Number 53 of 2021 regarding PPKM Levels 3, 2, and 1 in Java and Bali so that all travelers must go through a PCR test 2x24 hours before takeoff (Rosita & Adi, 2021). The Minister of Home Affairs is seen as an inverted stage with the ultimate goal of empowering domestic monetary recovery. We consider the commitment to PCR testing for flight travelers as stated in Permendagri 53/2021 concerning PPKM Levels 3, 2, and 1 in Java-Bali as a backward step for efforts to move towards other normalities such as the Covid-19 case. "Keep calling back in this country," he said. The House of Representatives Commission V individual from the National Awakening Party Faction rejected that instruction. They explained that the severe limitations during the Covid-19 pandemic in the previous 18 months had hit the world aviation industry, considering Hosea country.

The response from the International Air Transport Association management noted that the world aviation industry experienced a deficit of IDR 2.867 trillion over the past year and a half (Hutapea, 2020). The misfortune is synonymous with nine years of aggregate payments for the worldwide airline industry. In the country, many planes are forced to terminate their representatives because they continue to lose money. The absence of flight action hampered even efforts to rebuild Garuda's obligations during this pandemic. The callback to the Covid-19 pandemic should be energy for the recovery of the aviation business in the country (Purba, 2017). Despite large inoculations and defensive considerations, there should be no prerequisites for PCR tests for future aircraft passengers airplane travelers in this pandemic season. Indeed, we get many data if travelers have to take off their tickets because they have to wait for the consequences of the PCR test. Even though there is now the furthest cut in the cost of PCR testing for many people, it is still quite substantial. Even the cost of this PCR test can be half the cost of a boarding pass. This condition causes many potential tourists to choose different transportation methods (Gonzalez et al., 1997).

The current conditions certainly make it more difficult for the aviation business during this pandemic, considering that even though there are no prerequisites for the PCR test, the number of travelers will go down. Eem observed the development of PCR test prerequisites in the Minister of Home Affairs Regulation (Agustina & Fajrunni'mah, 2020). Because in Inmedagri, the prerequisite for prospective travelers is only as an antigen test (H-1) considering that they have received a second injection and the PCR result is negative (H-2) if they have just received the vaccine. The Major part of immunization. However, in the new Ministry of Home Affairs, this point is included. We do not need this new rule of PCR testing to be seen by the general public as a form of government arrangement with PCR test suppliers currently filling in the field. Try not to let the financial component of the problem arise in the PCR problem for the passengers on this plane (Fitriyani et al., 2021).

2. PCR test Legal status

Examination of the Implementation of the Rapid Test and PCR in the Aviation Sector Based on the Circular of the Task Force for the Acceleration of Handling Covid-19 Number 9 of 2020 in Preventing the Transmission of Covid-19 has become very confusing for transportation problems in Indonesia, especially in air or plane transportation (Novianti & Widigdo, 2020). The plane is one of the offices given by the public authority to serve the local area in air transportation with many benefits compared to other transportation (Nugroho et al., 2020). In 2019-2020 BPS recorded a decrease in travelers on both domestic and global flights. This way was due to the Covid-19 pandemic that has hit the world so that almost all ICAO states have reduced their flight recurrences, including Indonesia. As long as the Coronavirus transmission continues, several layers of deterrence or protection are needed, which can be completed and are expected to follow the climate and conditions during flight assignments (Mahadewi, 2020).

Layers of protection suggest isolating the fuse by isolating the entourage/gatherer of the plane or travelers, keeping a distance at the air terminal, using a shroud, washing hands, using a face shield while at this point prioritizing flight safety (P. B. A. A. Putra, 2021). Over time, the Government began to maintain the new general conditions. Where the environment completes activities as before but uses welfare shows. Public authorities resumed flights during the New Order era, although it was proposed only for business trips and emergency trips. During the Government's implementation of the new normal situation, the rules in the air transportation area began to be adjusted to the game plan for this new average period (Albert et al., 2021).

As mentioned from Kompas.com, Spokesperson for the Ministry of Transportation Adita Irawati said the latest standards for developing extraordinary aircraft starting November 3, 2020. Departing with the nuances of the latest travel rules by plane: And showing immunization cards for basically, travelers are expected to show confirmation Covid-19 test results are negative, either by antigen test or PCR depending on the segment of inoculation (Rashid et al., 2020). Travelers who have just received the primary vaccine are expected to show unfriendly Covid-19 test results from a PCR test modeled on the most significant season 3x24 hours before departure. For travelers who need a second piece of the immune response, they can show negative Covid-19 results from an antigen test whose model is taken within 1 x 24 hours before departure (Albert et al., 2021).

With these guidelines, the flying region has reestablished neighborhood flight ways in regards to any essential laws. This layered security is done so that the danger of transmission of Covid-19 in air transportation, for instance, low planes, should be done with the primary assumption that it should be settled through a Decree of the Minister of Health of the Republic of Indonesia (Castro et al., 2020). Priest of Transportation Regulation No. 41 of 2020, all transportation, including air transportation, planes, can keep sending newcomers by observing the essential guidelines. For air transportation such as planes, Article 14 of the Regulation of the Minister of Transportation Number 41 of 2020 coordinates the control of air transportation in inhibiting the transmission of COVID-19 by changing the work pattern of vehicles, in particular by limiting the number of explorers from the number

of seats. Limit and complete removal of seats while inside (Pollock & Lancaster, 2020). Aircraft by weakening three rows of seats on one side of the aircraft or removing the center line in each seat segment. Such as limiting the number of cruisers and eliminating situations by eliminating the three elements or center line on each row of seats, public authorities also support all sailors and all flight groups to continue to wear robes and use face shields or by using personal protective equipment to prevent the spread of contamination (Pulia et al., 2020).

Coronavirus during flights, either directly or indirectly, was essential. However, in interviews with 50 travelers, not all aircraft carry out welfare conventions (Wang et al., 2018) From the review results with 50 travelers, the planes that carry out all welfare conventions are Qatar Airways, Uzbekistan Airways, and Garuda Indonesia. Through the Task Force for the Acceleration of Handling Covid-19, which was given by SE No. 9 of 2020 in the circular letter, one of the public authorities regulates the model and prerequisites for every individual who needs to travel (Elavarasan & Pugazhendhi, 2020) In the regulation of letter F-number (2) letter b number 2, the need for movement for domestic individuals is to show PCR test authentication with adverse results or a quick test will with valid unresponsive results for 14 days at the time of takeoff. Data on rapid tests with non-receptive results were valid for three days at takeoff in the previous setting—a prerequisite for a rapid test or previous PCR assay (Raofi et al., 2021).

The quick test is an evaluating instrument for SARS-CoV-2 disease utilizing a blood test to recognize body antigens against the infection, yet it is not practical for the degree of viability of this fast test. 28 While the PCR Test is the best quality level demonstrative device strategy for building up an analysis by identifying the compound. Likewise, in light of the aftereffects of meetings with plane travelers, assessments identified with pessimistic records from the quick test or PCR test were considered less firm, so many individuals who utilize bogus negative letters, however, can, in any case, enter the air terminal and travel via plane.

Airlines suggest that these indicative tests should meet speed, Scale, and accuracy models (Gössling et al., 2020). If these symptom test prerequisites are not met, IATA recommends that countries do not require demonstrative tests, for example, rapid tests or PCR tests to be carried out. Assuming the country does not meet the prerequisites for the demonstration test, the movement requirements that must be completed are wearing a hood, maintaining proper separation, especially when in the air terminal, estimating the level of internal heat; it is wise to use a face shield. And the use of PPE for flight teams (Deshmukh & Haleem, 2020).

D. Conclusion

This final section will describe the conclusions from a series of secondary data studies in journals and other data that discuss the regulation of PCR tests for prospective airplane passengers in Indonesia. The results show that for the main problem, it tends to be reasonable that with a non-ideal level of precision, the need for a rapid test or PCR test alone is sufficient not to prevent disease transmission. COVID-19 in the realm of aeronautics. Prospective passengers and all operators and air terminals must adhere to strict health conventions, for example, maintaining

proper segregation, especially when in air terminals, estimating internal heat levels, being encouraged to wear face shields, and using PPE for flight teams.

Regarding the second issue, the reason was that the Task Force for the Acceleration of Handling Covid-19 was not the authority to make laws and guidelines; the team only agreed to direct its work area so that the clean items provided were not guidelines but health guidelines. An approach like a brochure. Pamphlets apply to the internal organization that publishes them. However, in the end, leaflets can apply to all passengers until the implementation of past guidelines and guidelines has not been directed, circular letters can be made, and as long as the circular letter is appropriate to its field and covers the entire population. This discussion summarizes essential points, including the legal status of PRC tests on prospective passengers, responses from many parties regarding the legality of government instructions, PCR tests for domestic passengers: The test rules are changing, 'the Government does not understand the purpose of proper testing. This way seems to be more of an act of profit. The changes and changes in these policies have confused the public, and the country is increasingly overwhelmed with the mandatory PCR test instructions at a price rate that tends to fluctuate.

References

- Agustina, A. S., & Fajrunni'mah, R. (2020). Perbandingan Metode RT-PCR dan Tes Rapid Antibodi untuk Deteksi COVID-19. *Jurnal Kesehatan Manarang*, 6(Khusus), 47–54.
- Albert, E., Torres, I., Bueno, F., Huntley, D., Molla, E., Fernández-Fuentes, M. Á., Martínez, M., Poujois, S., Forqué, L., & Valdivia, A. (2021). Field evaluation of a rapid antigen test (Panbio™ COVID-19 Ag Rapid Test Device) for COVID-19 diagnosis in primary healthcare centres. *Clinical Microbiology and Infection*, 27(3), 472-e7.
- Arevalo-Rodriguez, I., Buitrago-Garcia, D., Simancas-Racines, D., Zambrano-Achig, P., Del Campo, R., Ciapponi, A., Sued, O., Martinez-Garcia, L., Rutjes, A. W., & Low, N. (2020). False-negative results of initial RT-PCR assays for COVID-19: A systematic review. *PloS one*, 15(12), e0242958.
- Aswandi, R., & Madjid, Z. N. M. P. (2020). Menilik Aturan Rapid Test di Tengah Adaptasi Kebiasaan Baru (Studi Kasus Kota Makassar). *Jurnal Legislatif*, 37–58.
- Aulia, E., Farhan, F., Lisa, N., & Nurun, R. (2020). *Kekalahan Indonesia Dalam Perang Pandemi Covid-19*. online] Availableat: <https://www.academia.edu/43806583>
....
- Castro, R., Luz, P. M., Wakimoto, M. D., Veloso, V. G., Grinsztejn, B., & Perazzo, H. (2020). COVID-19: A meta-analysis of diagnostic test accuracy of commercial assays registered in Brazil. *Brazilian journal of infectious diseases*, 24, 180–187.
- Chaniago, R. H., & Suwarso, R. C. (2021). Analisis Diskursus Kebijakan Pembatasan Sosial Berskala Besar (PSBB) Selama Mewabahnya Pandemi Covid-19 Di Indonesia. *Syntax Literate; Jurnal Ilmiah Indonesia*, 6(8), 4044–4064.
- Churniawan, E., & Rozak, F. (2021). Analisis Respon Penumpang Terhadap Penerapan New Normal pada Layanan Kereta Api Jarak Jauh di Pulau Jawa. *Jurnal Perkeretaapian Indonesia (Indonesian Railway Journal)*, 5(1).

- Deshmukh, S. G., & Haleem, A. (2020). Framework for manufacturing in post-Covid-19 world order: An indian perspective. *International Journal of Global Business and Competitiveness*, 15, 49–60.
- Elavarasan, R. M., & Pugazhendhi, R. (2020). Restructured society and environment: A review on potential technological strategies to control the COVID-19 pandemic. *Science of The Total Environment*, 725, 138858.
- Fitriyani, I., Wahyuni, R. D., & Lamadjido, R. A. (2021). Laporan Kasus: Pemeriksaan Tes PCR untuk SARS-CoV-2 Tetap Positif dengan Gejala Klinis Minimal di RSUD. Undata Palu, Sulawesi Tengah. *SCRIPTA SCORE Scientific Medical Journal*, 3(1), 84–91.
- Gonzalez, I., Grant, K. A., Richardson, P. T., Park, S. F., & Collins, M. D. (1997). Specific identification of the enteropathogens *Campylobacter jejuni* and *Campylobacter coli* by using a PCR test based on the *ceuE* gene encoding a putative virulence determinant. *Journal of Clinical Microbiology*, 35(3), 759–763.
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: A rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 29(1), 1–20.
- Harahap, S. G., Lestari, P. B., Thobias, I. A., Febsi, Y., & Pratomo, H. (2021). Uji Coba Lapangan Terkait Nasehat Perjalanan (WHO) dalam Travelling selama Pandemi Covid-19. *Jurnal Health Sains*, 2(10), 1365–1375.
- Hennida, C., Saptari, N. O., Aristyaningsih, I. G. A. A. R., & Febrianto, A. S. (2020). *Respons Negara Dan Institusi Global Terhadap Covid-19*. Airlangga University Press.
- Hidayani, W. R. (2021). *Pneumonia: Epidemiologi, Faktor Risiko Pada Balita*.
- Husni Awali, M. M. (2021). Membangun Kompetensi Sumber Daya Manusia Sebagai Upaya Meningkatkan Pendapatan Ekonomi Pasca Pandemi Covid-19. *Integrasi Keilmuan Dalam Peningkatan Sdm Unggul Berkompetensi Selama Pandemi*, 41.
- Hutapea, P. W. (2020). *Perlindungan Hukum Bagi Pengguna Jasa Dan Perusahaan Maskapai Penerbangan Di Tengah Pandemi Covid-19* [PhD Thesis]. Universitas Airlangga.
- Juaningsih, I. N., Consuello, Y., Tarmidzi, A., & NurIrfan, D. (2020). Optimalisasi Kebijakan Pemerintah dalam penanganan Covid-19 terhadap Masyarakat Indonesia. *SALAM: Jurnal Sosial dan Budaya Syar-i*, 7(6), 509–518.
- Kadri, K. (2019). Polymerase chain reaction (PCR): Principle and applications. Dalam *Synthetic Biology-New Interdisciplinary Science*. IntechOpen.
- Kim, L., Leary, R., & Asbury, K. (2020). 'We need clear directions, if we're going to move forward. It's as simple as that': Teachers' narratives during partial school reopenings in the COVID-19 pandemic.
- Kusmana, C., Dwiyantri, F. G., & Malik, Z. (2020). Comparison of several methods of stands inventory prior to logging towards the yield volume of mangrove forest in Bintuni Bay, West Papua Province, Indonesia. *Biodiversitas Journal of Biological Diversity*, 21(4).
- Mahadewi, K. J. (2020). Kebijakan Pelaksanaan Ppkm Darurat Untuk Penanganan Covid-19 Dalam Tatanan Kehidupan Era Baru Di Provinsi Bali. *Jurnal Program Studi Magister Hukum*, 91, 99.

- Meyerowitz-Katz, G., & Merone, L. (2020). A systematic review and meta-analysis of published research data on COVID-19 infection-fatality rates. *International Journal of Infectious Diseases*.
- Mukminin, A. (2021). *TA: Analisis Sentimen Publik Terhadap Pelayanan Tes Swab-PCR Covid-19 di Indonesia Menggunakan Algoritma Support Vector Machine* [PhD Thesis]. Universitas Dinamika.
- Nanda, B. S. P. (2021). *Rapid Test Bagi Calon Penumpang Transportasi Umum Dalam Perspektif Hukum Kesehatan* [PhD Thesis]. Universitas 17 Agustus 1945 Surabaya.
- Novianti, R., & Widigdo, A. (2020). Persyaratan Uji Tes PCR atau Rapid Test untuk Transportasi Umum Dalam Perspektif Ketatanegaraan. *Binamulia Hukum*, 9(2), 115–126.
- Nugroho, R., Suprpto, F. A., Widiastuti, I., & Firdausy, E. F. (2020). *Evaluasi Kebijakan Respon Pandemi Covid 19*. Rumah Reformasi Kebijakan [Institute for Policy Reform].
- Nuraeny, R., Azizah, S. N., & Salam, A. N. (2021). Apakah Kebijakan Pemberlakuan Pembatasan Kegiatan Masyarakat Darurat (PPKM) Berpengaruh Terhadap Ketahanan Keluarga Pedagang Di Kebumen. *Jurnal Indonesia Sosial Teknologi*, 2(9), 1627–1639.
- Pandie, D. B. (2020). *Vaksin Ilmiah Kumpulan Esai Tentang Covid-19 dari Berbagai Perspektif Ilmu [Edisi II]*. Penerbit Lakeisha.
- Permana, T. B. (2021). *Peran Satuan Polisi Pamong Praja Dalam Penegakan Protokol Kesehatan Dan Pengendalian Covid-19 (Peraturan Bupati Kabupaten Tegal Nomor 62 Tahun 2020)* [PhD Thesis]. Universitas Pancasakti Tegal.
- Pollock, A. M., & Lancaster, J. (2020). *Asymptomatic transmission of covid-19*. British Medical Journal Publishing Group.
- Pulia, M. S., O'Brien, T. P., Hou, P. C., Schuman, A., & Sambursky, R. (2020). Multi-tiered screening and diagnosis strategy for COVID-19: A model for sustainable testing capacity in response to pandemic. *Annals of medicine*, 52(5), 207–214.
- Purba, H. (2017). Mewujudkan Keselamatan Penerbangan dengan Membangun Kesadaran Hukum Bagi Stakeholders Melalui Penerapan Safety Culture. *Jurnal Hukum Samudra Keadilan*, 12(1), 95–110.
- Putra, P. B. A. A. (2021). Sistem Pendaftaran Rapid Test Covid-19 Pada Klinik Medika Palangka Raya. *Jurnal Teknologi Informasi: Jurnal Keilmuan dan Aplikasi Bidang Teknik Informatika*, 15(1), 44–52.
- Putra, P., Liriwati, F. Y., Tahrim, T., Syafrudin, S., & Aslan, A. (2020). The Students Learning from Home Experiences during Covid-19 School Closures Policy In Indonesia. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 5(2), 30–42. <https://doi.org/10.25217/ji.v5i2.1019>
- Raofi, A., Takian, A., Haghghi, H., Rajizadeh, A., Rezaei, Z., Radmerikhi, S., Olyaeemanesh, A., & Sari, A. A. (2021). COVID-19 and Comparative Health Policy Learning; the Experience of 10 Countries. *Archives of Iranian Medicine (AIM)*, 24(3).
- Rashid, Z. Z., Othman, S. N., Samat, M. N. A., Ali, U. K., & Wong, K. K. (2020). Diagnostic performance of COVID-19 serology assays. *The Malaysian journal of pathology*, 42(1), 13–21.

- Raudatul, A. (2021). Pengaruh Wajib Rapid Test, Biaya Perjalanan Dan Keamanan Terhadap Keputusan Penumpang KM. Kelimutu (studi kasus pada KM. Kelimutu rute Semarang-Sampit). *SKRIPSI*.
- Ridlo, I. A. (2020). Pandemi Covid-19 dan tantangan kebijakan kesehatan mental di Indonesia. *INSAN Jurnal Psikologi Dan Kesehatan Mental*, 5(2), 162–171.
- Rosita, S. A. B., & Adi, A. S. (2021). Peran Bintara Pembina Desa (Babinsa) Koramil 0819/05 Dalam Satuan Gugus Tugas Percepatan Penanganan Covid-19 Di Kecamatan Grati, Kabupaten Pasuruan. *Kajian Moral dan Kewarganegaraan*, 9(2), 342–358.
- Siregar, M. Y., & Sihombing, P. (2021). The Performance Improvement and the Competitiveness of Private Universities (PTS) in North Sumatera through the Strategy of Building Institutional Competence. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 4(1), 639–653.
- Sucahya, P. K. (2020). Barriers to Covid-19 RT-PCR Testing in Indonesia: A Health Policy Perspective. *Journal of Indonesian Health Policy and Administration*, 5(2).
- SUDARMO, Nugraha, M. S., MARDHIAH, R. Iliow, F. E., & ASLAN. (2021). The Identification of Online Strategy Learning Results While Students Learn from Home During the Disruption of the COVID-19 Pandemic in Indonesia. *Journal of Contemporary Issues in Business and Government*, 27(2), 1950–1956. <https://doi.org/10.47750/cibg.2021.27.02.205>
- Usman, E. F., Chalim, K. A. S., & Wicaksono, I. A. D. (2021). *Proyeksi, Prediksi Dan Realita Dalam Perencanaan Di Era Pademi Covid-19*. Penerbit Qiara Media.
- Verdioa, S. K. A. (2021). Analisis Pengaruh Protokol Kesehatan, Sosialisasi Penumpang Dan Peran Syahbandar Terhadap Keselamatan Penumpang Kapal Pelni Cabang Semarang Di Tengah Pandemi Covid-19. *Skripsi*.
- Wahyudi, D. A. (2021). *Tinjauan fiqh siyāsah terhadap peraturan walikota Surabaya Pasca PSBB Nomor 33 Tahun 2020 tentang pedoman tatanan New Normal* [PhD Thesis]. UIN Sunan Ampel Surabaya.
- Wang, P., Wu, P., Wang, J., Chi, H.-L., & Wang, X. (2018). A critical review of the use of virtual reality in construction engineering education and training. *International journal of environmental research and public health*, 15(6), 1204.
- Yanna Pebriana, R. (2021). *Analisis Penerapan Prosedur Pelayanan New Normal Covid 19 Terhadap Penumpang Sebagai Pengguna Jasa Penerbangan Di Bandara Internasional Jendral Ahmad Yani Semarang Jawa Tengah* [PhD Thesis]. STTKD Sekolah Tinggi Teknologi Kedirgantaraan Yogyakarta.
- Yin, R., Sun, Y., Wang, K., Feng, N., Zhang, H., & Xiao, M. (2020). Development of a PCR-based lateral flow strip assay for the simple, rapid, and accurate detection of pork in meat and meat products. *Food chemistry*, 318, 126541.