

## Analysis of Factors that Influence the High Reference Rate in the Health Center in the Era of National Health Insurance

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### Abstract

The number of patient visits at the Tampo Health Center in Kendari City is known to be 30,540 patients in 2019 and in 2020 it decreased to 45.38% or 16,679 and in 2021 as of November it decreased from the previous number of 14.67%, namely 14,232. and it is known that the number of visits by BPJS participants until November 2021 is 28,350 participants who are registered at the first level health facility, namely at the Tampo Health Center, it is known that the population in the Tampo sub-district which is the working area of the Tampo Health Center is 34,366, thus there are only 17.50% still available. people who did not choose the first health facility at the Tampo Public Health Center. The total number of referrals in 2020 is 5336. From the data above, it is known that the number of referrals every month exceeds the set standard, which is above 15% and does not match the JKN referral standard. The purpose of this study is to determine the effect of the JKN Era Health services by increasing the number of referrals with the factors that cause referrals. This type of research is quantitative research with explanatory survey methods, research that explains causality and hypothesis testing. There is a significant influence with the existence of the JKN Era where the number of referral cases is known to be large and exceeds the reference standard, which is 15 percent.

**Keywords:** Availability of Health Workers, Availability of SOPs, Availability of Facilities

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### Introduction

Puskesmas is the main pillar of health management in Indonesia and is a health service facility that organizes first-level public health efforts (UKM) and individual health efforts (UKP). The Puskesmas prioritizes promotive and preventive efforts to achieve the highest public health degree in its working area (Permenkes RI No. 75, 2014). One of the vital units in the puskesmas is the medical record. With the form of health services provided by the Puskesmas, it is hoped that patients will be able to provide their own assessment of the Puskesmas. If the service provided is as desired, the patient will be satisfied, if the opposite happens, it will cause the patient to lose interest in treatment and this will cause the patient to have a negative view of the Puskesmas (Abbasi-Moghaddam et al., 2019; Izadi et al., 2017). Individual health services consist of 3 (three) levels, namely: first level health services; Primary health services are provided by first-level health facilities. Second-level health services are specialist health services carried out by specialist doctors or specialist dentists who use specialist health knowledge and technology. Third-level health services are sub-specialist health services carried out by sub-specialist doctors or sub-specialist dentists who use sub-specialist health knowledge and technology.

In carrying out health services, first-level and advanced-level health facilities are required to carry out a referral system by referring to the applicable laws and regulations, namely Participants who want to get services that are not in accordance with the referral system can be included in the category of services that are not in accordance with the procedures so that they cannot be paid by the public. Health facilities that do not implement a referral system, BPJS will perform recredentialing on the performance of these health facilities and may have an impact on the continuation of the collaboration. Referral services can be done horizontally or vertically (Regulation of the Minister of Health of the Republic of Indonesia, 2012). Horizontal referrals are referrals made between health services at one level if the referrer is unable to provide health services according to the patient's needs due to limited facilities, equipment and/or personnel that are temporary or permanent. , can be done from a lower level of service to a higher level of service or vice versa.

The development of Follow-Up Referral Health Facilities (FKRTL) in collaboration with BPJS Health has increased from 1,681 health facilities in 2014 to 2,507 health facilities in 2020. The most types of FKRTL are Private Hospitals, which are 46.35%, Government Hospitals (27.40 %), and Special Hospitals for 10.53% of all FKRTLs in collaboration with BPJS Health (Ministry of Health, 2021). In 2020, the number of health services that were used the most by BPJS Health participants was RJTP or First Level Outpatient, which was 78.3%. While the least utilized by BPJS Health participants is RITL or Advanced Inpatient at 2.5%. Although RITL in terms of number is the least utilized by BPJS Health participants, in terms of financing it is the largest utilization, which is 53.3% of all financing for Health services. While the lowest financing is for promotive and preventive programs, which is 0.3%. This figure shows that BPJS Health financing is currently still concentrated in curative or treatment terms, while promotive and preventive only take a very small portion of BPJS Health financing. Until the end of December 2020. BPJS Kesehatan applies Commitment-Based Capitation (KBK) payments to Puskesmas in implementing the referral system. With the aim of improving service quality, it is measured through predetermined performance indicators (Ministry of Health of the Republic of Indonesia, 2021). The implementation of Commitment-Based Capitation is almost the same as the pay for performance that has been implemented in several countries, including the United States, Estonia, France, Germany, New Zealand, and Turkey. The mechanism for implementing Commitment-Based Capitation is carried out by, among other things, deducting 10% of capitation funds from First Level Health facilities (FKTP) or puskesmas that do not reach the indicators, and providing incentives to puskesmas that achieve good performance (Ramadhani, 2020).

Implementation of Capitation Payments Based on Fulfillment of Service Commitments at First Level Health Facilities, it is said that the target for fulfilling service commitment indicators is the ratio of non-specialist outpatient referrals of less than 5%. First Level Health Facilities (FKTP) as gatekeepers are supposed to provide quality primary health services. If the quality of FKTP is not improved, the number of referrals will continue to increase, and it is feared that there will be an accumulation of patients in hospitals. In addition, the high number of referrals will also have an impact on reducing the capitation value of the related FKTP. To prevent this, it is necessary to implement the right policy (Ministry of National Development Planning/Bappenas, 2020). The number of referrals exceeding 15% can be concluded that there is a problem for service users and service implementers where various factors can be known such as Availability of Health Workers, Availability of SOPs, Availability of Facilities, Availability of Infrastructure, Types of Medical Indications, Availability of Medicines, Patient Perceptions, Officer Presessions, Policies Puskesmas, Medical Equipment Availability, Laboratory Availability, Health Office Supervision, Officer Knowledge, Information System

Availability, Referral Coordinator, these are reasons for referring patients, According to the 2014 BPJS Health regulation that the number of patient referrals in FKTPs should not exceed 15% of the total visits BPJS patients and the ratio of outpatient referrals for non-specialist cases is below 5%.

The number of patient visits at the Puuwatu Health Center in Kendari City is known to be 30,540 patients in 2019 with a total of 5,864 patients (19.20%) referrals and in 2020 it decreased to 45.38% or 16,679 and in 2021 as of November it decreased from the previous number of 14.67%. ie 14232. and it is known that the number of visits by BPJS participants until November 2021 is 28,350 participants who are registered at the first level health facility, namely at the Puuwatu Health Center, it is known that the population in the Puuwatu sub-district which is the working area of the Puuwatu Health Center is 34,366 so there are only 17.50% still available. people who did not choose the first health facility at the Puuwatu Public Health Center. Total referrals with static numbers where in January 2020 there were 657 (25.81%) patients, February 560 (22.01%), March 568 (22.31%), April 259 (10.17%), May 241 (9.46%), June 452 (17.76%), July 430 (16.89%), August 451 (17.72%), September 445 (17.48%), October 354 (13.90% ), November 487 (19.13%), and December 452 (17.76%) (Puuwatu Health Center, 2021). From the data above, it is known that the number of referrals every month exceeds the set standard, which is above 15%

## Methods

This type of research is quantitative research with explanatory survey methods, research that explains causality and hypothesis testing. This research was carried out in November at the Puuwatu Health Center, Kendari City in 2021. The population in this study was the number of patient visits at the Puuwatu Health Center in 2019 amounting to 5864 people and in 2020, namely 5336 people. The research sample is part of the population where the sample size for this study uses proportional random sampling based on the equation with the sample calculation as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Information:

n = sample

N = Population

E = Permissible percentage of sampling error accuracy allowance;

E = 0.1 In the slofin formula, the following condition exists: value of e=0.1 (10%) for large population value of e=0.2 (20%) of small population.

$$n = \frac{5336}{1 + 5336 (0,1)^2}$$

$$n = \frac{5336}{1 + 53.36}$$

$$n = \frac{5336}{53.37}$$

$$n = 99,98$$

Rounded to 100 samples in 2020

$$n = \frac{5864}{1 + 5864 (0,1)^2}$$

$$n = \frac{5864}{1 + 58.64}$$

$$n = \frac{58.64}{59.64}$$

$$n = 98,22$$

**Rounded to 100 samples in 2019**

It is known the size of the sample of 100 people and the sample with the following proportions for each variable based on its population with the following calculations:

$$ni = \frac{Ni}{N} \times n$$

Information:

ni : sample size for the i-th stratum

Ni: Population

n: Large Sample on Research

N: Large population in the study

So that the sample distribution for each variable can be described as follows:

Table 1. Sample distribution for each 2019 variable

No	Factors Causing Referral	Frequency	Sample	
1	Availability of Health Workers,	60	1,0	1
2	Availability of SOPs,	91	1,6	1
3	Availability of Facilities,	610	10,4	10
4	Availability of Infrastructure,	762	13,0	13
5	Types of Medical Indications,	263	4,5	4
6	Availability of Medicines,	532	9,1	9
7	Patient Perception,	753	12,8	13
8	Officer Preception	189	3,2	3
9	health center policy,	525	9,0	9
10	Availability of Medical Equipment,	692	11,8	12
11	Laboratory Availability,	332	5,7	6
12	Ministry of Health supervision,	113	1,9	2
13	Officer Knowledge,	98	1,7	2
14	Information System Availability,	632	10,8	11
15	Referral Coordinator	212	3,6	4
	<i>Total</i>	5864	100	100

Table 2. Sample distribution for each 2020 variable

No	Factors Causing Referral	Frequency	Sample	
1	Availability of Health Workers,	53	1,0	1
2	Availability of SOPs,	97	1,8	2
3	Availability of Facilities,	630	11,8	13
4	Availability of Infrastructure,	574	10,8	11
5	Types of Medical Indications,	201	3,8	4

6	Availability of Medicines,	563	10,6	10
7	Patient Perception,	679	12,7	12
8	Officer Preception	98	1,8	2
9	health center policy,	304	5,7	6
10	Availability of Medical Equipment,	541	10,1	10
11	Laboratory Availability,	556	10,4	10
12	Ministry of Health supervision,	56	1,0	1
13	Officer Knowledge,	32	0,6	1
14	Information System Availability,	432	8,1	8
15	Referral Coordinator	520	9,7	9
	<i>Amount</i>	5336	100	100

### Data Sources and How Data Are Collected

The data sources in this study are: Secondary data, namely data obtained from registration records on medical records at the Puuwatu Health Center, Kendari City. The collected data will then be processed with the stages of coding, editing, scoring, and tabulating.

### Research Ethics

This researcher has submitted an application for permission from the Head or head of the relevant agency for this research by following procedures in the form of, approval of the Medical Record officer, Anonymity (by not giving a bright name), Confidentiality (Confidentiality).

### Results and Discussion

#### Univariate Analysis

In the Univariate analysis in this study, it can be described in the form of a table and given a brief explanation in the following table

Table 3. Frequency Distribution of respondents with Factors Causing Referrals at the Puuwatu Health Center, Kendari City in 2019

No	Factors Causing Referral	Frequency	Percentage
1	Availability of Health Workers,	1	1,00
2	Availability of SOPs,	1	1,00
3	Availability of Facilities,	10	10,00
4	Availability of Infrastructure,	13	13,00
5	Types of Medical Indications,	4	4,00
6	Availability of Medicines,	9	9,00
7	Patient Perception,	13	13,00
8	Officer Preception	3	3,00
9	health center policy,	9	9,00
10	Availability of Medical Equipment,	12	12,00
11	Laboratory Availability,	6	6,00
12	Ministry of Health supervision,	2	2,00
13	Officer Knowledge,	2	2,00
14	Information System Availability,	11	11,00
15	Referral Coordinator	4	4,00
	<i>Amount</i>	100	100

The table above can be explained that from a total of 100 samples carried out referrals, many of the factors causing referrals were due to the availability of infrastructure and patient

perception, namely 13 people (13%) and a small number of factors causing referrals willingness of health workers, and the availability of SOPs amounted to 1 respondent (1%).

Table 4. Frequency Distribution of respondents with Factors Causing Referrals at the Puuwatu Health Center, Kendari City in 2020

No	Factors Causing Referral	Frequency	Percentage
1	Availability of Health Workers,	1	1,00
2	Availability of SOPs,	2	2,00
3	Availability of Facilities,	13	13,00
4	Availability of Infrastructure,	11	11,00
5	Types of Medical Indications,	4	4,00
6	Availability of Medicines,	10	10,00
7	Patient Perception,	12	12,00
8	Officer Preception	2	2,00
9	health center policy,	6	6,00
10	Availability of Medical Equipment,	10	10,00
11	Laboratory Availability,	10	10,00
12	Ministry of Health supervision,	1	1,00
13	Officer Knowledge,	1	1,00
14	Information System Availability,	8	8,00
15	Referral Coordinator	9	9,00
	<i>Amount</i>	100	100

The table above can be explained that out of a total of 100 samples carried out referrals, many of the factors causing referrals caused by patient perception, namely 12 people (12%) and a few in the group of factors causing referrals willingness of health workers, health office supervision and officer knowledge amounted to 1 respondent (1 %).

### Bivariate Analysis

#### Data Normality Test

Table 5. Data Normality Test Results (One-Sample Kolmogorov-Smirnov Test)

		Zscore: Number of Referral Cases	Zscore: Factors Causing Referral 2019	Zscore: Factors Causing Referral 2020
N		100	100	100
Normal Parameters <sup>a,b</sup>	Mean	.0000000	.0000000	.0000000
	Std. Deviation	1.0000000	1.0000000	1.0000000
Most Extreme Differences	Absolute	.061	.132	.119
	Positive	.061	.132	.119
	Negative	-.061	-.100	-.092
Test Statistic		.061	.132	.119
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>	.000 <sup>c</sup>	.001 <sup>c</sup>
<b>Exact Sig. (2-tailed)</b>		<b>.828</b>	<b>.057</b>	<b>.106</b>
Point Probability		.000	.000	.000
a. Test distribution is Normal.				
b. Calculated from data.				
c. Lilliefors Significance Correction.				
d. This is a lower bound of the true significance.				



It is known from the results of the data normality test that it can be concluded that all normally distributed data can be seen at the *Exact Sig value. (2-tailed)* each variable above 0.05

**T-test**

Table 6. Independent Test Coefficients<sup>t</sup> test results a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-8.953	1.095		-8.174	.000
	Factors Causing Referral /2019	4.173	.933	.543	4.472	.000
	Factors Causing Referral /2020	3.216	.872	.448	3.687	.000

a. Dependent Variable: Number of Referral Cases

From the table above, it is known that there is an influence of JKN-era health services with an increase in referral cases for 2019 and 2020 with a sig value. smaller than 0.05 i.e. each variable 0.000, and the calculated t value is greater than the table t value. Where  $t_{table} 1.984$ .

**Differential Test Analysis**

Table 7. Different tests using test dependent t-test Test

Group Statistics					
	Factors Causing Referral	N	Mean	Std. Deviation	Std. Error Mean
Factors Causing Referral	2020	100	8.0400	4.04000	.40400
	2019	1	1.0000	.	.
		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
Factors Causing Referral	Equal variances assumed	1.734	99	.086	7.04000
	Equal variances not assumed	.	.	.	7.04000
Std. Error Difference	95% Confidence Interval of the Difference				
	Lower	Upper			
4.06015	-1.01622			15.09622	
.	.			.	

From the table above, it is known that there is no significant difference in the increase in the number of referrals and it can be concluded that the increase in the number of visits with referrals of more than 15% does not change from the previous year or remains at an increase of above 15% every year and it is known that there is a negative correlation where an evaluation is needed to reduce the number of referrals below 15% of the total visits at the Puuwatu Public Health Center, Kendari City

The results of the study revealed that there was an effect of health services in the JKN era with an increase in the number of referrals where it is known that the referral standard must be below 15%, and the results of the dependent t test are known to have no difference, which means that the increase in the number of referrals is always consistent and there is a risk of an increase for

the following year. the need for a more comprehensive evaluation to reduce the number of referrals to below 15%.

Referral system for health services is the implementation of health services that regulate the delegation of duties and responsibilities of reciprocal health services both vertically and horizontally that must be carried out by participants of health insurance or social health insurance, and all health facilities (Eskandari et al., 2013; Stainkey et al., 2010).

Basically, the referral system is made to optimize the three levels of health services so that there is no waste of human resources, limitations at certain health service levels and referrals to cases that do not need to be visited. Creating a referral system will not give the expected results (Greenwood-Lee et al., 2018).

It is also known that in the analysis of variances, it is known that the factors causing referrals in 2019 were mostly in the availability of infrastructure and patient perception, namely 13 people (13%) and the least in the group of factors causing referrals, Availability of Health Workers, and the availability of SOPs amounted to 1 respondent (1%) , and in 2020 the cause of many referrals to the patient perception factor, namely 12 people (12%) and a small number of factors causing the referral of Health Personnel Willingness, Health Office Supervision and Officer Knowledge amounting to 1 respondent (1%).

Thus, it can be assumed that the factors causing infrastructure in 2019 were considered minimal so that the reason for health workers and patients also chose to be referred to more complete health facilities, but patient perception also increased the number of referrals where patients assumed with minimal knowledge related to referral procedures (Rosemann et al., 2006; Mehrotra et al., 2011). by using BPJS services, they choose to be referred immediately for reasons of facilities and comfort and sense of security if they are treated at a hospital or second-level health facility. And in 2020 due to changes in form and the addition of facilities at the Puuwatu Health Center so that the reasons for referrals are many for reasons or patient perceptions that are lacking so that they assume that maximum service is only available at second-level health facilities.

The health service referral system is carried out in stages according to medical needs, namely: a) Starting from the first level of health services by first-level health facilities b) If further services are needed by specialists, patients can be referred to second-level health facilities c) Second-level health services at secondary health facilities can only be given upon referral from primary health facilities. d) Third-level health services at tertiary health facilities can only be provided with referrals from secondary health facilities and primary health facilities. Health services at primary health facilities that can be referred directly to tertiary health facilities only for cases whose diagnosis and treatment plan have been established, are recurring services and are only available at tertiary health facilities

With the results of this study, the researcher assumes that the importance of deeper socialization for BPJS or JKN participants so that it can reduce the referral rate to below 15%.

## Conclusion

There is a significant influence with the JKN Era where the number of referral cases with various factors is known to exceed the reference standard, which is 15 percent.

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