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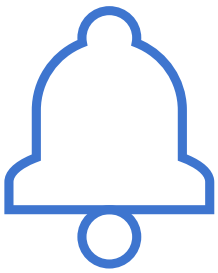

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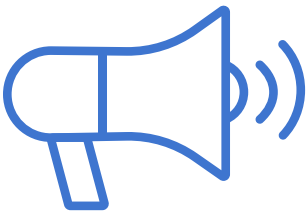

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The Role of Government-run Insurance in Primary Health Care Utilization: A Cross-Sectional Study in Papua Region, Indonesia, in 2018

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Abstract

Health development in the Papua region often lags behind other areas of Indonesia. The study aims to analyze the role of government-run insurance in primary health care utilization in the Papua region, Indonesia. The study examined 17,879 Papuan. The study used primary health care utilization as an outcome variable and health insurance ownership as an exposure variable. The study also employed nine control variables: province, residence, age, gender, marital status, education, employment, wealth, and travel time to primary health care. The research employed data using binary logistic regression in the final analysis. The results show that Papuans with government-run insurance were three times more likely to utilize primary health care than uninsured Papuans (AOR 3.081; 95% CI 3.026–3.137). Meanwhile, Papuan with private-run insurance were 0.133 times less likely to utilize primary health care than uninsured Papuans (AOR 0.133; 95% CI 0.109–0.164). Moreover, Papuans who have two types of health insurances (government-run and private-run) were 1.5 times more likely to utilize the primary health care than uninsured Papuan (AOR 1.513; 95% CI 1.393–1.644). The study concluded that government-run insurance increases the chance of primary health care utilization in the Papua region, Indonesia. Government-run insurance has the most prominent role compared to other health insurance categories.

Keywords

health insurance, primary health care, health care evaluation, public health, Papua

Eastern Indonesia, especially the Papua region, has more underdeveloped areas than other islands.[1,2] Presidential Regulation Number 63 of 2020 concerning Determination of Disadvantaged Regions for 2020–2024 stipulates some parts with underdeveloped categories throughout Indonesia, with the highest number in the Papua region. This condition directly affects the Human Development Index (HDI) in the Papua region because the indicators of underdeveloped areas set by the government coincide with HDI indicators. The HDI is one indicator of development progress in aspects of human quality in a country.[3] The 2018 Indonesian Central Statistics Agency's HDI calculation results show that the Papua region is the lowest HDI area among all provinces in Indonesia.

In health development, the Papua region lags behind other areas of Indonesia. The Public Health Development Index (PHDI) figures evidence the condition. Several indicators of the health sector make up the index, such as toddler health, reproductive health, health services, health behavior, infectious and noncommunicable diseases, and environmental health. The results of the PHDI calculation developed by the Research and Development Agency of the Ministry of Health in 2018 show that two provinces in the Papua region have the lowest PHDI rating among 34 provinces. West Papua Province is ranked 33rd rank, and Papua Province is ranked 34th. Even during the five years 2013–2018, the region of Papua did not show an increase in the PHDI rating.[4] The low PHDI in the Papua region is an early indication for the Indonesian government to oversee and improve health development in the Papua region.

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One component of healthy products that is important to note is the access of the Papuan population to health services. Access to health care is a fundamental right of every citizen, and the state should ensure equal access to health services for all citizens.[5,6] One of the efforts for equitable access to health services for the entire population is to realize a national social health insurance system that guarantees complete access to every participant regardless of economic status, race, residence, or religion.[7,8]

In early January 2014, the Indonesian government implemented the National Health Insurance (NHI) Program to improve public access to health services that suit their needs.[9] Various studies have shown that the health insurance mechanism positively affects public access to health services.[10–12] The government hoped that with the NHI, access to health services could be evenly distributed to all residents in the territory of Indonesia, especially in the Papua region, so that it would have a positive impact on improving health development in the region.[13]

The spearhead of health services in the health insurance mechanism is primary health services or First-Level Health Facilities (FLHF). FLHF is at the forefront of health services to participants in the NHI program. The function of FLHF as a gatekeeper has the role of participant service contact (first contact), continuous service (continuity), comprehensive service (comprehensiveness), and service coordination (coordination).[13] Based on the research background, the study aims to analyze the role of government-run insurance in primary health care utilization in the Papua region, Indonesia.

Materials and Methods

Study Design and Data Source

This cross-sectional study analyzed secondary data from the 2018 Indonesian Basic Health Survey. This survey was conducted on a national scale by the Ministry of Health. The survey collected data from May to July 2018 through household and individual instruments interviews.

The 2018 Indonesian Basic Health Survey included all Indonesian households. The sample framework of the 2018 National Socio-Economic Survey (run by the Central Statistics Agency), conducted in March 2018, was used for this survey. Furthermore, the 2018 Indonesian Basic Health Survey visited a target sample of 300,000 households from 30,000 census blocks in the 2018 Socio-Economic Survey.[14]

The 2018 Indonesian Basic Health Survey employs the probability proportional to size (PPS) method, employing systematic linear sampling in two stages. Stage 1 includes implicit stratification based on welfare strata of all census blocks resulting from the 2010 Population Census. PPS chose the sample survey as the sampling frame for selecting census blocks from a master frame of 720,000 census blocks from the 2010 Population Census, 180,000 of which were chosen (25%). The survey used the PPS method to determine several census blocks in each urban/rural strata per regency/city to create a Census Block Sample List. The survey chooses 30,000 Census Blocks in total. Stage 2 used systematic sampling to select 10 households in each Census Block with the highest implicit stratification of education completed by the head of household to maintain the representation of the diversity value of household characteristics. The survey interviewed all household members in the selected household as part of the 2018 Indonesian Basic Health Survey.[14]

The study population was all adults (≥ 15 years old) in the Papua region of Indonesia. The Papua region is an area that includes two provinces at the eastern tip of Indonesia: Papua and West Papua.[8] The study examined 17,879 respondents as a weighted sample according to the sampling methods.

Outcome Variable

The study's outcome variable was primary health care utilization: adults' connectivity to primary health care, whether outpatient or inpatient. Outpatient care was limited to the previous month, whereas inpatient care was limited to the past year. The survey asked respondents to recall the correct outpatient and inpatient incidences correctly.[14]

Exposure Variable

The study used ownership of health insurance as an exposure variable. According to the survey, insurance ownership has four attributes: uninsured, government-run insurance, private-run insurance, and government-run + private-run insurance.

Control Variables

Furthermore, the study employed nine control variables. The nine factors were province, residence type, age group, gender, marital status, education level, employment status, wealth status, and travel time to primary health care.

The study divided the type of residence into urban and rural categories. The study used the Indonesian Central Statistics Agency's provisions for urban–rural categorization. Furthermore, the study calculated age based on the most recent birthday. The study divided gender into male and female. The study also classified marital status into three categories: never married, married/living with a partner, and divorced/widowed.

The study defined education as the respondent's most recent diploma. There were four levels of education in the study: no education, primary, secondary, and higher education. There were two employment classifications: unemployed and employed.

The 2018 Indonesian Basic Health Survey used the wealth index formula to determine individuals' wealth status. The survey calculated the wealth index using a weighted

average of a family's total spending. Meanwhile, the survey estimated the wealth index using primary household expenditures such as health insurance, food, and lodging, among other expenses. Furthermore, the poll categorizes income into five groups: poorest, poorer, middle, richer, and most prosperous.[15]

Study Setting

In 2014, the Indonesian government issued an NHI policy that provided full coverage insurance. The Social Security Administrator of Health manages the NHI system. Foreigners who have worked in Indonesia for at least six months and paid their dues are covered by the policy (Law Number 40 of 2004 on National Social Security System; Law Number 24 of 2011 on Social Security Administrator). The NHI had 226.3 million participants as of September 2021, accounting for approximately 83.5 percent of Indonesia's total population.

Data Analysis

The Chi-Square test was used in the early stages of the sample to produce a bivariate comparison. Furthermore, the study used a collinearity test to ensure that the independent variables in the final regression model did not have a strong relationship. In the study's final point, the study used a binary logistic regression. The study used the last test to examine the multivariate relationship between all independent variables and primary health care utilization. The authors employed the IBM SPSS 26 application throughout the statistical analysis process.

The study, on either side, used ArcGIS 10.3 (ESRI Inc., Redlands, CA, USA) to map primary health care utilization by regency/city in the Papua region of Indonesia in 2018. The Indonesian Bureau of Statistics provided a shapefile of administrative border polygons for the study.

Ethical Approval

The 2018 Indonesian Basic Health Survey received ethical clearance from the National Ethics Committee (LB.02.01/2/KE.024/2018). The survey removed all respondents' histories from the set of data.

Results

The analysis found that the Papua region's average primary health care utilization in 2018 was 7.6 percent. Meanwhile, Figure 1 shows the distribution map of primary health care utilization by the regency/city in the Papua region, Indonesia. The map indicates that several regencies in Central Mountains have low utilization of primary health care, probably due to the extreme geographical factors in this region.

Descriptive Analysis

Table 1 displays a summary analysis of primary health care utilization and respondent attributes in Indonesia's Papua region in 2018. The study shows Papuan unutilized the primary health care leaders in all categories of health insurance ownership. Papuans who live in Papua occupy all categories of health insurance ownership. Papuans who live in rural areas dominate the uninsured and government-run category.

Based on age group, Table 1 indicates Papuan in the 18–64 age range dominate in all categories of health insurance ownership. On the other hand, based on gender, male Papuan dominate all sorts of health insurance ownership. Regarding marital status, married Papuan occupy all categories of health insurance ownership.

According to education level, Papuan with no education and Papuan with primary education led in uninsured and government-run categories. Meanwhile, Papuan with secondary and higher education led private and government-run plus private-run categories. Employed Papuan dominate in all types of health insurance ownership.

The richest Papuan dominated all health insurance ownership categories based on wealth status. Meanwhile, based on travel time to primary health care, Papuan with more than 10 min led in uninsured and government-run categories. Moreover, Papuan with 10 min or less led in private-run and government-run plus private-run types.

The collinearity test results show no strong relationship between the independent variables. Furthermore, the tolerance value for all variables is more significant than 0.10, and the variance inflation factor value for all factors is less than 10.00. The study found no multicollinearity in the regression model, indicating the test's decision-making foundation.

Multivariable Analysis

Table 2 informs the binary logistic regression results of primary health care utilization in the Papua region, Indonesia. The study employed "utilized primary health care" as a reference in this final stage.

Table 2 shows that Papuans with government-run insurance were three times more likely to utilize primary health care than uninsured Papuans (AOR 3.081; 95% CI 3.026–3.137). Meanwhile, Papuan with private-run insurance were 0.133 times less likely to utilize primary health care than uninsured Papuans (AOR 0.133; 95% CI 0.109–0.164). Moreover, Papuan who have two types of health insurance (government–run and private–run) were 1.5 times more likely to utilize primary health care than uninsured Papuan (AOR 1.513; 95% CI 1.393–1.644).

Table 2 shows all control variables also found significant concerning primary health care in the Papua region, Indonesia. Papuans in Papua Province are more likely to

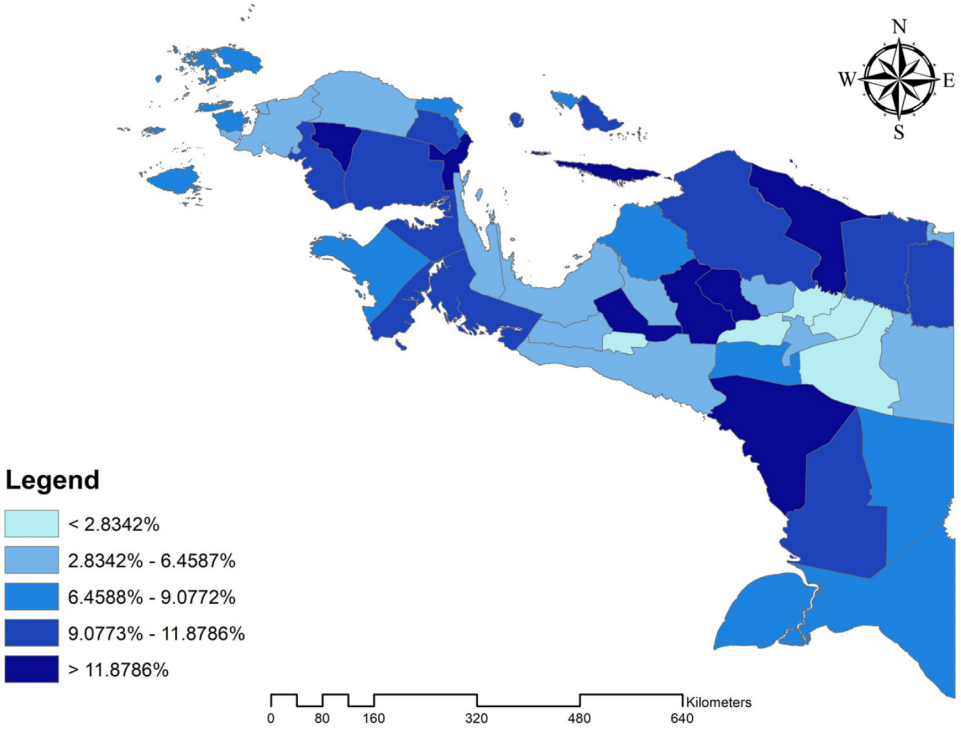

Figure 1. Distribution map of primary health care utilization by the district/city in Papua region, Indonesia, 2018.

use primary health care than West Papua Province. In addition, Papuans living in urban areas were less likely to use primary health care than Papuans in rural areas.

The study indicates six demographic characteristics of primary health care utilization in the Papua region: age group, gender, marital status, education level, employment status, and wealth status.

Finally, based on travel time to primary health care, Papuans with a travel time of 10 minutes or less were 1.2 times more likely to utilize primary health care than Papuans with a travel time of more than 10 min (AOR 1.211; 95% CI 1.199–1.223).

Discussion

The study results indicate that health insurance is related to primary health care in the Papua region, Indonesia. Health insurance has contributed to improving primary health care in the Papua region of Indonesia. Primary health care addresses the health needs of all patients at the community level, integrating care, prevention, promotion, and health education.[16] Community involvement in health care is critical to achieving universal health coverage and health for all because, in practice, care primary health begins in the household and community.[17] Universal health coverage is primarily financing, and primary health care is about the proper care at the right time to ensure health.[18] In addition to being related to primary health care, NHI in Indonesia is also associated with reducing out-of-pocket deliveries and the risk of catastrophic delivery expenditures.[19] Expanding health insurance coverage by reducing gap sociodemographics maternal health services in Indonesia. However, significant differences in utilization are still existed across regions. The effect of health insurance is more remarkable for the poor and those living in less developed areas, such as Eastern Indonesia and Sulawesi.[13]

Furthermore, the study found that government-run insurance has a significant role compared to privately managed insurance. Government-run insurance also has a stronger role than a combination of the two types. Government-managed insurance is administered nationally with the principles of social insurance and equity principles. The direction of social insurance includes cooperation between rich and poor, healthy and sick, and high and low risk. The equity principle is equality in obtaining services according to medical needs, which are not related to the number of contributions that have been paid.[20,21]

The Indonesian government has chosen the universal health coverage (UHC) model as one of the social security instruments to increase public access to health services. The government provides UHC through the NHI system. Based on Law Number 40 of 2004 on the National Social Security System, NHI is mandatory for everyone. The NHI, which the government initiated, has a broad benefits package, including outpatient and inpatient care. Furthermore, the government-run NHI has good portability; participants in an emergency can access health care facilities in any region in Indonesia.[21,22]

The success of health insurance managed by the Indonesian government cannot be separated from the central government's

Table 1. Descriptive Statistic Health Insurance Ownership and Respondents Characteristics in the Papua Region, Indonesia, 2018 (n = 17,879).

Characteristics	Health Insurance Ownership				*p*-value
	Uninsured (n = 2,661)	Government-run (n = 14,925)	Private-run (n = 187)	Government-run and Private-run (n = 106)	
Primary Health Care Utilization					< 0.001
Unutilized	97.1%	91.3%	99.7%	96.5%	
Utilized	2.9%	8.7%	0.3%	3.5%	
Province					< 0.001
West Papua	30.0%	20.5%	16.2%	31.0%	
Papua	70.0%	79.5%	83.8%	69.0%	
Type of residence					< 0.001
Urban	45.8%	28.5%	51.8%	59.9%	
Rural	54.2%	71.5%	48.2%	40.1%	
Age group					< 0.001
≤ 17 years	7.3%	6.3%	6.0%	1.1%	
18–64 years	90.7%	91.1%	93.2%	96.9%	
≥ 65 year	2.0%	2.6%	0.8%	2.0%	
Gender					< 0.001
Male	53.0%	52.4%	55.9%	62.2%	
Female	47.0%	47.6%	44.1%	37.8%	
Marital status					< 0.001
Never in union	24.6%	18.9%	20.6%	10.4%	
Married	70.4%	75.1%	76.4%	89.6%	
Divorced/Widowed	5.0%	6.0%	3.0%	0.0%	
Education level					< 0.001
No education	13.5%	18.9%	1.2%	0.6%	
Primary	50.1%	46.9%	27.4%	22.1%	
Secondary	30.4%	24.5%	54.0%	47.2%	
Higher	5.9%	9.7%	17.5%	30.1%	
Employment status					< 0.001
Unemployed	33.6%	31.8%	28.6%	31.7%	
Employed	66.4%	68.2%	71.4%	68.3%	
Wealth status					< 0.001
Poorest	22.2%	22.7%	0.8%	9.6%	
Poorer	10.8%	11.3%	3.5%	10.1%	
Middle	10.7%	13.3%	4.7%	9.6%	
Richer	18.9%	19.6%	11.7%	10.5%	
Richest	37.3%	33.1%	79.2%	60.3%	
Travel time					< 0.001
≤ 10 min	46.8%	35.6%	51.6%	52.5%	
> 10 min	53.2%	64.4%	48.4%	47.5%	

policy on the NHI financing source plan. This success is also inseparable from the involvement of local governments (province/city/regency) and the role of the private sector. The central government provides contribution assistance to the poor. Meanwhile, several regional governments have contributed to the poor and near-poor areas, which central government assistance has not covered. Moreover, the private sector, especially corporations, includes and bears the costs of their employees' participation.[21,22]

The government not only regulates the Social Security Administering Agency as the operator of the NHI, but also controls the National Social Security Council, which is responsible for monitoring and evaluating the implementation of the NHI. Through the National Social Security Council, the government also promotes community involvement in the plan's design, management, and supervision.[22–24]

Studies in China state that the Chinese government also channeled financial resources for health insurance. The Chinese government's financial support in the form of health insurance covers the central, provincial, city, and district levels.[25] Health insurance in Vietnam is in the form of Compulsory Health Insurance, Voluntary Health Insurance, Heavily Subsidized Health Insurance, and Health Care Fund for the Poor.[25,26] The Philippines has PhilHealth, the Philippines'

Table 2. The Result of Binary Logistic Regression of Primary Health Care Utilization in the Papua Region, Indonesia, 2018 (n = 17,879).

	Primary Health Care Utilization			
			95% CI	
Predictor	*p*-value	AOR	Lower Bound	Upper Bound
Insurance: Uninsured	-	-	-	-
Insurance: Government-run	<0.001	3.081	3.026	3.137
Insurance: Private-run	<0.001	0.133	0.109	0.164
Insurance: Government-run and Private-run	<0.001	1.513	1.393	1.644
Province: West Papua	<0.001	1.246	1.232	1.259
Province: Papua	-	-	-	-
Residence: Urban	<0.001	0.561	0.554	0.569
Residence: Rural	-	-	-	-
Age: ≤ 17 years	-	-	-	-
Age: 18–64 years	<0.001	1.058	1.032	1.085
Age: ≥ 65 year	<0.001	1.995	1.931	2.061
Gender: Male	<0.001	0.926	0.917	0.934
Gender: Female	-	-	-	-
Marital: Never in union	-	-	-	-
Marital: Married/Living with partner	<0.001	1.650	1.623	1.677
Marital: Divorced/ Widowed	<0.001	2.180	2.131	2.229
Education: No Education	-	-	-	-
Education: Primary	<0.001	1.168	1.155	1.182
Education: Secondary	<0.001	0.912	0.898	0.926
Education: Higher	<0.001	0.657	0.643	0.672
Employment: Unemployed	<0.001	1.102	1.090	1.114
Employment: Employed	-	-	-	-
Wealth: Poorest	-	-	-	-
Wealth: Poorer	<0.001	0.821	0.808	0.833
Wealth: Middle	<0.001	0.909	0.896	0.923
Wealth: Richer	<0.001	0.749	0.738	0.759
Wealth: Richest	<0.001	0.907	0.896	0.918
Travel time: ≤ 10 min	<0.001	1.211	1.199	1.223
Travel time: > 10 min	-	-	-	-

national health insurance company. PhilHealth's share in total health spending is only 14 percent, the quality of management and provider costs is still insufficient, and financial protection for PhilHealth members is still low.[27] In India, overall health insurance coverage reaches 20 percent.[28] In contrast, the entire population of Mongolia has free access to primary health care that the government fully funds.[29]

So far, primary health services in various regions in Indonesia still have several challenges. In a qualitative study in the Central Java region of Indonesia, most primary care physicians were dissatisfied with aspects of the NHI system. These aspects include the referral system, NHI system health service standards, NHI system programs, performance evaluation and payment for performance, patient relations, and workload.[30] Meanwhile, a study in Yogyakarta also found that participants of the NHI revealed a lower level of trust in primary care physicians compared to physicians in hospital and specialist care. Access to care at primary care clinics is often complicated by long waiting times and short opening hours. NHI participants also reported concerns that current NHI regulations could limit their ability to access guaranteed hospital services in the past.[31] The views and experiences of Indonesian general practitioners practicing in primary care in implementing NHI show that although NHI improves patient access to health services, many general practitioners in Indonesia experience challenging practices, limited clinical resources, and extensive administration in primary care.[32,33]

Meanwhile, this study informs two variables related to residence and utilization of primary health services in the Papua region, Indonesia: province and type of residence. According to Statistics data in 2017, about 79.68 percent of villages in the Papua region are located in mountainous areas. Health care was difficult to access. About 70 percent of the villages located in the mountains are isolated from transportation access. The slope of the province of Papua, 43.3 percent of the area, occupies a very steep slope position. Building a land transportation network is very difficult and requires a higher cost than in other regions in Indonesia. The diversity of geographical conditions in the district/city area is one of the obstacles to optimally providing public services to all corners of the area.[34]

The study shows six demographic characteristics related to the utilization of primary health care in the Papua region: age group, gender, marital status, education level, employment status, and wealth status. Papuans in rural areas and those age 65 and older use primary health care more often than other groups. Age-friendly facilities should also support primary care facilities for those aged 65 and older. A study in Dubai stated that aspects of primary health services for the elderly, including building design, signage, access to the Puskesmas, walking assistance features, wheelchairs, handrails, and property, must follow the needs of the elderly.[35] In addition, older adults in South Africa report communication gaps and frustration with primary health care because they feel unheard and neglected and feel that access to health services is difficult and unreliable.[36]

The population of Papua has more males than females, but more women utilize essential health services. A man who feels that his condition is healthy will be less likely to seek health services than a woman.[37] People divorced/widowed in Papua use primary health care more often than other groups. The study results support the study in Malaysia, which states that they are single/divorced/widowed are more likely to use the health services.[38] Someone who previously had a partner and later became single tends to be more psychologically vulnerable.[39]

Education has a positive effect on the utilization of health services.[40] Several studies report that low education is a barrier to achieving better output in the health sector.[41,42] It was further noted that the level of education had a statistically significant relationship with the probability of finding health services and the level of services used.[43]

Papuans who do not work and are the poorest are more likely to use primary health care than other groups. In 2017, the number of underdeveloped villages in the Papua region was 88.87 percent. By region, the poorest areas are in rural areas. In 2017, the poor population in the Papua region was 27.76 percent.[34] These results support studies in Iran and Ethiopia, which state that income/monthly income and place of residence have a statistically significant relationship with the probability of seeking health services and levels of services used.[43,44] Individual income levels and employment status affect the utilization of health care services in the Calabar community.[45]

Finally, Papuans with a travel time of 10 min or less have a higher chance of utilizing primary health services than Papuans with a travel time of more than 10 min. These results indicate that the speed of access influences the utilization of primary health care for residents of the Papua region of Indonesia. These results support a study in rural northwestern Burkina Faso, where primary health care visit rates decreased with distance from the clinic.[46] A survey of global travel-time maps makes travel-time maps without access to health care. The study found that only 8.9 percent of the global population cannot reach a health service within an hour if they have access to a motorized vehicle. Meanwhile, 43.3 percent cannot get to a health facility on foot within an hour.[47] Thus, distance is a difficulty in accessing primary health services. The shorter the travel distance, the easier it is to access direct health services.

Strength and Limitation

The study investigated a large amount of data to represent the Papua region. On the other hand, the study evaluates secondary data; thus, the accepted variables limit the factors examined. Other factors associated with primary health care utilization discovered in previous studies, such as transport costs and disease type, cannot be investigated.[48–50]

Conclusion

Based on the results, the study concluded that government-run insurance increases the chance of primary health care utilization in the Papua region, Indonesia. Government-run insurance has the most prominent role compared to other health insurance categories.

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Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

The National Ethics Committee approved the 2018 Indonesian Basic Health Survey (LB.02.01/2/KE.024/2018). The survey removed the identity of all respondents from the dataset. Respondents have provided written approval for their involvement in the study. The author has obtained permission to use data for this study through the website: https://www.litbang.kemkes.go.id/layanan-permintaan-data-riset/.

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References

1. Fidella R. The factors affecting HDI Indonesia. *Int J Sci Res Sci Eng Technol*. 2021;8(6):160–167.
2. Ipa M, Widawati M, Laksono AD, Kusrini I, Dhewantara PW. Variation of preventive practices and its association with malaria infection in eastern Indonesia: Findings from community-based survey. *PLoS One*. 2020;15(5):e0232909.
3. Arisman. Determinant of human development index in ASEAN countries. *J Ilmu Ekon*. 2018;7(1):113–122.
4. National Institute of Health Research and Development of the Ministry of Health of the Republic of Indonesia. The 2018 Public Health Development Index [Internet]. Jakarta; 2019. Available from: https://www.litbang.kemkes.go.id/buku-ipkm-2018/
5. Wulandari RD, Laksono AD, Prasetyo YB, Nandini N. Socioeconomic disparities in hospital utilization among female workers in Indonesia: A cross-sectional study. *J Prim Care Community Health*. 2022;I3(2):1–7.
6. Mahmudiono T, Laksono AD. Disparity in the hospitals utilization among regions in Indonesia. *Open Access Maced J Med Sci*. 2021;9(E):1461–1466.
7. Nugraheni WP, Hidayat B, Nadjib M, et al. Impact evaluation of national health insurance toward access hospital inpatient care in Indonesia. *Indian J Public Heal Res Dev*. 2018; 9(2):196–200.
8. Laksono AD, Wulandari RD, Soedirham O. Regional disparities of health center utilization in rural Indonesia. *Malaysian J Public Heal Med*. 2019;19(1):158–166.
9. Nugraheni WP, Kusuma RK. Analysis of outpatient health service patterns in the first year of implementation of the national health insurance program (Analisis Pola Layanan Kesehatan Rawat Jalan pada Tahun Pertama Implementasi Program Jaminan Kesehatan Nasional). *Media Litbangkes*. 2017;27(1):9–16.

10. Wulandari RD, Laksono AD, Matahari R. The effects of health insurance on maternity care in health services in Indonesia. *Int J Innov Creat Chang*. 2020;14(2):478–497.
11. Laksono ADAD, Wulandari RDRD, Rukmini R. The determinant of healthcare childbirth among young people in Indonesia. *J Public Health Res*. 2021;10(1):28–34.
12. Lin Y, Chu C, Chen Q, Xiao J, Wan C. Factors influencing utilization of primary health care by elderly internal migrants in China: The role of social contacts. *BMC Public Health*. 2020;20(1):1–10.
13. Anindya K, Lee JT, McPake B, Wilopo SA, Millett C, Carvalho N. Impact of Indonesia's national health insurance scheme on inequality in access to maternal health services: A propensity score matched analysis. *J Glob Health*. 2020;10(1):1–12.
14. National Institute of Health Research and Development of the Ministry of Health of the Republic of Indonesia. The 2018 Indonesian Basic Health Survey [Internet]. Jakarta; 2018 [cited 2021 Oct 7]. p. 99. Available from: http://labdata.litbang.kemkes.go.id/images/download/laporan/RKD/2018/Laporan_Nasional_RKD2018_FINAL.pdf
15. Wulandari RD, Qomarrudin MB, Supriyanto S, Laksono AD. Socioeconomic disparities in hospital utilization among elderly people in Indonesia. *Indian J Public Heal Res Dev*. 2019;10(11):1800–1804.
16. Van Weel C, Kidd MR. Why strengthening primary health care is essential to achieving universal health coverage. *Cmaj*. 2018;190(15):E463–E466.
17. Sacks E, Schleiff M, Were M, Chowdhury AM, Perry HB. Communities, universal health coverage and primary health care. *Bull World Health Organ*. 2020;98(11):773–780.
18. Walker C, Peterson CL. Universal health coverage and primary health care: Their place in people's health. *J Eval Clin Pract*. 2020;27(5):1027–1032.
19. Nugraheni WP, Mubasyiroh R, Hartono RK. The influence of Jaminan Kesehatan Nasional (JKN) on the cost of delivery services in Indonesia. *PLoS One*. 2020;15(7):1–16.
20. Kemenkes. Buku Panduan Jaminan Kesehatan Nasional (JKN) Bagi Populasi Kunci. Www.Jkn.Kemkes.Go.Id. Jakarta Indonesia; 2016. 3–4 p.
21. Laksono AD, Wulandari RD, Zuardin Z, Nopianto N. The disparities in health insurance ownership of hospital-based birth deliveries in eastern Indonesia. *BMC Health Serv Res*. 2021;21(1):1261.
22. Nasution SK, Mahendradhata Y, Trisnantoro L. Can a national health insurance policy increase equity in the utilization of skilled birth attendants in Indonesia? A secondary analysis of the 2012 to 2016 national socio-economic survey of Indonesia. *Asia-Pacific J Public Heal*. 2020;32(1):19–26.
23. Nugraheni WP, Hikmatuz Zahroh A, Hartomo RK, Nugraha RR, Chun CB. National health insurance deficit in Indonesia: Identification of causes and solutions for resolution. *Glob J Health Sci*. 2020;12(13):58–66.
24. Laksono AD, Wulandari RD, Matahari R. The determinant of health insurance ownership among pregnant women in Indonesia. *BMC Public Health*. 2021;281(1):1538.
25. Mao W, Tang Y, Tran T, Pender M, Khanh PN, Tang S. Advancing universal health coverage in China and Vietnam: Lessons for other countries. *BMC Public Health*. 2020;20(1):1–9.
26. Thuong NTT, Huy TQ, Tai DA, Kien TN. Impact of health insurance on health care utilisation and out-of-pocket health expenditure in Vietnam. *Biomed Res Int*. 2020;2020(Aug):1–16.
27. Obermann K, Jowett M, Kwon S. The role of national health insurance for achieving UHC in the Philippines: a mixed methods analysis. *Glob Health Action*. 2018;11(1):1–16.
28. Prinja S, Bahuguna P, Gupta I, Chowdhury S, Trivedi M. Role of insurance in determining utilization of healthcare and financial risk protection in India. *PLoS One*. 2019;14(2):1–16.
29. Dorjdagva J, Batbaatar E, Svensson M, Dorjsuren B, Batmunkh B, Kauhanen J. Free and universal, but unequal utilization of primary health care in the rural and urban areas of Mongolia. *Int J Equity Health*. 2017;16(1):1–9.
30. Maharani C, Rahayu SR, Marx M, Loukanova S. The national health insurance system of Indonesia and primary care physicians' job satisfaction: A prospective qualitative study. *Fam Pract*. 2022;39(1):112–124.
31. Ekawati FM, Claramita M, Hort K, Furler J, Licqurish S, Gunn J. Patients' experience of using primary care services in the context of Indonesian universal health coverage reforms. *Asia Pac Fam Med*. 2017;16(1):1–10.
32. Ekawati FM, Claramita M. Indonesian General Practitioners' experience of practicing in primary care under the implementation of universal health coverage scheme (JKN). *J Prim Care Community Heal*. 2021;12:1–12.
33. Megatsari H, Laksono AD, Ridlo IA, Yoto M, Azizah AN. Community perspective about health services access. *Bull Heal Syst Res*. 2018;21:247–253.
34. Pemerintah Provinsi Papua. RPJM Papua 2018-2023. 2017. 295 p.
35. Abdellatif TMF, Al JA, Taryam MMO, et al. Dubai primary health care centers conformation to WHO age-friendly primary healthcare recommendations. *Adv Aging Res*. 2017;06(06):83–92.
36. Motsohi T, Namane M, Anele AC, Abbas M, Kalula SZ. Older persons' experience with health care at two primary level clinics in Cape Town, South Africa: A qualitative assessment. *BJGP Open*. 2020;4(3):1–9.
37. Handayani PW, Dartanto T, Moeis FR, et al. The regional and referral compliance of online healthcare systems by Indonesia national health insurance agency and health-seeking behavior in Indonesia. *Heliyon*. 2021;7(9):e08068.
38. Yunus SZSA, Puteh SEW, Ali AM, Daud F. The COVID impact to public healthcare utilization among urban low-income subsidized community in klang valley Malaysia. *Heal Serv Res Manag Epidemiol*. 2021;8:1–9.
39. Megatsari H, Laksono AD, Herwanto YT, et al. Does husband/partner matter in reduce women's risk of worries?: Study of psychosocial burden of COVID-19 in Indonesia. *Indian J Forensic Med Toxicol*. 2021;15(1):1101–1106.
40. Agyemang S, Asibey BO. Effect of education on health care utilization in rural Ghana: The case of selected communities in the Bekwai municipality. *KNUST J Geogr Dev*. 2018;2(1):114–127.
41. Laksono AD, Wulandari RD. The barrier to maternity care in rural Indonesia. *J Public Heal*. 2022;30(1):135–140.

42. Rohmah N, Yusuf A, Hargono R, et al. Determinants of teenage pregnancy in Indonesia. *Indian J Forensic Med Toxicol*. 2020;14(3):2080–2085.
43. Niyas M, Karimi M, Kavosi Z. Utilization of primary health care services in rural and urban areas in Shiraz. *Shiraz E Med J*. 2018;19(10).
44. Kim D, Birmeta K, Kim C, et al. Determinants of primary health care utilization in Ethiopia. *Inst Poverty Alleviation Int Dev*. 2016;25s(May 2019):269–293.
45. Archibong EP, Bassey GE, Isokon BE, Eneji R. Income level and healthcare utilization in Calabar metropolis of cross river state, Nigeria. *Heliyon*. 2020;6(9):e04983.
46. Oldenburg CE, Sié A, Ouattara M, et al. Distance to primary care facilities and healthcare utilization for preschool children in rural northwestern Burkina Faso: Results from a surveillance cohort. *BMC Health Serv Res*. 2021;21(1):1–8.
47. Weiss DJ, Nelson A, Gligorić K, et al. Global maps of travel time to healthcare facilities. *Nat Med*. 2020;26:1835–1838.
48. Laksono AD, Wulandari RD, Efendi F. Determinants of hospital utilisation among urban poor societies in Indonesia. *Int J Innov Creat Chang*. 2020;12(9):375–387.
49. Laksono AD, Wulandari RD. Predictors of hospital utilization among papuans in Indonesia. *Indian J Forensic Med Toxicol*. 2020;14(2):2319–2324.
50. Wei Y, Yu H, Geng J, et al. Hospital efficiency and utilization of high-technology medical equipment: A panel data analysis. *Heal Policy Technol*. 2018;7(1):65–72.

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GERMAS

PERSETUJUAN AMANDEMEN PROTOKOL

PROTOCOL AMENDMENT APPROVAL

No. : LB.02.01/2/KE.024/2018

Ref. : Persetujuan/Approval no : LB.02.01/2/KE.267/2017 tanggal 28 Juli 2017

Komisi Etik Penelitian Kesehatan, Badan Penelitian dan Pengembangan Kesehatan (KEPK-BPPK) dengan berdasarkan Deklarasi Helsinki, telah melakukan telaah, pembahasan dan penilaian melalui proses **expedited.**
memutuskan amandemen protokol penelitian yang berjudul :
Health Research Ethics Committee, National Institute of Health Research and Development (HREC-NIHRD), in accordance with Helsinki Declaration, has conducted a thorough expedited review of research protocol amendment entitled :

"Riset Kesehatan Dasar (RISKESDAS) 2017-2018"

yang akan mengikutsertakan manusia sebagai partisipan/subyek penelitian; dengan Ketua Pelaksana/Peneliti Utama :
in which will involve human participant(s), with Principal Investigator :

drg. Agus Suprapto, M.Kes.

dapat diberikan persetujuan amandemen sesuai surat pengantar no. LB.02.03/1/406/2018 tanggal 16 Januari 2018. Masa berlaku surat persetujuan etik ini adalah :
*has hereby declared the amendment is **approved** for implementation. This letter is valid from/to*

24 Januari 2018 s/d **28 Juli 2018**

Jika ada perubahan protokol (amandemen) dan/atau perpanjangan penelitian, Ketua Pelaksana/Peneliti Utama harus mengajukan kembali protokol versi terbaru untuk kaji etik penelitian. Pada akhir penelitian, laporan pelaksanaan penelitian juga harus diserahkan kepada KEPK-BPPK.
Should there be any modification (amendment) and/or extention of the study, the Principal Investigator is required to resubmit the latest version of protocol for approval. The final summary reports should also be submitted to HREC-NIHRD.

Chair of HREC-NIHRD :

Jakarta, 24 Januari 2018
Ketua
Komisi Etik Penelitian Kesehatan
Badan Litbang Kesehatan,

Prof. Dr. M. Sudomo