(RESEARCH ARTICLE)

The relationship between officer understanding and availability of medicines with the referral number of National Health Insurance (NHI) patients at the Poasia Primary Health Care in Kendari city, southeast Sulawesi province, Indonesia, 2024

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Abstract

Background: The referral ratio of National Health Insurance patients at the Poasia Health Center fluctuated from February to April 2024. Based on initial survey data obtained at the Poasia Health Center, the referral ratio of NHI patients in February was 24.43% and in March it was 27.05%. Then, in April it continued to increase to 29.38%. In addition, there is a gap in the referral ratio of NHI patients from year to year when compared to the Social Health Security Administration Body regulation in 2014, which stipulates that the number of patient referrals at first-level health facilities should not exceed 15% of the total BPJS patient visits.

Methods: This study is a type of quantitative research using *a* cross-sectional *approach*. The sampling technique was carried out using the total sampling method, involving 113 respondents in accordance with the number of population.

Results: The results of the study showed that there was a relationship between the officers' understanding of the function of the health center as *a gatekeeper* (p-value = 0.035) and the availability of medicines (p-value = 0.002) with the referral number at the Poasia Health Center in Kendari City.

Conclusion: There is a relationship between the officers' understanding of the function of the health center as *a gatekeeper* and the availability of medicines and the referral number at the Poasia Health Center in Kendari City in 2024. It is expected that health agencies will further intensify training on referral policies and strengthen the drug management system for health workers to ensure that referrals are made rationally to the effectiveness of efforts to reduce the number of referrals

Keywords: Referrals; Officer understanding, Availability of Medicines, NHI Patients; Health PHC

1. Introduction

Universal Health Coverage (UHC) agreed by the World Health Organization (WHO) in 2014 is a health insurance system designed to ensure that all residents of a country have access to comprehensive health care services. These services include preventive, curative, rehabilitative, promotive, and palliative measures, including modern health services, injury management, and non-communicable diseases, as well as services that support the achievement of the Sustainable Development Goals (SDGs). UHC not only guarantees access to healthcare, but also provides comprehensive financial protection to reduce the burden of healthcare costs for all levels of society   (1) .

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The Government of Indonesia is responsible for protecting the health of all its citizens through the National Health Insurance (NHI) program. This policy is supported by Law No. 24 of 2011 concerning the Social Security Administration Agency (BPJS) which requires the establishment of a legal entity to manage the health insurance program. In its implementation, the government entrusts the provision of health services to three main elements, namely Social Health Security Administration Body, health service providers, and the community. As a concrete step, Social Health Security Administration Body was established as a public company on January 1, 2014 to organize a health insurance program for all Indonesian citizens. Various medical institutions in collaboration with Social Health Security Administration Body are involved in the provision of medical services in NHI. First-Level Health Facilities (PHC) include health centers, clinics, and doctors' practices, while Advanced Referral Health Facilities (ARHF) are type C and type B hospitals that have implemented a tiered referral system. Level 3 health facilities currently include type A Hospitals. NHI Program is one of the strategic policies in supporting the implementation of social development in Indonesia   (2) .

All NHI participants have the right to receive comprehensive health services that are held in stages, effectively and efficiently, by prioritizing the principles of quality control and costs based on medical indications. To ensure the availability of these services, primary health care facilities (PHC) and advanced referral service facilities (ARHF) must implement a referral system. As *the gatekeeper* of the NHI era, PHC is responsible for providing comprehensive and quality basic health services. In the NHI system, health services are provided with a tiered referral system, where each health service provider has clear duties and functions. This system aims to strengthen primary health services as a means of quality and cost control. One of the most important strategies to support quality management and cost efficiency is to increase collaboration between healthcare facilities   (3) .

According to Social Health Security Administration Body data, the number of Indonesian National Health Insurance (NHI) participants reached 69,665,007 people as of April 31, 2024. Of these, the majority of participants, namely 116,171,685 people or around 43.08%, are the group of Contribution Assistance Recipients (PBI) funded by the State Budget (Social Health Security Administration Body, 2024). In addition, the number of referral participants from PHCs in Indonesia currently reaches 12,450,311 people, with a referral ratio of 7.81%. This ratio increased by 1.02% compared to the previous year   (4) .

Southeast Sulawesi is the fifth province in Sulawesi with the highest proportion of NHI participants, with the number of patient visits to PHC in April 2024 as many as 159,380,903 people with an average referral rate of 7.81% dominated by patients at Puskesmas as many as 121,416,753 with a referral ratio of 6.32%.   (4)

Kendari City is one of the cities in Southeast Sulawesi Province that is in the top position in the number of NHI participants in April 2024 with a total of 417,804 people covered by the National Health Insurance (NHI). The Kendari City Government oversees 11 sub-districts, one of which is Poasia District. In Poasia District there is a health center, namely the Poasia Health Center Where, the Poasia Health Center is a health center that has the highest number of visits and referrals compared to several other health centers in Kendari City   (4)   (Kendari City Profile, 2024).   (6) .

Based on preliminary survey data obtained at the Poasia Health Center on August 24, 2024, in February the number of NHI patient visits at the Poasia Health Center was 2906 patients, while the number of referrals for NHI patients to ARHF was 710 patients, so that the referral ratio of NHI patients to ARHF was 24.43% (exceeding the BPJS stipulated standards). In March, the number of visits for NHI patients at the Poasia Health Center was 2817 patients, while the number of referrals for NHI patients to ARHF was 762 patients, so that the referral ratio of NHI patients to ARHF could be obtained as much as 27.05% (exceeding the BPJS stipulated standards). In April, the number of NHI patient visits at the Poasia Health Center was 2444 patients, while the number of referrals for NHI patients to ARHF was 718 patients, so that the ratio of NHI patients to ARHF was 29.38% (exceeding the BPJS stipulated standards).

Based on available data, the referral ratio of NHI patients at the Poasia Health Center shows an increasing trend every month, from 24.43% to 29.38% of referrals. In addition, there is a gap in the ratio of referrals to NHI patients per month when compared to the 2014 Social Health Security Administration Body regulation, which stipulates that the number of patient referrals at first-level health facilities should not exceed 15% of the total visits of BPJS patients. Referral criteria are used to minimize and control the number of patients referred to advanced healthcare facilities. The main goal is to ensure that only patients who meet certain medical criteria are referred to them, so that there are measurable and systematic limitations in the referral process. It also aims to optimize care in primary health facilities and reduce the burden on referral facilities.

Based on initial observations made on Tuesday, September 10, 2024, one of the registration staff at the Poasia Health Center stated that there was an increase in the number of referral patients. This is due to the limited medical equipment and medicines at the Health Center. In addition, many patients directly request to be referred to an Advanced Referral

Health Facility (ARHF). Some NHI patients tend to choose direct referrals to ARHF because the facilities, facilities, and infrastructure at the Poasia Health Center are often considered inadequate, such as the limited medical equipment at the Dental Polyclinic.

Several studies that analyzed the implementation of the referral system in puseksmas with referral ratios above the standard showed that there were various factors related to the increase in the referral number. These factors include limited human resources both in terms of quantity and quality, the absence of Standard Operating Procedures (SOPs), incomplete health facilities and infrastructure, patient medical indications, and the availability of drugs. In addition, the distance factor also plays a role. Many patients are referred directly to ARHF because the health centers they often visit have a closer distance from the hospital   (7) .

Previous research has shown that the high number of referrals from PHC to ARHF is not new and continues. This phenomenon occurs every year depending on the situation and conditions. Therefore, finding the right solution in addressing this problem requires enormous attention from all parties involved in the implementation of the system. From the background description above, the researcher is interested in conducting this study with the title "Factors Related to the Referral Rate of NHI Patients at the Poasia Health Center, Kendari City in 2024".

2. Method

The type of research used is quantitative with *a cross-sectional* approach. The population in this study is all health workers at the Poasia Health Center in Kendari City with a total of 113 people. The sampling method used is *total sampling*, where the number of samples with the number of population, which is 113 people. The data analysis method used is the *Continuity Correction test.*

3. Results and Discussion

The Relationship between Officers' Understanding of the Function of the Health Center as *a Gatekeeper* and the Referral Number at the Poasia Health Center in Kendari City in 2024

Table 1 The Relationship between Officers' Understanding of the Function of the Health Center as *a Gatekeeper* and the Referral Number at the Poasia Health Center in Kendari City in 2024

Officers' Understanding of the Function of the Health Center as *a Gatekeeper*	Reference				Sum		*p-value*
	Tall	%	Low	%	n	%	
Tall	44	89.8	5	10.2	49	100	0.035
Low	46	71.9	18	28.1	64	100	
Total	90	79.6	23	20.4	113	100	

Source: Primary Data, November 2024

Based on the table above, it can be seen that of the 49 respondents (100%) who have a high understanding of the function of the Puskesmas as *a gatekeeper*, there are 44 respondents (89.8%) with a high referral rate and a low referral rate of 5 respondents (10.2%). Meanwhile, of the 64 respondents (100%) who had a low understanding of the function of the Puskesmas as *a gatekeeper*, there were 46 respondents (71.9%) with a high referral rate and a low referral rate of 18 respondents (28.1%).

The results of the hypothesis test with *the Continuity Correction* test showed *p-value* (0.035) < α (0.05) so that H0 was rejected and Ha was accepted. This shows that there is a relationship between the officers' understanding of the function of the Puskesmas as *a gatekeeper* and the referral number at the Poasia Health Center, Kendari City in 2024.

Knowledge is the result of human activities that want to know various things using various methods and certain tools. This knowledge can be of various types and characteristics: it can be direct or indirect, temporary (variable), subjective and specific, or permanent, objective and general. Knowledge occurs when a person uses reason and mind to understand objects or events that they have never seen or experienced before. Healthcare worker knowledge refers to the information he or she knows through knowledge of sources or ideas received, both formally and informally that are used to provide healthcare services to patients. (8)

Based on the results of a bivariate analysis of the relationship between the officer's understanding of the function of the Puskesmas as *a gatekeeper* and the referral rate of NHI patients at the Poasia Health Center in Kendari City in 2024, it was found that there was a significant relationship between the understanding of officers and the referral number of NHI patients. The results of the questionnaire showed that most respondents did not know the number of diseases that could or could not be referred to Advanced Referral Health Facilities (ARHF). This shows that the lack of understanding of the function of the Puskesmas as a gatekeeper is one of the factors causing the increase in the number of referrals at the Poasia Health Center.

This research is in line with research conducted by Astuti et al., 2024, entitled "Factors Related to the High Number of Referral Requests for BPJS Patients at the Tiuh Tohou Health Center, Manggala District, Tulang Bawang Regency in 2023." The study showed *p-value* = 0.002 < 0.05, which means that there is a relationship between knowledge and the referral number of NHI patients. The results of this study indicate that the officer's lack of knowledge of the referral mechanism can influence the decision to refer the patient at the patient's own request, even if the patient has not met the appropriate referral criteria.

The Relationship between the Availability of Medicines and the Referral Number at the Poasia Health Center in Kendari City in 2024

Table 2 The Relationship between the Availability of Medicines and the Referral Number at the Poasia Health Center in Kendari City in 2024

Availability of Medicines	Reference				Sum		*p-value*
	Tall	%	Low	%	n	%	
Adequate	61	89.7	7	10.3	68	100	0,002
Inadequate	29	64.4	16	35.6	45	100	
Total	90	79.6	23	20.4	113	100	

Source: Primary Data, November 2024

Based on the table above, it can be seen that of the 68 respondents (100%) who stated that the availability of medicines was adequate, there were 61 respondents (89.7%) with a high referral rate and a low referral rate of 7 respondents (10.3%). Meanwhile, of the 45 respondents (100%) who stated that the availability of medicines was inadequate, there were 29 respondents (64.4%) with a high referral rate and a low referral rate of 16 respondents (35.6%).

The results of the hypothesis test with *the Continuity Correction* test showed *p-value* (0.002) < α (0.05) so that H0 was rejected and Ha was accepted. This shows a relationship between the availability of drugs and the referral number at the Poasia Health Center, Kendari City in 2024.

Drugs are substances that affect life activities as well as compounds that are used to prevent, treat, diagnose diseases, or to create certain conditions. Medications can be used to treat illnesses, relieve symptoms, or alter chemical processes in the body. Based on the Law of the Republic of Indonesia Number 36 of 2009 concerning Health, drugs are ingredients or mixtures of ingredients, including biological products, that are used to affect or examine physiological systems or pathological states in the context of determining diagnosis, prevention, cure, recovery, health improvement, and contraception in humans   (9)

Based on the results of a bivariate analysis of the relationship between the availability of drugs and the number of referrals for NHI patients at the Poasia Health Center in Kendari City in 2024, it was found that there was a relationship between the two factors. Most of the respondents who argued that the medicines at the Poasia Health Center were inadequate revealed that health workers at the health center often directed patients to buy drugs at other pharmacies. Although medications for handling emergency conditions are quite adequate, there are still several types of medications that need to be supplemented. This causes patients to be referred to advanced health facilities because they need drugs that are not available at the Health Center, for example pediatric patients with high fever who do not respond *to oral paracetamol* and require paracetamol injections to prevent seizures. The availability of these drugs is one of the causes of the increase in referral numbers at the Poasia Health Center.

This study is in line with the research conducted by Sayuti et al. (2021), entitled "Factors Related to the Referral of Social Health Security Administration Body Patients at the Sungai Ulin Health Center in 2021," with the results of the study *p-*

value = 0.008 < 0.05, which shows a relationship between the availability of drugs and the number of referrals for BPJS patients. In addition, this study also supports the findings of Magfirah's (2023) research, entitled "Factors Related to the Referral of BPJS Participant Patients at the Bangkala Health Center, Makassar City in 2023," with the results of the study *p-value* = 0.000 < 0.05, which also shows a relationship between the availability of drugs and the referral rate of BPJS patients.

4. Conclusion

Based on the results of research that has been conducted at the Poasia Health Center in Kendari City, it can be concluded that: There is a relationship between the officers' understanding of the function of the health center as *a gatekeeper* and the availability of medicines with the referral number at the Poasia Health Center, Kendari City in 2024.

4.1. Suggestion

4.1.1. For Health Institutions (Poasia Health Center, Kendari City)

It is hoped that the health center will increase the training of health workers on case management and referral policies to ensure that referrals are carried out rationally and strengthen the drug management system to ensure the availability of essential drugs at the primary service level

4.1.2. For Local Governments

Health cadres are expected to conduct periodic evaluations of the availability of resources, including medicines in primary care facilities through better supervision and distribution and develop a data-driven referral monitoring system to identify the causes of high referral rates.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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