

ANALYSIS OF SECTIO CAESAREA UNIT COST AS A BASIS TO RECOMMEND THE PRICE

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Abstract: This research aims to know the amount of Sectio Caesarea unit cost as a basis to recommend the price. Beside that this research also aims to know cost component which influences Sectio Caesarea unit cost and to know factoHospital that can influence counting Sectio Caesarea unit cost in the hospital. The method used in this research is Operational research and this research is descriptive with an approach to quantitative and qualitative data. Unit cost calculation using real cost method. The results show that Sectio Caesarea unit cost as a basis to recommend the price of Rp. 7,687,231.03. Hospital costs currently only reach CRR 102.86%. The proposed price of Section Caesarea amounted to Rp. 7,878,000.00. Cost components that affect the unit cost are direct costs, indirect costs, and utilization. FactoHospital affecting the calculation of the unit cost include never done a cost analysis, incomplete data, human resource capability, knowledge of human resources, and lack of skills of human resources. From these results Need to do a cost analysis, revamping financial statements, and equipment inventory.

Keywords: Unit cost, real cost, CRR and Cost Analysis



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Hospital in Batu City has co-operated with various insurance such as Jamkesmas, Jamkesda, health insurance PNS/TNI-POLRI, Jamsostek, Jasa raharja, and other private insurance. Asuransi Jamkesmas, jamsostek and health insurance PNS/TNI-POLRI become National Health Insurance since 1 January 2014. This has been mandated in the National Health Insurance System Act No. 40 of 2004. The percentage of outpatient financing for the period of January-July 2016 was dominated by the

National Health Insurance of 64.63%, the personal financing percentage was 29.32% and the remaining 6.05% was financed by other insurers. The percentage of inpatient financing is dominated by National Health Insurance for 52.45%, personal financing of 47.55%. The percentage of patient financing in an operating room with National Health Insurance was 62.75%, a general patient was 34.90% and 3.35% other Hospital (Hospital in Batu City, 2016).

Revenue from National Health Insurance in operating rooms from January to July 2016 verified by BPJS verifier is Rp. 2,886,779,700. The number of claims submitted to BPJS amounted to Rp. 4,553,173,928. Difference between claims of Hospital and verification by BPJS verifier (Rp. 1,666,394,228). This happens because hospital costs about surgery are higher than the cost of INA-

CBGs. The value of Cost Recovery Rate (CRR) of Sectio Caesarea cases between hospital costs and the INA-CBGs cost was 50.63%. This shows that hospitals that operate by doing Obgyn especially Sectio Caesarea in a state of deficit. This calculation is not based on the cost of the Hospital with the total cost of Sectio Caesarea, as it does not have a unit cost of secession Caesarea.

Based on interviews with Hospital leaders including directors, deputy finance directors, deputy director of services, and financial managers, the pattern of costs in Hospital is not based on unit cost, because Hospital difficulties in unit cost calculation as the basis for costing. This should be the concern of the Hospital management who have followed the INA-CBGs payment system since it can lead to lower revenues compared to expenses, hospital costs less than the unit cost or cost incurred at the time of production greater than the cost set. Based on the above background, the purpose of this study is to calculate the Sectio Caesarea unit cost in Hospital in Batu City, to Determine the size of the proposed cost of Sectio Caesarea in Hospital in Batu City, to determine the cost component affecting the Sectio Caesarea unit cost in Hospital in Batu City, and to find out the factors affecting the calculation of the Sectio Caesarea unit cost in Hospital in Batu City.

RESEARCH METHODS

The research was conducted at Hospital in Batu City, East Java Province on January 23rd until 03rd February 2017. The research design used was op-

erational research and was descriptive with the use of the quantitative and qualitative approach. Research subjects consist of directors, deputy director general and finance, deputy director of services, insurance agency, and financial manager. The research sample used is all financial transactions related to investment cost, operational cost, maintenance cost, and unit allocation unit cost. Data processing using a computer by creating a spreadsheet for real cost method in Microsoft Excel program.

RESULTS

Number of Sectio Caesarea patients in January-December 2016

Table 1 Number of Sectio Caesarea at Hospital in Batu City 2016

| No | Period | Amount |
|--------------|-----------|------------|
| 1 | January | 30 |
| 2 | February | 35 |
| 3 | March | 34 |
| 4 | April | 34 |
| 5 | May | 40 |
| 6 | June | 24 |
| 7 | July | 43 |
| 8 | August | 32 |
| 9 | September | 38 |
| 10 | October | 37 |
| 11 | November | 25 |
| 12 | December | 39 |
| Total | | 411 |

Source: Hospital in Batu City Operations Report, 2016.

Table 2 Total Cost Unit Sectio Caesarea

| Costs | Cost (Rp) | % |
|---|---------------------|---------------|
| Operating costs | 1,861,747.03 | 24.22 |
| Maintenance costs (pre-post) | 2,251,000.00 | 29.28 |
| Medical services obgyn doctors | 1,200,000.00 | 15.61 |
| Medical services of anesthetic physicians | 500,000.00 | 6.50 |
| Pediatric medical services | 250,000.00 | 3.25 |
| Medicine | 450,727.00 | 5.86 |
| BHP | 1,173,757.00 | 15.27 |
| Total Cost | 7,687,231.03 | 100.00 |

Table 3 Results of income and CRR calculations on Sectio Caesarea

| Class | Σ | Hospital Cost (Rp) | Income (Rp) | Unit Cost (Rp) | Total Cost (Rp) | CRR (%) |
|--------------|------------|--------------------|-------------------------|----------------|-------------------------|----------------|
| I | 49 | 8,700,000.00 | 426,300,000.00 | 7,687,231.03 | 376,674,320.47 | 113.17% |
| II | 115 | 7,800,000.00 | 897,000,000.00 | 7,687,231.03 | 884,031,568.45 | 101.47% |
| III | 247 | 7,800,000.00 | 1,926,600,000.00 | 7,687,231.03 | 1,898,746,064.41 | 101.47% |
| Total | 411 | | 3,249,900,000.00 | | 3,159,451,953.33 | 102.86% |

Table 4 Results of calculation of income and CRR on Sectio Caesarea with INA-CBGs Costs

| Class | Σ | Hospital Cost (Rp) | Income (Rp) | Unit Cost (Rp) | Total Cost (Rp) | CRR (%) |
|--------------|------------|--------------------|-------------------------|----------------|-------------------------|---------------|
| I | 49 | 5,631,000.00 | 275,919,000.00 | 7,687,231.03 | 376,674,320.47 | 73,25% |
| II | 115 | 4,826,600.00 | 555,059,000.00 | 7,687,231.03 | 884,031,568.45 | 62,79% |
| III | 247 | 4,022,100.00 | 993,458,700.00 | 7,687,231.03 | 1,898,746,064.41 | 52,32% |
| Total | 411 | | 1,824,436,700.00 | | 3,159,451,953.33 | 57,75% |

Table 5 Cost Simulation with Number of Fixed Measures

| Class | Σ | Hospital Cost (Rp) | Income (Rp) | Unit Cost (Rp) | Total Cost (Rp) | CRR (%) |
|-------|-----|--------------------|----------------|----------------|-----------------|---------|
| II | 115 | 7,800,000.00 | 897,000,000.00 | 7,687,231.03 | 869,466,880.55 | 103.17% |
| II | 115 | 7,878,000.00 | 905,970,000.00 | 7,687,231.03 | 869,466,880.55 | 104.20% |
| II | 115 | 7,956,000.00 | 914,940,000.00 | 7,687,231.03 | 869,466,880.55 | 105.23% |
| II | 115 | 8,034,000.00 | 923,910,000.00 | 7,687,231.03 | 869,466,880.55 | 106.26% |
| II | 115 | 8,112,000.00 | 932,880,000.00 | 7,687,231.03 | 869,466,880.55 | 107.29% |
| II | 115 | 8,190,000.00 | 941,850,000.00 | 7,687,231.03 | 869,466,880.55 | 108.33% |
| II | 115 | 8,230,560.00 | 946,514,400.00 | 7,687,231.03 | 869,466,880.55 | 108.86% |

DISCUSSION

The Cost of Investing In Medical Devices, Non Medical Instruments, and Electronic Devices

The cost of medical equipment investment (4.53%) is greatest because the implementation of the Cesarean Sectio service requires sophisticated, expensive, high cost, long period of use (± 5 years), the investment value of large medical equipment, changed or updated and inflation. This is similar to research conducted by Widyadewi (2003), which states that the cost of investing the largest medical equipment because medical equipment is one of the factors that affect the optimization and quality of services provided. Research conducted by Nisma

Abdurrhaman (2009), states that one of the largest components of fixed costs is the cost of medical equipment that is Rp. 539,739,027 (56%) for using sophisticated and large equipment. In contrast to research conducted by Subirman (2012), states that the largest investment cost is the cost of building investment because of the cost of procurement and the initial price of a high investment. Increased health costs due to inflation health costs that occur on the supply side of health technology (Gani, 1996). According to Callan and Yeager (1991), in the United States, the high cost of health is caused by technology, where the cost of research and development of new drugs and diagnostic tools that continue to evolve into expensive health costs.

Operational Cost of Sectio Caesarea

The biggest operational cost is the nurse's salary because the nurse's salary includes the cost of basic salary and paramedical services. This is in accordance with the study of Sanjato (2004) which states that the largest operational costs are the cost of salary (52.7%) and in Maryani's (2003) study the salary cost is also the largest of total operational costs. The operational costs of the doctor's medical services are not included in the total cost of Sectio Caesarea as medical fees at Hospital in Batu City are an agreement between the physician and the hospital management. Though Obgyn and Anesthetic Doctors are permanent doctors who get a fixed salary even though there are no Sectio Caesarea service activities. The fixed salary of Obgyn doctors (0.81%) and anesthesia (0.80%) of the total operational cost of Sectio Caesarea. The operational costs of drugs and BHP used for Sectio Caesarea services are greater than medicines and BHP which are greater than the cost of drugs and BHP based on Clinical Pathway (CP) Hospital in Batu city. This happens because the TKMKB that has been formed by Hospital in Batu city is not running with its functions and duties, the use of drugs and BHP that are not in accordance with CP, increased use of drugs and BHP due to incidents of disease and the behavior of providers or prescribing habit support rational drug use. Research conducted Utami, SB (2006) mentioned that the high cost of health services due to the use of large drugs in health care units To overcome this problem, intervention is needed in controlling the use of drugs and BHP in accordance with the clinical pathway so that the goal of efficiency in professionalism cost goes well and runs the role of TKMKB according to its function and duty.

Maintenance Costs of Sectio Caesarea

Maintenance costs are costs incurred to maintain the value of investment goods to function properly (Gani, 1997). In this study maintenance cost of 5.04% of total cost. Maintenance costs are very small compared to other costs. This occurs because there is no detailed maintenance cost record, building maintenance cost is reduced by the proportion

of maintenance of all Hospital buildings to the operating room building, medical equipment, and electronic equipment maintenance cost is obtained from the BPS unit because the maintenance cost is not recorded in the financial statements and the cost of maintaining non-medical equipment directly obtained from the financial statements but not described the cost of maintaining each tool. To overcome the problem of maintenance costs, it must provide a maintenance form of every tool available in the Hospital. This is similar to research conducted by Maryani (2003), and Widyadewi (2003), mentions that the maintenance cost is the smallest compared to investment cost, operational cost and allocation unit cost of support.

Gani (1996), revealed that balancing the cost of investment and maintenance costs is very important to keep the investment goods is not damaged. To prevent such problems then require maintenance costs for the investment goods remain optimal.

Indirect Cost of Allocation of Supporting Units in Sectio Caesarea

The largest allocation unit cost is the cost of directors (16.20%) of the total cost. This happens because the cost of draft issued in 2016 amounted to Rp. 3,154,476,250.00. So the cost incurred in Sectio Caesarea is also getting bigger. The cost of the board of directors is due to the unspecified cost of HOSPITAL activities, the total salary cost which is not differentiated between the basic salary, incentives, and other HR operations. In the allocation of the unit cost of support needs to be done efficiently.

Unit of Charge of Sectio Caesarea

Unit cost is the cost calculated for each one unit of production/service. At the unit cost of service, Sectio Caesarea required an amount of production for one year. The unit cost calculation is influenced by the utilization rate. Sectio Caesarea unit costs in operating room Rp. 1,567,953.03. Total cost of SC, pre-post op and Obgyn, child and anesthetic medical services and medicines and BHP costs Rp. 7,560,581.57, since the Caesarea's unit cost calculation at Hospital in Batu City of 2016

involves all costs involved in Sectio Caesaria. This is different from the research that has been done by Indrayanti (2001), who said that Caesarea cost unit with double distribution method is Rp. 865,721.00 and with ABC method of Rp. 851,682.00 because this research was conducted in Hospital local government which get a subsidy from the government. While Hospital in Batu City is a private Hospital that independently manages its own income and expenses, the cost and data information are limited and the human resources do not have the willingness, capability, knowledge, and skills in a unit cost analysis.

Proposed Cost of Sectio Caesarea

Based on Table 4 it appears that the SC Cost of all treatments has covered all costs incurred for the service of Sectio Caesarea due to CRR > 100%. But for CRR grade II and III the same that is 103.17%. To differentiate Class II and III fees Hospital must raise the cost of class II to Rp. 7,878,000.00. Costing is influenced by the unit cost, type of service, expected utilization rate and cross subsidy, level of community capability, elasticity and equivalent service cost of competitors (Nadjib. M., 1997). Table 5 shows that CRR values in all treatment classes for National Health Insurance patients were 58.71%. This occurs because the cost formation in Hospital is not based on cost analysis, Cost derived from Kediri Baptist Hospital and based on MSE and inflation increase. To overcome these losses, cross subsidies on services with the highest surplus need to be performed and cost analysis on the determination of service costs.

Cost components affecting the formation of the Sectio Caesarea unit cost as the basis of proposed Fees at Hospital in Batu City

Based on the results of the research obtained and presented in Table 5.34 shows that the establishment of Sectio Caesarea cost units as the basis of proposals Costs in Hospital in Batu city are influenced by direct costs, indirect costs, and the number of products produced (utilization). Direct costs consist of investment cost, operational cost and maintenance cost. The indirect costs consist of the

cost of allocating a supporting unit. According to Gani (1993), states that the calculation of unit costs in Hospital influenced by utility rates, the higher the level of utility the greater the number of production and unit costs are smaller. Conversely, the lower the utility level the smaller the amount of production and the greater the unit cost.

Factors Affecting Unit Cost Calculations

There are some problems with the calculation of the cost of investing in medical devices, nonmedical instruments and electronic devices using AIC ie no data purchase and equipment prices. Such as SC set tool. This is because Hospital in Batu City does not have a good inventory of medical, non-medical and electronic instruments that will affect the results of the calculation of investment costs based on AIC, financial data not distinguished per unit of production, the absence of officers who have competence in the needs analysis service cost, no unit cost analysis in tariff determination, complex method for cost analysis

Trisnantoro (2004) revealed that before calculating the unit cost then it must have a proper accounting system. In addition, human resources who do not have the willingness, ability, knowledge, and skills in the analysis of unit costs cause the unit cost cannot be measured

According to Subanegara (2005), cost information becomes very important because with this information, the hospital management will be able to assess the efficiency or absence of each work unit performance, and in this case is Caesarea section, besides that the cost information, especially unit cost can be used to determine the number of Expected Expenses that reflect the reality of the costs incurred. Furthermore, the efforts to achieve efficient health services in hospitals are closely linked to existing human skills, knowledge, skills and behavior, ranging from doctors, nurses and non-medical staff.

CONCLUSION

The results of the study showed that the first, the unit of service cost of Sectio Caesarea without medical services, medicines, BHP and treatment (pre-post) Rp. 1,861,747.03 and total Sectio

Caesarea costs with medical, medicinal, BHP and pre-post) Rp. 7,687,231,03. The second, the current cost of reaching recovery rate (CRR) of 102.86%. The cost of INA-CBGs version 4.1 recovery rate (CRR) below 100% is 57.75%. The third, the amount of the Proposal Costs in class II needs to be increased by Rp. 78,000.00 from Rp. 7,800,000.00 to Rp. 7,878,000.00. The fourth, cost factors that affect the unit cost of services Caesarea section is the direct costs, indirect costs and the amount of product utilization. and lastly, Factors affecting unit cost calculation include no year data and purchase price of tools, no specific equipment data and maintenance costs, financial data that is not differentiated per unit of production, the absence of officers who have competence in the analysis service cost requirements, no cost unit analysis in the determination of tariffs, complex methods for cost analysis and the presence of officers who do not know about the procedures for calculating cost analysis.

SUGGESTION

Suggestions for Hospital in Batu City

- Cost analysis for Sectio Caesarea services is required to obtain information or budgeting policies, as well as open and accountable financial accountability.
- It is necessary to conduct inventory of facilities and infrastructure covering price and year of purchase of equipment.
- Efficiency is required on the cost of allocation of supporting units, BHP and drugs for the service of Sectio Caesarea.
- Need improvement of recording and financial reporting, among others, separation of activity data per unit space.

Advice for BPJS / Ministry of Health

- A private HOSPITAL INA-CBGs cost review needs to be reviewed.
- Please note the cost components that must be in INA-CBGs Costs.

Suggestions for Other Researchers

It can be done by another research researcher with the same object in terms of service Sectio Caesarea with different subject for example:

- Using different research methods eg with qualitative methods.
- WTP and ATP of the insurance against the service of Sectio Caesarea.

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