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Factors Related to Conservative Preterm Therapy on BPJS Claim Achievement in Waluyo Jati Hospital Probolinggo Regency

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ABSTRACT

Introduction: A high number of reports of preterm incidents in Probolinggo, which was the highest in East Java in 2018, has caused problems in the financing process claimed by the Indonesian National Social Health Insurance (Badan Penyelenggara Jaminan Sosial (BPJS)). Insufficient financing for maternity mothers, as the highest proportion of national delivery methods, can certainly be a direct or indirect obstacle to the maternal mortality rate, which is still very high in Indonesia. This research aims to analyze the influence of hospitalization period, gestational age, and delivery method in conservative preterm therapy on BPJS claim achievement at Waluyo Jati Hospital, Probolinggo Regency.

Material and Methods: This study is a quantitative research with a cross-sectional approach. Sampling took place from May to September 2023 at Waluyo Jati Regional Hospital, Probolinggo Regency. Sampling used an accidental sampling technique. 33 respondents participated in this research.

Results: The results of this study showed that the largest number of respondents with the criteria for a length of stay of 4-7 days was 23 respondents (69.6%), gestation age 31-33 weeks was 14 respondents (42.4%), and 23 respondents underwent cesarean section delivery (69.7%). The highest BPJS claim achievement value was in the range of 30-50%, with 18 respondents (54.5%). The results of the Multiple Linear Regression showed a p-value of 0.000.

Conclusion: The conclusion from this research is that there is an influence of hospitalization period, gestational age, and delivery method simultaneously in conservative preterm therapy on the achievement of BPJS claims at Waluyo Jati Hospital, Probolinggo Regency.

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INTRODUCTION

Preterm labor is defined as delivery before 37 weeks of gestation is completed [1]. Prematurity is associated with morbidity and mortality in children under five. Preterm birth is one of the largest contributors to perinatal mortality and neonatal morbidity, both short and long-term [2].

The incidence of preterm and preterm infant mortality in Indonesia is still relatively high. Indonesia is ranked in the top 10 out of 184 countries with a high preterm incidence rate, namely 15.5 preterm births per 1,000 live births. Indonesia is the fifth country with the highest number of preterm babies in the world, namely 675,700 babies [3]. Based on reports of infant deaths in Probolinggo Regency in 2016, 223 babies died out of 17,918 live births. In 2017, 190 babies died out of 17,593 live births. In 2018, 242 babies died, higher than in 2017, which was only 190 babies, and this makes Probolinggo Regency the number one region in East Java with the highest infant mortality rate.

The implementation of the national health insurance system (JKN) aims to achieve universal health insurance so that all citizens get the benefit from health services and protection to meet primary health needs [4]. As one of the systems launched by the state with law number 40/2004, this system has been running since 2014. JKN is implemented with the BPJS Program using a payment

system with package rates in the form of prospective payments or a package system that we know as the Indonesia Case Base Groups (INA-CBGs) according to RI Minister of Health Regulation No. 3 of 2023 concerning standard health service rates in the implementation of health insurance programs and was implemented in 2008 as a payment method for the Community Health Insurance program [5,6].

Data on the total number of BPJS Health participants in 2022 reached 248.77 million people, while in 2021, it was 235.71 million. The number in 2022 is equivalent to 90.34% of Indonesia's total population of 275.36 million. The total population of Probolinggo Regency covered by BPJS Health insurance reached 95.89% [7]. This condition has caused health insurance claims to become the main income for hospitals in Indonesia [8]. Data based on a preliminary study at Waluyo Jati Regional Hospital, Probolinggo Regency, in December 2022, more than 90% of patients used the BPJS Program services, including maternal patients with conservative preterm pregnancies. The number of maternal patients with failed conservative preterm pregnancies at Waluyo Jati Hospital from October to December 2022 was 35 maternal patients with failed conservative preterm pregnancies at Waluyo Jati Regional Hospital, all of whose treatment costs exceeded the INA-CBGs claim provisions from the BPJS program.

Insufficient funding for maternity, as the highest proportion of national delivery methods, can certainly be a direct or indirect obstacle to the maternal mortality rate, which is still very high in Indonesia. The number of significant claims or bundling must be adjusted to actuarial values to ensure adequate quality of health services. In maternal health services, JKN influences the management of maternal patients in health facilities.

MATERIAL AND METHODS

This research is a descriptive-analytical study with a cross-sectional approach. Data collection was carried out on patients with failed conservative preterm pregnancies from September to October 2023 in the Rosela room at Waluyo Jati Regional Hospital, Probolinggo Regency. Sampling was carried out using an accidental sampling technique. Thirty-three respondents participated in this research.

RESULTS

The number of patients who received treatment in the Rosela room at Waluyo Jati Regional Hospital in the 3 month research period was 33 people. In Table 1, data shows that the majority of respondents are in the age range of 15-25 years (45.5%), with the highest education being was university degree (63.6%), and the majority of pregnant women are housewives (57.6%).

Table 1. Respondent Characteristics

Characteristics	n	%
Age		
15-25	15	45.5
26-35	13	39.4
36-45	4	12.1
> 45	1	3
Education		
Elementary school or below	1	3.0
Junior high school	3	9.1
Senior High school	8	24.3
University degree	21	63.6
Employment		
Housewife	19	57.6
Private employee	7	21.2
Entrepreneur	7	21.2
Total	33	100

Table 2. Gestational Age, Type of Labor, and Respondent's BPJS Claim

Type of Labor	n	%
Gestational age		
28-30 weeks	6	18.2
31-33 weeks	14	42.4
34-36 weeks	13	39.4
Delivery		
Normal	10	30.3
Cesarean Section	23	69.7
LOS		
< 4 days	5	15.2
4-7 days	23	69.6
> 7 days	5	15.2
BPJS claim bundling		
< 30%	2	6.1
30-50 %	18	54.5
51-70%	10	30.3
71-90%	3	9.1
Total	33	100

Based on Table 2, data analysis of the results of patient frequency distribution revealed that 39.4% of respondents in this study were in the gestational age range of 31-33 weeks at the time of delivery, 23 of the 33 respondents gave birth by caesarean section method (69.7%), with the highest range of care being 4-7 days. (69.6%). The achievement of BPJS claims during treatment is in the range of 30-50% (18 people), meaning that patients still need to cover 50-70% of treatment costs that are not covered by BPJS services. The highest BPJS claims were 71-90% (3 patients).

Table 3 shows the results of the cross-tabulation analysis of the dependent variable with BPJS claim achievements. The tabulation results show that the majority of respondents with cesarean section births at the BPJS claim achievement level was 30-50%, with a

Table 3. Cross-tabulation of Delivery Methods with BPJS Claim Achievements

Indicator	BPJS Claim Achievement										Total		Sign
	<30%		30-50%		51-70%		71-90%		>90%				
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	*p*
Delivery													
Normal	0	0.0	0	0.0	7	21.2	3	9.1	0	0.0	10	30.3	0.00
Cesarean Section	2	6.0	18	54.5	3	9.1	0	0.0	0	0.0	23	69.7	
LOS													
< 4 days	0	0.0	0	0.0	2	6.0	3	9.1	0	0.0	5	15.2	
4-7 days	0	0.0	15	45.4	8	24.2	0	0.0	0	0.0	23	69.6	0.00
> 7 days	2	6.0	3	9.1	0	0.0	0	0.0	0	0.0	5	15.2	
Gestational age (weeks)													
28-30	1	3.0	2	6.0	3	9.1	0	0.0	0	0.0	6	18.2	
31-33	1	3.0	9	27.3	3	9.1	1	3.1	0	0.0	14	42.4	0.651
34-36	0	0	7	21.2	4	12.1	2	6.0	0	0.0	13	39.4	
Total	2	6.0	18	54.5	10	30.3	3	9.1	0	0.0	33	100	

Table 4. Multiple Linear Regression Test: Length of Treatment, Gestational Age, Method of Giving Birth to Respondents, and BPJS Clain Achievement

Model Summary				
Model	R	R Square	Adjusted R Square	*p-value*
1	0.894[a]	0.799	0.778	0.00

total of 18 respondents (54.5%, *p-value*<0.05). The majority of respondents with a length of stay of 4-5 days are at the BPJS achievement level of 30-50% (*p-value*<0.05).

The statistical test results of the multiple linear regression test of length of treatment, gestational age, and method of delivery of respondents with BPJS claim achievement show that the results of the linear regression test have a value of R = 0.894, indicating that there is a very strong influence between the variables length of treatment, gestational age, method of delivery simultaneously on claim achievement. BPJS. The R square value = 0.799 shows that length of treatment, gestational age, and method of delivery can explain the achievement of BPJS claims by 79.9%, while 20.1% is explained by other factors.

DISCUSSION

Demographic data of the respondents shows that the majority of respondents in this study were in the 15-25-year age range. The optimal productive age for healthy reproduction is between 20 - 35 years. The risk increases at ages under 20 years and over 35 years. Pregnant women at a young age will have several risks, including miscarriage, premature birth, low birth weight (LBW), congenital abnormalities, easy infection, anemia in pregnancy, pregnancy poisoning (gestosis), and death [9, 10].

The majority of respondents in this study gave birth at 31-33 weeks of gestation, which means that labor occurred preterm. 23 respondents gave birth using the cesarean section method, and only 10 respondents gave birth using the normal method. Statistical analysis of the correlation between delivery method and BPJS claim achievement showed significant results (*p-value* <0.00). Sectio caesarea is a surgical procedure to deliver a fetus by making an incision in the uterine wall through the front wall of the abdomen. This action is an effort to prevent fetal and maternal death due to complications that do not allow the mother to give birth vaginally [11]. Cesarean Section is an example of an intervention that costs a large amount of JKN funding. In 2017 BPJS Health report showed that the first rank of BPJS Health claims is the light cesarean section, with a total of 548,978 cases [12].

The increase in incidence of cesarean section has increased over the last decade, which has made this condition a world health problem. In Indonesia, cesarean section is only performed based on certain medical indications, including pregnancy problems with complications [9]. Preterm pregnant women who fail to be conservative can be born normally or vaginally [13]. Childbirth complications other than preterm birth in pregnancy can include delivery by cesarean section, premature rupture of membranes, birth with the help of instruments, and also prolonged labor. Births using cesarean section and instrumental assistance are generally higher in pregnancies of childbearing age or over 35 years of age [11]. In preterm patients with

premature rupture of membranes, delivery with the help of instruments and also prolonged labor, if this is not successful, then delivery is performed by cesarean section [14].

The results of this research showed that the highest range of treatment period for respondents was 4-7 days, namely 23 respondents (69.6%); the relationship between treatment period and BPJS claims showed significant results (p-value <0.00). These results are in line with previous research where the length of stay for patients with cesarean section was in the range of 4-5 days with cesarean section level 1 [15].

The need for maternal hospitalization after normal delivery requires care for 36 hours [16]. The goal of postnatal care is to support the physical and emotional recovery of the mother and baby, increase the self-confidence and well-being of the parents, and establish feeding for the baby in the first few days and weeks after birth [17, 18]. The World Health Organization (WHO) today launched its first-ever global guidelines to support women and newborns in the postnatal period – the first six weeks after birth. This is a critical time for ensuring newborn and maternal survival and for supporting the healthy development of the baby as well as the mother's overall mental and physical recovery and well-being [19].

The high rates can be influenced by how long the patient is treated according to the 2005 Republic of Indonesia Ministry of Health in the Republic of Indonesia Law on Health. Where there is an increase in the number of patient care costs, the length of time the patient is treated is influenced by the patient's recovery condition during the recovery period after a cesarean section is performed on patients. Meanwhile, in payments using INA-CBG's, both hospitals and payers no longer detail bills based on details of services provided. To the patient, but only by conveying the patient's discharge diagnosis and INA-CBG's code [20]. Length of treatment (LOS) influences the difference between real rates and INA CBG rates. This is because the length of treatment at the real rate is calculated per day, so the longer the patient is treated, the greater the costs [21].

In the analysis of BPJS claim performance, it was found that the majority of respondents received BPJS claims in the range of 30-50% (54.5%), and only a small percentage of patients received BPJS claims in the range of 70-90% (2 people). The results of multiple linear regression statistical tests simultaneously on length of treatment, gestational age, delivery method, and BPJS claim achievement showed a *p-value* of 0.000.

Government hospital rates are determined by a Decree from the Minister of Health or Regional Government. This rate reflects the government's strict control as the hospital owner (Hernowo, 2018). The real tariff is calculated according to the details of the type of service; in this case, the standard tariff has been determined in the Regional Regulation. Meanwhile, the INA-CBG tariff is calculated based on the accumulation or combination of diagnosis codes and procedure/action codes into a CBG code whose standard tariff has been determined by the Central Government. Calculation of tariffs for INA-CBG uses tools in the form of software that has been determined by the Ministry of Health so that the tariff output definitely matches the database that has been determined [21].

The factors causing differences in tariffs are determined by rate standards, length of treatment, and accuracy of coding. The errors in providing diagnostic codes, both primary diagnoses and secondary diagnoses/complications, by coding officers (coders) will also affect the results of the INACBG claim value. The accuracy of the determination of the diagnosis will have an impact on the accuracy of the determination of the INA-CBG rate group [22].

The variables that most significantly influence the difference in length are treatment class, length of treatment, and type of treatment [23]. This research is in line with the results of previous research, where the factors that influence real hospital costs are the length of stay [24]. Length of Stay also influences the difference in real rates with the INA-CBG package rates. This is because the length of treatment at the real rate is calculated per day, so the longer the patient is treated, the greater the costs [25]. Meanwhile, in INA-CBG, the length of treatment has been determined by standards so that even if the patient is treated for a long time or a short time, the rate will still be according to the diagnosis code and procedure code [26].

CONCLUSION

The results of the study showed that gestational age, length of stay, and delivery method had an influence on conservative preterm therapy on the achievement of BPJS claims at Waluyo Jati Regional Hospital. This shows that the achievement of BPJS claims is low in cases of mothers with preterm pregnancy who fail to be conservative because there is quite a large difference between the PERDA rates for hospital services and the INA-CBGs rates from BPJS. This difference has resulted in an imbalance between the real costs according to the PERDA tariff for hospital services and the decline in BPJS claim financing. Things that can reduce the value of BPJS claims far from real costs are by carrying out appropriate coding on the hospital avisena system, writing appropriate care and treatment documentation, and supporting examinations that are in line with the provisions of the INA-CBGs BPJS.

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CONFLICT OF INTEREST

Not applicable.

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