



Research Article

Cost Analysis and Waste Elimination in Efforts to Prepare Inpatient Room Rates as an Efficiency and Effectiveness Strategy in Managing a Hospital Business

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ABSTRACT

ABC Hospital is a class B hospital with an increase in capacity to 238 beds. The process of cost analysis and unit cost preparation is very necessary in determining the burden of each service unit. This calculation is used to prepare service rates, in this case the inpatient room rates. The aim of this research is to analyze BPJS inpatient costs, analyze financial costs during January – July 2023, compare costs with predetermined plans and calculate fixed costs, variable costs and semi-variable costs in calculating inpatient rates. This research is descriptive qualitative, by processing secondary data that has been provided. The data used is service visit data from medical records, financial data for January – July 2023, BPJS TXT data for January – July 2023.

ABC Hospital has carried out controls related to quality control and costs, by prioritizing effectiveness and costs. The biggest income is from BPJS income while the biggest cost is labor costs. In calculating unit costs, several cost variables are used, including Fixed Cost, Semi-variable Cost and Variable Cost with the average unit cost being 362,020 rupiah.

Keywords: Income, Expense costs, Unit Cost, Tariff

INTRODUCTION

Cost control is a process or effort carried out in an orderly and systematic manner in setting implementation standards which has the aim of planning an information system that provides feedback (Ronald et al., 2018), compares actual implementation with planning, determines and manages deviations that may occur, and makes corrections or improvements following plans that have been previously determined, so that goals are achieved effectively and efficiently in the use of costs at the hospital (Fentiana & Ginting, 2020).

Itself is a sacrifice that can be measured in units of money for the ownership of goods or services obtained for a certain purpose and the period or useful life of the sacrifice that has been previously made (Analysis & Rusli, 2017). Sacrifices that produce benefits can be referred to as costs, while sacrifices that do not produce results are considered wasteful costs (losses) that hurt the hospital (Cahyo & Saputra, 2020).



Cost control in a hospital is carried out because it can control the costs incurred in carrying out activities so that they can run effectively and efficiently (Sumiati et al., 2020). The control function is an important function to achieve previously planned goals. Carrying out control can help minimize deviations that are expected to occur within the scope of the hospital (Ticoalu, 2020). Hospitals must constantly enhance their human resource capacities to meet the growing demand from the public for high-quality, professional healthcare services (Azizah, 2022). The purpose and driving force behind hospitals' provision of healthcare services is this demand. However, there are fewer and fewer government subsidies and resources available to pay for public health services (Perbendaharaan et al., 2020).

Cost analysis is an activity in the accounting system which aims to evaluate changes in costs relative to changes in income (Putra, 2012). Analysis of service costs in hospitals must be known to hospital leaders to obtain information about total hospital costs, sources of financing and their components, to obtain information about costs, Hospital administrators can learn about the hospital's cost centers and pinpoint those that are deficient so that corrective or preventive measures can be implemented. (Sumiati et al., 2020).

Hospital administrators can also utilize cost analysis as a fundamental tool for budgeting and subsidy preparation, performance measurement, and budget preparation (Ticoalu, 2020). Proposing new, reasonable hospital fees for the community might also be based on cost analysis. . Apart from that, the public can also be informed about the costs required for the hospital services they receive (Sugiyarti et al., 2013). The principle of cost analysis in hospitals is to calculate the costs that have been incurred for one year in each functional unit in the hospital concerned (Zahra, 2015), including all investment costs, operational costs and maintenance costs (Pratama & Pikri, 2020). The total costs for each unit will reflect the total costs at the hospital concerned. The results of this kind of analysis will produce a cost map in each unit and throughout the hospital using cost analysis which aims to calculate the costs incurred in supporting units to production units (Sugondo et al., 2021).

Unit cost is an important component in making the company's production process efficient. This concept can help ensure that the company's costs are lower than the selling price of one unit (Arfiani et al., 2020). To meet sales goals, the company must be able to adjust the costs per unit of the products produced (Sulistiadi, 2008). To calculate *unit costs* accurately, some steps must be taken. Some of these steps include: (1) Identification of components included in fixed costs, variable costs and semi-variable costs (2) Identification of variable costs. These costs depend on the number of units produced by the company such as direct labor costs and direct material costs. Each Unit has different variable costs. (3). The number of units produced can come from monthly, quarterly, or certain period calculations.

The hospital is a class B hospital with an increase in capacity to 238 beds. The process of cost analysis and unit cost preparation is very necessary in determining the burden of each service unit. This calculation is used to prepare service rates, in this case, the inpatient room rates. This research aims to analyze BPJS inpatient costs, analyze financial costs during January – July 2023, compare costs with predetermined plans and calculate fixed costs, variable costs and semi-variable costs in calculating inpatient rates.

MATERIALS AND METHODS

This research is descriptive and qualitative, by processing secondary data that has been provided. The data used is service visit data from medical records, financial data for January-July 2023, and BPJS TXT data for January-July 2023. The data that has been obtained from ABC

Hospital is processed by carrying out cost analysis by conducting a comparative study between income and costs. Then grouped to calculate the efficiency results of each unit to draw conclusions.

RESULTS AND DISCUSSION

Hospital Income Is income obtained from hospital operational activities, namely general medical activities, inpatient care, outpatient care, surgical activities, laboratory-related activities, and other health activities. The following is the income of ABC Hospital, the percentage achievement of income is the amount of rupiah composition compared to the total income achievement of up to 100%, while the achievement of the income target is the result of the achievement compared to the target that has been determined in the work plan. The following is the percentage achievement and income target achievement of ABC Hospital from January to August 2023.

Table 1. Percentage Achievement and Revenue Target Achievement of ABC Hospital from January-August 2023

No	Income and Earnings	Revenue Percentage Achievement	Achievement of Revenue Targets
1	Pharmacy	6.2%	58.89%
2	Inpatient	5.7%	43.18%
3	Outpatient	2.2%	57.42%
4	Inst. Emergency	1.0%	59.51%
5	Special Care	1.2%	111.38%
6	Medical support	3.0%	62.37%
7	BPJS	79.3%	94.22%
8	Other Service Income	0.8%	33.73%
	Total Earnings and Earnings	100.0%	82.11%

Table 1 shows that the largest amount of income is BPJS income. Costs are all the amounts spent by ABC Hospital, the cost percentage achievement is the total rupiah composition of costs compared to the total cost achievement up to 100%, while the target achievement is the achievement compared to the target that has been determined in the work plan. The following are the Percentage Achievements and Target Achievements of ABC Hospital Revenue from January-August 2023.

Table 2. Percentage Achievement and Expense Target Achievement of ABC Hospital from January-August 2023

No	Expenses and Losses	Expense Percentage Achievement	Load Target Achievement
1	Cost of Drugs	15.3%	84.92%
2	Labor Expenses	35.6%	84.32%
3	BPJS burden	13.8%	125.65%
4	Service Unit Expenses	18.6%	92.18%
5	Education and Training Expenses	0.4%	37.87%
6	Administrative and General Expenses	5.0%	102.48%
7	Depreciation and Amortization Expenses	8.5%	58.47%
8	Electricity, Water and Telephone Expenses	2.8%	64.08%
	Total Expenses and Losses	100.0%	86.04%

Table 2 shows that the largest burden costs are labour costs. Fixed costs also have the meaning of costs incurred by a company in a fixed amount (Sugondo et al., 2021). This means that even though there is an increase or decrease in the number of goods or services, costs remain unchanged. In this case, it is depreciation costs and salary components. The total investment in land and buildings is 160 billion, with a depreciation capacity of 11 service floors, the following are the depreciation costs per day/floor.

Table 3. Depreciation Costs/Fixed Costs for New Inpatient Buildings and Buildings at ABC Hospital

Floor	Area (M ²)	Depreciation/Month	Daily depreciation
7th floor	1367	47,055,054	1,568,502
8th floor	1054	36,280,927	1,209,364
9th floor	1054	36,280,927	1,209,364
10th floor	1054	36,280,927	1,209,364
11th floor	1054	36,280,927	1,209,364
Amount	15736	541,666,667	18,055,556

Table 4. Semi-Variable Costs for New Inpatient Rooms at ABC Hospital

Floor	ILLUMINATION (Watts) (in months)	AC (Watts) (In Months)	Electricity Cost/Day (Rupiah)
7th floor	26,868	59,929	2,820,555
8th floor	28,857	54,869	2,720,760
9th floor	31,492	54,869	2,806,387
10th floor	31,492	54,869	2,806,387
11th floor	17,820	59,397	2,509,244
Amount	245.126	725,681	31,547,344

Table 4 provides information regarding semi-variable costs, namely the use of electricity and air conditioning, while variable costs are costs that depend on the number of patients in care, namely laundry services, cleaning services, patient meals and nutritional operational costs. The following are the variable costs of inpatient care.

Table 5. Variable Costs of New Inpatient Rooms at ABC Hospital

Variable Costs	Rupiah	Treatment Day	Variable Costs (Rupiah)
Laundry Services	642,506,916	17,930	35,834
Cleaning Service	481,840,712	17,930	26,873
Patient Feeding	522,563,122	17,930	29,145
Nutrition Unit Operations	267,499,545	17,930	14,919
ATK etc	275,797,099	17,930	15,382
			122,153

Table 5 provides information that the variable cost for each patient/day of hospitalization is IDR 122,153/day of treatment. The following is the average unit cost for inpatient care at ABC Hospital.

Table 6. Average Unit Cost at ABC Hospital Inpatient

Floor	Number of TT	Treatment Day	Fixed Costs	Semi Variable Cost	Wages Employee	Fixed Cost + Semi Variable Cost	Variable Cost	Unit Cost
Lanati 7	20	360	1,568,502	2,820,555	86,000,000	251,081	122.153	373,234
8th floor	26	468	1,209,364	2,720,760	86,000,000	192.158	122.153	314,312
9th floor	25	450	1,209,364	2,806,387	86,000,000	200,035	122.153	322,188
10th floor	25	450	1,209,364	2,806,387	86,000,000	200,035	122.153	322,188
11th floor	14	252	1,209,364	2,509,244	86,000,000	356,026	122.153	478,179
Average								362.020

Table 6 provides information on the average unit cost of inpatient care at ABC Hospital. Unit Cost Calculation is an important component in making the company's production process efficient. This concept can help ensure that the company's costs are lower than the selling price of one unit. To meet sales goals, the company must be able to adjust the costs per unit of the products produced.

CONCLUSION AND SUGGESTIONS

ABC Hospital has made maximum efforts regarding quality control and cost control, but in terms of implementation, the costs incurred are indeed greater than the amount of income obtained. Must have efforts to increase income and control costs. ABC Hospital has carried out controls related to quality control and costs, by prioritizing effectiveness and costs. The biggest income is from BPJS income while the biggest cost is labor costs. In calculating unit costs, several cost variables are used, including Fixed Cost, Semi-variable Cost and Variable Cost with the average unit cost being 362,020 rupiah.

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CONFLICT OF INTEREST

There is no conflict of interest in the research carried out at ABC Hospital Surabaya. The researcher has no financial relationships or other interests with the hospital that could influence the research results

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