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The Suitability of the Real Costs Against the Price of the Ina-Cbg's on Patients Prolonged Labour at the Regional General Hospital Pandan Arang Boyolali

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ABSTRACT

Background. Prolonged labour defrayel was regulated in the INA-CBG's rates.

Purpose. The purpose of this research is to know the difference real costs against the price of the INA-CBG's and know the factors which influence the real costs in patients prolonged labour at the regional genral hospital Pandan Arang Boyolali.

Method. The research was on analytic observation research used a cross-sectional design according to the hospital perspective and data collection method was retrospectively. The data of this research were quantitative data. Analysis of suitability of real cost with INA-CBG's used t-test, one being an analysis of the factors that affect the real costs used bivariate correlation test.

Results. The study result showed that were difference between of real costs to the INA-CBG's rates on severity I on a class of treatments 1, 2 and 3 showed positive values, as for the difference obtained class 1 Rp. 3.195.800, class 2 Rp 15.634.812 and class 3 Rp. 9.762.782. On the severity II class of treatments 3 showed positive difference amounted Rp. 1.567.806.

Conclusion. The difference were shown the positive difference, were indicates the total real costs lower than INA-CBG's rate. The factors was affected the real costs of prolonged labour was LOS.

KEYWORDS

INA-CBG's, Prolonged Labour, Real Cost

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INTRODUCTION

Every pregnant woman dreams that the birth process will go through normally or without obstacles. However, it is not uncommon for completely undesirable events to occur during the stages of the birthing process, namely complications during the birthing process which of course endanger the safety of the mother and fetus. The cause is direct interference that occurs during childbirth and is one of the biggest causes of maternal death in Indonesia (Kaswinawati, 2015). The highest incidence of maternal deaths is during childbirth at 49.5%, deaths during pregnancy 26%, during the postpartum period 24%.

The highest incidence of maternal deaths is during childbirth at 49.5%, deaths during pregnancy 26%, during the postpartum period 24%. The main causes of maternal death in Indonesia include bleeding 31.79%, hypertension in pregnancy 24.62%, infection 5.54%, prolonged labor 4.74%, abortion 1.09%, and others 32.22%. From these data it can be concluded that one of the causes of high maternal mortality in Indonesia is due to prolonged parturition (Ministry of Health of the Republic of Indonesia, 2014). Even though prolonged labor has a low incidence rate, the complication of prolonged labor is bleeding which is the highest cause of maternal death. The results of Dina's research in 2013 regarding the determinant factors for the incidence of post-partum bleeding at the Majene District Hospital, Majene Regency, showed that prolonged labor had a 3.5 times greater risk than mothers with normal labor for the incidence of post-partum bleeding. Prolonged labor is labor that lasts more than 24 hours in primiparas and ≥18 hours in multiparas. The incidence of prolonged labor is 2.8-4.9% (Manuaba, 2010). What is said to be prolonged labor is if the latent phase lasts ≥8 hours, or labor lasts ≥12 hours, the baby is not born/if the cervix is to the right of the alert line in the active phase (Saifuddin, 2010). Prolonged labor in the second stage is labor that lasts more than 2 hours in primigravida and 1 hour in multigravida (Manuaba, 2010). In several cases of prolonged labor with induction of labor but the baby has not yet been born, to immediately save the mother and fetus, vaginal delivery is required with certain tools such as forceps and vacuum extraction (Pacarda, 2010). The number of complications and procedures during prolonged labor will determine the total costs that the patient will incur for the services provided by the hospital.

Considering the large costs incurred for vaginal births with prolonged labor, the Indonesian government has implemented the National Health Insurance (JKN) program as an implementation of the National Health Insurance (JKN). The payment pattern for advanced health facilities has been regulated by implementing Indonesian Case Based Groups (INA-CBG's). . INA-CBG's rates have been stipulated in Minister of Health Regulation Number 52 of 2016 concerning standard health service rates at first level health facilities and advanced level health facilities in the implementation of health insurance (Ministry of Health, 2016).

The JKN program has INA-CBG's (Indonesian Case Based Group's) rates. This rate is the amount of claim payments by BPJS Health to advanced level health facilities for service packages based on the grouping of disease diagnoses according to hospital region and treatment class. Vaginal delivery with prolonged labor is one of the diagnoses whose payment rates are regulated in INA-CBG's with code O-6-13-I for vaginal birth procedures with prolonged labor classified as mild, O-6-13-II for vaginal birth procedures with prolonged labor. moderate classification and O-6-13-III for heavy classification vaginal birth procedures (Ministry of Health, 2016). Factors that influence costs are age, parity and pregnancy spacing. The older the mother is, the greater the possibility of experiencing prolonged labor, especially in cases where the majority are >35 years old. Meanwhile, the number of parities at risk of experiencing prolonged labor are those who give birth for the first time and give birth four times or more. Pregnancy spacing influences the recovery process of the mother's reproductive organs. If the mother's reproductive organs have not recovered completely, the risk of prolonged labor will be greater (Rice, 2016).

Prolonged labor is also influenced by complications such as premature rupture of membranes and bleeding that occurs during vaginal birth as well as procedures such as vacuum extraction and forceps performed on vaginal birth patients causing higher patient care costs. The cost of treating patients in hospital is influenced by the length of treatment, based on the patient's recovery condition during the recovery period after vaginal delivery with prolonged labor. The length of treatment and therapy costs are calculated per day so that the longer the patient is treated, the higher

the therapy costs. The cost components that determine the real cost of therapy include examination costs, supporting medical costs and maintenance costs (Caporale et al, 2011).

Pandan Arang Boyolali Hospital is a class C state hospital. This hospital is able to provide a wide range of specialist and sub-specialist medical services by the government and is a referral hospital. Pandan Arang Boyolali Hospital has implemented the INA-CBG's program based on Minister of Health Regulation Number 52 of 2016 as a basis for calculating claims costs for outpatient and inpatient patients. In the case study conducted by researchers, there were 283 cases of prolonged labor. Based on the results of literature studies, there has been no research regarding the suitability analysis of real costs for INA-CBG's rates for long term labor patients at Pandan Arang Hospital, Boyolali. Therefore, researchers are interested in conducting research on the suitability analysis of real costs for INA-CBG's rates for long term parturition patients at Pandan Arang Hospital, Boyolali.

RESEARCH METHODOLOGY

This type of research is analytical observation using a cross-sectional research design from a hospital perspective, with data collection methods carried out retrospectively, namely by searching patient medical record documents, JKN patient claim files, and medical costs for inpatient vaginal birth patients. This research data is quantitative data.

The population and sample used in this study were all medical records (RM) data and inpatient service claim files in the form of individual patient sheets (LIP), inpatient JKN patients with vaginal delivery with prolonged labor in 2017 at Pandan Arang Boyolali Regional Hospital with code INA -CBG's O-6-13-I, O-6-13-II, and O-6-13-III class 1,2 and 3 rates.

The sampling technique was purposive sampling, where the sample met the inclusion criteria, namely inpatient JKN patients with a primary diagnosis of prolonged labor, a secondary diagnosis of vaginal delivery in 2017 who had been declared discharged by a doctor. The exclusion criteria for this study include claim files for patients who died and patient medical record files that are missing or unclear.

The tools used were a data collection form for vaginal delivery patients with prolonged labor which was designed according to research needs, stationery for recording, and calculating equipment. The materials used are all inpatient service claim files for vaginal birth patients with prolonged labor with INA-CBG's codes O-6-13-I, O-6-13-II, and O-6-13-III class 1,2 and 3, medical records, and inpatient JKN patient status book at Pandan Arang Hospital Boyolali in 2017. Data recorded in the data collection sheet includes: medical record number, patient identity (age and gender), hospital admission diagnosis (MRS) including main diagnosis, secondary diagnosis, hospital discharge date (KRS), patient condition when the patient was discharged from the hospital, drug therapy, and patient costs.

Course of Research

1. Preparatory stage

   The preparation stage begins with a literature study which is used to create a proposal to obtaining permits at the research location, namely the Pandan Arang Boyolai Regional Hospital.

2. Data collection and processing stage

   a. Data collection can be done by collecting medical record data in the hospital medical records sub-section. The data collected is data from JKN patients hospitalized for vaginal birth with prolonged labor in 2017. The data source comes from medical records, JKN claim files. Medical record data was taken to identify the patient's name, inpatient medical record number,

age, medication use records, and laboratory data. After that the data is recorded on the patient data collection sheet.

b. Data on the amount of medical costs for inpatients with vaginal deliveries were obtained from the patient's medical record data. The cost data consists of the costs of using drugs and medical devices obtained from the hospital pharmacy installation, while the rates for emergency room costs, drug costs, hospital service costs and medical support costs were obtained from the medical and financial records sub-section of Pandan Arang Boyolali Regional Hospital.

c. The data is then entered into a computer and carefully grouped.

RESULT AND DISCUSSION

Results of research conducted during the November-December 2018 period at the Pandan Arang Boyolali Regional General Hospital on patients participating in the National Health Insurance (JKN) for prolonged labor with inpatient vaginal delivery in treatment classes 1, 2 and 3 with INA CBG's code O-6-13 -I/II for the period January-December 2017, a sample of 150 patients was obtained. Of the 150 patients who met the inclusion criteria, 81 patients.

Patient characteristics in this study included age, parity, pregnancy interval, LOS, secondary diagnoses and procedures. The results of the study showed that those aged 20-35 years were the most vulnerable age group for experiencing prolonged labor at 77.8%, namely 63 patients out of 81 patients. In parity, the largest percentage of parity in patients with parity at risk, 51.9%. Pregnancy spacing in patients with pregnancies at risk was 56.8%. According to Sarwono (2010), too young an age, namely less than 20 years at birth, can cause prolonged labor because too young an age can cause shoulder dystocia, this is because the reproductive organs are not yet mature.

The treatment class for patients in prolonged labor at Pandan Arang Boyolali Regional Hospital for the January-December 2017 period was mostly class 3. Class 3 patients. The research results the largest percentage of patients who had 2 secondary diagnoses was 91.4%, namely a singleton birth fetus. and delivery with coconut presentation.

The research results showed that 76 patients received 1 procedure and 9 patients received 2 procedures. Procedures generally performed on patients in long labor are procedure 73.59 (other manually assisted delivery), other procedure 69.7 (insertion of intrauterine contraceptive device), procedure 73.51 (manual rotation of fetal head), procedure 73.4 (medical induction labor), procedure 88.78 (diagnostic ultrasound of gravid) . The highest number of action procedures was 73.59 (other manually assistend delivery). Other manually assisted delivery is spontaneous labor experienced by a woman giving birth, there are 80% of women experiencing spontaneous labor within 24 hours of the labor process (Hinelo, 2013).

69.7 (insertion of intrauterine contraceptive device) is a procedure for using intrauterine contraceptive devices that are used after childbirth. Julian's research in 2015 showed that 25.9% of women used contraception after giving birth. Contraception is a way to avoid or prevent pregnancy, so that the pregnancies are not too close together which could pose a risk to the mother and baby.

At severity level 1 in both treatment classes 1, 2, and 3, patients undergo hospitalization for 2-4 days. Meanwhile, at severity level 2, the treatment class is 2 days. The difference in LOS is due to the patient's condition. The suitability of real costs with INA-CBG's tariffs can be seen from whether there is a difference between real costs and INA-CBG's tariffs and based on statistical tests. The large cost difference is obtained from reducing the total INA-CBG tariff from the total real cost. The difference between the total real costs and INA-CBG's rates is depicted in the table 1.

Table 1. Difference Between Total Real Costs and INA-CBG's Rates at Severity Levels I/II Treatment Classes 1, 2 And 3 Pandan Arang Boyolali Hospital

Tingkat Keparahan	Kelas	N	Total Biaya Riil (Rp)	Tarif INA-CBG's (Rp)	Selisih (Rp)
O-6-10-1	1	6	9.781.000	12.976.800	3.195.800
	2	33	45.543.888	61.178.700	15.634.812
	3	38	48.943.418	58.706.200	9.762.782
Total		**77**	**104.268.306**	**132.861.700**	**28.593.394**
O-6-10-II	4	4	5.746.194	7.314.000	1.567.806
Total		**4**	**5.746.194**	**7.314.000**	**1.567.806**

Table 1 explains the results of the one sample t-test to see whether there is a significant difference between the real costs and the INA-CBG's rates for patients with prolonged labor and vaginal delivery at Pandan Arang Hospital, Boyolali in 2017.

Based on the results obtained in table 12, there is a difference between real costs and INA-CBG's rates, at severity level I both in treatment classes 1, 2 and 3 show positive values, while the difference obtained in class 1 is IDR. 3,195,800, in class 2 Rp. 15,634,812 and maintenance class 3 Rp. 9,762,782, at severity level II in treatment class 3 shows a positive cost difference of Rp. 1,567,806. The smallest total positive difference is severity level II treatment class 3 because the patient requires more medical costs and more care, so the costs incurred are more and the resulting cost difference is smaller.

The largest total difference was at severity level I, treatment class 2, this was due to the patient's condition not being so severe, accompanied by a short length of treatment and not many procedures. At severity level I, treatment classes 1, 2 and 3, the costs incurred by the hospital are less than the BPJS guarantee, meaning that the standard hospital costs are in accordance with the BPJS rates.

Table 2 explains the results of the one sample t-test to see whether there is a significant difference between the real costs and the INA-CBG's rates for long term labor patients at Pandan Arang Hospital, Boyolali in 2017.

Tingkat Keparahan	Kategori	Rata-rata (Rp)	± SD	Selisih	*P*
		Kelas 1			
O-6-13-I	Biaya Riil	9.781.000	180.531	3.195.800	0,01
	Biaya INA-CBG's	12.976.800	-		
		Kelas 2			
O-6-13-I	Biaya Riil	45.543.888	169.733	15.634.812	0,00
	Biaya INA-CBG's	61.178.700	-		
		Kelas 3			
O-6-13-I	Biaya Riil	48.943.418	248.694	9.762.782	0,00
	Biaya INA-CBG's	58.706.200			
O-6-13-II	Biaya Riil	5.746.194	320.842	1.567.806	0,086
	Biaya INA-CBG's	7.314.000			

The results of the analysis using one sample t-test¸ differences are considered significant if the results are $p < 0.05$. A significant difference between real costs and INA-CBG's rates is found in classes 1, 2 and 3 of mild severity. This is in accordance with research conducted by Agnes (2015) that the average real cost of therapy at severity level 1 is lower when compared to the INA-CBG's standard rates, but does not show a significant difference where the p value = 0.963 (greater than p = 0 .05). The significant difference in mild and moderate severity levels could be due to the average length of stay being not too long and the participant's illness not being serious so that the real costs

spent by patients during treatment were different from INA-CBG's rates, even more so than INA-CBG's rates.

Meanwhile, in class 3, moderate severity level, there is no significant difference between real costs and INA-CBG's rates. The results of this research are similar to Handayani's research (2016) which states that there is no difference in real costs with INA-CBG's rates in class 3 with moderate severity with p=0.376. There is no difference between real costs and INA-CBG's rates at moderate severity levels due to various comorbidities, causing there to be no significant differences between real costs and INA-CBG's rates.

CONCLUSION

Based on the results of research regarding the analysis of the real costs of inpatient postpartum treatment at Pandan Arang Boyolali Hospital in 2017 for JKN patients, conclusions can be drawn There is a difference between the real costs and the INA-CBG's rates for postpartum patients with long stays at Pandan Arang Hospital Boyolali in 2017, namely in class 1 severity level I amounting to IDR 3,195,800 with p=0.01, class 2 severity level I amounting to Rp. 15,634,812 with p=0.00 class 3 severity level I amounting to Rp. 9,762,782 with p=0.00. This difference shows a positive difference, meaning the total real costs are lower than INA-CBG's rates.

AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

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