Kesmas

Volume 20
Issue 5 *Special Issue 1, July*

Article 9

7-31-2025

Health Economics Perspective on Indonesian Telemedicine Platform Practices: A Qualitative Study

Yossico Ria Wibowo
Telkom University, Bandung, yossicoria@gmail.com

Rina Djunita Pasaribu
Telkom University, Bandung, rinadjunita@telkomuniversity.ac.id

Recommended Citation

Wibowo YR , Pasaribu RD . Health Economics Perspective on Indonesian Telemedicine Platform Practices: A Qualitative Study. *Kesmas*. 2025; 20(5): 73-82
DOI: 10.7454/kesmas.v20isp1.1892
Available at: https://scholarhub.ui.ac.id/kesmas/vol20/iss5/9

Wibowo *et al. Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*. 2024; 20 (Special Issue 1): 73-82
DOI: 10.7454/kesmas.v20isp1.1892

Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)

Health Economics Perspective on Indonesian Telemedicine Platform Practices: A Qualitative Study

Yossico Ria Wibowo*, Rina Djunita Pasaribu

Master of Management Study Program, Faculty of Economics and Business, Telkom University, Bandung, Indonesia

Abstract

Telemedicine in Indonesia has experienced significant growth since its introduction in 2014. The financing system is regulated independently by each platform, leading to disparities in teleconsultation fees and medical incentives. This qualitative study, which involved a literature review and interviews with 33 participants, offered a health economics perspective on the implementation of telemedicine. The recommended teleconsultation fee ranges from USD 0.05 to USD 2.54, with medical incentives set at USD 1,59-3.18 for general practitioners and USD 4.77-6.36 for specialists, using telephone or video calls as the preferred means of teleconsultation. Although most patients and Indonesian Medical Association administrators generally agreed with these recommendations, platform managers expressed reservations, particularly regarding the fees for specialists. Video calls were widely accepted as the preferred medium for teleconsultations. This study concludes that the maximum recommended teleconsultation fee is USD 2.54, with minimum medical incentives of USD 1.59 for general practitioners and USD 4.77 for specialists, and that the teleconsultation medium for making a diagnosis on the telemedicine platform is chat, with a mandatory feature allowing optional use of video calls, which can be used according to the mutual agreement and adjustment of teleconsultation fees.

Keywords: health economics, medical incentives, teleconsultation fee, telemedicine

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has altered the habits of Indonesian patients, shifting from in-person visits to telemedicine consultations.[1] Centers for Disease Control and Prevention (CDC) analysis in January, as of March 2020, stated that the number of telemedicine visits in the United States increased by 50% compared to 2019.[2] Meanwhile, in Indonesia, telemedicine use increased by 44.1% in 2022 compared to 2021.[3]

The implementation of telemedicine in Indonesia refers to the Minister of Health Regulation Number 20 of 2019.[4] This regulation does not regulate patient consultation fees, medical incentives for doctors, or teleconsultation media on private telemedicine platforms.[4] This has led to significant disparity in teleconsultation costs and medical incentives. General practitioner (GP) teleconsultation fees range from USD 0.5 to USD 4.45, while those for specialists range from USD 1.59 to USD 22.24. The amount of health incentives received by doctors is 70%–80% of the teleconsultation fee, depending on the platform.[5]

This study compared teleconsultation costs and medical incentives in Indonesia, based on gross domestic product (GDP) per capita, as well as teleconsultation media, with global benchmarks from high-income countries, including the United States, Australia, Belgium, Denmark, France, Germany, China, the Netherlands, and Singapore.[6-8] High-income countries serve as the benchmark because Indonesia is classified as an upper-middle-income country by the World Bank.[9]

This economic evaluation of telemedicine is crucial for understanding its potential cost savings, improved patient outcomes, and overall impact on the healthcare system.[10] A previous study has primarily been conducted in developed countries, focusing on the amount of patient fees and medical incentives.[11] This study aimed to elaborate on the perceptions of telemedicine users and healthcare providers regarding the amount of patient fees and medical incentives relative to GDP per capita and the use of telemedicine modalities that fit the Indonesian culture. This information is critical

***Correspondence**:* *Yossico Rio Wibowo, Master of Management Study Program, Faculty of Economics and Business, Telkom University, Bandung, Indonesia. E-mail: yossicoriawibowo@student.telkomuniversity.ac.id or yossicoria@gmail.com*

Received : May 8, 2024
Accepted : April 28, 2025
Published: July 31, 2025

for policymakers, healthcare providers, and insurance companies to make informed decisions on the implementation and funding of telemedicine services.

Method

This study employed a qualitative approach, incorporating a literature review and in-depth interviews. The preliminary literature review aimed to provide recommendations for the appropriate teleconsultation fee, medical incentives, and types of teleconsultation media. In addition, in-depth interviews were conducted to determine whether or not participants agreed with the teleconsultation fees, medical incentives, and teleconsultation media recommended based on the results of the previous literature review, and the reasons behind their answers.

The First Stage: Literature Study and Gross Domestic Product Standardization

The determination of teleconsultation costs in Indonesia was conducted by comparing the ratio of teleconsultation costs to GDP per capita with high-income countries, such as Australia, China, and Singapore (Table 1).[12-14] These countries were chosen as comparators because patients, similar to the system in Indonesia, fully bore the costs of teleconsultation. Based on this standardization, the ideal ratio of teleconsultation costs in Indonesia compared to GDP per capita was 1:100,000–50:100,000. Indonesia's GDP per capita in 2023 was USD 4,919.7.[9] Assuming this ratio was converted to USD, and the ideal teleconsultation fee was USD 0.05 - USD 2.54 per session.

Table 1. Teleconsultation Fees Abroad, Gross Domestic Product per Capita, and Comparison of Gross Domestic Product per Capita with Teleconsultation Fees

Country	Author (year)	Teleconsultation Fees	GDP per capita (USD) (World Bank, 2023)	Comparison of teleconsultation fees with GDP per capita (standardized per 100,000 GDP per capita)
Australia[12]	Snoswell *et al.* (2022)	USD0.68–USD27.26 per session	63,487	1:100,000–43:100,000
China[13]	Xie *et al.* (2022)	USD25 per session	50,030	50:100,000
Singapore[14]	Chua *et al.* (2022)	USD20–USD40 per session	84,500.4	24:100,000–47:100,000

1 USD = IDR 15,734 (currency per February 11, 2024)
The formula for c, comparison of GDP per capita with teleconsultation fees = teleconsultation fees × 100,000 : GDP per capita.

Medical incentives in Indonesia are formulated by comparing the ratio of medical incentives for GPs and specialists to GDP per capita with high-income countries, such as the Netherlands, Denmark, France, and Belgium (Table 2).[15-16] Based on this standardization, the ideal ratio of GPs' medical incentives in Indonesia to GDP per capita is 6:100,000–60:100,000, considering that Indonesia's GDP per capita in 2023 was USD 4,919.7. The ideal ratio of specialist medical incentives in Indonesia to GDP per capita is 27:100,000–621:100,000. Indonesia's GDP per capita is USD 4,919.7.[9] If this ratio is converted to USD (1 USD = IDR 15,734 based on currency per February 11, 2024), the ideal GPs medical incentive for teleconsultation services is USD 0.35-3.05 per session, and the ideal specialist's medical incentive for teleconsultation services is USD 1.39-31.65 per session. This figure reflects the Circular Letter from the Indonesian Medical Association in 2013 regarding the reference rates for doctors' medical services, which stated that medical incentives for face-to-face GPs were USD 1.59–3.18, and for face-to-face specialists were USD 4.77–6.36.[17] Thus, the recommended medical incentives for GPs are USD 1.59–3.18. and for specialists are USD 4.77–6.36.

Table 2. Amount of Medical Incentives in Various Countries

Country	Medical Incentives (USD)	GDP per capita (USD) (World Bank, 2023)	Comparison of medical services provided by teleconsultation doctors with GDP per capita (standardized per 100,000 GDP per capita)
Denmark[15]	GPs: USD4.26-USD24.7 Specialist: USD19.18-USD443.55	71,402	GPs: 6:100,000-35:100,000 Specialist: 27:100,000-621:100,000
France[15]	GPs: 27.64	46,315	60:100,000
Netherlands[15]	GPs: USD5.81-USD23.25	61,769.7	9:100,000-38:100,000
Belgium[16]	GPs: USD29.6 Specialist: USD29-USD68.65	53,567	GPs: 55:100,000 Specialist: 54:100,000-128:100,000

1 USD = IDR15,734 (currency per February 11, 2024)
The formula for comparison of GDP per capita with medical incentives = medical incentives x 100,000: GDP per capita.

The Second Stage: In-depth Interviews

This study employed purposive sampling, with 33 respondents divided into four groups: telemedicine patients (n = 15), telemedicine doctors (n = 11), platform managers (n = 3), and administrators from the Indonesian Medical Association (n = 4). The inclusion criteria for this study were doctors who had provided teleconsultation services for at least 1 year, patients who had used teleconsultation services for at least 2 years, individuals currently managing telemedicine, and individuals currently serving as administrators of the Indonesian Medical Association. Participants were recruited until the responses reached saturation, indicating that no new information was obtained.

Interviews were conducted online via video conference between April and May 2024 and lasted 30–45 minutes. Patients were asked questions regarding teleconsultation fees and the use of teleconsultation media. Doctors received questions about medical incentives and teleconsultation media. Telemedicine platform managers and administrators of the Indonesian Medical Association received questions regarding teleconsultation fees, medical incentives, and the use of teleconsultation media.

Participants were invited via short messages. Interviews were conducted after the researcher obtained participant consent via short messages. The aim of this research, the purpose of the interview, the guarantee of data confidentiality, and the rights and obligations of the participant were orally conveyed before the interview took place. Participants' identities were kept confidential. This in-depth interview utilized an interview guide (as outlined in the supplementary file "Interview Question Guide"), which could be tailored to the specific interview conditions. The interviews were recorded and then transcribed verbatim. The interview transcripts were securely stored on a computer and could only be accessed by the authors. Only the obtained information was used for publication. The authors used Miles and Huberman's qualitative research analysis, which comprises three main stages: data reduction, data presentation, and conclusions. Participants received compensation in the form of internet quotas.

Results

Participant Characteristics

This study examined teleconsultation fees, medical incentives, and the use of teleconsultation media. Patients shared their views on fees and media, while doctors expressed their opinions on incentives and media. Platform managers and the administrators of the Indonesian Medical Association addressed all three variables. The demographic data are summarized in Table 3.

Table 3. Participant Characteristics

Characteristics	Participants (n=33)
Age (years), mean (SE; range)	33 (6.2; 24–47)
Sex, n%	
Female	9 (27%)
Male	24 (73%)
Domicile, n%	
Bali	1 (3%)
Bekasi	1 (3%)
Depok	1 (3%)
Jakarta	21 (64%)
Balikpapan	1 (3%)
Palembang	1 (3%)
Surabaya	4 (12%)
Tangerang	3 (9%)
Category	
Doctor	11 (33%)
Patient	15 (46%)
The telemedicine platform manager	3 (9%)
The administrators of the Indonesian Medical Association	4 (12%)

Table 4. Participant Details

Participant	Characteristics		
	Age (years)	Sex	Domicile
Doctor 1	33	Female	Bali
Doctor 2	34	Male	Palembang
Doctor 3	34	Male	Tangerang
Doctor 4	34	Male	Tangerang
Doctor 5	31	Male	Jakarta
Doctor 6	33	Male	Jakarta
Doctor 7	33	Male	Jakarta
Doctor 8	33	Male	Jakarta
Doctor 9	31	Male	Jakarta
Doctor 10	34	Male	Surabaya
Doctor 11	33	Female	Jakarta
Patient 1	33	Male	Depok
Patient 2	40	Female	Surabaya
Patient 3	47	Male	Surabaya
Patient 4	45	Female	Surabaya
Patient 5	33	Male	Balikpapan
Patient 6	33	Female	Tangerang
Patient 7	32	Female	Jakarta
Patient 8	32	Male	Jakarta
Patient 9	28	Male	Jakarta
Patient 10	33	Male	Bekasi
Patient 11	47	Male	Jakarta
Patient 12	33	Male	Jakarta
Patient 13	29	Male	Jakarta
Patient 14	34	Male	Jakarta
Patient 15	28	Female	Jakarta
Platform manager 1	40	Male	Jakarta
Platform manager 2	35	Female	Jakarta
Platform manager 3	33	Male	Jakarta
The administrators of the Indonesian Medical Association 1	49	Male	Jakarta
The administrators of the Indonesian Medical Association 2	45	Male	Jakarta
The administrators of the Indonesian Medical Association 3	44	Female	Jakarta
The administrators of the Indonesian Medical Association 4	35	Male	Jakarta

Teleconsultation Fee

Based on the previous literature review, the recommended teleconsultation fee is USD 0.05–2.54. All patients (100%) agreed, finding it affordable, but also considered the impact on doctors' medical incentives.

"Agree, [if the fee is] below USD 1.27, then it will be too cheap because it corresponds with the appreciation of the knowledge obtained by the doctor who gives the service with a big effort. However, let the telemedicine doctor decide whether they are willing to be paid at that price and give the best to the patients." (Patient 1)

Platform managers agreed that the recommended fees were in line with current rates for GPs but deemed them too low for specialists. Their fees are based on market surveys showing that Indonesians are willing to pay USD 0.95 for GPs and USD 2.86 for specialists.

"Yes [I agree] the price is still plausible for general practitioners, but for specialists, it is still underpriced. We conducted a market survey and found that patients are willing to pay around USD 2.86 for specialists and USD 0.95 for general practitioners. Therefore, we decided to apply one price in our platform, USD 0.95 for general practitioners and USD 2.86 for specialists." (Platform Manager 2)

"I concur with the fee for the public. Standard teleconsultation fee in our platform is USD 0.95 for a general practitioner and USD 3.18 for a specialist." (Platform Manager 3)

All administrators of the Indonesian Medical Association (100%) agreed that the recommended fees are accessible to all, but emphasized the need for a remuneration system that reflects the doctors' competence.

"Agree, it is very cheap so that it can cover all groups, but you need to think about how to calculate the doctor's remuneration. If the teleconsultation costs are that amount, the doctor cannot be paid that low." (The administrators of the Indonesian Medical Association 3)

"Agree. so far, there have been no clear regulations from the government regarding teleconsultation in Indonesia, so in reality, the market is free to determine prices; it is necessary to think about appropriate prices for the doctors and the patients so that they are mutually beneficial." (The administrators of the Indonesian Medical Association 4)

Medical Incentive

Based on the previous literature review, the recommended medical incentive is USD 1.59-3.18 for GPs and USD 4.77-6.36 for specialists. All doctors (100%) agreed. They view teleconsultations as equivalent to face-to-face consultations in terms of professionalism and effort, and expect incentives equivalent to those in face-to-face practice.

"I agree, in my opinion, the medical incentives should just be the same [with regular visit], still, because doctors serve patients according to each patient's complaints." (Doctor 1)

"Agree, because even though doctors are online, they also have to be on standby during online working hours; it is the same as working in a hospital or clinic." (Doctor 2)

"I agree because our professionalism as doctors is no different when we meet patients in the clinic and in telemedicine. Patients who come are treated according to their complaints. The medicine cannot be the same [for all patients]. If there are patients who are allergic to medicine A, the medicine must be adjusted for the patient." (Doctor 3)

All telemedicine platform managers (100%) disagreed with the medical incentive recommendations due to misalignment with their business models. Platform 1 treats GPs as employees with fixed incomes and specialists as partners with incentives and commissions, while platforms 2 and 3 consider all doctors as external partners. paid through commissions.

"I disagree with the recommendation; it cannot be implemented on our platform. General practitioners who provide teleconsultations on our platform are employees. We offer general practitioners a monthly salary of approximately USD 762.68. While specialists are partners, their medical services will be calculated per patient. Specialists have "standby fees" for one day that are approximately USD 6.36-9.53, depending on the specialist. Then every time someone consults, they get another USD 1.27 - USD 1.59." (Platform Manager 1)

"For medical incentives, the system is a 70:30 commission. The doctor gets 70%, so if our general practitioner's teleconsultation fee is USD 0.95, then the doctor gets USD 0.67 per session. Specialists charge the same consultation fee of USD 2.86; therefore, the medical incentive received is USD 2 for each teleconsultation. If we have to increase the medical incentives for doctors, but the teleconsultation costs are still not included in our system, I do not think they can be included in our system." (Platform Manager 2)

"Doctors on our platform are partners; before signing the contract, we have informed them of the medical incentives that will be received, payment with a commission split of 80:20, 80% for the doctor. Our standard price for general practitioners is USD 0.95 and for specialists USD 3.18." (Platform Manager 3)

Only 25% of the administrators of the Indonesian Medical Association agreed with the health incentive recommendation, which aligns with the Indonesian Medical Association's 2013 Circular Letter. The remaining 75% disagreed, arguing that the incentive recommendation is lower than the local rates. They proposed incentives of USD 6.36-7.94 for GPs and USD 15.89-25.42 for specialists per session.

"Remuneration should be based on the Circular Letter; there should be no difference in medical incentives between teleconsultation and face-to-face doctors. Until now, there are no regulations regarding medical incentives for telemedicine doctors; apart from that, the government has not differentiated the legal risks between telemedicine and face-to-face doctors, so medical incentives should also be equalized." (The administrators of the Indonesian Medical Association 4)

"So, in my opinion, it seems that if general practitioners and specialists are paid according to your recommendation, it is too low, maybe around USD 6.36 to USD 7.94, it still covers general practitioners, using the same benchmark as examining patients at the polyclinic. For a specialist, in my opinion, it is around USD 15.89 - USD 19.07." (The administrators of the Indonesian Medical Association 1)

"The telemedicine medical incentive of USD 6.36 for general practitioners and USD15.89 for specialists is appropriate, it is adjusted the same as an offline doctor." (The administrators of the Indonesian Medical Association 2)

"Actually, it should be the same as offline. In my opinion, a general practitioner is USD 6.36, and a specialist doctor should be USD 27.24 up to USD 25.42." (The administrators of the Indonesian Medical Association 3)

Teleconsultation Media

Based on the previous literature review, the recommended teleconsultation media are telephone or video calls. Most patients (73%) preferred video calls for better interaction, fostering a personal connection, empathetic communication, and more accurate diagnosis.

"Agree, I think video calls allow doctors and patients to interact directly, similar to meetings in a doctor's office. This creates a more personal relationship between the doctor and patient, allowing the doctor to better understand the patient's condition and provide the necessary emotional support." (Patient 7)

"Agreed, it will increase diagnostic accuracy and make it easier for patients to explain symptoms." (Patient 15)

Some patients (27%) preferred chat or telephone over video calls for teleconsultation, favoring written records, review of diagnoses, education, and prescriptions.

"I disagree because if you make a telephone or video call, there is no record, via chat, I can reread the diagnosis and prescription." (Patient 1)

Most doctors (67%) favored video calls because they enhance communication and allow the use of teaching aids for better patient education.

"Agree, telemedicine in Indonesia should at least use video calls, so you can make direct observations regarding the patient's physical condition. Also, lactation counselor doctors can provide education using teaching aids." (Doctor 3)

"Agree, so that the patient can visually show the part they are complaining about, and the doctor can understand the patient's emotions." (Doctor 4)

A minority (23%) of doctors preferred chat over video calls, as this approach allows simultaneous treatment of multiple patients, matching offline practice earnings. They suggest adjusting the medical incentives for video call services.

"I disagree with telephone or video calls because usually at one time I can handle several patients at once by chat." (Doctor 9)

"Currently, I disagree with the use of video calls. We need to consider the amount of incentives, because telemedicine is one source of income for doctors." (Doctor 8)

All telemedicine platform managers (100%) disagreed with the use of video calls because patient surveys showed a preference for chatting during work hours due to convenience and flexibility. Doctors also favor chat because it allows them to serve many patients simultaneously.

"From the patient's side, they still prefer chat because sometimes they are consulted while they are working, during office hours, or while taking a break. We have tried converting from chat to telephone, but most patients do not want to because they are working. Just because of consumer behavior, it seems like video calls are not very suitable yet." (Platform Manager 1)

"We do not have videos. We have surveyed the patients and the doctors. Only 10% of patients want a video call with a doctor, as they are nervous and must wear appropriate clothes. It is impossible to use a negligee to call a doctor like that, right? Then, they sometimes forget what they want to say and ask. Well, that is a problem from the patient's side. We also conducted a survey with our doctors on whether they were willing to make video calls. They ask how much the fee is. Because during video calls, it's only one-on-one. If you do teleconsultation using chat, you can serve 3–4 patients at the same time. If it is four patients, four times 45 thousand, that's 180 thousand for me once I am online. If it is a video call, how much do you want to pay? There is only one way. You cannot video call to serve many patients at the same time. So we decided not to use video calls." (Platform Manager 2)

A telemedicine platform is developing a video call feature with a booking system that requires at least one day's notice and higher fees compared to chat-based teleconsultation.

"We are currently developing video calls for teleconsultations, with a booking system at least one day in advance. We developed this in response to several requests from patients. According to patients, consultations are limited to words when chatting. The advantage of a video call is that it can show the condition of the disease and the doctor's explanation to the patient can be longer and wider. Currently, we are also determining suitable teleconsultation fees for the video call feature; of course, the video call price is higher than chat." (Platform Manager 3)

All administrators of the Indonesian Medical Association (100%) prefer video calls for teleconsultations because they enable doctors to observe patients' expressions and body language, and verify their identity.

"It is called teleconsultation; it is professional, the same as a face-to-face consultation at a polyclinic, so use the most suitable video so that the patient's smile and body language look like that, you know. So, if using chat and telephone, you cannot see all of that." (The administrators of the Indonesian Medical Association 1)

"Actually, chat and telephone are very limited, because if we do anamnesis, we need body language, expressions, etc. We usually have to make a video call, because we have to be able to see the patient's expression, whether he provided correct information regarding his condition. So if we just chat, we do not know who is chatting. Then, if we call, we do not know whether it is really the patient, and so on. So, at least teleconsultation on the telemedicine platform should be a video call." (The administrators of the Indonesian Medical Association 4)

Discussion

This study highlighted the agreements among doctors, administrators of the Indonesian Medical Association, patients, and platform managers regarding teleconsultation fees, medical incentives, and the use of teleconsultation media. Although the proposed fees are broadly accepted, they do not align with the cost structures of telemedicine providers. Doctors and the administrators of the Indonesian Medical Association supported medical incentives that comply with the 2013 Circular Letters; however, the current incentives were below professional standards. Patients favored chat. The administrators of the Indonesian Medical Association and platform managers emphasized the importance of video and telephone calls, prompting efforts to introduce video calls as an alternative teleconsultation media modality.

The recommended teleconsultation fee of USD 0.05–2.54 has been agreed upon by patients, platform managers, and the administrators of the Indonesian Medical Association as affordable for most Indonesians, in line with their average wages. This indicated that the role of price is very important in attracting consumer interest.[18] According to Statistics Indonesia data in 2021, most Indonesians worked as laborers, employees, or staff (37.02%).[19] In 2023, the average national

wage was USD 184.31 per month, with the highest in the real estate sector (USD 306.34) and the lowest in the services sector (USD 113.77).[20] Based on the Pareto method, which allocates 80% of income to priority needs and 20% to savings, teleconsultation costs are still included in the 20% allocation; therefore, in theory, it can be affordable for all levels of society.

Platform managers agreed that a medical incentive is suitable for GPs but not specialists on the grounds that market surveys show people's willingness to pay USD 0.32 for GPs and USD 2.86-3.18 for specialists. Participants agreed that fees directly affected doctors' remuneration and platform revenues, thereby emphasizing the need for a fair remuneration system. Globally, South Korea and Taiwan use centralized National Health Insurance (NHI) systems to finance teleconsultation.[21] South Korea reimburses 80% of the cost, with additional incentives for special circumstances; Taiwan offers high incentives for remote area services.[22] Indonesia's centralized NHI, managed by BPJS Healthcare Security, currently does not cover teleconsultation costs. However, funding for telemedicine was prioritized in the 2024 National Budget Plan. Patients hope that BPJS Healthcare Security will cover telemedicine services entirely or, through cost-sharing, that Indonesia can adopt best practices from South Korea and Taiwan by integrating teleconsultation into the NHI system using an effective financing scheme and Health Technology Assessment to ensure quality, accessibility, and sustainable funding.

The potential for high platform maintenance, advertising, and medical incentives should not be covered solely by the teleconsultation fee. The calculated fee based on GDP per capita, the international telemedicine funding scheme, and the agreement from the respondents indicated that the cost of telemedicine in Indonesia is not yet ideal. Therefore, this study highlights the need for multiple revenue streams for regular platforms rather than cost-based pricing that burdens patients.

Doctors agree to medical incentives of USD 1.59- 3.18 for GPs and USD 4.77-6.36 for specialists; however, in reality, the incentives received are much lower, specifically USD 0.67 for GPs and USD 2 for specialists per session. Two out of the three platform managers disagree because the incentive fees were considered too high. Meanwhile, the administrators of the Indonesian Medical Association recommended larger incentives, USD 6.36-7.94 for GPs and USD 15.89-25.42 for specialists. However, this recommendation exceeded the medical service rates in Indonesia for GPs but is still more appropriate for specialists than those in other countries: USD 1.39-31.65.[17]

The interview's results showed a gap between the interviewees' expectations and the field conditions. For this reason, there is a need for a governmental role that allows doctors to earn a decent income without burdening patients. Multiple sources of revenue should be leveraged to bridge the gap between the consultation fee and professional incentives. Therefore, gaining a balance between adequate professionalism and a low financial burden of consultation.

Regarding teleconsultation media, in the United States, Australia, France, and Germany, telephone or video call features are utilized during teleconsultations for diagnosis, follow-up, and therapy.[23-27] Meanwhile, in Belgium, Canada, Qatar, and Spain, apart from diagnosis and follow-up, teleconsultation via video call or telephone is also used for emergency triage.[28-31] In Indonesia, there were different opinions among the participants. Most patients and doctors support the use of video calls for improved communication, but some prefer chat services due to their ease of access and flexibility. Chat allows doctors to serve multiple patients simultaneously, although it risks compromising the quality of service. All platforms support chat based on market surveys, whereas the administrators of the Indonesian Medical Association recommend video calls as the optimal option for visual inspection. Video calls also have the potential to increase doctor and platform revenues if special incentives accompany them. In Indonesia, teleconsultation in telemedicine primarily uses the chat feature. Additionally, the trend in telemedicine use in Indonesia is to simplify the process of obtaining sick permits, non-visual diagnosis, and medical prescriptions. These services can be facilitated regardless of whether a previous doctor visit has occurred.[5] The government is expected to increase internet bandwidth to support this feature. Integration with the One Health System is mandatory to ensure that chronic patient care histories are maintained, thereby supporting social justice in telemedicine services in Indonesia.

This study served as a pilot for a larger study that aims to encourage policymakers, platform managers, healthcare providers, and insurance companies to adopt multiple revenue schemes, thereby reducing the costs of teleconsultation that patients often bear. A gap exists between financial capability and medical professionalism in the provision of medical services in Indonesia. Based on the interviews, most doctors were willing to disband payments in return for medical services. If such a practice is sustained over the long term, telemedicine in Indonesia will not become the primary service channel for most doctors. This gap can only be filled if regulations support the need for multiple revenue streams as a minimum standard for telemedicine.

However, the teleconsultation media for making a diagnosis on the telemedicine platform primarily involves chat, with a mandatory optional feature to use video calls, which can be used according to the agreement and adjustment of teleconsultation fees for doctors who provide services via video call. Video calls may add to the operational cost of the telemedicine platform. Based on the interviews, this step is currently being managed by some platform managers. The video call feature is an additional revenue model for the platform. The use of paid video calls, multiple business models offered by the platform, and external collaboration to provide services beyond teleconsultations can help alleviate the cost burden on patients. Telemedicine connects doctors (supply), patients (demand), and partners (insurance, pharmacies, laboratories, delivery services, and referral institutions). Currently, the platform's revenue is obtained from patients in the form of consultation fees (B), and the platform provides medical services (JM) to doctors. The doctor gives the diagnosis (Dx) to the patient. In addition to income from patients, telemedicine revenue streams can also be generated from insurance companies, pharmacies, laboratories, couriers, and other healthcare facilities, such as clinics and hospitals.[32]

This study was not conducted in-depth qualitative research involving opinions from BPJS Healthcare Security or employ quantitative approaches; therefore, it limits stakeholders' ability to make informed decisions. However, this study served as a pilot project to provide scientific insight into the comparison of ideal teleconsultation fees and incentives based on GDP per capita. This research also suggests that, based on the GDP per capita ratio, multiple revenue streams for telemedicine are mandatory to accommodate the wider economic gap in Indonesia.

Conclusion

Based on the GDP per capita ratio, the maximum teleconsultation fee on the telemedicine platform is USD 2.54, and the amount of medical incentive on the telemedicine platform for GPs is a minimum of USD 1.59 and USD 4.77 for specialists. To achieve this, governments and the private sector must collaborate to establish a minimum standard for the telemedicine financing model, thereby decreasing the teleconsultation burden on patients and increasing the appreciation of professionals.

Abbreviations

GP: general practitioner; GDP: gross domestic product; NHI = National Health Insurance.

Ethics Approval and Consent to Participate

The study was conducted following the ethical approval of the Health Research Ethics Committee of the Faculty of Medicine and Health Sciences, Atma Jaya Catholic University of Indonesia, Number 11/05/KEP-FKIKUAJ/2024.

Competing Interest

The authors declare no conflict of interest in the writing of this article.

Authors' Contribution

The authors confirm their contributions to the paper as follows: YRW and RDP performed conceptualization, methodology, and project administration. YRW performed data curation, formal analysis, investigation, resources, visualization, and writing of the original draft. RDP performed supervision, data validation, and reviewed the final version of the manuscript. All authors have approved the final version of the manuscript.

Acknowledgment

The authors thank dr. Daniel Edbert, M.Ked.Klin., Sp.MK (Atma Jaya Catholic University of Indonesia) for guidance, discussions, and experience working on the telemedicine platform.

References

1. Lubis ZI. Analisis kualitatif penggunaan telemedicine sebagai solusi pelayanan kesehatan di Indonesia pada masa pandemik COVID-19. Physiotherapy Health Sci. 2021; 2 (2): 76–82. DOI: 10.22219/physiohs.v2i2.15148.
2. Koonin LM, Hoots B, Tsang CA, et al. Trends in the use of telehealth during the emergence of the COVID-19 pandemic - United States, January-March 2020. Morbidity and Mortal Wkly Rep. 2020; 69 (43): 1595–1599. DOI: 10.15585/mmwr.mm6943a3.
3. Setyowati D. Jumlah pengguna baru layanan telemedicine capai 44% dalam 6 bulan. Jakarta: Katadata; 2022.
4. Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 20 Tahun 2019 Tentang Penyelenggaraan Pelayanan Telemedicine Antar Fasilitas Pelayanan Kesehatan. Jakarta: Kementerian Kesehatan; 2019.
5. Wibowo YR. Kajian platform telemedicine ditinjau dari aspek biaya telekonsultasi, jasa medis, dan media diagnosis [Thesis]. Bandung: Universitas Telkom; 2025.
6. Andrianto W, Fajrina AR. Tinjauan perbandingan penyelenggaraan telemedicine antara Indonesia dan Amerika Serikat. J Huk Kesehat Indonesia. 2021; 1 (2): 70–85. DOI: 10.53337/jhki.v1i02.7.
7. Budiyanti RT, Suryoputro A, Murni, et al. Studi komparasi regulasi telekonsultasi antara Indonesia dengan Singapura. J Crepido. 2022; 4 (1): 1–11. DOI: 10.14710/crepido.4.1.1-11.
8. Dewayanti I, Suryono A. Tinjauan etika dan hukum praktik kedokteran melalui telemedicine pasca pandemi COVID-19. J Huk dan Pembang Ekon. 2023; 11 (1): 27–40. DOI: 10.20961/hpe.v11i1.68662.
9. World Bank. GDP per capita (current US$). Washington DC: World Bank; 2023.

10. Pasaribu RD, Kartini D, Oesman YM, et al. The effect of customer demand and supplier performance in competitive strategy and business performance (case of fixed broadband in Indonesia). International J Scientific Technol Res. 2016; 5 (2): 123–129. DOI: 10.1201/9780429295348-178.
11. Birch S, Gafni A. Health Economics. In: Gellman, M.D., Turner, J.R. (eds) Encyclopedia of Behavioral Medicine. New York: Springer-Verlag; 2013.
12. Snoswell CL, Whitty JA, Caffery LJ, et al. Consumer preference and willingness to pay for direct-to-consumer mobile teledermoscopy services in Australia. Dermatology. 2022; 238 (2): 358–367. DOI: 10.1159/000517257.
13. Xie Z, Chen J, Or CK. Consumers' willingness to pay for ehealth and its influencing factors: Systematic review and meta-analysis. J Med Internet Res. 2022; 24 (9): e25959. DOI: 10.2196/25959.
14. Chua V, Koh JH, Koh CHG, et al. The willingness to pay for telemedicine among patients with chronic diseases: Systematic review. J Med Internet Res. 2022; 24 (4): e33372. DOI: 10.2196/33372.
15. Raes S, Trybou J, Annemans L. How to pay for telemedicine: A comparison of ten health systems. Health Syst and Reform. 2022; 8 (1): e2116088. DOI: 10.1080/23288604.2022.2116088.
16. Raes S, Annemans L, Willems R, et al. Physicians' views on optimal use and payment system for telemedicine: A qualitative study. BMC Health Serv Res. 2023; 23 (1): 292. DOI: 10.1186/s12913-023-09314-w.
17. Pengurus Besar Ikatan Dokter Indonesia. Acuan (tarif) jasa medik dokter. Jakarta: Perdatin Aceh; 2013.
18. Yudha KSA. Pengaruh harga dan citra merek terhadap minat berlangganan Spotify Premium pada mahasiswa di Indonesia [Undergraduate Thesis]. Bandung: Telkom University; 2021.
19. Annur CM. Layanan telemedicine yang paling banyak digunakan di Indonesia, apa saja?. Jakarta: Databoks; 2022.
20. Annur CM. Berikut besaran rata-rata upah buruh di Indonesia pada Februari 2023, terbesar sektor Real Estate. Databoks; 2023.
21. Budiyanti RT, Suryawati C, Murni, et al. User expectations on telemedicine financing in the National Health Insurance Era. J Manaj Kesehat Indonesia. 2022; 10 (3): 209–217. DOI: 10.14710/jmki.10.3.2022.209-217.
22. Bajowala SS, Milosch J, Bansal C. Telemedicine pays: Billing and coding update. Curr Allergy Asthma. 2020; 20 (60). DOI: 10.1007/s11882-020-00956-y.
23. Abbott LM, Miller R, Janda M, et al. Practice guidelines for teledermatology in Australia. Australasian J Dermatology. 2020; 61 (3): e293–e302. DOI: 10.1111/ajd.13301.
24. Thai-Van H, Bakhos D, Bouccara D, et al. Telemedicine in Audiology. Best practice recommendations from the French Society of Audiology (SFA) and the French Society of Otorhinolaryngology-Head and Neck Surgery (SFORL). Eur Ann Otorhinolaryngol Head Neck Dis. 2021; 138 (5): 363–375. DOI: 10.1016/j.anorl.2020.10.007.
25. Richter JG, Chehab G, Reiter J, et al. Evaluation of the use of video consultation in German rheumatology care before and during the COVID-19 pandemic. Front Med. 2022; 9: 1052055. DOI: 10.3389/fmed.2022.1052055.
26. Ghosh A, Gupta R, Misra A. Telemedicine for diabetes care in India during COVID-19 pandemic and national lockdown period: Guidelines for physicians. Diabetes Metab Syndr. 2020; 14 (4): 273–276. DOI: 10.1016/j.dsx.2020.04.001.
27. Pairon A, Philips H, Verhoeven V. A. A scoping review on the use and usefulness of online symptom checkers and triage systems: How to proceed? Front Med. 2023; 9: 1040926. DOI: 10.3389/fmed.2022.1040926.
28. Talla PK, Makansi N, Michaud PL, et al. Virtual oral health across Canada: A critical comparative analysis of clinical practice guidances during the COVID-19 pandemic. Int J Environ Res Public Health. 2023; 20 (5): 4671. DOI: 10.3390/ijerph20054671.
29. Dijkstra HP, Ergen E, Holtzhausen L, et al. Remote assessment in Sport and Exercise Medicine (SEM): A narrative review and teleSEM solutions for and beyond the COVID-19 pandemic. Br J Sports Med. 2020; 54 (19): 1162–1167. DOI: 10.1136/bjsports-2020-102650.
30. Rivas JG, Serrano AR, Loeb S, et al. Telemedicine and smart working: Spanish adaptation of the European Association of Urology recommendations. Actas Urol Esp. 2020; 44 (10): 644–652. DOI: 10.1016/j.acuro.2020.08.010. (31)
31. Budiyanti RT, Suryawati C, Hanifah M. Pembiayaan jaminan kesehatan nasional untuk layanan telemedicine di Indonesia, Taiwan, dan Korea Selatan. J Kesehat. 2023; 11 (1): 33–41. DOI: 10.25047/j-kes.v11i1.391.
32. Torregrossa M. Platform economy: The 4 key business models. Medium; 2018.