



Analysis of The Effect of INA CBGs Diagnoses on Costs in Outpatient THT Specialist Poly Hospital X Surabaya

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ABSTRACT

BPJS Kesehatan will pay to advanced referral Health Facilities. BPJS Kesehatan pays with the INA CBG's (Indonesia Case Base Groups) package system. INA CBGs is a payment system with a package system based on the diseases suffered by patients (1) knowing the disease pattern in the ENT-KL Polyclinic of RSX Surabaya, (2) calculating the unit cost of the 10 most common diseases, (3) calculating the relationship between age range and INA CBGs coding on drug costs using the relationship test. The method used in this research is a retrospective descriptive study. The population and sample of this study were BPJS patient data. The type of data used was TXT secondary data in the outpatient ENT clinic. The type of data used is secondary data from BPJS patient, the total sample was a population of 750. The data was processed using Chi-Square. From this study, it was found that most of the BPJS patients of the ENT Poli of X Hospital were male, with the highest age range being at the age of 51 - 55 years, with the INA CBGs coding being Q - 5 - 44 - 0 with the diagnosis of Tinnitus / Ringing in the ears with the total average difference per patient against hospital tariff financing compared to the INA CBGs Tariff was 83,593. There is a relationship between the Age Range and INA Cbgs coding on the funding in the Pharmacy Unit, which is ENT.

INTRODUCTION

BPJS Kesehatan will pay to advanced referral Health Facilities. It pays with the INA CBG's (Indonesia Case Base Groups) package system. (Kementerian Kesehatan Republik Indonesia, 2013). The system is a payment model used by BPJS Kesehatan to reimburse claims billed by hospitals. INA CBGs is a payment system with a package system based on the disease suffered by the patient (Basuki, 2016). Referring to the BPJS dictionary of terms on its website states that the hospital will get a payment amount based on the appropriate number at the INA CBGs tariff, which is the average cost spent on a diagnosis group (Sariunita & Syakurah, 2023).

In this case, the system calculates, for example, a patient with dengue fever, what services will be provided for the patient and the treatment until the patient is declared cured or during one period of care at the hospital (Ruslang & Diah Ayu Puspadari, 2023). All Health Facilities, even though they do not cooperate with BPJS Kesehatan, are obliged to serve patients in an emergency; after the emergency is resolved and the patient can be transferred, the health facility is obliged to refer to a health facility that cooperates with BPJS Kesehatan (Basuki, 2016). BPJS Kesehatan will pay health facilities that do not cooperate after

providing emergency services equivalent to the prevailing tariff in the region (Simorangkir Lasmaria, 2021).

Health services are important in improving the welfare and health of every human being in the world. Where every individual has the right to obtain health services provided by the government as a form of responsibility for health efforts that are safe, quality, and affordable for the entire community (Kementerian Kesehatan Republik Indonesia, 2013). Hospitals are individual healthcare institutions that are plenary in providing services, INAp care, and outpatient care (Presiden Republik Indonesia, 2013).

Polyclinics in Surabaya X Hospital ENTKL Poly: This is very helpful for patients who are using the services provided by the hospital. Disease patterns in the ENT-KL Polyclinic can vary depending on where the research is conducted. This is due to the influence of climate, habits, heredity, and exposure obtained from each individual. For example, the incidence of otitis media is more common in young children than in adults, and so is the incidence of tonsillitis. These patterns may also vary from community to community or hospital to hospital based on the availability of specialists or supporting facilities.

Knowledge of the disease patterns of the ear, nose, throat, and head and neck surgery is fundamental because if there is a disorder of these organs, it will affect the quality of life of the patient himself. In some conditions, ENT-KL disorders can cause social and occupational problems, so first-level health facility services such as Puskesmas can be maximized, including the availability of essential ENT-KL examination tools. Research conducted at the ENT-KL Polyclinic of X Surabaya Hospital was reported on 2023 BPJS patients. The purpose of this study was to (1) determine the pattern of diseases in the ENT-KL Polyclinic of RSX Surabaya, (2) calculate the unit cost of the 10 most common diseases, (3) calculate the relationship between age range and INA CBGs coding to drug financing using the relationship test.

METHOD

The method used in this research is a retrospective descriptive study conducted at the BPJS ENT Polilinic of RS X Surabaya in 2023. The population and sample of this study were BPJS patient data. The type of data used was TXT secondary data in the outpatient ENT clinic. The type of data used is secondary data from BPJS patient bills at the X Hospital ENT Specialist Outpatient Clinic; during 2023, the total sample was a population of 750. Data analyzed is Gender, Age Range, INA CBG coding, and the top 10 most common diseases. The data was processed using Chi-Square to test the relationship between Age Range and INA CBG coding on drug costs.

RESULT

Table 1. Distribution of Respondent Characteristics in BPJS Poli THT X Patients

Characteristics	Frequency	Percentage
Gender		
Male	716	68,58%
Female	328	31,42%
Age Range		
< 5 Years	60	5,75%
11 - 15 Years	47	4,50%
16 - 20 Years	62	5,94%
21 - 25 Years	64	6,13%
26 - 30 Years	48	4,60%
31 - 35 Years	35	3,35%
36 - 40 Years	55	5,27%
41 - 45 Years	64	6,13%
46 - 50 Years	66	6,32%
5 - 10 Years	94	9,00%
51 - 55 Years	77	7,38%
55 - 60 Years	110	10,54%
> 60 Years	262	25,10%
INA CBGs		
Q-5-31-0	1	0,10%
Q-5-42-0	26	2,49%
Q-5-44-0	920	88,12%
U-3-14-0	14	1,34%
U-3-15-0	83	7,95%
Total	1044	100,00%

From Table 1, it is found that most patients are male, with the highest age being 55-60 years old, with the most INA CBGs financing code being Q-5-44-0. The following is a cross-crosstabulation between the age range and the INA CBG code for Patient Examination. The following are the top 10 diagnoses of the most common diseases: BPJS ENT Poly X.

Table 2. Diagnoses of the top 10 most common diseases BPJS Poli THT X

Diagnosis	Frequency	Hospital rate	INA CBGs Tariff	Rate Difference	Average Difference
Z09.8;H93.1 Tinnitus (ringing in the ears)	120	15.057.559	24.748.900	9.691.341	80.761
Z09.8;H61.2 Impacted cerumen Diseases of the ear and mastoid processus	103	13.758.764	27.632.300	13.873.536	134.695
Z09.8;H66.1 Chronic tubotympanic suppurative otitis media	69	9.995.828	14.378.300	4.382.472	63.514
Z09.8;H66.0 Acute suppurative otitis media	65	8.940.277	13.406.000	4.465.723	68.703
Z09.8;H60.8 Other otitis externa	49	6.312.214	10.165.600	3.853.386	78.641
Z09.8;J01.9 Acute sinusitis, unspecified	28	4.370.381	5.765.200	1.394.819	49.815
Z09.8;J32.0 Chronic maxillary sinusitis	28	4.647.996	5.738.200	1.090.204	38.936
Z09.8;J32.8 Chronic sinusitis	20	2.783.811	4.118.000	1.334.189	66.709
Z09.8;H91.1 Other hearing loss	19	2.373.998	4.223.200	1.849.202	97.326
Z09.8;J31.2 Corpus Alienum.	18	2.242.729	3.692.700	1.449.971	80.554
Total	519	70.483.557	113.868.400	43.384.843	83.593

Table 2 provides information from the 10 most common ENT disease diagnoses, the diagnosis of Tinnitus / Ringing in the ears, with a total average difference per patient against hospital tariff financing

compared to the INA CBGs Tariff is 83,593. The following is a Cross-Crosstabulation Between Age Range and INA CBGs Code for BPJS Patient Examination at Poli THT Hospital X Surabaya.

Table 3. Cross-Crosstabulation Between Age Range and INA CBGs Code for BPJS Patient Examination at Poli THT Hospital X Surabaya

Age Range	Q-5-31-0	Q-5-42-0	Q-5-44-0	U-3-14-0	U-3-15-0	Total
< 5 Years		3	50		7	60
11 - 15 Years		3	37		7	47
16 - 20 Years	1		52		9	62
21 - 25 Years		3	58		3	64
26 - 30 Years		3	40		5	48
31 - 35 Years		2	28		5	35
36 - 40 Years		2	47	1	5	55
41 - 45 Years		1	58	3	2	64
46 - 50 Years		4	58	1	3	66
5 - 10 Years		3	79		12	94
51 - 55 Years			72	1	4	77
55 - 60 Years		1	98	4	7	110
> 60 Years		1	243	4	14	262
Grand Total	1	26	920	14	83	1044

Based on Table 3, it is found that the highest number of patients are patients with an age of more than 60 years with INA CBGs code Q-5-44-0. The following is a comparison of hospital rates with r CBG rates.

Table 4. Comparison of Hospital Rates with INA CBGs Rates INA CBGs Code at Poli THT RS X Surabaya

Row Labels	Frequency	Hospital Rate	INA CBGs Tariff	Rate Difference	Average Difference
Q-5-31-0	1	285.000	147.100	- 137.900	-137.900
Q-5-42-0	26	3.834.403	5.541.300	1.706.897	65.650
Q-5-44-0	920	120.132.457	188.172.500	68.040.043	73.957
U-3-14-0	14	2.877.806	4.377.700	1.499.894	107.135
U-3-15-0	83	12.053.435	26.461.100	14.407.665	173.586
Grand Total	1044	139.183.101	224.699.700	85.516.599	81.912,45

Based on Table 4, the most significant difference is that the INACBGs code is Q-5-44-0, with an average per patient of 73,957. The following is a crosstabulation between the age range and the amount of drug dollars generated. From the data generated by the average data on the results of drug use and whether it affects each age range, the amount of drug data on average is declared good if the average amount of drug is below the average price of the amount. In contrast, it is declared immoral if the drug price is above the average drug.

Table 5. Cross tabulation of Age Range with Total Drug Price at Poli THT Hospital X Surabaya

Age range	Total Drugs		Total	Significant
	Good	Not Good		
< 5 Years	54	6	60	0,0000
5 - 10 Years	73	21	94	
11 - 15 Years	31	16	47	
16 - 20 Years	36	26	62	
21 - 25 Years	39	25	64	
26 - 30 Years	26	22	48	
31 - 35 Years	24	11	35	
36 - 40 Years	35	20	55	
41 - 45 Years	35	29	64	

46 - 50 Years	51	15	66
51 - 55 Years	51	26	77
55 - 60 Years	81	29	110
> 60 Years	214	48	262
Total	750	294	1044

Based on Table 5, crosstabulation of Age Range with Total Drug Price at Poli THT RS X Surabaya, it is found that there is a relationship between age range and the use of total drugs at Poli THT RS X Surabaya. The following is a crosstabulation of INA CBGs with the total price of drugs at Poli THT Hospital X Surabaya.

Table 6. Crosstabulation of INA CBGs with Total Drug Price at Poli THT Hospital X Surabaya

INA CBGs	Total Drugs		Total	Significant
	Good	Not Good		
Q-5-31-0	1	0	1	0,000
Q-5-42-0	14	12	26	
Q-5-44-0	641	279	920	
U-3-14-0	14	0	14	
U-3-15-0	80	3	83	
Total	750	294	1044	

Based on Table 6, cross tabulation of Age Range with Total Drug Price at Poli THT RS X Surabaya, it is found that there is a relationship between age range and the use of total drugs at Poli THT RS X Surabaya.

DISCUSSION

Health financing is an important part of the implementation of the National Health Insurance. The objectives of health financing are to encourage quality improvement and patient-oriented services, encourage efficiency, not reward providers who over-treat, under-treat, or perform adverse events, and encourage team services. With the right financing system, it is hoped that the above objectives can be achieved (Hilfi L et al., 2015). Two hospital payment methods were used: retrospective payment method and prospective payment method (Suprayitno et al., 2021).

The retrospective payment method is a method of payment made for health services provided to patients based on each service activity provided, and the more health services provided, the greater the costs to be paid (Min et al., 2022). An example of a retrospective payment pattern is Fee For Services (FFS). A prospective payment method is a method of payment made for health services whose amount is known before the health service is provided (Romliyadi & Oxyandi, 2018). Examples of prospective payments are global budget, Perdiem, Capitation, and case-based payments. No single financing system is perfect, and each financing system has advantages and disadvantages (Widati et al., 2017; Ali Hanifah, Nabila Farah Wardani, 2021).

Table 4 compares hospital rates and INA CBGs rates from 1044 cases with a total difference of Rp.85,516,599 while the average per patient is Rp.81.912/patient. The advantages of prospective and

retrospective payment systems are that health service tariffs at advanced health facilities are carried out with the payment pattern of Indonesian Case Base Groups (INACBG's) (Simorangkir Lasmaria, 2021; Putra et al., 2023) Obtained: In the implementation of the National Health Insurance (JKN), it has been regulated that the payment pattern to advanced health facilities is with INA-CBGs by Presidential Regulation Number 12 of 2013 concerning Health Insurance as amended by Presidential Regulation Number 111 of 2013 (Presiden Republik Indonesia, 2013). For tariffs that took effect on 1 January 2014, adjustments have been made from the INA-CBG Jamkesmas tariffs and have been stipulated in Minister of Health Regulation No. 69 of 2013 concerning Standard Tariffs for Health Services at First Level Health Facilities and Advanced Health Facilities in the implementation of Health Insurance (Simorangkir Lasmaria, 2021; Ari Sukawan, 2019).

The number of cases in the top 10 diagnoses had hospital rates that were greater than the INA-CBGs rates. At the same time, the other two diagnoses had an average number of cases with hospital rates smaller than the INA-CBGs rate. So, the total positive difference obtained from the two diagnoses cannot cover the negative difference (Fatmawati & Dewi, 2016). Diagnoses that produce more negative differences come from Mastoid Otitis diagnoses, with an average number of 134,695. This is based on research conducted by Dumaris (2015), which states that cardiac polyclinics in outpatients produce a negative difference of Rp.4,427,201 (Umar et al., 2019).

In 10 outpatient service diagnoses, there are three diagnoses with the most prominent billing component, namely drug costs; diagnoses including those with the highest bills are Tinnitus, Mastoid Otitis, and Chronic Tubotmbani (Min et al., 2022). Meanwhile, the other two diagnoses had the highest bills for supporting examinations. The total hospital tariff or the cost incurred by the hospital to provide health services to JKN patients for one year in the outpatient service unit is IDR 160,434,520. While the total INA-CBGs tariff is Rp.93,656,112 (Fajarwati et al., 2022). This means that the total cost of outpatient services incurred by the hospital is huge compared to the total paid by BPJS in the form of INA-CBG packages. The hospital suffered a loss of Rp.66,778,404 (Basuki, 2016; Santiasih, 2021).

CONCLUSION

From this study, it was found that most of the BPJS patients of the ENT Poli of X Hospital were male, with the highest age range being at the age of 51 - 55 years, with the INA CBGs coding being Q - 5 - 44 - 0 with the diagnosis of Tinnitus / Ringing in the ears with the total average difference per patient against hospital tariff financing compared to the INA CBGs Tariff was 83,593. There is a relationship between the age range and INA Cbgs coding on financing in the pharmacy unit, which is ENT.

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