

Perceived quality of primary healthcare services among the National Health Insurance members and fee for service patients in the West Denpasar II Public Health Center Bali, Indonesia

Nitya Nijyoti,^{1*} Putu Ayu Indrayathi,² I Made Ady Wirawan²

ABSTRACT

Background and purpose: The Government of Indonesia established the National Health Insurance or in Indonesia called *Jaminan Kesehatan Nasional* (JKN) in 2014 with the target of achieving universal health coverage (UHC) by 2019. However, many have not become JKN participants and still use the fee for service financing system. The purpose of this study was to determine patient's perceptions of the quality of health services under the JKN and fee for service payment methods.

Methods: A cross-sectional study was conducted at West Denpasar II Public Health Centre (PHC) with 133 outpatient respondents who were selected sequentially. Data collection was carried out in June 2019 through interviews. Patients' perceptions of service quality were measured according to the six domains of health service quality established by the Institute of Medicine (IOM) which include effectiveness, efficiency, timeliness, patient-centered approach, safety and equity. Bivariate analysis was conducted with Mann Whitney test and multivariate analysis with Ancova.

Results: Patients' perceptions of the quality of services in the JKN and fee for service payment methods were found to be quite good with an average of 3.08 and 3.17 of the maximum value of 4.0. Bivariate analysis showed a significant difference with a mean rank of 54.28 for JKN and 79.16 for fee for service ($p < 0.01$). Patients' perceptions of service quality also differed significantly based on the dimensions of efficiency ($p = 0.001$), effectiveness ($p = 0.005$), timeliness ($p = 0.007$) and patient-centered approach ($p = 0.032$). Multivariate analysis showed that the variable that was significantly related to patient perceptions of service quality was the payment methods ($p < 0.001$).

Conclusion: Patients with a fee for service payment methods have a better perception of service quality than patients who use JKN. Advocacy to policy makers and service providers should be conducted in order to ensure the equal quality of service for all patients.

Keywords: Payment methods, service quality, JKN, fee for service, public health centre

INTRODUCTION

The Government of Indonesia established the National Health Insurance called *Jaminan Kesehatan Nasional* (JKN) in 2014 with the target of achieving universal health coverage (UHC) by 2019.¹ Capitation payment system is a payment system implemented at primary health services or *fasilitas kesehatan tingkat pertama* (FKTP) especially first level outpatient services in collaboration with the implementing organisation for national health insurance (*BPJS Kesehatan*) based on the number of participants registered at the health facility multiplied by the amount of capitation per person. This system encourages primary health services

to act effectively and efficiently and prioritizes promotive and preventive activities.² With this system the community is expected to receive services as needed without a reduction in quality.

The government targeted that as of 1 January

2019, JKN membership would cover 95% of the population, or as many as 257.5 million people.³ But in 2020, JKN membership coverage was only 223 million people, or 86.6% of the target. The majority of JKN participants were premium assistance beneficiaries or called *Penerima Bantuan Iuran* (PBI) sourced from the state budget or *Anggaran Pendapatan dan Belanja Negara* (APBN) as many as 96,539,056 individuals, while PBI participants with funding sources from the local government budget or *Anggaran Pendapatan dan Belanja Daerah* (APBD) amounted 36,960,279 people.^{4,5} JKN membership in Bali Province in 2018 was reported as high as 73% or around 3.1 million people.⁶

The implementation of health services in the JKN system is carried out in stages starting from the primary health services which includes public health centres (PHCs), primary clinic, doctor's and dentist's practices.⁷ PHC is a health service facility

¹Public Health Postgraduate Program, Faculty of Medicine, Udayana University

²Department of Public Health and Preventive Medicine, Faculty of Medicine, Udayana University

*Correspondence to:
Nitya Nijyoti; Public Health Postgraduate Program, Faculty of Medicine, Udayana University;
nityanijyoti@yahoo.com

that organizes health efforts with prioritizing promotive and preventive efforts.⁸ Since JKN was initiated, the role of PHC in curative services has become more dominant because the number of visits of patients seeking treatment has increased. Based on data in Indonesia on the number of visits in 2017 per FKTP type, PHC has the highest number of visits of 89,741,478 people.⁹

Previous studies show that the payment methods influence patients' perceptions of the quality of health services, where patients who use health insurance perceive the quality of services to be different from non-insurance patients. It was also reported that the quality of service in some studies was measured using a Service Quality Framework that has five dimensions, namely reliability, responsiveness, assurance, empathy and tangibility.^{3,10-13}

Institute of Medicine (IOM) provided a new framework established by Dr. Avedis Donabedian in 2001 for measuring the quality of health services in terms of inputs, processes and outputs, which is an advantage of this framework as compared to the Service Quality Framework. The input aspect consists of human resources (HR) who provide facilities and equipment services. The process is assessed by the length of waiting time and length of examination. Outputs are assessed from the results of health services obtained by patients.^{14,15} These three aspects are developed into six dimensions namely efficiency, effectiveness, timeliness, patient-centered approach, equitable and safety.¹⁶

Because JKN coverage has not reached 100%, PHCs are currently still serving patients with a fee for service payment methods. In Denpasar, capital city of Bali Province, West Denpasar II PHC serves the highest number of JKN and fee for service patients. The number of outpatient visits in 2019 with the fee for service in this PHC was reported to be as many as 19,988 people and with JKN financing as many as 15,967 people.¹⁷ Published research on JKN and fee for service patients' perceptions on the quality of services in PHC using the IOM framework remain limited. This study aims to identify the patient's perception of the health service quality between the JKN and the fee for service payment methods in West Denpasar II PHC using the IOM framework.

METHODS

This study used a cross sectional design conducted at West Denpasar II PHC in June 2019. Respondents in this study were outpatients in West Denpasar II PHC who were selected sequentially. The total sample of 133 outpatients was determined with a significance level of 95%, power 80% and with an average patient's perception of service quality in the

fee for service group of 56.59 and in the JKN group of 44.41.¹⁸

Data was collected through interviews using a questionnaire covering the socio-demographic characteristics of respondents (age, education, employment, expenses per month), the payment methods (grouped into two categories, namely fee for service and JKN) and the quality of services consisting of six dimensions: efficiency, effectiveness, timeliness, equity, patient-centered approach and safety. The efficiency dimension includes completeness of medical devices, staff skills, number of staff and services according to cost. The effectiveness dimension consists of the ability of staff, service procedures, examination room instructions and administrative processes. The timeliness dimensions include registration window counters, patient admission procedures, prompt and timely service, and on time arrival of staff. Patient-centered dimension include polite and friendly staff, attention to complaints, quick actions for patients in need and environmental conditions. The equity dimension consists of equal attention to the patient with no regard for social status, and complete explanation with no regard for ethnicity, race and religion. The safety dimension includes security guarantees, safe data storage, safe physical facilities and medical devices.^{16,19}

Respondents' perceptions of the six dimensions of service quality were measured by the 4th edition of Sociocultural Attitudes Towards Appearance Scale (SATAQ). The 4th edition SATAQ questionnaire consisted of 24 questions, using four Likert scales, namely: 1=poor, 2=average, 3=good, 4=very good. Service quality is categorized into two namely good (if the average score is ≥ 3.00) and poor (if the average score < 3.00). Data analysis was performed using Stata SE 12. The normality of the data was determined by the Kolmogorov Smirnov test. Bivariate analysis for categorical data was conducted using the Chi-square test and for interval data using the Mann Whitney test. Multivariate analysis was carried out using Ancova with a significance level of 0.05. This study has been approved by the Ethics Committee of the Faculty of Medicine, Udayana University/Sanglah General Hospital Denpasar with No. 2146/UN14.2.2.VII.14/LP/2019 on July 19, 2019.

RESULTS

Table 1 presents the proportion of respondents based on the payment methods and social demographic characteristics. Of the 133 respondents, 65 people (48.9%) used JKN and 68 people (51.1%) used fee for service. The age of most respondents was between 17-29 years (46.6%). There were almost as

many male respondents as female, namely 49.6% and 50.4%, respectively. Most respondents had a senior high school education or above (79.7%),

had a permanent job (66.9%) and more than half (55.6%) had an average monthly expenditure of less than three million rupiah.

Table 1. Payment methods and socio-demographic characteristics of the respondents

Characteristics	n	%
Payment methods		
Fee for service	68	51.1
JKN	65	48.9
Gender		
Male	66	49.6
Female	67	50.4
Age (years)		
17-29	62	46.6
30-44	33	24.8
45-59	21	15.8
60-74	15	11.3
75-89	2	1.5
Education		
<Junior high	27	20.3
≥Senior high	106	79.7
Employment		
Unemployed	44	33.1
Employed	89	66.9
Expenditure (IDR)		
<3,000,000	74	55.6
≥3,000,000	59	44.4
Total	133	100.0

Table 2. Proportion of respondents by perceived service quality and social demographic characteristics

Variables	Perception of service quality				p*
	Good		Poor		
	n	%	n	%	
Payment methods					
Fee for service	64	94.1	4	5.9	<0.001
JKN	41	63.1	24	36.9	
Gender					
Male	53	80.3	13	19.7	0.70
Female	52	77.6	15	22.4	
Age (years)					
<45	78	82.1	17	17.9	0.15
≥45	27	71.1	11	28.9	
Education					
<Junior high	20	74.1	7	25.9	0.48
≥Senior high	85	80.2	21	19.8	
Employment					
Unemployed	33	75.0	11	25.0	0.43
Employed	72	80.9	17	19.1	
Expenditure (IDR)					
<3,000,000	59	79.7	15	20.3	0.80
≥3,000,000	46	78.0	13	22.0	
Total	105	78.9	28	21.1	

*) Chi-square test

Table 2 presents the results of a cross tabulation between socio-demographic characteristics and payment methods with perceived service quality. It is evident that the proportion of respondents with good service quality perceptions in the fee for service group was significantly higher than the JKN group, which were 94.1% and 63.1% respectively ($p < 0.001$). No significant differences were found ($p > 0.05$) based on sex, age, education, employment status and monthly expenditure.

Table 3 presents differences in perceived service quality scores in the JKN group and fee for service based on six dimensions of service quality (efficiency, effectiveness, timeliness, patient-centered approach, safety and equity). Crude mean score in the JKN group was 3.08, while from the fee for service group 3.17 from a maximum value of 4.0. The normality test shows that the scores of service quality dimension in the JKN group and the fee for service were not normally distributed and therefore a non-parametric statistical test was performed using Mann Whitney. The mean rank of overall service quality scores in the fee for service group was significantly higher than the JKN group, namely 79.16 and 54.28 ($p < 0.001$).

When it viewed per dimension, the mean score in the fee for service group was higher than the JKN group in all dimensions. The highest score in the JKN group was found in the equity dimension of 3.13, followed by the dimensions of safety (3.10), effectiveness (3.09), patient-centered approach (3.08), efficiency (3.06) and timeliness (3.04). Different sequences were found in the fee for service group, the highest was in the effectiveness dimension of 3.23, followed by the dimensions of efficiency (3.19), timeliness (3.17), safety (3.16), equity (3.15) and effectiveness (3.14).

The mean rank per dimension was significantly higher in the fee for service group in the efficiency dimension with values of 77.12 and 56.41 ($p < 0.01$), effectiveness with values of 75.21 and 58.42 ($p < 0.01$), timeliness with values of 74.48 and 59.18 ($p < 0.01$) and patient-centered approach with values of 73.49 and 60.33 ($p = 0.032$). No significant differences were found in the equity dimension with mean rank values of 71.07 and 62.52 ($p = 0.149$) and in the safety dimension with mean rank values of 69.75 and 64.12 ($p = 0.303$).

Table 4 presents the results of multivariate analysis using Ancova with the perceptions of service quality as the dependent variable while socio-demographic and payment methods as the independent variables. It was found that the

Table 3. Difference in score of six dimensions of service quality in JKN group and fee for service

	Mean score		Mean rank		p*
	JKN	Fee for service	JKN	Fee for service	
Efficiency	3.06	3.19	56.41	77.12	0.001
Completeness of facilities	3.05	3.18			
Staff expertise	3.17	3.26			
Number of staff	2.94	3.06			
Service fee	3.08	3.25			
Effectiveness	3.09	3.23	58.42	75.21	0.005
Staff skill	3.12	3.29			
Service procedure	3.14	3.22			
Directions	3.06	3.21			
Administrative process	3.05	3.21			
Timeliness	3.04	3.17	59.18	74.48	0.007
Registration process	3.05	3.10			
Reception of patients	3.06	3.19			
Efficiency	3.03	3.22			
On time	3.05	3.19			
Patient-centered approach	3.08	3.14	60.22	73.49	0.032
Staff politeness and friendliness	3.14	3.18			
Attention	3.03	3.03			
Speediness	3.00	3.22			
Atmosphere of room	3.18	3.13			
Equity	3.13	3.15	62.57	71.07	0.149
Fair attention	3.12	3.09			
Non judgemental	3.14	3.15			
Clarity of explanation	3.09	3.19			
Non discriminative	3.17	3.21			
Safety	3.10	3.16	64.12	69.75	0.303
Safety guaranteed	3.09	3.15			
Data safely stored	3.11	3.13			
Safety of facilities	3.12	3.19			
Safety of medical instruments	3.11	3.18			
Overall Service Quality	3.08	3.17	54.28	79.16	<0.001

*) Mann Whitney test

Table 4. F value of social demographic variables and the payment methods

Variable	Service quality		
	Mean Square	F	p*
Corrected model	0.572		0.001
Intercept	425.895		0.000
Gender	0.014	0.095	0.758
Education	0.218	1.470	0.228
Age	0.442	2.981	0.087
Employment	0.087	0.589	0.444
Expenditure	0.048	0.323	0.571
Financing system	2.626	17.724	<0.001

*) Ancova Test

payment method is significantly related to perceived service quality ($F=17.724$, $p<0.001$).

DISCUSSION

This study shows that patients' perceptions of service quality are quite good both in the fee for service and JKN payment methods. Perceptions in both groups of respondents regarding service quality were found to be almost the same according to gender, age, education, employment status and expenditure each month. Bivariate and multivariate analysis shows that perceptions of service quality are related to the payment methods. Fee for service group respondents had a better perception than the JKN group. The fee for service group also had a better perception than the JKN group in the six dimensions of service quality, however, it was only significantly difference in the dimensions of effectiveness, efficiency, timeliness and patient-centered approach and not significant in the dimensions of equity and safety.

The findings of this study are consistent with other studies that measure service quality using the service quality dimension which shows that the patient payment methods has a strong association with outpatient service quality, so that it causes differences in the quality of service between payment methods used by patients.¹⁵ A cross-sectional study in Wonogiri, Central Java found that the highest average score of service quality was in the fee for service payment method.²⁰ The results of this study are similar to a cross-sectional study conducted in Bantul, Yogyakarta which reported the differences in the payment methods.²¹ The perception score of respondents in the fee for service group was significantly higher than that of the JKN group in the efficiency dimension, which is likely because the fee for service respondents had better assumptions about the completeness of medical equipment, the number and skills of staff and the better suitability of services with costs.

Likewise, for the effective dimension, the fee for service group responded better about the ability of staff, service procedures especially administrative processes and room instructions. Similarly, for the timeliness dimension such as the registration window schedule, the procedure for admitting patients, on time arrival of staff and the speediness of the delivery of services were highlighted. For the patient-centered approach dimension, the fee for service group gives a better rating because the staff are polite and friendly, pay special attention to patient complaints and because of the support of comfortable environmental conditions. A cross-sectional study in Bantul, Yogyakarta stated that administrative documents prepared for JKN

patients differ from fee for service patients so that fee for service patients are handled faster.¹⁸

Our study shows that there are no significant perceptual differences in the equity and safety dimensions. It signifies that patients still receive quality services regardless of their socio-demographic. Patients also receive safe services which guarantee anonymity. The association between payment methods and quality of service shows that the payment methods can influence the attitudes and behavior of health service providers. Differences in administrative procedures between the two payment methods can also affect service time so as to affect differences in perceptions of service quality.²⁰

This study has several limitations. The study was only conducted at one PHC, so the generalization of results is not possible, so it is necessary to conduct research at several PHCs and also at private health facilities. The assessment of service quality is only based on respondents' perceptions which are very subjective. This study did not explore in depth why patients in the fee for service group had better perceptions than JKN patients in terms of service quality. Then, there is the possibility of social desirability bias where respondents tend to choose answers which are considered good or tend to be neutral on instrument items. In the future, qualitative research is needed to explore in depth the explanation of these findings. In addition, it is also necessary to assess perceptions from the point of view of service providers, in order to get a more comprehensive picture related to service quality.

CONCLUSION

There is a difference in perception of service quality between patients with the JKN and the fee for service payment methods. Patients' perceptions of service quality differ significantly based on the dimensions of efficiency, effectiveness, timeliness and patient-centered approach. Patients with a fee for service payment method have a better perception of service quality than patients who use the JKN. Further research needs to be done to explore differences in service quality from service providers' perceptions. In addition, the assessment of service quality with other methods such as qualitative methods need to be considered in order to get a more comprehensive picture related to the quality of the service. Advocacy efforts to service providers to provide the equal quality of service to all patients need to be carried out.

ACKNOWLEDGEMENTS

The authors would like to thank the Head of West

Denpasar II PHC for her supports during the study and all respondents for their contribution to this study.

AUTHOR CONTRIBUTION

NN, designed the study, conducted data collection and data analysis, wrote the first draft and edited the manuscript; PAI and IMAW, critically reviewed the study design, provided feedback on data analysis and edited the manuscript.

CONFLICT OF INTEREST

All authors declare no conflict of interest.

FUNDING

The study was self-funded by the researchers.

REFERENCES

1. World Health Organization. Universal health coverage and health care financing Indonesia [Internet]. WHO. 2019 [cited 2020 Jul 27]. Available from: <http://origin.searo.who.int/indonesia/topics/hs-uhc/en/>.
2. National Health Insurance Implementing Body. Dana kapitasi BPJS Kesehatan diterima langsung puskesmas, layanan masyarakat akan meningkat [Capitation of the National Health Insurance Implementing Body directly received by public health centers, quality of services will increase] [Internet]. 2014 [cited 2020 Jul 27]. Available from: <https://bpjs-kesehatan.go.id/bpjs/index.php/post/read/2014/77/Dana-Kapitasi-BPJS-Kesehatan-Diterima-Langsung-Puskemas-Layanan-Masyarakat-Akan-Meningkat>.
3. Anggriani, SW. Kualitas pelayanan bagi peserta badan penyelenggara jaminan sosial kesehatan dan non badan penyelenggara jaminan sosial kesehatan. [Service quality for participants of *BPJS Kesehatan* and non *BPJS Kesehatan*]. *J Soc Polit Sci*. 2016;5(2):79–84.
4. Novika S. Target kepesertaan JKN dan masalahnya [Target of JKN membership and its problems] [Internet]. 2019 [cited 2020 Mar 20]. Available from: <https://www.alinea.id/bisnis/target-kepesertaan-jkn-dan-masalahnya-b1WZ49gLx>.
5. National Health Insurance Implementing Body. Fee for service vs INA-CBGs mana yang lebih menguntungkan? [Fee for service vs INA-CBGs, which one is more beneficial?] [Internet]. 2014 [cited 2020 Mar 20]. Available from: <https://bpjs-kesehatan.go.id/bpjs/index.php/post/read/2014/63/Fee-for-Service-Vs-INA-CBGs-Mana-yang-Lebih-Menguntungkan>.
6. Bali Berkarya. Dari 4,3 juta warga di Bali, baru 73 persen jadi peserta JKN-KIS [Out of 4.3 million people in Bali, only 73 percent are JKN-KIS participants] [Internet]. 2018 [cited 2020 Mar 23]. Available from: <https://baliberkarya.com/index.php/read/2018/01/02/201801020011/Dari-43-Juta-Warga-di-Bali-Baru-73-Persen-Jadi-Peserta-JKNKIS.html>.
7. Ministry of Health of the Republic of Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 28 Tahun 2014. [Regulation of the Ministry of Health of the Republic of Indonesia No. 28 Year 2014]. Jakarta; 2014.
8. Wulandari A, Adenan, Musafaah. Hubungan antara persepsi pada pelayanan administrasi rawat inap dengan

- kepuasan keluarga pasien peserta Jaminan Kesehatan Nasional. [Relationship between perception towards inpatient administration services and family satisfaction of patients participating in National Health Insurance]. *J Indones Public Heal Publ.* 2016;3(2):45–50.
9. Ristrini, Kristiana L, Budiarto W. Quality of services and health financing efficiency of community health insurance (*Jamkesmas*) at 21 general and specialty hospitals in Indonesia. *Heal Syst Res Bull.* 2013;16(4):401–9.
 10. Siswanto H, Makmur M, Lastiti N. Analysis of health service quality on operationalization of Ambulance Program (A study at Kedungpring Public Health Center of Lamongan District). *J Public Adm.* 2014;3(11):1821–6.
 11. Dewi A, Ramadhan NK. The difference of satisfaction level in patients of *BPJS Kesehatan* and Non *BPJS Kesehatan* towards health services. *Int J Public Heal Sci.* 2016;5(1):36–40.
 12. Rumengan DSS, Umboh JML, Kandou GD. Factors associated with health care utilization of BPJS Kesehatan participants in Paniki Mapanget Down PHC, Manado District. *JIKMU.* 2015;5(1):88–100.
 13. Supriyantoro, Hendarwan H, Savithri Y. A case study on the implementation of local health insurance benefit packages. *Heal Syst Res Bull.* 2014;17(4):327–36.
 14. Salim NA. Implementing continuous quality improvement in health care. *Managed Care Quarterly.* 2011.
 15. Utami YT. Pengaruh jenis pembiayaan terhadap kualitas pelayanan. [Effect of type of financing on service quality]. *Pros Nas SMIKNAS.* 2018;151–158.
 16. Warda A, Junaid, Fachlevy AF. Relationship between service quality perceptions with patient satisfaction of Perumnas Public Health Center, Kendari (Undergraduate thesis). Universitas Halu Oleo; 2016.
 17. Denpasar City Health Office. Profil Kesehatan Kota Denpasar Tahun 2017 [Denpasar City Health Profile 2017]. 2018.
 18. Sisyani, Pribadi F, Urhmila M. Perbedaan kualitas pelayanan pada sistem pembayaran INA-CBGS dengan fee for service di Rumah Sakit PKU Muhammadiyah Bantul. [Differences in service quality between INA-CBGS payment system and fee for service at PKU Muhammadiyah Hospital Bantul]. *Jurnal Asosiasi Dosen Muhammadiyah Magister Administrasi Rumah Sakit.* 2016;2(2):1–9.
 19. Rusli G. Mengukur pencapaian 6 dimensi mutu pelayanan kesehatan di puskesmas menggunakan data P-Care [Measuring achievement of the 6 dimensions of quality of health services in puskesmas using P-Care data] [Internet]. 2016 [cited 2019 Sep 11]. Available from: <https://www.mutupelayanankesehatan.net/14-agenda/2316-mengukur-pencapaian-6-dimensi-mutu-pelayanan-kesehatan-di-puskesmas-menggunakan-data-p-care>.
 20. Budi HS. Hubungan antara sistem pembiayaan dengan kualitas pelayanan di Puskesmas Slogohimo Wonogiri (Thesis) [Relationship between the financing system and service quality at Slogohimo Wonogiri Public Health Center (Thesis)]. Universitas Sebelas Maret; 2010.
 21. Pardini MAE. Perbedaan tingkat kepuasan pasien Jaminan Kesehatan Nasional dan pasien umum terhadap mutu pelayanan kesehatan di Klinik Kimia Farma 125 Denpasar (Skripsi). [Difference of patient satisfaction between National Health Insurance and general patients on the quality of health services at the Kimia Farma 125 Clinic Denpasar (Undergraduate thesis)]. Udayana University; 2017.



This work is licensed under a Creative Commons Attribution