

REVIEW ARTICLE

Literature Review: Analysis of the Use of Teleconsultation for Patients of *Diabetes mellitus* During the Covid-19 Pandemic in Indonesia

Putri Permatasari, Mardiaty Nadjib, Chahya Kharin Herbawani, Ulya Qoulun Karima, Arnur Oktafiyanti, Nadia Ramadhanty

Public Health Study Program, Universitas Pembangunan Nasional "Veteran" Jakarta, 12450 Jakarta, Indonesia

ABSTRACT

Following the Covid-19 pandemic's development in Indonesia, the government decided to enact social distancing laws as a means of breaking the virus's chain of transmission. Teleconsultation is one of the ways the community can conduct remote consultations to make sure that health services are available during the Covid-19 pandemic. The purpose of this study is to identify the variables that affect the usage of teleconsultation, including its implementation, advantages, and difficulties in Indonesia. Using five journal publications with vulnerable publication dates between 2017 and 2022 that were found on Google Scholar, this analysis employed the literature review approach. The study's findings indicate that during Covid-19, the number of teleconsultation users in Indonesia rose. There are a number of advantages and difficulties with its application when utilizing its services. It is envisaged that this study's findings would enable the integration of all teleconsultation services with the Social Security Agency on Health and safeguard user privacy with regard to data.

Malaysian Journal of Medicine and Health Sciences (2025) 21(SUPP3): 254-260. doi:10.47836/mjmhs.21.s3.38

Keywords: Covid-19, Teleconsultation, *Diabetes mellitus*, Benefits, Challenges

Corresponding Author:

Dr. Putri Permatasari, MKM
Email: putripermatasari@upnvj.ac.id
Tel : +6281277865705

INTRODUCTION

The Covid-19 pandemic in 2020 significantly impacted all sectors, especially the health sector. Until 2022, the number of people confirmed to have Covid-19 in Indonesia had reached 6.7 million (Official Covid-19 Handling Website, 2022). Covid-19 can be transmitted through droplets and spread quickly, making the government implement social distancing regulations to reduce the spread chain (1). The Covid-19 pandemic has also made in-person encounters between medical professionals and patients more vulnerable to the transmission of illnesses, such as Covid-19. Teleconsultation is one tactic that can be utilized to guarantee that health services are provided in the future. (2).

Based on Ministry of Health Circular Letter Number HK. 02.01/MENKES/202/2020, teleconsultation was used during the Covid-19 epidemic. (3). As per the circular, medical professionals who possess the necessary skills and authority can diagnose, treat, prevent, and evaluate

patients' health concerns using teleconsultation, including dentists, specialists, subspecialists, and dentists. (4). Physicians who use teleconsultation to perform their services are required to have a registration certificate (STR) and to be mindful of patient safety and service quality. During the Covid-19 pandemic, teleconsultation offers several advantages, such as convenient access to consultation without the need to visit a medical facility, a decreased risk of Covid-19 transmission, shorter wait times for patients, and more. (5).

The number of teleconsultation visits rose by 50% from 2019 to 2020 in the first quarter of 2020, with a 154% increase in visits, according to an analysis done by the Centers for Disease Control and Prevention (CDC). (6). The majority of users accessed the consultation service for ailments other than Covid-19 between January and March 2020. However, during the final three weeks of March 2020, the percentage of people using teleconsultation services for Covid-19 disease grew to 16.5%. (7). Based on a survey conducted with 2,108 respondents, the number of Teleconsultation Service users in 2022 has increased by 44.1%, with 33.6% of respondents using this service because of Covid-19 and another 20% of respondents using it for general diseases such as flu and ulcers (8).

The data results above indicate that as the Covid-19 epidemic spreads, teleconsultation is growing. Technological developments also drive the use of teleconsultation. Therefore, this literature review was created to look at the implementation of teleconsultation in Indonesia, including the factors that influence it and the use, benefits, and challenges felt while using teleconsultation services.

Objective

From various published research results, we understand the role and actions of health delivering in the implementation of teleconsultation services.

MATERIAL AND METHODS

This research employs a literature review methodology, utilizing data sourced from many journals accessed via the

Google Scholar database. The terms "implementation," "teleconsultation," "pandemic," "Covid-19," and "Indonesia" were used to find journal articles. Journal publications published between 2017 and 2022 that are available for download and have both qualitative and quantitative research designs, are open access, and address the application of teleconsultation during the Covid-19 pandemic in Indonesia are the inclusion criteria for this review; and journals use Indonesian or English. Exclusion criteria in this study are journals that use literature review research methods and articles with only research abstracts. This study used five journal articles that met the inclusion and exclusion criteria.

RESULTS

Table 1 presents the analytical results for the five reviewed publications in the interim.

Table 1: Results of Article Review

No	Title	Author	Purpose	Method	Result
1	Factors Influencing the Decision to Use Teleconsultation During the COVID-19 Pandemic	Yulaikah and Artanti (2022)	Knowing the factors that influence the decision to use one of the teleconsultation applications during the COVID-19 pandemic	Quantitative by distributing questionnaires online.	Two factors influence teleconsultation during the COVID-19 pandemic, including the quality of information obtained through health applications and trust between users and service providers.
2	Analysis of Factors Associated with the Intention to Use Teleconsultation Services (Teleconsultation) among Jabodetabek Residents during the Covid-19 Pandemic in 2021	Salsabila and Sari (2022)	Knowing the description and factors associated with intention-to-use of teleconsultation services during the COVID-19 pandemic among residents of Jabodetabek, ages 19–49,	Quantitative with method data analysis method PLS-SEM	Teleconsultation during the COVID-19 pandemic has various advantages and challenges in its implementation.
3	Teleconsultation as a Media Consultation Health in Pandemic Period COVID-19 in Indonesia	Sari and Wirman (2021)	Find out the patient's reason for using the application Teleconsultation during the COVID-19 pandemic.	Qualitative with a Phenomenological Approach	Factors that influence patients to use teleconsultation are concerns and fears about conducting in-person consultations.
4	Accelerating the Use of Teleconsultation for Chronic Neurological Disease Patients During the COVID-19 Pandemic in Yogyakarta, Indonesia: A Case Series Study	Pinzon, Paramitha, and Wijaya (2020)	Reviewing the use of teleconsultation for chronic neurological disease patients during the COVID-19 pandemic based on a case study at Bethesda Hospital, Yogyakarta	Quantitative with using questionnaire	The use of teleconsultation for patients with neurological disorders has been maximised during the COVID-19 pandemic.
5	A cross-sectional study on the use of teleconsultation and the glycemic status of diabetic patients during the COVID-19 pandemic	Wati, Wongsasuluk, and Soewondo (2021)	Determining the function of teleconsultation in providing services to diabetic patients during the COVID-19 pandemic	Quantitative using a questionnaire	Of the 264 diabetic patients who were respondents, only 19.2% used teleconsultation services during the COVID-19 pandemic.

Factors Affecting the Use of Teleconsultation during the Covid-19 Pandemic

The study's R square results came to 49.6% based on the findings of the coefficient of determination. It was determined that 51.4% of the variables examined had additional causes and that 49.6% of the variables had a structural relationship. Additionally, the estimated CR is compared to the standard CR at 0.05, which is 2.00, for the hypothesis test. If the level of significance (P) ≤ 0.00 and the CR count is ≥ 2.00 , then the hypothesis is significant and there is an influence between the

dependent and independent variables.

The perceived fear of the decision to use has no significant effect on the decision, as indicated by the association between the felt fear and the CR value of $0.628 < 2.00$ and the significance value of $0.531 > 0.05$. Information quality significantly influences the decision to use, as seen by the relationship between the two variables (CR value of $3.269 > 2.00$ and a significance value of $0.001 < 0.05$). Trust has a considerable impact on the decision to use, as evidenced by the association

between trust and the CR value of $3.935 > 2.00$ and a significance value of $0.000 < 0.05$.

Use of Teleconsultation during the Covid-19 Pandemic in Indonesia

The results showed that someone doing an online consultation was due to the COVID 19 pandemic which caused concern and fear to do a direct consultation and because the disease being consulted was considered the patient was not a serious illness. In Order to Motivate patients to do online health consultations is to get information and solutions to their illness, to get recommendations for drugs to be consumed or actions that must be followed up and to get peace over the anxiety they feel given the many complaints consulted referring to questions about symptoms COVID 19. The level of patient confidence in online diagnosis results shows that generally patients will trust the diagnosis for minor illnesses, however, diagnoses that lead patients to see an expert doctor tend to be ignored by patients.

The Indonesian government has implemented the Ministry of Health's Telemedicine Regulation in response to the Covid-19 pandemic. In response to this circumstance, the Indonesian Neurological Association (INA) also took action. Because of their circumstances (advanced age), risk factors (diabetes and hypertension), and treatments (immunosuppressive for multiple sclerosis or myasthenia gravis), these regulations are highly appropriate for people with neurological illnesses. In order to use telemedicine consultations, the majority of these restrictions demand electronic medical records and electronic prescriptions. According to the law, prescriptions for prohibited medications like opioids and analgesics must be written for acceptable medical reasons. During the Covid-19 epidemic, outpatient visits for neurological disorders are frequently dangerous and inefficient.

People might need to make lengthy trips to hospitals, which could take hours in places with little population. Patients frequently wait in packed waiting rooms and pharmacies after lengthy commutes. This study examines 20 situations where online consultation has already been used; Table 2 displays the demographic information. The majority of participants (70%) are men, 90% are older than 60, and 60% have had a stroke diagnosis. For their ongoing neurological consultations, almost 75% of the participants expressed satisfaction with the usage of telemedicine. Eighty percent of the participants recommended that the reimbursement services for consultations be assessed during the Covid-19 pandemic.

Benefits of Teleconsultation during the Covid-19 Pandemic

Covid-19 Access to normal medical care has been reduced by 19 preventions, particularly for people with persistent neurological diseases. This illness has

particularly encouraged the use of telemedicine in healthcare delivery. This study reviewed 20 instances from Bethesda Hospital in Yogyakarta that provided online consultation services, as well as the usage of telemedicine as spurred by many rules of the Indonesian government. Patients with neurological conditions who were asked about their opinions of consultations, pharmacy pharmaceutical services, and proposals for the new system in outpatient consultations were asked about their experiences with telemedicine.

The hazards associated with comorbidities and therapies for these individuals make the restrictions around the use of telemedicine pertinent. Out of the 20 participants in the research, 15 (75%) expressed satisfaction with the service, 3 (15%) expressed extreme satisfaction, and 2 (10%) expressed neutrality. The majority of respondents (80%) recommend improving reimbursement, whereas 10% and 10% of respondents advocate improving services and drugs. The pandemic has increased system and hospital needs for telemedicine services for neurological illnesses. Patients with comorbidities and therapies that put them at high risk of Covid-19 mortality can receive the necessary healthcare through telemedicine. To improve the telemedicine experience, it is necessary to improve payment regulations, regulatory structures, state licensure, and credentialing across hospitals.

During the Covid-19 epidemic, outpatient visits for neurological disorders are frequently dangerous and inefficient. People might need to make lengthy trips to hospitals, which could take hours in places with little population. Patients frequently wait in packed waiting rooms and pharmacies after lengthy commutes. The majority of participants (70%) are men, 90% are older than 60, and 60% have had a stroke diagnosis. For their ongoing neurological consultations, almost 75% of the participants expressed satisfaction with the usage of telemedicine. Eighty percent of the participants recommended that the reimbursement services for consultations be assessed during the Covid-19 pandemic.

Challenges in Using Teleconsultation

The degree to which an individual believes that friends, family, coworkers, or medical professionals endorse or support his belief in utilizing teleconsultation has been demonstrated to have a relationship with his intention to utilize teleconsultation services during the Covid-19 epidemic. This phenomenon is known as social influence. It is known that 81% of research participants got knowledge about teleconsultation services from social media.

It has been demonstrated that a person's inclination to use teleconsultation services during the Covid-19 pandemic is correlated with their level of trust in a provider, which can enhance their efficacy in controlling their health. Accuracy, timeliness, understandability, and usefulness

are other key factors. It has been demonstrated that people's inclination to utilize teleconsultation services during the Covid-19 epidemic is correlated with their level of trust in the internet or in the safe and private teleconsultation they use.

Furthermore, it was discovered that a number of factors were connected to intermediary variables rather than intention-to-use directly. This study discovered that while a person's intention to use telemedicine was not directly correlated with his perception of his own health condition (perceived need), it was significantly correlated with his trust—that is, his trust in doctors and the information they provided—which would increase his willingness to use telemedicine.

DISCUSSION

Factors Affecting the Use of Teleconsultation during the Covid-19 Pandemic

Services for teleconsultation have emerged as a breakthrough for patients seeking consultations without physically visiting the hospital (9). In-person gatherings are now particularly susceptible to the fast and hazardous transmission of the virus due to the Covid-19 pandemic. Fewer persons choose to use teleconsultation services as a means of preventing Covid-19 (10). The literature review indicates that a number of factors, including users' fear of the virus spreading and their decision to consult using technology through teleconsultation services, the system's quality, the information and services they receive, and their sense of trust in service providers, all influence the use of teleconsultation during the Covid-19 pandemic (11).

The same findings are shown in a study done on individuals in the Jabodetabek (Jakarta, Bogor, Depok, Tangerang, dan Bekasi) in Indonesia region between the ages of 19 and 49, which found that the usage of teleconsultation services is motivated by a sense of trust that the services are secure and won't jeopardize user privacy (11). Furthermore, as per additional research, one of the factors taken into account while utilizing teleconsultation services is the degree of perceived complaints. Teleconsultation is an option because it is assumed that the complaints that are received are typically not serious (12). The availability of several choices for medical consultations is the second aspect, which facilitates user interaction and allows users to ask more in-depth inquiries about diagnoses and complaints of doctors (13). The availability of suggested medications that are safe to take without a prescription is the final factor influencing teleconsultation during the Covid-19 pandemic (14).

The use of teleconsultation during the Covid-19 pandemic is influenced by a number of factors, including

trust in the teleconsultation system, availability of multiple options, ease of interacting with doctors, and complaints that are not too severe, according to some of the results of the article review mentioned above. These elements demonstrate that one aspect of health services that the community may be able to use to obtain some services, like consultation, is teleconsultation.

Use of Teleconsultation during the Covid-19 Pandemic in Indonesia

When social distance laws are put into place to break the chain of Covid-19 dissemination, teleconsultation provides a way for health care providers to go on offering their services during the pandemic (15). Through the use of technology, teleconsultation enables patients to get consultation services from hospitals and primary care physicians remotely (16). During the Covid-19 pandemic, teleconsultation has become more common in Indonesia. The variety of digital platforms providing teleconsultation services is growing. The public currently uses a number of teleconsultation platforms in Indonesia, including Halodoc, Alodokter, KlikDokter, ProSehat, SehatQ, and others (17).

Based on the research results conducted on Jabodetabek residents aged 19 to 49 years, 36% of them have never used teleconsultation services from January 2021–January 2022. Then, 64% of the research subjects have used teleconsultation services at varying frequencies (18). More than half, or 52.8%, of Teleconsultation users used the service 1-2 times. Then, 25.4% used the teleconsultation service 2-4 times, and 21.8% used it more than four times (19). Teleconsultation service users mostly use the Halodoc and Alodokter platforms, Getwell, and others (20).

Additionally, it was discovered that each responder, on average, utilized the teleconsultation site at least five to six times to consult on their own or their family's health issues based on the findings of additional research and in-depth interviews with six respondents. Alodokter and Halodoc were the two of the six respondents who used teleconsultation platforms the most (Sari and Wirman, 2021). Patients with serious illnesses, including those with neurological disorders and diabetes, were also shown to use teleconsultation in another study (21).

Given that the Covid-19 epidemic is mostly affecting elderly individuals, teleconsultation for patients with neurological problems is thought to be highly pertinent. Patients with neurological diseases also need immunosuppressive medication since they have risk factors like diabetes and hypertension. In the event that the patient contracts Covid-19, these circumstances pose a serious risk to their health (22). According to studies done on patients with neurological illnesses, 75% of patients expressed satisfaction with the teleconsultation

services they received in relation to their disorders (23).

Patients with type 2 *Diabetes mellitus* who use teleconsultation were the subject of another investigation. During the Covid-19 pandemic, 19.7% of the 264 type 2 *Diabetes mellitus* patients who participated in the research used teleconsultation. Diabetes patients are still advised by doctors to see a hospital directly for control or consultation. One useful method of providing health services is through teleconsultation (24).

Based on the many research findings presented above, the majority of Indonesians have utilized teleconsultation services. Users of teleconsultation services Patients with severe illnesses, such as those with neurological problems and *Diabetes mellitus*, can also use teleconsultation services as a medium for consultation. These services are not simply for users with mild complaints or for simple consultation. The community has a variety of options for accessing health care because to the existence of multiple platforms that offer teleconsultation services.

Benefits of Teleconsultation during the Covid-19 Pandemic

Teleconsultation first appeared as a way to help with medical needs in remote or hard-to-reach places. Pandemics and epidemics have prompted the development of tactics that make use of digital technology to maintain the proper operation of healthcare systems throughout time. Teleconsultation, which makes use of technology, offers both service providers and users a number of advantages (25). Using teleconsultation services during the Covid-19 pandemic has a number of advantages, including reducing costs and time, facilitating easier access to healthcare institutions wherever and whenever needed, and assisting in the prevention of the coronavirus (26).

The benefits of teleconsultation are also felt by patients with severe diseases, such as those with neurological disorders and diabetic patients. Teleconsultation is considered to make it easier for patients with neurological disorders to consult and control with doctors, considering that most patients with neurological disorders are geriatric patients and have comorbidities, so they are more susceptible to Covid-19 infection. In addition, teleconsultation services can also prevent crowds and save patients time at the hospital (27). Not only that, diabetic patients who use teleconsultation services also experience several benefits, including improving self-care and facilitating disease monitoring (28).

From the research results above, it can be concluded that teleconsultation has various benefits for users and service providers, namely doctors. Some of these benefits

include preventing the spread of Covid-19 in hospitals, facilitating access to health services, and saving costs and time (29). In addition, teleconsultation also helps geriatric and comorbid patients continue to get health services even though their conditions are vulnerable (30).

Challenges in Using Teleconsultation

Although teleconsultation has various advantages and benefits for both users and service providers, it must be considered that teleconsultation also has several challenges in its implementation (31). The technical features of teleconsultation, data confidentiality, payment methods, diagnosis accuracy, and other issues are some of the identified hurdles (32). Based on the findings of a study done on respondents in the Jabodetabek area who were between the ages of 19 and 49, some of the respondents believed that teleconsultation services were not very helpful due to issues with internet connection, diagnostic discrepancies, difficulty exchanging information and interacting with doctors online, and the prescription of frequently unnecessary drugs (33).

In addition, challenges in teleconsultation are also felt by patients with neurological disorders. In patients with neurological disorders, the challenges are in the neurological examination activities, which include eye, neuromuscular, and vestibular system examinations (34). These examinations are tricky to do remotely, so patients still have to go to the hospital. Another challenge in using teleconsultation is related to the reimbursement system. Teleconsultation is more accessible for private patients and very limited for patients who use state insurance, such as BPJS (35).

Diabetic patients also feel the same challenges. Diabetic patients face several obstacles when using teleconsultation: patients preferring to see medical facilities in person; there is no assurance that insurance will cover teleconsultation services; and concerns about patient privacy and diagnosis accuracy (36). In partnership with the Social Security Agency on Health, eight first-level health facilities (FKTP) and ten advanced referral health facilities (FKRTL) in Indonesia have participated in teleconsultation service trials (37). Teleconsultation is now available to the public thanks to integration between Social Security Agency on Health and certain primary healthcare facilities.

CONCLUSION

The number of people using teleconsultation during the Covid-19 pandemic is rising. Some people use teleconsultation because it's convenient for getting health care. Reducing the Covid-19 chain of transmission within healthcare facilities is another benefit of teleconsultation. Teleconsultation has a number of

advantages as well as difficulties in its application.

The government must link the Teleconsultation service with Social Security Agency on Health in order to maximize its utilization during the Covid-19 epidemic. This will facilitate patients who utilize Social Security Agency on Health in accessing this service. Additionally, by bolstering the security system, teleconsultation service provider platforms should be mindful of patient data privacy.

REFERENCES

- BPJS Kesehatan (2022). *BPJS Kesehatan*. [online] Bpjs-kesehatan.go.id. Available at: <https://www.bpjs-kesehatan.go.id/bpjs/post/read/2022/2370/Layanan-Telekonsultasi-Tuai-Respon-Positif-dari-Peserta-JKN-dan-Fasilitas-Kesehatan> [Accessed 27 Dec. 2022].
- Colbert, G. B., Venegas-Vera, A. V., & Lerma, E. V. (2020). Utility of Telekonsultasi in the Covid-19 era. *Reviews in cardiovascular medicine*, 21(4), 583–587. <https://doi.org/10.31083/j.rcm.2020.04.188>
- Desy Setyowati (2022). Number of New Users of Teleconsultation Services Reaches 44% in 6 Months. [online] *Katadata.co.id*. Available at: <https://katadata.co.id/desysetyowati/digital/624e9b8b96669/jumlah-pengguna-baru-layanan-Telekonsultasi-capai-44-dalam-6-bulan> [Accessed 27 Dec. 2022].
- Koonin, L. M., Hoots, B., Tsang, C. A., Leroy, Z., Farris, K., Jolly, T., Antall, P., McCabe, B., Zelis, C. B. R., Tong, I., & Harris, A. M. (2020). Trends in the Use of Telehealth During the Emergence of the Covid-19 Pandemic - United States, (2020). *Morbidity and mortality weekly report*, 69(43), 1595–1599. <https://doi.org/10.15585/mmwr.mm6943a3>
- Salsabila, I.M. and Sari, K. (2022). Analysis of Factors Related to Intention-to-use Teleconsultation Services In Jabodetabek Residents During The Covid-19 Pandemic
- Journal of Indonesian Health Policy and Administration*, [online] 7(3), p.262. doi:10.7454/ihpa.v7i3.6090.
- Sari, G.G. and Wirman, W. (2021). Teleconsultation as a Health Consultation Media during the Pandemic COVID 19 in Indonesia. *Communication Journal*, [online] 15(1), pp.43–54. doi:10.21107/ilkom.v15i1.10181.
- Circular Letter of the Minister of Health of the Republic of Indonesia HK.02.02/MENKES/303/2020 of 2020. Implementation of Health Services Through the Use of Information and Communication Technology in the Context of Preventing the Spread Corona Virus Disease 2019 (Covid-19)
- Wati, N. S., Wongsasuluk, P. and Soewondo, P. (2021) "A cross-sectional study on the Teleconsultation usage and glycemic status of diabetic patients during the Covid-19 pandemic", *Medical Journal of Indonesia*, 30(3), pp. 215-20. doi: 10.13181/mji.oa.215558.
- Covid-19 Controlling Official Website (2022). Peta Sebaran | Covid19.go.id. [online] covid19.go.id. Available at: <https://covid19.go.id/peta-sebaran> [Accessed 27 Dec. 2022].
- Wijaya, V.O., Paramitha, D. and Pinzon, R. (2020). Acceleration of Telekonsultasi Use for Chronic Neurological Disease Patients during Covid-19 Pandemic in Yogyakarta, Indonesia: A Case Series Study. *Kesmas: National Public Health Journal*, [online] 15(2). doi:10.21109/kesmas.v15i2.3929.
- Yulaikah, N. and Artanti, Y. (2022). Factors Influencing Decisions to Use Teleconsultation during the Pandemic Covid-19. *Business Innovation and Entrepreneurship Journal*, [online] 4(1), pp.1–11. doi:10.35899/biej.v4i1.351.
- Forrest CB, Shi L, Von Schrader S, & Judy. Managed Care, Primary Care, and the Patient- practitioner Relationship, *Journal of General Internal Medicine*. 2016a;17(1): 270–7.
- Goroll AH, Berenson RA, Schoenbaum SC, Gardner LB. Fundamental Reform of Payment for Adult Primary Care Comprehensive Payment for Comprehensive Care, *Journal of General Internal Medicine*. 2017;22(3): 410–15.
- Hendartini J. Doctor Performance Model with Capitation Payments in Health Insurance Programs. Dissertation, Universitas Gadjah Mada, Yogyakarta. 2020.
- Infante FA, Proudfoot JG, Davies GP, Bubner TK, Holton CH, Beilby JJ, & Harris MF. How People With Chronic Illness View Their Care in General Practice: A Qualitative Study. *Medical Journal of Australia*. 2018;181(2) July: 70–73.
- Ministry of Health. (2020). Surat Edaran Menteri Kesehatan Republik Indonesia Nomor Hk.02.01/Menkes/303/2020 Tahun 2020 Tentang Penyelenggaraan Pelayanan Kesehatan Melalui Pemanfaatan Teknologi Informasi Dan Komunikasi Dalam Rangka Pencegahan Penyebaran Corona Virus Disease 2019
- Kementerian Kesehatan. (2020). Coronavirus Prevention and Control Guidelines Coronavirus Disease (COVID 19)_Revisi 5.
- Lafata JE, Martin S, Morlock R, Divine G Xi. H. Provider Type and The Receipt of General And Diabetes-Related Preventive Health Services Among Patients With Diabetes. *Medical Care*. 2021;39: 491–9.
- MarkPlus. (2020). MarkPlus Industry Roundtable 20 _ Health Services. Smith, Anthony C. (2020). Telehealth for global emergencies: Implications for coronavirus disease 2019 (Covid-19). *Journal of Telemedicine and Telecare*, 26(5) 309–. <https://doi.org/10.1177/1357633X20916567>
- Paramaputri P. Evaluation of the Role of General

- Practitioners as Gatekeepers in the Referral System in the Outpatient Unit of Pertamina Jaya Hospital and Pertamedika Medical Center, Thesis, Fakultas Kedokteran Universitas Gadjah Mada, Yogyakarta. 2018.
22. Susiyanti W dan Kasim F. Evaluation of Pertamina Retired Patient Referrals with Coronary Heart Disease, Hypertension and *Diabetes mellitus* at Pertamedika Medical Center, Tesis, Magister Manajemen Rumah Sakit, Fakultas Kedokteran Universitas Gadjah Mada. *Journal of General Internal Medicine*. 2020;14(1) January: 13-20.
23. Van Meter, Donald S., & Van Horn, Carl E. (1975). The Policy Implementation Process: A Conceptual Framework. *Administration & Society*, 6(4), 445-488. <https://doi.org/10.1177/009539977500600404>
24. WHO. (2020). Covid-19-significantly-impacts-health-services-for-noncommunicable-diseases.
25. Aashima. (2021). A Review of Patient Satisfaction and Experience with Telemedicine: A Virtual Solution During and Beyond Covid-19 Pandemic. *Telemedicine and E- Health*. <https://doi.org/10.1089/tmj.2020.0570>
26. ACOG committee. (2020). Implementing Telehealth in Practice. *ACOG Committee Opinion No. 798. Obstet Gynecol* 2020;135:E73-E79., 135 No 2 F.
27. Ashwin, Ramaswamy. (2020). Patient Satisfaction With Telemedicine During the Covid-19 Pandemic: Retrospective Cohort Study. *Journal of Medical Internet Research*. <https://doi.org/10.2196/20786>
28. Berendsen A, Benneker WHGM, Sculing J, Koorn NJ, Slaets JPJ, & Jong BM. Collaboration with general Practitioners: Preferences of Medical specialist-a qualitative study. *BMC Health Services Research*. 2016;6 (December):155.
29. BPJS Kesehatan. *BPJS Health Director of Health Service Guarantee Circular Number 16 of 2020 Concerning Health Service Policy in First Level Health Facilities During the Prevention Period in Corona Virus Disease 2019.* , (2020).
30. Brook, Calton. (2020). Telemedicine in the Time of Coronavirus. *Journal of Pain and Symptom Management*, 60 No1. <https://doi.org/10.1016/j.jpainsymman.2020.03.019>
31. Forrest CB, Shi L, Von Schrader S, & Judy. Managed Care, Primary Care, and the Patient- practitioner Relationship, *Journal of General Internal Medicine*. 2016a;17(1): 270-7.
32. Nazareth, S., N. Kontorinis, N. Muwanwella, A. Hamilton, N. Leembruggen, and W. Cheng. "Successful Treatment of Patients with Hepatitis C in Rural and Remote Western Australia via Telehealth." *Journal of Telemedicine and Telecare* 19, no. 2 (2020): 101-106.
33. Thaker, D., R. Monypenny, I. Olver, and S. Sabesan. "Cost Savings from a Telemedicine Model of Care in Northern Queensland, Australia." *The Medical Journal of Australia* 199, no. 6 (2020): 414-417.
34. Wade, V. A., J. Karnon, E. G. Elshaug, and J. E. Hiller. "A Systematic Review of Economic Analysis of Telehealth Services Using Real Time Video Communication." *BioMed Central Health Services Research* 10 (2020): 233.
35. Whittaker, F., and V. Wade. "The Costs and Benefits of Technology-Enabled Home-Based Cardiac Rehabilitation Measured in a Randomized Controlled Trial." *Journal of Telemedicine and Telecare* 20, no. 7 (2019): 419-422.
36. Wootton, R., K. Bahaadingbeigy, and Haily D. "Estimating Travel Reduction Associated with the Use of Telemedicine by Patients and Healthcare Professionals; Proposal for Quantitative Synthesis in a Systematic Review." *BioMed Central Health Services Research* 11 (2021): 185.
37. Loh, Victor. "Amid Debate about Telemedicine, 4 More Providers Join MOH Regulatory Initiative." Available at : <https://www.todayonline.com/singapore/amiddebate-about-telemedicine-4-more-providers-join-moh-sandbox>