

Utilization of Health Insurance for Outpatient in the Community: A Meta-Analysis

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ABSTRACT

Background: Health insurance is the answer to the uncertainty of the occurrence of illness and the need for health services. To ensure that the need for health services can be adequately financed, a person or small group of people transfers risk to another party called an insurer/insurer, or an insurance agency.

Subjects and Method: This was a systematic review and meta-analysis conducted with PRISMA flow diagrams. Search articles through journal databases including: Google Scholar, MEDLINE/ PubMed, Science Direct and Spinger Link by selecting articles published in 2000-2021 The keywords used are “health care” AND “outpatient” OR “insurance” AND “private health insurance” AND “outpatient” OR “health insurance” AND “private health insurance” AND “utilization of public health care” AND “inpatient service” AND “outpatient service” AND “logistic regression aOR”. The inclusion criteria were full paper articles with retrospective study cohort research methods, the analysis used was multivariate with adjusted Odds Ratio (aOR), the intervention provided was health insurance, the research subjects were private health insurance users. Eligible articles were analyzed using the RevMan 5.3 application.

Results: A meta-analysis of 9 articles showed that people with private health insurance were 1.98 times more likely to use outpatient services than those without health insurance, and the effect was statistically significant (aOR = 1.98; 95% CI = 1.39 to 2.81; p<0.001).

Conclusion: The use of private health insurance has a statistically significant effect in increasing outpatient use.

Keywords: health insurance, private health insurance, outpatient, meta analysis.

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BACKGROUND

The use of health services by a person is the cause of the need for pain or discomfort that is felt medically. With the utilization of health services, it causes expenditures for health care costs. The cost of health services which is increasing over time is closely related to socio-economic conditions, where

an individual with wealth above the average can finance health services, but individuals who lack and do not have health insurance cannot finance health services (Susetyo, 2019).

Insurance is the answer to the nature of uncertainty (uncertain) of the occurrence of illness suffered and the need for health

services. To ensure that the need for health services can be adequately financed, a person or small group of people transfers risk to another party called an insurer/insurer, or an insurance agency (You et al, 2018).

Health insurance is generally known by everyone to increase the use of medical services by policyholders. As insurance lowers the price of medical services for policyholders, it encourages medical utilization (You et al, 2018).

However, in practice, quite a lot of problems related to health insurance are reported by consumers to the OJK consumer service. The top five topics of health insurance problems that often occur are claim difficulties, claim disbursement, disbursement refusal, pembatalan or policy closure, and premium refund requests. If analyzed further, the potential for vulnerabilities which can then develop into the problems mentioned above can occur at every stage of closing (purchasing) health insurance until the completion of the policy. At each of these stages, apart from insurance companies and consumers, there are other parties that can be involved, including insurance agents and brokers (Susetyo, 2019).

The use of private health insurance will contribute to the current rapid increase in health, induce the fragmentation of the health care system, and exacerbate social inequality in society by increasing the gap in the utilization of any health service between opposite ends of the socioeconomic spectrum (Janeway et al, 2020).

One of the critical controversies over private health insurance is its potential impact on health service utilization. If individuals with private health insurance increase the utilization of health services, the result will be inequality in health care (Leach et al, 2015).

The Central Statistics Agency (BPS) reported that 68.36% of Indonesia's population had health insurance in 2021, this was down 0.93% from 2020. If you look at the trend, the population with health insurance has experienced an increase. A total of 59.41% of the population had health insurance in 2017. This percentage increased to 64.1% in 2018 and continued to increase to 65.88% in 2019. Then, during the pandemic, it increased along with increasing public awareness of health. The percentage of the population with health insurance increased by 3.41 points to 69.29% in 2020 (BPS, 2021).

The need for more awareness from the community to achieve a better health status must be balanced with the participation of government support in encouraging people to pay more attention to basic health needs. Therefore, researchers are interested in studying the effect of using health insurance on increasing users of health services through several previously published systematic review articles. The data obtained will be analyzed by meta-analysis, meta-analysis is an epidemiological study design to systematically assess previous studies and integrate the findings obtained to obtain quantitative conclusions. Meta-analysis was carried out in an effort to obtain comprehensive results by synthesizing the results of primary research studies involving a large number of samples to determine the effectiveness of using insurance to increase service users compared to not using insurance.

SUBJECTS AND METHOD

1. Study Design

This was a systematic review study design and meta analysis. It also uses the PRISMA flow chart guidelines. Article searches were carried out using journal databases including: Google Scholar, MEDLINE/ PubMed, Science Direct, and Spinger Link

articles in vulnerable years 2000-2021 with the keywords "health care" AND "outpatient" OR "insurance" AND "private health insurance" AND "outpatient" OR "health insurance" AND "private health insurance" AND "utilization of public health care" AND "inpatient service" AND "outpatient service" AND "logistic regression aOR".

2. Inclusion Criteria

This study has inclusion criteria, including: Full paper article with a retrospective cohort study design. The analysis used logistic regression with adjusted Odds Ratio. The study subjects were users of private health insurance.

3. Exclusion Criteria

This study has exclusion criteria, including: primary studies that have been meta-analyzed, general insurance, and articles published before 2000.

4. Operational Definition

The formulation of the research problem was carried out by considering the eligibility criteria defined using the PICO, namely, Population: utilization of outpatient service, Intervention: private health insurance, Comparison: not having health insurance and Outcome: improvement of outpatient services.

Outpatient services are services for people who enter the hospital for the purposes of observation, diagnosis, treatment, medical rehabilitation and other health services without staying in an inpatient room.

Private health insurance is health insurance that will contribute to the current rapid increase in health spending, induce fragmentation of the health care system, and exacerbate social inequality by increasing disparities in health service utilization between opposite ends of the socioeconomic

spectrum.

5. Instrument

Assessment of the quality of research articles is carried out using the Critical Appraisal Checklist for Case Control (CEBM, 2005).

6. Data Analysis

Data analysis in this study was carried out using the Review Manager application (RevMan 5.3). The data were analyzed based on variations between studies by determining the use of the fixed effects analysis model. This research was conducted using I² to quantify the dispersion. The results of the data analysis are in the form of effect size values for the heterogeneity of the study which later the results of the analyzed data will be interpreted in the form of forest plots and funnel plots.

RESULTS

Research from primary studies related to the use of health insurance to increase outpatient use by the community contained 9 articles originating from 2 continents, namely, 5 studies from the North American continent and 4 studies from the Asian continent.

The search for articles was carried out using a database based on the PRISMA flow diagram, which can be seen in Figure 1. The study quality assessment was carried out qualitatively and quantitatively. Assessment of research quality using the Critical Appraisal Checklist for Case Control Study (CEBM, 2005). In Table 1. Each of the 11 questions is answered with a choice of answers: if Yes, the value is 1 and No, the value is 0. After the study quality assessment was carried out, a total of 17 articles included in the quantitative synthesis process of the meta-analysis were analyzed using RevMan 5.3.

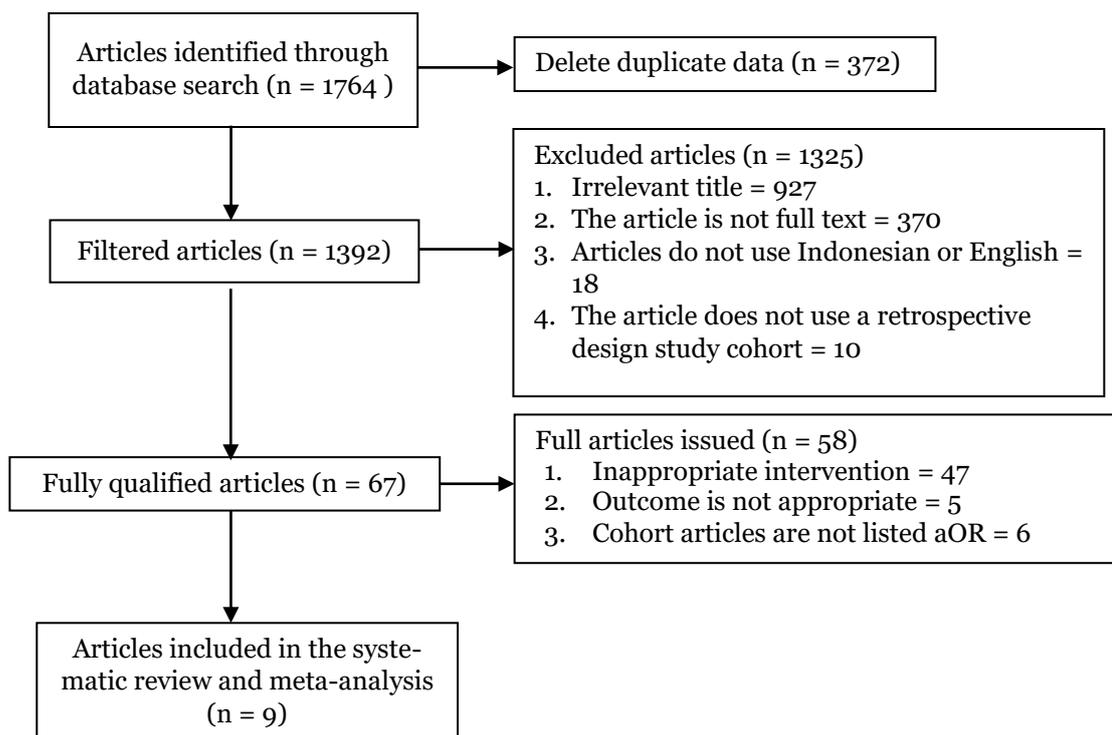


Figure 1. PRISMA flow diagram

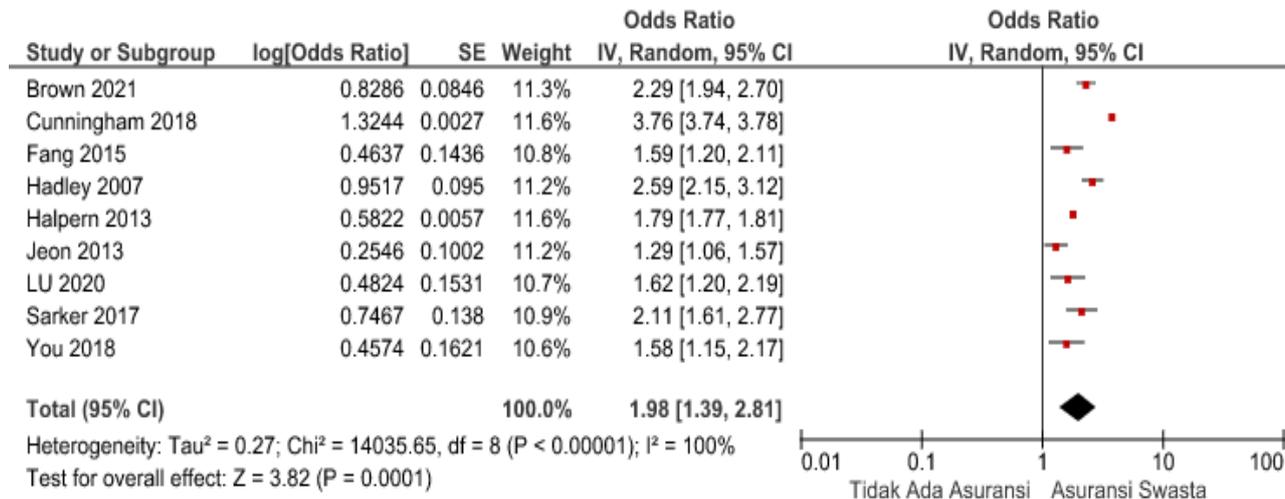


Figure 2. Forest plot of outpatient use of private health insurance

The forest plot in Figure 2 shows the effect of health insurance on outpatient use by the community. People who have health insurance are 1.98 times more likely to use outpatient services than those who do not have health insurance, and the effect is statistically significant (aOR = 1.98; 95% CI = 1.39 to 2.81; p<0.001).

The forest plots also showed a very high heterogeneity in the effect estimates in all the primary studies performed in the meta-analysis I²= 100%, thus the synthesis of the overall effect estimates was carried out using a random effects approach.

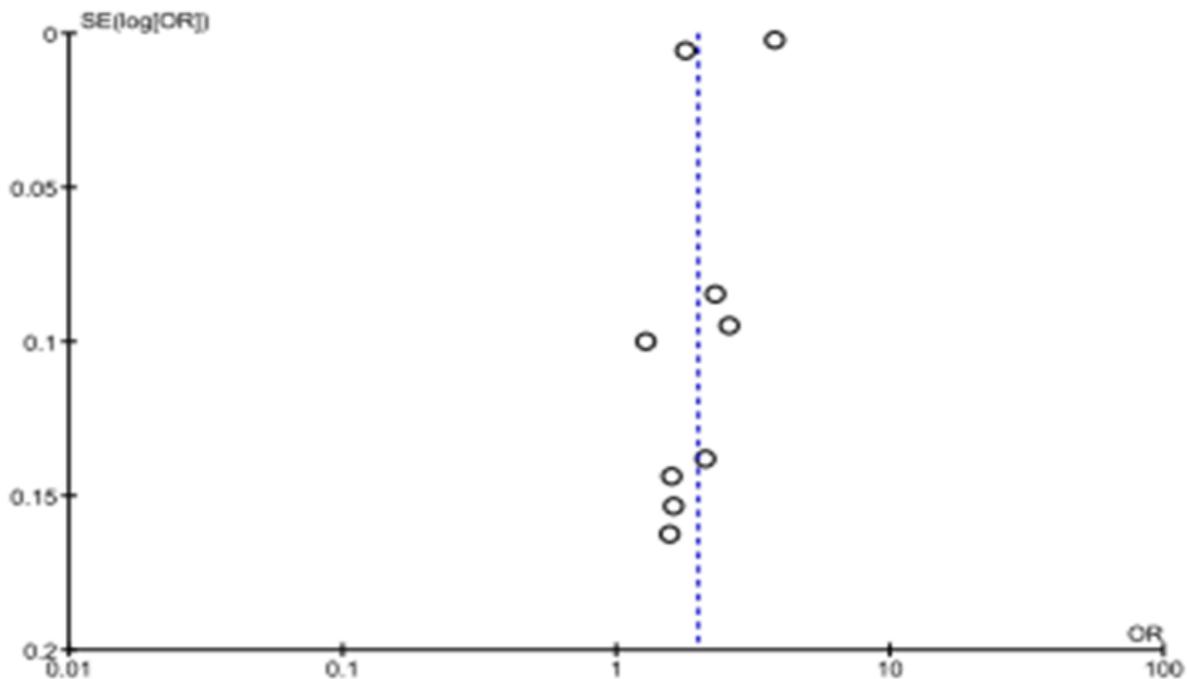


Figure 3 Funnel plot of the use of private health insurance on outpatients

The funnel plot in Figure 3 shows a more or less symmetrical distribution of the estimated effects on the right and left of the estimated average vertical line. Thus the funnel plot does not show any publication bias.

DISCUSSION

Of the 9 research articles, a retrospective cohort study design, showed the results of the forest plot that the use of health insurance could increase the use of outpatient services by 1.98 times compared to not using insurance significantly (aOR= 1.98; 95% CI = 1.39-2.81).

This study is in line with Halpern et al (2013), that explained that one of the analyzes related to insurance with the use of medical care services showed that uninsured individuals tended to have far fewer out-

patient neurologist visits than they did. who have private insurance. The analysis of the data in this study therefore supports the view that the use of health insurance can increase outpatient visits.

This statement is in line with Jeon et al. (2013), that the opportunity to use health services both outpatient and inpatient is higher for consumers (patients) using private insurance. In addition, private insurance also has an impact on consumer initiation in the use of health services, and health insurance increases the possibility of consumers seeking and using health services, especially outpatient services. So it can also be said that consumers (patients) prefer outpatient services to inpatient services, in other words the elasticity of demand is higher for outpatient services than for inpatient services.

Table 1. Assessment of Research Quality on the Use of Health Insurance in Outpatient Care by the Community.

No.	Questions	Jeon et al (2013)	Cunningham et al (2018)	Halpern et al (2013)	Sarkar et al (2017)	You et al (2015)	Hadley et al (2007)	Lu et al (2020)	Fang et al (2015)	Brown et al (2021)
		Score	Score	Score	Score	Score	Score	Score	Score	Score
1.	Does this research clearly address the focused problem?	1	1	1	1	1	1	1	1	1
2.	Was the cohort recruited in an acceptable way?	1	1	1	1	1	1	1	1	1
3.	Is the exposure accurately measured to minimize bias?	1	1	1	1	1	1	1	1	1
4.	Are the results accurate? measured to minimize bias?	1	1	1	1	1	1	1	1	1
5.	Have they taken confounding factors into account in the design and/or analysis?	1	1	0	1	1	1	1	1	1
6.	Was the follow-up of the study complete enough?	1	1	1	0	1	1	1	1	0
7.	Was the follow-up of the study complete enough?	1	1	0	1	1	1	1	1	1
8.	What are the results of this study?	1	1	1	1	1	1	1	1	1
9.	How precise is the result?	1	1	1	1	1	1	1	1	1
10.	Do you believe in the results?	1	1	1	1	1	1	1	1	1
11.	Can the results be applied to the local population?	1	0	1	1	1	1	1	1	1
12.	Are the results of this study consistent with other available evidence?	1	1	1	1	1	1	1	1	1
Total		12	11	10	11	12	12	12	12	11

This is in line with the opinion in You et al. (2018), that the use of private health insurance should be encouraged to ease the financial burden on patients and the social health care system. So that this can increase the use of insurance for the use of outpatient services in a medical institution, be it a hospital or other health care place.

According to Cunningham et al. (2013), that the level of purchasing private health insurance is quite high due to awareness of the long-term need for health protection for consumers (patients). In Indonesia, according to data from the Central Statistics Agency (BPS) reports, as many as 68.36% of Indonesia's population have health insurance in 2021, this is down 0.93% from 2020. If you look at the trend, the population who have health insurance has increased. A total of 59.41% of the population had health insurance in 2017. This percentage increased to 64.1% in 2018 and continued to increase to 65.88% in 2019. Then, during the pandemic, it increased along with increasing public awareness of health. The percentage of the population with health insurance increased by 3.41 points to 69.29% in 2020 data from the Central Statistics Agency, 2021 in (Jayana, 2021). So it can be said that the higher the understanding and awareness of the public regarding health insurance, the higher the use of health insurance as a guarantee of health protection in the future.

The choice of health care provider is influenced by a variety of demographic, social, and economic factors. Income level and type of health insurance are the main economic factors. Generally, using a high-level health facility increases the cost of treatment and the individual's financial burden compared to using a primary health facility for the same disease. Therefore, individual economic factors can influence patient selection in medical institutions (Tipir-

neni et al, 2018). In some countries, there is a universal public health insurance system, but it is also possible to subscribe to private health insurance that covers co-pays and services not covered by national health insurance. Because private health insurance covers up to 90% of the patient's share of medical costs, private health insurance insureds have better access to higher-level medical institutions, such as hospitals and tertiary health facilities, than the uninsured (Rice et al. 2014).

Based on You et al. (2018), that health insurance is generally known to increase the use of medical services by policyholders. Because insurance lowers the price of medical services for policyholders, it encourages medical utilization. Evidence that people with private health insurance use medical services more than uninsured people can be observed across health care systems in various countries. A previous study has shown that private health insurance not only results in quantitative growth in the use of medical services, but also influences the choice of insured individual health care providers. In many European countries, private health insurance policyholders are significantly more likely to seek outpatient care than uninsured individuals.

The use of private health insurance will contribute to the current rapid increase in health spending, induce fragmentation of the healthcare system, and exacerbate social inequality by increasing disparities in health care utilization between opposite ends of the socioeconomic spectrum (Haven et al, 2018).

AUTHOR CONTRIBUTION

Sulaiman Putra Nagaring is the main researcher who selects the topic, searches and collects research data. Bhisma Murti and Didik Tamtomo analyzed data and reviewed research documents.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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