

Activity Based Costing Method As The Basis For Determining Service Rates In The Radiology Unit At Royal Prima Hospital Medan

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Abstract.

Determining the tariff for radiology examination services is a very important decision, because it can affect the profitability of a hospital. Activity Based Costing is a system of accumulating costs and charging costs to products using various cost drivers by tracing the costs of each activity and then tracing the costs from activities to products. The purpose of this study was to determine the application of the activity based costing method as an alternative to CT Thorax service rates in the radiology unit at RSU Royal Prima Medan. The data analysis technique used in this study is a non-statistical quantitative analysis technique. Data in the form of numbers obtained from RSU Royal Prima Medan which contains the calculations are then analyzed using the ABC (Activity Based Costing) Implementation theory. The results showed that the unit cost for CT Thorax examination in the radiology unit of RSU Royal Prima Medan using the activity based costing method was Rp. 1,646,693. The real cost of a CT Thorax examination at the radiology unit of the Royal Prima Medan General Hospital is Rp. 1,897,500. There is a difference in the cost of CT Thorax examination at the radiology unit of RSU Royal Prima Medan with unit costs using the activity based costing method and using real cost calculations at RSU Royal Prima Medan with a cost difference of Rp.250,809. The results showed that the unit cost for CT Thorax examination in the radiology unit of RSU Royal Prima Medan using the activity based costing method was Rp. 1,646,693. The real cost of a CT Thorax examination at the radiology unit of the Royal Prima Medan General Hospital is Rp. 1,897,500. There is a difference in the cost of CT Thorax examination at the radiology unit of RSU Royal Prima Medan with unit costs using the activity based costing method and using real cost calculations at RSU Royal Prima Medan with a cost difference of Rp.250,809. The results showed that the unit cost for CT Thorax examination in the radiology unit of RSU Royal Prima Medan using the activity based costing method was Rp. 1,646,693. The real cost of a CT Thorax examination at the radiology unit of the Royal Prima Medan General Hospital is Rp. 1,897,500. There is a difference in the cost of CT Thorax examination at the radiology unit of RSU Royal Prima Medan with unit costs using the activity based costing method and using real cost calculations at RSU Royal Prima Medan with a cost difference of Rp.250,809.

Keywords: Activity Based Costing, Radiology Unit, and CT Thorax.

I. INTRODUCTION

Hospitals have the main function of organizing health in the form of healing and recovery for sufferers and providing services that are not limited to in-hospital care, but provide outpatient services, as well as care outside the hospital (Rasidin, 2018). Hospital is one example of a non-profit oriented organization. The main task of the hospital is to provide treatment, care and health services. In hospitals, cost is an important aspect because rates are a very important aspect in hospital institutions (Yanti, 2021). It is important for hospitals to know the cost of each service unit they have as unit cost information that forms the basis for setting service rates (Dwi Windu, 2022). The charging activity of providing health services, the pulmonary hospital earns income from service revenue and the facilities provided, one example of service is the services of a radiology unit, and where the income from these services is obtained from the tariffs that must be paid by users of radiology examination services. Determining the tariff for radiology examination services is a very important decision, because it can affect the profitability of a hospital. The use of various technologies and experts makes the operational costs incurred by the hospital become large which will have an impact on the tariff for radiology examination services. Controlling hospital costs requires an appropriate accounting system, especially costing calculation methods in order to produce accurate cost information regarding the costs of its service activities.

So far, the hospital in determining the basic price has only used the traditional costing system, a method in which costing is based on direct costs and indirect costs associated with services (Purwati, 2022). Traditional costing is less effective in determining product costs, traditional hospital accounting methods are not related to conditions or outcomes, nor do they measure over the complete treatment cycle

for a given condition (Breanna, et al 2020). The calculation of cost of goods was originally applied in manufacturing companies, but in its development the calculation of cost of goods has been adapted by service companies, trading companies, and the non-profit sector (Breanna, et al 2020). Fantastic developments in the field of technology and information have made every company make every effort to apply technology to improve the quality of its processes (Febiona et al, 2021). Cost control, the hospital requires an appropriate accounting system, especially the cost calculation method to produce accurate cost information regarding the costs of its service activities (Utary & Subhan, 2018). The activity-based costing method uses many cost factors when allocating costs for activity-based costing is considered to be able to create appropriate costs (Darcy, 2020). The development of science has resulted in an activity-based costing system designed to overcome the distortions that occur in traditional cost accounting systems. This accounting system is called Activity Based Costing, an Activity Based Costing system can assist in decision making (Aldi, 2019).

Activity Based Costing is a system of cost accumulation and cost assignment to products using various cost drivers by tracing the costs of each activity and then tracing the costs from activity to product. However, in the implementation of ABC there are still several obstacles, including: interviews and survey processes require time and are expensive, data for the ABC model is subjective and difficult to validate, and data requires storage, processing and reporting (Faizaturuhaniah, 2022). The cost accounting system based on Activity Based Costing is financing based on service activities as well as an information system that identifies activities carried out in the production process and knows every activity cost that occurs in the hospital (Sigit, 2018).

Activity Based Costing focuses on the costs attached to services based on the activities carried out to carry out, and distribute or support the services concerned (Mulyadi, 2016). The main difference in calculating cost of goods between traditional cost accounting and an Activity Based Costing system is the number of cost drivers used (Zulia, 2020). When a hospital implements ABC, it must consider the relevant and required factors, including the services offered at the hospital, demographics, factors such as the size or type of hospital, location, educational level of employees, and equipment. Factors as the basis of management to make decisions. ABC can be applied in the health care sector because ABC calculates costs for activities that consume resources and then applies them to products (patients) on the basis of activities required in production or treatment (Nugroho, 2018).

The system of determining the cost of goods with an Activity Based Costing system has been found that this system increases the allocation of resources and provides more accurate cost information in complex environments with resources that focus on skills and knowledge in hospital services (Angels, et al 2021). The Activity Based Costing system assumes that costs are incurred due to activities resulting from the services performed, Activity Based Costing helps hospitals understand exactly where to take action in setting hospital rates to get benefits (Angels, et al 2021). Research on the application of activity based costing has been carried out by several other researchers, they conducted research on the application of activity based costing methods to calculate hospitalization rates at the hospital. From this study it was concluded that by using the activity based costing method, it gives different calculation results from the previous method, this is because there are differences in the imposition of overhead costs on each product based on the cost driver used, Andriady (2022) conducted research on activity based costing method of determining the unit cost of lithotripsy for the treatment of urinary bladder calculus at vitainsani hospital Pematangsiantar.

Using the activity based costing method, determining tariffs is traced to every activity that can trigger costs related to hospitalization activities, not only activities that are directly related to the service production process, but tracing of costs incurred based on activities that are not directly related to process of hospitalization but has relevance as a supporter of hospital inpatient activities. So that this system is expected to assist in determining hospital inpatient rates more accurately (Kesumah, 2019). The ABC method is proposed as an improvement to activity-based costing because it makes accurate cost analysis easier to update by estimating two parameters: (I) the unit cost of resource inputs and (II) the time and quantity of resources required to perform a transaction. or activities (Etges et al, 2020). The ABC method can optimize resource management on a per patient basis across all treatments (Koehler et al, 2019). Helps identify

opportunity cost savings by making healthcare procedures more efficient, competitive, and, consequently, less expensive (Ana et al, 2022). This study took the research object, namely the Royal Prima Medan General Hospital which offers various types of services, one of which is service in the radiology unit. From the description of the background above, the researcher wants to conduct research with the title "Activity based costing method as the basis for setting service rates in the Radiology Unit at RSU Royal Prima Medan".

II. METHODS

This type of research is a quantitative descriptive research by conducting a case study at RSU Royal Prima Medan. Descriptive research was conducted to determine the existence of independent variables, either only on one variable or more (stand-alone variable or independent variable) without making comparisons of the variables themselves and looking for relationships with other variables. (Sugiyono, 2018). In this study, researchers analyzed the efficiency of service financing in the radiology unit in the form of unit cost, carried out using the ABC (Activity Based Costing) method. In this study, the research subjects were all those involved in the service at the Radiology Unit of RSU Royal Prima Medan. The object of this research is all activities and costs that occur in the Radiology Unit of RSU Royal Prima Medan. Meanwhile, the object of research is all activities that occur to produce service products at the Radiology Unit of RSU Royal Prima Medan. The activities in question are all activities that occur in services at the Radiology Unit of RSU Royal Prima Medan. In this study the data collection techniques used were:

1. Library Research

Namely research conducted by studying and collecting material from the theoretical basis of various literature, references and research results related to the object of research. The aim is to gain knowledge and insight which is the basis for conducting analyzes and supporting the discussion of problems in this research.

2. Field Research

Namely research conducted by directly reviewing the place that is the object of research. The research was carried out in the following way:

a. Observation

Observation is observation, recording analysis and planned interpretation of behavior, actions or events (Sekaran and Bougie, 2017). In this study direct observations were made to the research location and carried out documentation that was considered important, to observe the current situation and conditions related to inpatient service rates.

b. Interview

Interviews are an effective data collection method, especially during the exploratory research phase. Prior to conducting the interviews, the required data and documents were collected first by asking questions about the research to informants or people who are experts in their fields, namely the manager and the finance department with the aim of obtaining the information and data needed. The interview conducted was an unstructured interview called unstructured because the interviewer did not enter the interview situation with a series of planned questions that would be given to the respondent (Sekaran and Bougie, 2017).

c. Documentation

Data collection techniques to obtain data or documents related to the research to be carried out. These data include:

- a) Profile of RSU Royal Prima Medan
- b) The organizational structure of RSU Royal Prima Medan
- c) Service Data in the Radiology Unit for 2022
- d) Data - activity cost data in the Radiology Unit in 2022

III. RESULT AND DISCUSSION

The results of the study showed that there was a difference between the real hospital rates and the rates using the ABC method in CT Thorax examinations at the Radiology Unit of RSU Royal Prima Medan where the results showed that for real hospital costs in CT Thorax examinations a fee of Rp. 1,897,500 and for CT Thorax rates using the ABC method of Rp. 1,646,693, there is a difference of Rp. 250,809 which is

cheaper using ABC costing. The main difference between the traditional or real system and the activity based costing system lies in the number of cost drivers used, in determining the cost of goods using an activity based costing system using more cost drivers compared to the real cost system which only uses one unit-based cost drivers (Zulia, 2020). The ABC system also provides information about the costs and performance of each activity and resource and can trace costs accurately to cost objects other than products, such as customers and distribution channels. The rationale for this costing approach is that the company's products or services are carried out by activities and the activities needed use resources that cause costs (Zulia, 2020). The results of this study are in line with research conducted by Kesumah (2019) in his research entitled "Comparison of Unit Cost Calculations for Medical Services with the Conventional vs ABC Method at the Agnesia Clinic" which states that there are differences in the cost of accident patients calculated using the ABC method.

The results of this study are not in line with the research conducted by Sayuri, (2016) where the results show that tariffs using the ABC method for radiology installation services are more expensive than traditional rates where comparisons occur between radiology installation service rates with traditional method rate setting and activity based costing methods. Caused by the imposition of overhead costs on each product, the result tends to occur distortion in overhead assignment. Whereas in the ABC method, overhead costs for each product are charged to many cost drivers. So that the ABC method has been able to allocate activity costs to each installation appropriately based on the consumption of each product based on activity (Rini, 2022). Costing plays an important role in strategic decision making. Inaccurate cost data can potentially result in less than optimal strategic decision making. The ABC method can help reduce unnecessary costs more effectively and reduce or even eliminate costs from unnecessary activities. The need to use the Activity Based Costing (ABC) method as an alternative method for determining the unit cost of products/services which can produce more accurate product price information (Rini, 2022). The ABC method is a cost measurement method based on activities to produce products/services, where the charge is based on the activities that have been carried out, so that it can be known for what needs and activities the costs were incurred. With the ABC method, different unit costs are generated for each type of product. This makes it easier for the management to determine the price/rate of service according to the type. The unit cost calculation applied by the hospital management by calculating using the ABC method has a difference in costs, this is because the methods used are not the same. In the Activity Based Costing method, the costs incurred are charged based on the activities in the unit (Rini, 2022).

IV. CONCLUSION

Based on the results of the research and discussion presented in the previous chapter, it can be concluded that:

1. The unit cost for CT Thorax examination at the radiology unit of Royal Prima Medan General Hospital using the activity based costing method is Rp. 1,646,693.
2. The real cost of a CT Thorax examination at the radiology unit of the Royal Prima Medan General Hospital is Rp. 1,897,500.
3. There is a difference in the cost of CT Thorax examination at the radiology unit of RSU Royal Prima Medan with unit costs using the activity based costing method and using real cost calculations at RSU Royal Prima Medan with a cost difference of Rp.250,809.

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VI. ETHICAL CONSIDERATIONS

This research has been declared ethically compliant according to the WHO 7 Standards 2011 by the Health Research Ethics Commission (KEPK) University of Prima Indonesia.

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