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THE VARIATION OF CAESARIAN SECTION COSTS IN INDONESIAN HOSPITALS: A NARRATIVE REVIEW

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ABSTRACT

Background: In providing services, hospital, as one of the health care providers, must be able to regulate the number of costs obtained in accordance with the proportion/variation. The costs incurred by hospitals in providing complete personal health services consist of various cost components, including service fees, pharmacy costs, accommodation costs, action costs, investigation fees, and administrative costs. The cost calculation is one of the strategic steps that must be taken in marketing because it will be used for pricing. Caesarean Section (CS) surgery is one of the largest services and costs a lot in the hospital; careful planning is needed. This study aims to look at the variation in the cost components of CS services in Indonesia based on hospital level, hospital ownership.

Methods: This study is a quantitative research Narrative Review by analyzing twenty hospitals in six provinces representing Indonesia from the thesis found in lib.ui database. The analysis in this study is the amount of proportion/variation in the cost components with the type of hospital and hospital ownership. Meanwhile, the criteria for selected hospitals are government-owned and private hospitals with types A, B, C and D. To be able to compare these data and avoid inflation differences, it is necessary to do data collection or valuation presentation (VP). The chosen cases were the usual CS without emergency and complication

Results: There was a wide variation in CS service cost components, namely medical services (25% - 90%), accommodation (2% -39%), investigations (1% -36%) and drugs and BHP (2% -50%) both in government and private hospitals. Government-owned type B hospitals and government and private type C costs for medical services are greater than 44%.

Conclusion: There are variations in the cost components of CS services at hospital types B and C. There is a need for government efforts to make regulations regarding the magnitude of the ideal cost component as a reference for all hospitals in Indonesia.

Keywords: Caesarian section costs, Hospital, Indonesia

INTRODUCTION

Hospital is one of the health care providers that must be able to regulate the amount of fee obtained according to proportion/variation. The costs incurred by hospitals in providing complete personal health services consist of various components of costs including, service fees, pharmacy costs, accommodation costs, action costs, supporting examination fees and administrative costs [1]. This surplus of hospitals in the era of BPJS Kesehatan causes hospital capable of implementing efficiency and cost-effectiveness [2]. If the hospital is wrong in regulating the amount of variation in costs, it will cause losses.

Cost calculation is one of the strategic steps that must be taken in marketing because it will be used for pricing. At present, the pricing of health services in hospitals is determined by the Ministry of Health using INA CBG's. Pricing/variation of costs is one of the strategic steps that must be taken because it refers to costs incurred, both marginal and total costs, including indirect costs (*overhead costs*). However, calculating fixed costs is important to determine efficiency efforts by hospitals. As a significant contributor to cases, section caesarean services also require large fees at the Advanced Referral Health Facility (FKRTL), Cesarean section (CS) surgery is one of the most common actions performed in the operating room which also requires careful planning of service costs, so that the appropriate price setting for the hospital can do activities without reducing service quality.

This study aims to look at variations in the cost of CS services care class 3 in Indonesia based on the class/level of hospitals, hospital ownership, and the proportion of costs according to their components. In setting rates/prices, it is necessary to consider how much service utilization must occur so that the costs released can be effective and efficient. According to the rules there is a composition of costs at government hospitals 38% HR costs, 32% equipment and operational costs, 18% overhead costs, 7% equipment costs and 5% fixed capital, while in private hospitals the largest proportion is equipment and operational costs namely 40%, followed by HR costs 27%, overhead costs 19%, equipment costs 7% and fixed capital 6%. [3] On the other hand, according to the Indonesian Ministry of Health No.12 of 2013 about the Pattern of Public Service Agency Rates (BLU) within the scope of the Ministry of Health Article 28 Paragraph 2, which reads [4] "The highest employee costs 44% of hospital income", in other regulations at 18/2014 concerning Guidelines for Implementing the National Health Insurance Program Chapter Funding in article D paragraph b reads the number of health services in the government-owned FKRTL 30%-50%. Finally, after this research, we will see a picture of the cost components found in hospitals in Indonesia and become a reference for other hospitals to react to it. Because there is no standard for the proportion of the components of CS service costs, there is a very high variation in each hospital.

CS service is the largest income from hospitals sourced from BPJS patients. For the present conditions, 70% -85% of patients in a hospital serves the participation of BPJS [5] Many hospitals complain about the current rates. Therefore it is important to see how much the CS service costs vary in these hospitals

METHODS

This study is a Quantitative research Narrative Review by analyzing 20 hospitals in 6 provinces representing Indonesia from the thesis found in the lib.ui database. The chosen thesis criterion is research on hospitals that analyzes the proportion of cost components such as medical services, accommodation, supporting investigations, and drug of stationery and BHP section caesarian cases. The analysis in this study is the amount of proportion/variation in the cost components with the type of hospital and hospital ownership. Meanwhile, the criteria for selected hospitals are government-owned and private hospitals with type A, B, C, and D according to the availability of the data in lib.ui.

The costs referred to in this study are based on the perception of the payer so that the service tariff is used to calculate it. Due to the diversity of types and ownership of hospitals, the data taken is data on CS services without complications or emergencies in class III services. After the magnitude of the components of CS service costs, then the data needs to be randomized to the latest from this study with the Present Value (PV) method also to avoid the difference in inflation that occurs. This fact happened because the Hospital data obtained was not the same year, the longest data obtained in 2005 and the most recent data in 2016.

Present Value (PV) formula:

FV = Future Value

PV = Present Value

- i = inflation
n = Difference in years

After all, data has been obtained with the same year, then compared the component size and proportion of each cost component.

RESULTS

Table 1. The Proportion of Types and Ownership of Hospitals

No.	Hospital type	Ownership		Total/%
		Government	Private	
1	A	2		2 (10%)
2	B	4	2	6 (30%)
3	C	6	4	10 (50%)
4	D	1	1	2 (10%)
	Total/%	13 (65 %)	7 (35 %)	20

Table 1 shows the number of type C hospitals is the largest hospital in this study, followed by type B, while for types A and D there are as many as. Based on hospital ownership, government hospitals are more than private hospitals.

Table 2. Characteristics of Hospitals by Province

DKI Jakarta	West Java	Yogyakarta	Jambi	West Sumatera	Central Kalimantan	TOTAL
9	5	1	3	1	1	20
45%	25%	5%	15%	5%	5%	100%

In Table 2, the hospital characteristics, based on location, are mostly in DKI Jakarta province, while the rest are spread in five other provinces.

Table 3. The proportion of Cost Components by Type A Hospital

No.	Hospital	T y p e	Ownership	Year Data	Component/Cost Proportion				TOTAL
					Medical services	Accomm odation	Medica l Support	Drug, Medical Devices, Consumables (BHP)	
1	RSPN	A	Governme nt	2010	4,413,45 9	2,649,643	635,01 6	1,990,572	9,688,69 0
2	Hospital 1 [6]	A	Governme nt	2014	1,436,35 3	1,180,093	199,68 4	1,037,695	3,853,82 5
INTERVAL PROPORTION/AVERAGE COST					37 % - 45%	27% - 31%	5 % - 7%	21% -27%	6,771,25 8

The data from 20 hospitals spread across six provinces in Indonesia according to their type of distributes components and the proportion of costs, as shown in Table 3. The results indicate that the type A hospitals are only owned by the government and the cost components vary almost evenly where the proportion of medical services is 8%, Accommodation 4%, supporting checks 2% and drug, Medical Devices, and Consumables (BHP) 6%.

Table 4. The proportion of Cost Components by Type B Hospital

No.	Hospital	Type	Ownership	Year Data	Component/Cost Proportion				TOTAL
					Medical services	Accommodation	Medical support	Drug, Medical Devices, Consumables (BHP)	
1	Hospital B [7]	B	Government	2016	5,654,751	3,119,215	219,809	1,302,480	10,296,255
2	DS Hospital [2]	B	Government	2016	8,288,111	368,360	276,270	276,270	9,209,012
3	Hospital B	B	Government	2010	3,368,668	289,703	80,402	2,021,777	5,760,549
4	Hospital 2 [6]	B	Government	2014	1,395,814	75,794	299,763	1,022,885	2,794,255
INTERVAL PROPORTION/AVERAGE COST					50% - 90%	3% -30%	1% -11%	3% -36%	7,015,018
5	RSIA HB [3]	B	Private	2012	4,822,113	3,971,560	5,032,143	197,824	14,023,639
6	Hospital 6 [6]	B	Private	2014	1,974,489	1,510,413	297,439	2,273,236	6,055,578
INTERVAL PROPORTION/AVERAGE COST					33% - 34%	25% - 28%	5% -36%	2% -37%	10,039,609

Table 4 shows the proportion interval medical services in government hospitals of type B are 40% (50%-90%) larger than privately owned 2% (33%-34%), while the proportion of accommodation, supporting checks and drug, medical device, consumables (BHP) privately owned hospitals a higher proportion. The proportion of each component of government hospital costs is quite large. Medical services reach 40%, accommodation amounts to 27%, supporting checks by 10% and last drug, medical devices, and consumables (BHP) reaches 33%. On the other hand, at private hospitals, the largest interval is drug, medical devices, and consumables (BHP) amounting to 35%, supporting checks by 31%, medical services by 1%, and accommodation amounting to 3%.

Table 5. The proportion of Cost Components by Type C Hospital

No.	Hospital	Type	Ownership	Year	Component/Cost Proportion				Total
					Medical services	Accommodation	Medical support	Drug, Medical Devices, Consumables (BHP)	
1	RS BY [4]	C	Government	2014	2,456,831	67,123	242,720	1,039,234	3,805,907
2	RSD B [5]	C	Government	2011	2,720,312	1,255,529	261,568	664,709	4,902,118
3	P Hospital	C	Government	2005	4,342,197	3,349,876	716,734	4,422,072	12,830,880

No	Hospital	Type	Ownership	Year	Component/Cost Proportion				Total
					Medical services	Accommodation	Medical support	Drug, Medical Devices, Consumables (BHP)	
4	Hospital 3 [6]	C	Government	2014	3,333,182	880,644	40,039	198,078	4,451,942
5	DA Hospital	C	Government	2013	3,963,760	2,158,077	562,160	4,612,714	11,296,711
6	RSUD PP [8]	C	Government	2010	1,190,330	181,183	161,520	834,284	2,367,317
INTERVAL PROPORTION/AVERAGE COST					35% - 75%	2% -26%	1% -7%	4% -41%	6,609,146
7	AR Hospital [9]	C	Private	2014	4,866,372	337,747	174,380	983,289	6,361,788
8	J Hospital [10]	C	Private	2014	1,854,192	2,383,595	177,747	1,726,316	6,141,850
9	Hospital 5 [6]	C	Private	2014	16,629,775	6,954,494	867,432	5,187,790	29,639,490
10	Hospital 7 [6]	C	Private	2014	2,205,000	2,020,289	136,133	4,286,964	8,648,386
INTERVAL PROPORTION/AVERAGE COST					25%-77%	2%-39%	2%-3%	15%-50%	12,697,879

Table 5 shows that medical services still dominate the CS cost component. The cost proportion per component is almost the same between government-owned hospitals and private hospitals. The highest government hospital component is medical service by 40%, followed by drug, medical devices, and consumables (BHP) amounting to 39%. Meanwhile, the highest private hospitals spendings are for medical service component by 52% and accommodation by 37%.

Table 6. The Proportion of Cost Components by Type D Hospital

b	Hospital	Type	Ownership	Year Data	Component/Cost Proportion				Total
					Medical services	Accommodation	Medical support	Drug, Medical Devices, Consumables (BHP)	
1	Hospital 4 [6]	D	Government	2014	305,929	229,543	48,309	300,263	884,043
2	Hospital 8 [6]	D	Private	2014	1,513,393	1,298,754	104,546	1,662,118	4,578,810
INTERVAL PROPORTION/AVERAGE COST					33% - 35%	26% -29%	2% - 5%	34% -36%	2,731,426

In Table 6, the two hospitals are government owned, the intervals of per-component proportions are 2% medical services, 3% accommodation, 3% supporting checks and drug, medical devices and Consumables (BHP) 2%.

DISCUSSION

Based on the ownership status and type of hospital already represented in this study only for the ownership status of private type A hospitals cannot be displayed because the research in lib.ui was not found. While the distribution of regions based on the location of the hospital has not been distributed evenly throughout Indonesia, 45% of hospitals are in Jakarta.

The cost of uncomplicated Caesarian Section (CS) care in class 3 between government and private hospitals has a fairly wide interval for medical services (25%-90%), accommodation (2%-39%), supporting checks (1%-36%) and drugs and BHP (2%-50%). When compared with Minister of Health Regulation 12/2013 about the Pattern of Public Service Agency Rates (BLU) within the scope of the Ministry of Health Article 28 Paragraph 2 that reads [11] that the largest medical service costs are 44% in other regulations on 28/2014 concerning Guidelines for Implementation of Guarantee Programs National Health Chapter Funding in Article D Paragraph B [12] reads that the number of health services in the government-owned FKRTL reach 30% -50%. It turns out that many hospitals still budget service fees above 44% and some even more than 90%, and this will burden the hospital operating costs. Such costs mean that the cost of accommodation, investigation, and ATK and BHP is only 10%, resulting in the quality and safety of patients being served will be very low. Moreover, vice versa if the big one is medicine and BHP which in this study is up to 50%, there will be a large burden by the hospital management to cover other costs because ideally, the 30% number of hospitals can normally run according to [5]. Viewed by type and ownership of the hospital, the proportion of the components of medical service costs, type A, private type B, and type D hospitals are according to the rules, which are below 44% of the total service cost. While government type B and type B hospitals, both government and private provide medical services above the provisions, because most patients have used BPJS as a provider of health care costs where the pattern of service is a static/package, hospitals must be able to do efficiency, but with quality services, hospitals cannot do efficiency to make hospitals even closure can occur.

The Cost Component proportion of CS services also have relatively wide intervals, both in government and private hospitals. If the hospital does not immediately revise the proportion as recommended, the cost component of the government hospital will be 38% for HR costs, 32% for equipment, and operational costs, 18% for overhead costs, 7% for equipment costs and 5% for fixed capital [13]. In private hospitals, on the other hand, the largest proportion is equipment and operational costs (40%),

followed by HR costs (27%), overhead costs (19%), equipment costs (7%), and recommended fixed capital (6%) will disrupt hospital activities. The proportion takes place because no regulation makes the proportion of the variation of the cost component by the government, the researcher proposes to the government (Ministry of Health) to immediately make these rules so that hospitals have directions according to the capabilities and conditions of their respective hospitals.

Based on data from Medicare funding in 1995-1999, the use of health costs in America, the highest cost was used for hospital admission costs (31%), followed by for doctor/clinical services (21%) and drug purchases (10%). This finding is supported by the results of the study.

Based on the Medicare data from 1995-1999, the use of health costs in America, the highest cost was used for hospital admission costs amounting to 31%, followed by 21% for doctor and clinical service check and last 10% for medicine purchase costs.

CONCLUSION

This research was conducted in twenty hospitals in six provinces in Indonesia, but the highest number was in Jakarta area and did not represent type A private hospitals.

There was an interval in the proportion of components of the uncomplicated caesarian sectional cost of care class 3 which was wide enough for medical services (25% -90%), accommodation (2% -39%), supporting checks (1% -36%) and drugs and BHP (2-50%). Government type B hospitals, government type C, and private medical service fees above the applicable rules (> 44%) and hospital management need to fix them immediately. With the increasing number of patients utilizing BPJS as a guarantor of health services, hospitals must immediately take efficiency measures but with quality services

The government needs to make new regulations on the proportions and intervals of the components of service costs in hospitals.

More in-depth research is required on the research limitations conducted by the researchers today.

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