

# Tariff of Indonesia Case Based Groups (INA-CBG's) and Real Tariff on Acute Gastroenteritis Patient National Health Insurance in Inpatient Unit Class I District General Hospital Undata Palu

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## ABSTRACT

Hospitals are required to provide tariffs that can be reached by the general public. This cost of service problem becomes very important so as to encourage all elements concerned, to calculate in real how much the cost of hospital services. Undata Palu Public Hospital has never done real tariff calculation analysis by hospital, where the difference or comparison result will show how exactly impact of INA-CBG's tariff payment system on finance or hospital income. The purpose of this study is to see and know the difference between INA-CBG's tariff and real hospital tariff in GEA patients of JKN participants in the first class hospital unit of Undata Palu Public Hospital. This research type is quantitative with descriptive method. Data were retrospectively taken from BPJS claim files and medical records of patients. The research object was medical record of inpatient with diagnose of Acute Gastroenteritis (GEA) at Undata Hospital with code of INA-CBG's K-4-17-I and K-4-17-II period January - September 2017. The difference between the INA-CBG's tariff and the real tariff of the hospital by the total difference between the INA-CBG's tariff and the real tariff of the hospital is Rp. 38,515,292, for total INA-CBG's tariff of Rp. 127,432,300 and the real rate of hospital is Rp. 88,917,008. So overall it shows that INA-CBG's tariff is higher than the real rate in hospital. It is recommended to calculate the difference between INA-CBG's tariff and the real tariff of hospitals with different cases, so as to know the applicable cross subsidies between diseases that are beneficial and detrimental to the hospital.

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## INTRODUCTION

Based on Law Number 40 of 2004 concerning the National Social Security System (SJSN) and Law Number 24 of 2011 concerning the Social Security Administering Body, financing of individual health services is organized through health care insurance with a social insurance mechanism which in time is expected to achieve universal health coverage [1].

This National Health Insurance is a form of government commitment to the implementation of health

insurance for the entire Indonesian community. In addition, the need for the community to become JKN participants, participants can get adequate quality services at reasonable and controlled costs, ensuring sustainability (certainty of sustainable health service financing) [2].

Financing of public health services is something that is the responsibility of the government, while for individual health services, financing is private, except for financing for the poor and underprivileged, which is the responsibility of the government [1].

Hospital rates are an aspect that is highly considered by private hospitals and government-owned hospitals. The importance of setting hospital rates is based on the classification and owner of the hospital, where rates can be set with various objectives as follows to increase hospital cost recovery, for cross-subsidies that are expected to have policies so that strong economic communities can help ease the cost of hospital services for weak economic communities [3].

INA-CBG's rates and real hospital rates need to be compared, where the difference or comparison results will later show how the INA-CBG's tariff payment system actually impacts the hospital's finances or income, whether it is profitable or actually still detrimental even after improvements and adjustments to the INA-CBG's rates [4].

Based on the performance report of Undata Hospital, the number of GEA disease cases over the past three years has remained in the highest group of diseases in hospitalization, with the number of cases in 2015 as many as 244 cases and in 2016 as many as 422. Then in 2017, from January to September, the total number of GEA cases was 316 cases, for class I inpatient units there were 71 cases.

In addition, RSUD Undata has never conducted an analysis of the calculation of real rates issued by the hospital, where the results of the calculation can be used as a comparison with the INA-CBG's rates, so it is not known whether the hospital is experiencing a deficit against INA-CBG's or not. In addition, according to the BPJS Kesehatan manager at RSUD Undata, the INA-CBG's rates applied in the hospital have several diseases that can benefit and some that are detrimental to the hospital.

## **METHOD**

The type of research conducted using a descriptive quantitative method, with the object of research being inpatients diagnosed with Acute Gastroenteritis (GEA) at Undata Hospital, recorded in the hospital's medical records with Case-Mix system services with INA-CBG's K-4-17-I and K-4-17-II codes in 2017. The sample size of GEA cases for the period January-September 2017 was 71 cases, however, at the time of the research, 18 medical record files (medical record numbers) of patients were not included because they were incomplete so they could not be accessed to see the total rates at BPJS Kesehatan Undata Hospital and the inpatient cashier at Undata Hospital. So that the number of research samples used was 53.

## **RESULTS AND DISCUSSION**

The calculation of real hospital rates is based on the type of service provided, consisting of medical procedures, supporting procedures, treatment costs and drug costs. The results of the study obtained, in table 1, show a description of the components of real hospital costs for patients in GEA disease services (diarrhea) with the highest total cost of IDR 3,460,607 and the lowest total real cost of IDR 867,398. The highest LOS for GEA patients (diarrhea) was for 7 days of treatment and the lowest LOS was for 1 day of treatment only.

**Table 1** Components of Real Hospital Costs for Patients in GEA Disease Services at Undata Hospital, Palu

No	Tarif Riil				LOS (Length Of Stay)	Total (Rp)
	Biaya Tindakan Medis (Rp)	Biaya Tindakan Penunjang (Rp)	Biaya Kamar (Rp)	Biaya Obat (Rp)		
1	976,682	70,000	1,000,000	99,304	4	2,145,986
2	580,413	94,000	500,000	30,170	2	1,204,583
3	532,382	70,000	500,000	67,850	2	1,170,232
4	994,663	70,000	500,000	3,426	2	1,568,089
5	634,713	70,000	750,000	49,468	3	1,504,181
6	774,713	70,000	750,000	478,021	3	2,072,734
7	640,364	70,000	250,000	62,587	1	1,022,951
8	1,277,782	70,000	1,250,000	216,170	5	2,813,952
9	1,087,732	144,000	1,000,000	100,947	4	2,332,679
10	590,413	70,000	500,000	40,606	2	1,201,019
11	724,182	70,000	750,000	23,020	3	1,567,202
12	644,713	70,000	750,000	48,053	3	1,512,766
13	373,782	94,000	750,000	48,185	3	1,265,967
14	561,632	70,000	500,000	10,490	2	1,142,122
15	612,913	70,000	500,000	46,835	2	1,229,748
16	622,913	70,000	500,000	76,397	2	1,269,310
17	805,232	429,000	1,000,000	91,705	4	2,325,937
18	1,174,713	120,000	1,750,000	369,908	7	3,414,621
19	793,132	-	1,250,000	132,840	5	2,175,972
20	496,632	70,000	500,000	151,843	2	1,218,475
21	756,464	570,000	750,000	19,601	3	2,096,065
22	1,034,682	120,000	1,000,000	53,747	4	2,208,429
23	1,639,814	120,000	1,250,000	304,020	5	3,313,834
24	609,663	214,000	500,000	75,391	2	1,399,054
25	507,332	120,000	250,000	38,629	1	915,961
26	1,371,163	214,000	1,750,000	134,444	7	3,469,607
27	1,359,882	120,000	500,000	177,786	2	2,157,668
28	645,413	70,000	500,000	53,609	2	1,269,022
29	1,112,032	120,000	1,250,000	63,756	5	2,545,788
30	687,913	120,000	500,000	65,894	2	1,373,807
31	591,632	70,000	500,000	61,140	2	1,222,772
32	688,432	70,000	750,000	39,465	3	1,547,897
33	840,982	-	1,000,000	71,128	4	1,912,110
34	581,632	-	500,000	2,285	2	1,083,917
35	581,632	70,000	500,000	54,900	2	1,206,532
36	651,463	70,000	750,000	98,146	3	1,569,609
37	625,413	70,000	500,000	111,108	2	1,306,521
38	788,482	70,000	1,000,000	98,146	4	1,956,628
39	597,913	70,000	500,000	34,131	2	1,202,044
40	719,713	120,000	750,000	130,304	3	1,720,017
41	682,382	-	500,000	103,902	2	1,286,284
42	716,463	94,000	750,000	6,958	3	1,567,421
43	687,913	379,000	500,000	79,053	2	1,645,966
44	496,632	70,000	500,000	10,150	2	1,076,782
45	369,813	70,000	500,000	18,704	2	958,517
46	237,500	124,000	1,250,000	54,622	5	1,666,122
47	522,500	90,000	1,000,000	208,935	4	1,821,435
48	853,375	240,000	1,000,000	461,999	4	2,555,374
49	298,375	394,000	750,000	61,373	3	1,503,748
50	137,500	370,000	750,000	310,300	3	1,567,800
51	345,125	70,000	500,000	190,190	2	1,105,315
52	283,375	70,000	500,000	14,023	2	867,398
53	313,375	170,000	1,000,000	175,663	4	1,659,038

Source: Data Primer, 2017

**Table 2** Total Difference between INA CBG's Rates and Real Rates of GEA Diseases at Undata Regional Hospital, Palu

No	Kode INA-CBG's	Tarif INA-CBG's (Rp)	Tarif Riil (Rp)	Selisih (Rp)
1	K-4-17-II	2,910,100	2,145,986	764,114
2	K-4-17-I	2,363,100	1,204,583	1,158,517
3	K-4-17-I	2,363,100	1,170,232	1,192,868
4	K-4-17-I	2,363,100	1,568,089	795,011
5	K-4-17-I	2,363,100	1,504,181	858,919
6	K-4-17-I	2,363,100	2,072,734	290,366
7	K-4-17-I	2,363,100	1,022,951	1,340,149
8	K-4-17-I	2,363,100	2,813,952	-450,852
9	K-4-17-I	2,363,100	2,332,679	30,421
10	K-4-17-I	2,363,100	1,201,019	1,162,081
11	K-4-17-I	2,363,100	1,567,202	795,898
12	K-4-17-I	2,363,100	1,512,766	850,334
13	K-4-17-I	2,363,100	1,265,967	1,097,133
14	K-4-17-I	2,363,100	1,142,122	1,220,978
15	K-4-17-I	2,363,100	1,229,748	1,133,352
16	K-4-17-I	2,363,100	1,269,310	1,093,790
17	K-4-17-II	2,910,100	2,325,937	584,163
18	K-4-17-I	2,363,100	3,414,621	-1,051,521
19	K-4-17-II	2,910,100	2,175,972	734,128
20	K-4-17-I	2,363,100	1,218,475	1,144,625
21	K-4-17-II	2,910,100	2,096,065	814,035
22	K-4-17-I	2,363,100	2,208,429	154,671
23	K-4-17-I	2,363,100	3,313,834	-950,734
24	K-4-17-I	2,363,100	1,399,054	964,046
25	K-4-17-I	2,363,100	915,961	1,447,139
26	K-4-17-I	2,363,100	3,469,607	-1,106,507
27	K-4-17-I	2,363,100	2,157,668	205,432
28	K-4-17-I	2,363,100	1,269,022	1,094,078
29	K-4-17-I	2,363,100	2,545,788	-182,688
30	K-4-17-I	2,363,100	1,373,807	989,293
31	K-4-17-I	2,363,100	1,222,772	1,140,328
32	K-4-17-I	2,363,100	1,547,897	815,203
33	K-4-17-I	2,363,100	1,912,110	450,990
34	K-4-17-I	2,363,100	1,083,917	1,279,183
35	K-4-17-I	2,363,100	1,206,532	1,156,568
36	K-4-17-I	2,363,100	1,569,609	793,491
37	K-4-17-I	2,363,100	1,306,521	1,056,579
38	K-4-17-I	2,363,100	1,956,628	406,472
39	K-4-17-I	2,363,100	1,202,044	1,161,056
40	K-4-17-I	2,363,100	1,720,017	643,083
41	K-4-17-I	2,363,100	1,286,284	1,076,816
42	K-4-17-I	2,363,100	1,567,421	795,679
43	K-4-17-I	2,363,100	1,645,966	717,134
44	K-4-17-I	2,363,100	1,076,782	1,286,318
45	K-4-17-I	2,363,100	958,517	1,404,583
46	K-4-17-I	2,363,100	1,666,122	696,978
47	K-4-17-I	2,363,100	1,821,435	541,665
48	K-4-17-I	2,363,100	2,555,374	-192,274
49	K-4-17-I	2,363,100	1,503,748	859,352
50	K-4-17-I	2,363,100	1,567,800	795,300
51	K-4-17-I	2,363,100	1,105,315	1,257,785
52	K-4-17-I	2,363,100	867,398	1,495,702
53	K-4-17-I	2,363,100	1,659,038	704,062
<b>TOTAL</b>		127,432,300	88,917,008	38,515,292

Sumber : Data Primer, 2017

The difference between the total real hospital costs and the INA-CBG's rates as shown in table 2 is obtained by subtracting the total INA-CBG's rates from the total real hospital rates. Based on these results, it can be seen that there is a positive difference between the total INA-CBG's rates and the total real hospital rates in patients with mild and moderate acute gastroenteritis (diarrhea) disease classifications with the largest

difference in mild acute gastroenteritis (diarrhea) which is Rp. 35,618,852 and the lowest in severe acute gastroenteritis (diarrhea) which is Rp. 2,712,580.

Moderate. Where for Acute Gastroenteritis (diarrhea) the rate is set according to the severity level (severity of the disease). For mild Acute Gastroenteritis it is Rp. 2,363,100, moderate Acute Gastroenteritis it is Rp. 2,910,100 and severe Acute Gastroenteritis it is Rp. 3,492,100, and for cases of severe Acute Gastroenteritis at Undata Palu Regional Hospital, researchers did not find such cases.

The results of this study are in line with previous studies that the determination of health service rates for inpatients and outpatients is based on the provisions of the Jamkesmas rates in each hospital that apply to general and special hospitals that have been stipulated in the Decree of the Minister of Health of the Republic of Indonesia [6].

### Real Rates

Real hospital rates or commonly known as payments based on services (fee for service), where payments are made per item of service provided which includes diagnostic actions, treatment services, supporting services, therapy and so on are then added up and patients will pay according to the services they have received [8].

At Undata Palu Regional Hospital, the calculation of real rates for GEA disease services is based on the type of service provided where the service components consist of medical actions, supporting actions, treatment costs and drug costs. The results of the study showed a description of the components of real hospital costs for patients for GEA disease services (diarrhea) with the highest total cost of Rp. 3,460,607 and the lowest total real cost of Rp. 867,398. The highest LOS in GEA (diarrhea) patients was for 7 days of treatment and the lowest LOS in GEA (diarrhea) disease service patients was for 1 day of treatment only

The results of this study are in line with previous studies that the difference between the real rate and the INA-CBG's rate for JKN class 3 inpatients with typhoid fever in the first quarter of 2014 at Sukoharjo District Hospital where the rate is supported by the length of treatment, diagnosis code, medical services and drug rates provided [7]

### Differences in INA-CBG's Rates and Real Hospital Rates

The difference between the total INA-CBG's rate and the real hospital rate based on the INA-CBG's code for mild GEA (diarrhea) severity level shows a total of Rp. 115,791,900 with a total of 49 patients, while the total real hospital rate shows a total of Rp. 80,173,048, so that a difference of Rp. 35,618,852. For moderate severity level GEA (diarrhea), the total INA-CBG's rate is Rp. 11,640,400 with 4 patients and a total real hospital rate of Rp. 8,927,820, so the difference obtained is Rp. 2,712,580. As many as 6 out of 53 cases of GEA (diarrhea) that occurred at Undata Hospital showed real rates exceeding the INA CBG's package rate with a total cost difference of Rp. 3,751,888 and as many as 47 out of 53 cases of GEA (diarrhea) the real hospital rate was less than the INA CBG's rate or with a total profit of Rp. 34,763,404. So overall it shows that the INA-CBG's rate is higher than the real rate applicable in the hospital with the final result of the calculation of the difference between the INA-CBG's rate and the real hospital rate being Rp. 38,515,292.

Hasil penelitian ini memiliki persamaan dengan yang dihasilkan oleh peneliti, yaitu sama-sama menemukan perbedaan antara pemberlakuan tarif riil dan tarif paket INA-CBG's, dimana tarif pelayanan kesehatan di RSUD Kabupaten Sukoharjo memperoleh keuntungan (surplus) dari selisih tarif riil dan tarif INA-CBG's [9]. Begitupun dengan penelitian Aulia (2015), dimana penelitian ini menemukan bahwa cost recovery rate sebesar 93% artinya rumah sakit memperoleh keuntungan 7% dengan menggunakan tarif INA CBG's [10].

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### CONCLUSION AND SUGGESTIONS

The conclusion in this study is the calculation of real rates for GEA (Diarrhea) disease services, based on the type of service provided, the service components consist of medical actions, supporting actions, treatment costs and drug costs. There is a difference between the INA CBG's rates and the real hospital rates with a total difference between the INA CBG's rates and the real hospital rates of Rp. 38,515,292, so that overall it shows that the INA-CBG's rates are higher than the real rates applicable in hospitals.

It is recommended to conduct further research with different cases to see the difference in rates based on hospitals with the rates determined in INA-CBG's and to assess the factors that influence the difference in rates based on hospitals with the rates determined in INA-CBG's.

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