

Calculation of Health Service Rate Using Activity-Based Costing Method At Laboratory Installation of RSUP Dr. Tadjuddin Chalid Makassar

Mohammad Normansyah.¹, Fatmawati²

^{1,2}Accounting Study Program, Politeknik Negeri Ujung Pandang

Abstract

The aim of study is to calculate the health services rate at the laboratory installation of RSUP Dr. Tadjuddin Chalid Makassar by using the Activity-Based Costing method and comparing it with the rates that apply at the hospital, the results which can assist hospital management in determining new service rate patterns. The data used are primary data and secondary data. The method used is quantitative descriptive analysis, namely analyzing data by describing the data that has been collected using the Activity-Based Costing method. The results of the study show that there is a difference between the rates calculated using the Activity-Based Costing method and those applicable in hospitals due to cost distortion. There are 7 out of 10 services that are calculated to generate rates that are lower than the applicable rates (overcosting) with differences ranging from IDR 444 – IDR 48,567. Meanwhile, the other 3 services generate rates that are higher than the applicable rates (undercosting) with a difference of IDR 5,600 – IDR 11,835.

Keywords: Activity-Based Costing, Health Service Rate, Laboratory.

INTRODUCTION

The hospital is one of the rapidly growing public service agencies. Many hospitals provide various kinds of services to the community. Hospitals in general are non-profit organizations, which means that their main goal is not to make a profit but to focus on providing health services to people in need. Even so, the hospital still needs revenue to cover the costs incurred for the services provided and keep operating. Hospital revenue is derived from the rates charged for each service. The more complex the service provided, the greater the rate that will be charged. Therefore, hospitals need to determine the right rates so that activities can continue. Correct cost calculation will have a good impact on the rates charged, and vice versa. Imagine if the calculation of the costs made by the hospital is not correct, it is possible

147

IJEBIR, Volume 01 Issue 01, 2022



Copyright at authors some right reserved this work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

that over time the hospital will not be able to continue its service activities due to the fact that the income received is less than the costs that must be incurred.

One of the hospitals in Makassar is Dr. Tajuddin Chalid Hospital. Each service provided by this hospital is charged according to the applicable regulations. The determination of rates at the hospital is currently still based on the previous year's rates which are increased by a set profit percentage. This is influenced by costs that are determined based on unit costs which then become the basis for determining rates and are increased by a predetermined percentage. In calculating the costs incurred for each service, this hospital uses the traditional method of charging production costs based on product. This system causes distortion in cost calculations because it only uses one costing basis for resource usage, while different resources can be consumed based on various activities.

The application of traditional methods according to the Hospital Accounting Sub Coordinator does not produce accurate and informative costs which makes rates charged inaccurate and has an impact on profitability. Some service activities at this hospital are still below the costs incurred so that the hospital accountant wants to use another method that shows more accurate and informative results and reflects realistic cost data.

The method is Activity-Based Costing (ABC) which allocates costs based on existing activities. The ABC concept states that to achieve the efficiency and effectiveness of an organization, the cost system used must be based on the activities that occur in order to create something. This ABC method is indeed suitable for service activities in complex hospitals because the cost allocation is determined from the activities that trigger costs. One of the complex services occurs in laboratory installations. This service is a support service that helps diagnose disease and can help see the risk of disease so that it can be treated early.

The following are services for laboratory installations and their rates :

Table 1. Services for Laboratory and the rates

No	Services	Rates (IDR)
1	Hematologi Rutin	100.000
2	SGOT (ASAT)	55.000
3	SGPT (ALAT)	55.000
4	Ureum	50.000
5	Kreatinin	55.000
6	Glukosa	50.000
7	Elektrolit	140.000



8	Albumin	85.000
9	HbsAg (Rapid)	68.500
10	Kolestrol LDL	95.000

In the services provided by laboratory installations, there are several activities. Improper imposition of overhead costs can cause the cost of services to be lower or higher. So that it has a direct impact on determining the rates charged. Therefore the use of traditional costing methods that only use one cost driver for all overhead costs is no longer suitable for use in determining rates for this laboratory unit, given the large number of overhead activities that occur. So it is necessary to change the method of calculating the cost of services from the traditional method to the activity-based method to determine the new service tariff pattern.

LITERATURE REVIEW

Cost

According to Dunia and Wasilah Abdullah (2014; 22) costs are expenses or sacrifice values to obtain goods or services that are useful for the future, or have benefits that exceed one accounting period. Dewi and Septian Bayu Kristanto (2017;10) state that costs are resources that are sacrificed or released to achieve certain goals in the future.

Rates

Asmirawati (2016: 8) defines rates (service prices) as an amount of money that is used to cover the full cost of the services provided in order to generate profits according to what is determined by the company.

Activity-Based Costing

According to Riwayadi (2014: 182) states that Activity-Based costing is the calculation of the cost of goods based on activity which includes all costs incurred along the value chain of the production function. The Indonesian Institute of Accountants (2019: 24) defines Activity-Based costing as a cost calculation system based on the activities carried out to produce a product.

Cost Driver

Cost drivers are the basis used to allocate overhead costs (Carter, 2012; 528). Meanwhile, according to Raiborn and Michael R. Kinney (2011; 41) a cost driver is a prediction that has an absolute causal relationship to a cost.



METHODS

The data analysis technique used in this research is quantitative descriptive analysis. The analysis was carried out using the Activity-Based Costing method to calculate the rates charged. The steps in data analysis are as follows (Reiter and Paula, 2021: 256):

- 1) Identify the relevant activities in the laboratory installation
- 2) Classify costs in each activity, including direct costs and indirect costs
- 3) Identify cost drivers for each activity
- 4) Collect activity data for each service
- 5) Calculating the total cost of services by aggregating activity costs
- 6) Calculation of rates for each service
- 7) Compare the results of calculating service rates using the ABC method with the current rates.

RESULTS

- 1) Identify the relevant activities in the laboratory installation

Table 2. Activities in Laboratory Installation

No	Activities	Costs
1	Patient Service Activities	Adiministrative Costs Health Admin Remuneration Costs
2	Patient Examination Activity	Cost of Consumables Doctor Remuneration Fees Medical Analyst Remuneration Fee Cost of auxiliary materials Electricity cost Building Depreciation Cost
3	Inventory Maintenance Activities	Facility Depreciation Fee Cleaning Fee Security cost Health Facility Maintenance Costs

- 2) Classify costs in each activity, including direct costs and indirect costs

Table. 3 Cost in Labortory Activites

	Direct Costs	Total (IDR)
1	Cost of Consumables	1.793.352.776



2	Direct Labor Costs (Doctor & Analyst)	773.227.428
Indirect Costs		
1	Cost of auxiliary materials	98.326.500
2	Health Admin Remuneration Costs	21.763.740
3	Building Depreciation Cost	8.991.383
4	Cleaning Fee	17.138.793
5	Electricity cost	33.253.343
6	Security cost	1.109.805
7	Administrative Costs	38.643.803
8	Facility Depreciation Fee	417.193.222
9	Health Facility Maintenance Costs	82.368.272

3) Identify cost drivers for each activity

Table 4. Cost Driver for Each Activity

No	Activities	Costs	Cost Driver
1	Patient Service Activities	Administrative Costs Health Admin Remuneration Costs	Number of checks Number of checks
2	Patient Examination Activity	Cost of auxiliary materials Electricity cost Building Depreciation Cost	Number of checks KwH usage Number of checks
3	Inventory Maintenance Activities	Facility Depreciation Fee Cleaning Fee Security cost Health Facility Maintenance Costs	Depreciation Number of checks Number of checks Hospital Regulations

4) Collect activity data for each service

Data on overhead activity costs in laboratory installations can be determined based on the determination of cost drivers for overhead costs, so overhead costs in laboratory installations can be determined by the activity rate with the formula (Dunia and Wasilah Abdullah, 2014: 327).

$$\text{Activities Rates} = \frac{\text{Activity Cost}}{\text{Cost Driver}}$$

Based on the activity rate and cost allocation, the overhead costs for each laboratory service are as follows:

Table 5. Overhead Cost of Laboratory Service

No	Services	Overhead Costs (IDR)
1	Hematologi Rutin	367.880.901
2	SGOT	29.737.998
3	SGPT	30.589.259
4	Ureum	36.866.138
5	Kreatinin	42.553.682
6	Glukosa	106.510.491
7	Elektrolit	37.821.838
8	Albumin	14.153.379
9	HbsAg (Rapid)	8.690.162
10	Kolestrol LDL	12.319.894

5) Calculating the total cost of services by aggregating activity costs

Table 6. Total Cost of Laboratory Services

No	Services	Cost of Consumables (IDR)	Direct Labor Costs (IDR)	Overhead Cost (IDR)	Services Costs (IDR)
1	Hematologi Rutin	591.843.936	141.639.640	367.880.901	1.101.364.477
2	SGOT	75.297.219	37.001.596	29.989.139	142.287.954
3	SGPT	76.880.122	38.060.779	30.847.589	145.788.490
4	Ureum	121.931.853	45.870.805	37.177.477	204.980.134
5	Kreatinin	155.107.529	52.947.549	42.913.053	250.968.131
6	Glukosa	253.754.148	132.526.004	107.409.985	493.690.137
7	Elektrolit	443.732.212	44.346.046	38.122.828	526.201.086
8	Albumin	33.653.648	17.610.385	14.272.906	65.536.939
9	HbsAg (Rapid)	13.208.460	15.759.723	8.797.128	37.765.311



10	Kolestrol LDL	27.943.649	15.329.066	12.423.937	55.696.653
----	---------------	------------	------------	------------	------------

6) Calculation of rates for each service

Table 7. Rates for Laboratory Services Using ABC Method

Services	Services Costs (IDR)	Number of Checks	Cost per Inspection	Profit [10%] (IDR)	Services Rates (IDR)
Hematologi Rutin	1.101.364.477	12.169	90.506	9.051	99.556
SGOT	142.287.954	3.179	44.759	4.476	49.235
SGPT	145.788.490	3.270	44.584	4.458	49.042
Ureum	204.980.134	3.941	52.012	5.201	57.213
Kreatinin	250.968.131	4.549	55.170	5.517	60.687
Glukosa	493.690.137	11.386	43.359	4.336	47.695
Elektrolit	526.201.086	3.810	138.111	13.811	151.922
Albumin	65.536.939	1.513	43.316	4.332	47.647
HbsAg (Rapid)	37.765.311	1.354	27.892	2.789	30.681
Kolestrol LDL	55.696.653	1.317	42.291	4.229	46.520

7) Compare the results of calculating service rates using the ABC method with the current rates.

Table 8. Rates Comparison Between ABC Method and Current Rates

No	Services	Rates of ABC Method (IDR)	Current Rates (IDR)	Difference (IDR)	Difference (%)
1	Darah Rutin	99.556	100.000	(444)	(0,44)
2	SGOT	49.235	55.000	(5.765)	(10,48)
3	SGPT	49.042	55.000	(5.958)	(10,83)

4	Ureum	57.213	50.000	7.213	14,43
5	Kreatinin	60.687	55.000	5.687	10,34
6	Glukosa	47.695	50.000	(2.305)	(4,61)
7	Elektrolit	151.922	140.000	11.922	8,52
8	Albumin	47.647	85.000	(37.353)	(43,94)
9	HbsAg (Rapid)	30.681	68.500	(37.819)	(55,21)
10	Kolestrol LDL	46.520	95.000	(48.480)	(51,03)

DISCUSSIONS

There is a difference in lower rates if calculated using the ABC method for routine Hematology services, SGOT, SGPT, Glucose, Albumin, HbsAg, and LDL Cholesterol with different percentages ranging from 0.44% -55.21%. The lowest percentage of rates is found in HbsAg services with a nominal difference of IDR 37,819 (55.21%). Meanwhile, the difference in rates that are higher if calculated using the ABC method is found in Ureum, Creatinine and Electrolyte services with differences ranging from 8.52% -14.43%. The highest percentage of tariff difference is found in the Ureum service with a nominal value of IDR 7,213.

The difference in nominal rates is significant for several services such as Albumin, HbsAg (Rapid), and LDL Cholesterol because of the large percentage difference compared to the applicable rates. As for other services, even though the difference in nominal value is not too large, these services provide many inspections each year so that the difference in rates will be significant.

Differences or distortions in costs that occur are due to differences in calculation methods used by hospitals and researchers. The hospital uses unit cost in calculating the cost of its services where this unit cost only uses one cost driver in charging the costs so that it is less fair and accurate for services that have many cost components, whereas for the ABC method overhead costs are charged with cost drivers according to the activities carried out. occur. This shows that the ABC method is able to charge overhead costs to each service fairly and accurately.

The ABC method used in calculating service rates at laboratory installations takes into account depreciation costs for health facilities, health facility maintenance costs, and building depreciation costs. These costs are not taken into account in the traditional method used by the hospital so that there is a difference in the applicable rates with the rates calculated using the ABC method. These costs should also be included in the service fee component to calculate the cost of using the laboratory building, using health facilities, and costs incurred for maintaining these facilities.



In addition, the allocation of electricity costs that are carried out accurately according to each use for each service is the cause of the difference in rates obtained. In the ABC method, electricity costs are measured based on the power consumption of each tool for each service, because there are differences in equipment for several services in the laboratory, so it must be allocated appropriately so that the fees charged are fair and accurate.

CONCLUSION

Based on the data obtained and the results of research that has been carried out on service rates at the laboratory installation of RSUP Dr. Tadjuddin Chalid Makassar, it can be concluded that the rates calculated using the Activity Based Costing method are different from the rates in force at RSUP Dr. Tadjuddin Chalid Makassar. From the results of calculations using the Activity-Based Costing method, it can be seen that 7 out of 10 services at laboratory installations result in rates that are lower than the applicable rates (overcosting) with differences ranging from IDR 444 – IDR 48,480. Meanwhile, the other 3 services generate rates that are higher than the applicable rates (undercosting) with a difference of IDR 5,687 – IDR 11,922. This difference is due to the different calculation methods used where Activity-Based Costing is able to charge overhead costs more accurately because it takes into account costs such as the imposition of building depreciation costs, the imposition of health facility depreciation costs, the imposition of health facility maintenance costs, and a more equitable allocation of electricity costs.

REFERENCES

- Asmirawati. 2016. Analisis Penetapan Tarif Jasa Pelayanan Ekspedisi Dalam Meningkatkan Penjualan Pada PT. Jalur Nugraha Ekakurir (JNE) Cabang Makassar. Skripsi. Makassar: Universitas Muhammadiyah Makassar
- Barlian, A. L. 2020. Penentuan Tarif Layanan Pasien Rawat Inap pada RSUD Batara Siang Kabupaten Pangkep Menggunakan Metode ABC. Skripsi. Makassar: Politeknik Negeri Ujung Pandang.
- Baviga, R. 2021. Penerapan Metode Activity Based Costing System dalam Menentukan Besarnya Tarif Jasa Rawat Inap (Studi Kasus pada RSUD Mayjen H.A. Thalib Kerinci). Indonesian Journal Business and Management, I (1): 371 – 401
- Carter, W. K. 2012. Akuntansi Biaya. Dialihbahasakan oleh Krista. Jakarta: Salemba Empat
- Dewi, S. dan Septian B.K. 2013. Akuntansi Biaya. Bogor: Penerbit In Media
- Dunia, F, dan Wasilah A. 2012. Akuntansi Biaya. Edisi 3. Jakarta: Salemba Empat



- Hakim, T. dan IM. Rahman. 2018. Activity-Based Costing dan Derivatifnya serta Signifikansinya pada Lingkungan yang Mutakhir. *The International Journal of Applied Bussiness*, II (2): 50 – 65
- Hardani. 2020. *Metode Penelitian Kualitatif & Kuantitatif*. Yogyakarta: CV. Pustaka Ilmu Group
- Hardiyanti, M. 2013. *Penerapan Metode Activity Based Costing dalam Perhitungan Harga Pokok Jasa Rawat Inap RSUD Labuang Baji Makassar*. Skripsi. Makassar: Politeknik Negeri Ujung Pandang.
- Ikatan Akuntan Indonesia. 2019. *Modul Level Dasar (CAFB) Akuntansi Biaya dan Manajemen*. Jakarta
- Mulkhadimah, A. 2020. Analisis Cost Driver pada CV. Binter. *Jurnal Pendidikan Tambusai*, I (4): 888-891
- Nurhabiba, A. 2021. *Penerapan Metode Activity Based Costing untuk Menentukan Harga Pokok Produksi pada Usaha Kecil Menengah Lestari Laris di Tulungagung*. Skripsi. Tulungagung: Institut Agama Islam Negeri Tulungagung.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 28 Tahun 2015 Tentang Pola Tarif Nasional Rumah Sakit. 2015. Jakarta
- Raiborn, Cecily A. dan Michael R, Kinney. 2011. *Akuntansi Biaya : Dasar dan Perkembangan*. Edisi 7. Jakarta: Salemba Empat
- Reiter, K. L dan Paula H.S. 2021. *Gapenski's Healthcare Finance*. Edisi 7. Chicago: Health Administration Press
- Riwayadi. 2014. *Akuntansi Biaya Pendekatan Tradisional dan Kontemporer*. Jakarta: Salemba Empat
- Sadewa, I K. Y. 2016. *Perhitungan Biaya Layanan Kesehatan Rawat Jalan dengan Menggunakan Metode Activity Based Costing di Poliklinik Gigi pada Rumah Sakit Umum Daerah (RSUD) Kota Makassar*. Skripsi. Makassar: Politeknik Negeri Ujung Pandang.
- Sekaran, U dan R.Bougie. 2017. *Metode Penelitian Untuk Bisnis*. Jakarta: Salemba Empat
- Setyaningsih, S.L. 2011. *Analisis Penentuan Harga Pokok Produksi Berdasarkan Sistem Activity Based Costing (ABC) pada Pabrik Roti Sumber Rejeki Gunungpati*. Skripsi. Semarang: Universitas Negeri Semarang.
- Siregar, B 2013. *Akuntansi Biaya*. Edisi 2. Jakarta: Salemba Empat
- Sudiraman, I. 2020. *Strategi Penetapan Tarif Rumah Sakit Berdasarkan Unit Cost*. Makassar: Penerbit Nas Media Pustaka
- Sugiono. 2019. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Penerbit Alfabeta



- Syahrul. 2017. Analisis Penerapan Metode Activity Based Costing System dalam Penerapan Tarif Jasa Rawat Inap pada Rumah Sakit Bhayangkara Makassar. Skripsi. Makassar: Universitas Muhammadiyah Makassar
- Uluputty, N. dan Dewita. 2020. Penetapan Activity Based Costing pada Tarif Jasa Rumah Sakit (Studi pada RSUD Kabupaten Bantaeng). Bata Ilyas Journal of Accounting, I (2): 18 – 29
- Wibowo, M. 2021. Evaluasi Penetapan Tarif Pelayanan Kesehatan Puskesmas Blud Unit Rawat Jalan Menggunakan Pendekatan Biaya Satuan Unit (Unit Cost) Dengan Metode Step Down. Skripsi. Yogyakarta: Universitas Islam Indonesia.

