

Rate Analysis of Activity Based Costing (Abc) Method on Indonesian Rate Case Based Groups (Ina Cbgs) In Appendictomic and Toncilectomic Measures in Hospital

by Budi Aji

Submission date: 22-Mar-2023 06:15AM (UTC+0700)

Submission ID: 2043050081

File name: Cbgs_In_Appendictomic_and_Toncilectomic_Measures_in_Hospital.pdf (340.03K)

Word count: 4900

Character count: 25144

RATE ANALYSIS OF ACTIVITY BASED COSTING (ABC) METHOD ON INDOONESIAN RATE CASE BASED GROUPS (INA CBGS) IN APPENDICTOMIC AND TONCILECTOMIC MEASURES IN HOSPITAL

Muhamad Eko Mikroni ¹, Ary Yunanto ², Budi Aji ³

¹²³Fakultas Ekonomi dan Bisnis Jenderal Soedirman University, mikronius@gmail.com , Indonesia

ABSTRACT

Hospitals as advanced health facilities have a very important role in the implementation of the National Health Insurance (JKN) program. There are still many problems in implementing JKN, one of them is the Indonesian Case Based Groups (INA CBGS) rate, which uses a prospective payment method. However the payment is not effective because the INA rates CBGS potentially cause harm to the hospital if there are operative action.

This study aims to analyze the rates of the *Activity Based Costing (ABC) method* toward the INA CBGS rates for appendectomy and tonsillectomy. *Unit cost* analysis with ABC method was performed on *appendectomy and tonsillectomy* without complications. The used data is primary data in the form of observations and interviews with specialists Surgery, ENT specialist and secondary data, reports financial Muhammadiyah Rodliyah Achid Hospital Moga Pematang in 2019, flat-rate data INA CBGS 2019 claims data BPJS verified in 2019 and the profile Muhammadiyah Rodliyah Achid Hospital Moga Pematang. The results of *unit cost* analysis on *appendectomy and tonsillectomy services* through the ABC approach shows that the *unit cost* calculation results using the ABC approach are higher than the INA CBGS package rates. There is a negative difference in appendectomy rates using the ABC method, namely IDR. 8.720.089 while the INA CBG rate is IDR. 2.507.700. The rate for tonsillectomy using the ABC method is IDR. 8.690.274 rates of tonsillectomy by INA CBGS namely IDR. 2.924.600.

The conclusion of this study results a negative difference with a lower INA CBGS rate than using the ABC method to calculate the unit cost at Muhammadiyah Rodliyah Achid Hospital Moga, Pematang.

Keywords: *Activity Based Costing, Appendectomy, Tonsillectomy, INA CBGS*

1. Introduction

Hospitals as advanced referral health facilities is one of a very important component for health service providers and providers in the implementation of the National Health Insurance (JKN)

program. The JKN program is part of public policy as a result of the government's *good will*. The successful of government programs in JKN depends, among others, on the extent to which this policy is implemented in hospitals (Thabrany, 2014).

Hospitals in deciding cost of the product, often still use traditional cost accounting. The system is incompatible with today's advanced manufacturing environment and at high product diversification (diversity). Product costs generated by traditional cost accounting systems provide distorted cost information. Distortions arise due to inaccuracies in costing, causing errors in determining costs, making decisions, planning, and controlling (Supriyono, 1999: 259).

Hospital is a service company that produces a variety of products. This situation results in many types of costs and activities that occur at the hospital, so it demands the accuracy of *overhead* costs in determining the cost of product. As it is known, calculating costs using the traditional model causes inaccuracies in identifying costs that come out of each activity, so the *Activity Based Costing system* (ABC system) is considered to be able to accurately measure the costs that come out of each activity. This is due to the large number of *cost drivers* used in charging *overhead* costs, so by using the *Activity Based Costing system* (ABC system) can increase accuracy in cost details, and the accuracy of more accurate costing (Andriansyah, et al 2013).

In the implementation of the National Health Insurance, since there are still many problems that arise, one of them that which is becoming concern is the INA CBGs rate, the government is very likely to realize that there is a mismatch between the INA CBGs rate and the *real cost* of the Hospital. Based on Permenkes No. 52 of 2016 concerning Standard Service Rates in the Implementation of the National Health Insurance Program, which is an amendment of Permenkes No. 59. In 2014, the government has not raised rates CBGs INA, but there is a change grouping between the Hospital (RS) government and private hospitals. Based on the results of the research by Putra et al, 2014, which shows a tendency for the amount of INA CBGS costs to be greater than the Fee for Services, especially for non-surgical cases, on the contrary for surgical cases the tendency for INA-CBGS costs is much lower than the Fee for Services.

Muhammadiyah Rodliyah Achid Hospital Moga (RSMRA) Pemalang is an advanced health facility with class D type that has collaborated with BPJS (Social Security Administering Body) for Health since 2015. Based on RSMRA report data for 2019, there are 2 operations that always suffer losses, namely appendectomy and Tonsillectomy because INA CBGs rates do not match the real hospital costs. Based on the research of Septianis et al., 2010, there is a tendency for hospitals to lose money in the services of operative medical treatment for Jamkesmas patients because most of the costs of the action are not (greater) than the INA CBGs rates. There is a gap in the diagnosis rate for appendectomy surgery of IDR. 8.720.089 based on hospital rates, while INA CBGs rates are IDR. 2.507.700. A rate gap was also found in the diagnosis of Tonsillectomy surgery of IDR. 8.690.274 while based on the INA CBGs rate of IDR. 2.924.600 (Muhammadiyah Rodliyah Achid Hospital, 2019). The gap between hospital operational rates and INA CBGs rates cause financial losses at Muhammadiyah Rodliyah Achid Hospital Moga Pemalang.

The purpose of this study was to analyze the diagnostic rates of appendectomy and tonsillectomy based on the Activity Based Costing method, and compared to the INA CBGs rates. The results of this study is able to provide input regarding the cost of diagnosis of appendectomy and tonsillectomy to The National Casemix of the Ministry of Health of the Republic of Indonesia.

2. Literature Review

2.1 Headin ABC(Activity Based Costing)

ABC is a calculation based on costs incurred in real terms of service to the community. The ABC method imposes activity costs on products or services based on the consumption used so that it provides more accurate rate information (Aldogan, 2014). The ABC method, from a managerial perspective, not only provides accurate product cost information but also provides information on the performance of activities and resources and can accurately trace the costs used to cost objects other than products, such as customers and distribution channels. Activity-based cost calculation is a cost calculation approach that imposes resource costs on cost objects such as products, services or customers based on activities carried out for these cost objects (Kuchta & Zabek, 2011).

According to Roztock et al., (2004) the stages of costing activities involve 3 components, namely resources, activities and service products. The costs consume resources could be classified to direct labor costs (direct labor cost), the cost of equipment (equipment costs) and indirect costs (indirect costs).

2.2 APENDIKTOMY

Diagnosis of acute appendicitis and chronic appendicitis is the cause of an appendectomy. Appendicitis is an acute inflammation of the appendix which is located in the lower right quadrant of the abdominal cavity (Smeltzer & Bare, 2002). The exact cause of appendicitis is not yet known for sure, it can be caused by acidity in eating habits, genetic resistance of bacterial flora, eating habits low in fiber, high in sugar and fat are also predisposing to less bowel movements, food transit time in the intestine is much longer and increased pressure within the intestinal lumen (Anderson et al., 1979). If an attack of acute appendicitis occurs, an appendectomy must be performed immediately (Dudley, 1992). The symptoms of appendicitis can vary, but generally there is a history of abdominal pain, followed by anorexia, nausea, low-grade fever and vomiting, usually lasting more than one or two days and laboratory investigations of leucocytes increased to between 15.700 with other laboratory results with no recurrence (Brunicardi et al. , 2010).

2.3 TONCILECTOMY

Chronic tonsillitis is chronic inflammation of the tonsils as a continuation of recurrent / recurrent acute / sub acute inflammation with nonspecific causative bacteria. This chronic inflammation can cause enlargement of the tonsils which results in swallowing and breathing problems. Local complaints such as pain when swallowing, a sense of a lump in the throat, halitosis, fever, snore, cough, runny nose, and their repeated complaints systemic form of weakness, less of appetite, headache, pain in the joints. On physical examination, there was enlargement of the tonsils, the

surface of the tonsil crypts was widened, and enlarged submandibular glands (PPK PERHATI-KL VOL 1 ENT, 2015).

2.4 INA CBGS (Indonesian Case Based Groups)

The INA CBGS rate has 1,077 rate groups consisting of 789 group codes / inpatient groups and 288 outpatient group codes, the basis for grouping in the INA CBGS uses a coding system from the final diagnosis and actions / procedures that are output services, based on the ICD 10 reference for diagnosis and ICD 9 CM for action / procedure. Grouping of diagnosis codes and procedures / actions is carried out using the UNU grouper (UNU Grouper), UNU Grouper is a Casemix Grouper developed by the United Nations University (UNU) (Menkes, 2014).

3. Research Methodology

This descriptive research used a quatitative approach with unit cost calculations. The location of study was at Muhammadiyah Rodliyah Achid Hospital Moga Pemalang. The number of samples conducted in this study was 2 diagnoses of surgery, namely appendectomy and tonsillectomy. Two surgeries were chosen because it is the act of operating the Big 5 which is often done in the operating room Muhammadiyah Rodliyah Achid Hospital Moga Pemalang in 2019, there were 10 cases apendiktomy, 121 cases of tonsillectomy and both actions such operations made Hospital have loss for BPJS health claims. Methods of data collection using primary data by conducting observations and interviews and secondary data obtained from the data part of the financial RSMRA 2019, the data rates CBGS 2019 INA and claim verification BPJS 2019. Subject of this study is the finance department, emergency unit doctors, nurses Central Surgical Installation unit (operating), doctor specialist ENT, surgeon, pharmacy, emergency unit staff, staff Central Surgical Installation unit/operating, the head of HR and infrastructure. The object of this research is all unit costs that occur in the emergency unit (pre operation), Central Surgical Installation unit (operating), inpatient (postoperative) with a diagnosis of appendectomy and tonsillectomy. Data analysis using Activity Based Costing method compared to INA CBGS inpatient claim rates from BPJS.

4. Results and Discussion

Based on the result from data collecting in Muhammadiyah Rodliyah Achid hospital in Moga Pemalang ABC analisys is done by some steps, which are: (1) Direct expense to the patient in emergency Unit (pre operation) according to the diagnose; (2) Free charge of direct expenses to the patient in Central Surgical Installation unit (operating) according to the diagnose; (3) Free charge of direct expenses to the patient in inpatient unit (post operative) according to the diagnose; (4) determine overhead indirect source; (5) determine overhead direct source; (6) Add direct expense and overhead source for patient who has apendictomi and tonsilectomi treatment.

4.1 Direct expense to the patient in emergency unit (pre operation) according to the diagnose

Table 1. Direct expense for apendictomi in emergency unit (pre operation)

Expense Category	Unit	Sum	Sum in IDR
Patient registration	Activity	1	30.000

Patient examination	Action	1	30.000
Blood laboratory check	Action	1	110.000
Infusion plug in	Action	1	10.000
Ringer laktat infuse	Plabot	1	12.500
Infusion set	Pieces	1	9.000
Abotach No 22	Pieces	1	20.000
Consumable thing	Set	1	10.000
Ranitidine 50mg Injection	Ampul	1	11.500
Sput 3cc	Cutting	1	9.000
Medicine injection action	Activity	1	7.500
Injeksi cefxon 1gr	Ampul	1	277.200
EKG check	Action	1	30.000
Radiology check	Action	1	80.000
Anesthesia doctor visitation	Activity	1	50.000
Total			696.700

Table 2. Direct expense for tonsilektomi in emergency unit (pre operation)

Expense Category	Unit	Sum	Sum in IDR
Patient registration	Activity	1	30.000
Patient examination	Action	1	30.000
Blood laboratory check	Action	1	110.000
Infusion plug in	Action	1	10.000
Ringer laktat infuse	Plabot	1	9.100
Infusion set	Pieces	1	9.000
Abotach No 22	Pieces	1	20.000
Consumable thing	Set	1	10.000
Starson 1gr Injection	Ampul	1	296.340
Asam traneksamat 500mg Injection	Ampul	1	6.700
Sput 3cc	Cutting	1	3000
Medicine injection action	Activity	1	2.500
Dexametason 40mg injection	Ampul	1	4.002
EKG check	Action	1	30.000
Radiology check	Action	1	80.000
Anesthesia doctor visitation	Activity	1	50.000
Total			700.642

4.2 Direct expense for patient in Central Surgical Installation unit (operating) according to diagnose

Table 3. Direct expense for apendectomy in Central Surgical Installation unit (operating)

Expense Category	Unit	Sum	Sum in IDR
Gamex 7.5	Cutting	5	132.000
Gamex 6.5	Cutting	1	13.200
Bisturi no 21	Cutting	1	6.600
S25 thread	Cutting	1	63.360
C28 thread	Cutting	1	85.800
DC No.16	Cutting	1	20.022
Urine bag	Cutting	1	5.940
NGT No. 16	Cutting	1	36.000
Sterile gauze	Cutting	1	14.400
Povidone	Perml	100	14.400
Alcohol	Perml	100	1.440
Hecting needle	Cutting	1	15.000

Mask	Cutting	5	6.010
Anios DD	Perml	5ml	6.000
Ecure handscrub	Cutting	1	25.000
Spinocan	Cutting	1	52.800
Epedrin injection	Ampul	1	33.000
Kanul O2	Cutting	1	6.486
Cetorolac injection	Ampul	1	19.246
Ondansetron 4mg injection	Ampul	1	6.600
Ringer Laktat OGB	Cutting	3	27.465
Sput 3cc	Cutting	2	8.262
Sput 5 cc	Cutting	2	4.080
Oksigen	Packaget	1	72.000
N2O	Package	1	360.000
Operation surgery	Action	1	1.000.000
Anesthesia	Action	1	500.000
Operation Team	Action	1	200.000
Operation room and tools expense	Day	1	850.000
Total			3.585.111

Table 4. Direct expense for tonsilektomi in Central Surgical Installation unit (operating)

Expense Category	Unit	Sum	Sum in IDR
Gamex 7.5	Cutting	5	132.000
Pehacain	Ampul	2	7.470
Sterile gauze	Cutting	1	1.440
Big gauze	Cutting	1	27.600
Povidone	Perml	100ml	14.400
Alcohol	Perml	100ml	14.400
Mask	Cutting	5	6.010
Hecting needle	Cutting	1	15.000
Anios DD	Perml	5ml	6.000
Ecure handsrb	Perml	5ml	25.000
Petidine injection	Ampul	1	23.337
Atropinsulfat injection	Ampul	2	3.932
Stesolid injection	Ampul	1	10.514
Ondansetron injection	Ampul	1	6.600
Canul O2	Cutting	1	6.484
Ketorolac injection	Ampul	1	19.246
Propofol injection	Ampul	1	112.200
Tramus injection	Ampul	1	55.440
Asam traneksamat injection	Ampul	2	26.400
Neostigmine injection	Ampul	1	9.306
Sput 3cc	Cutting	2	8.262
Sput 5cc	Cutting	3	6.120
Sput 10cc	Cutting	1	1.557
O2 Package	Package	1	72.000
N2O Package	Package	1	360.000
Operation	Action	1	1.000.000
Anesthesia	Action	1	500.000
Operation room and tools expense	Day	1	850.000
Operation team	Action	1	200.000
Total			3.520.718

4.3 Direct expense to patient in inpatient unit (post operative) according diagnose

Table 5. Direct expense for apendiktomi in inpatient unit (post operative)

Expense Catagory	Unit	Sum	Sum in IDR
Room rate class 3 per day	Day	3	150.000
Medical service per day	Day	3	75.000
Consumable stuff per day	Day	3	67.500
Nutrition service per day	Day	3	75.000
Medical specialist visitation	Activity	3	150.000
Doctor visitation	Activity	6	60.000
Infusion laktat ringer	Plabot	5	27.300
Medical injection service	Action	5	37.500
Ketorolac 30mg injection	Ampul	5	89.000
Ceftriaxone 1gr injection	Ampul	5	85.500
Non steril Handscoen	Cutting	9	16.200
Sput 3 cc	Cutting	3	3.762
Mask	Cutting	9	10.800
Tablet asam mefenamat 100mg	Tablet	10	3.564
Tablet norflam	Tablet	10	12.000
Prescription service	Activity	3	15.000
Total			878.126

Table 6. Direct expense for tonsilektomi in inpatient unit (post operative)

Expense Catagory	Unit	Sum	Sum in IDR
Room rate class 3 per day	Day	3	150.000
Medical service per day	Day	3	75.000
Consumable stuff per day	Day	3	67.500
Nutrition service per day	Day	3	75.000
Medical specialist visitation	Activity	3	150.000
Doctor visitation	Activity	6	60.000
Infusion laktat ringer	Plabot	3	27.300
Medical injection service	Action	5	37.500
Ceftriaxon 1g injection	Ampul	3	139.000
Asam traneksamat 50mg injection	Ampul	3	40.000
Dexametason 4mg injection	Ampul	3	8.600
Handscoen tidak steril	Cutting	9	16.200
Sput 3 cc	Cutting	3	3.762
Mask	Cutting	9	10.800
Tablet ciprofloxasin 500mg	Tablet	10	9.200
Tablet Metil prednisolone 4mg	Tablet	10	8.400
Tablet asam mefenamat	Tablet	10	3.500
Tablet asam traneksamat	Tablet	10	12.000
Prescription service	Activity	3hari	15.000
Total			908.762

4.4 Determine overhead indirect expense source

Table 7. Actual expense in Muhammadiyah hospital Moga year 2019

Kinds of Expenses	Expense in IDR
All employee salaries	10.651.620.912
Training expense	186.500.000
Depreciation cost of medical and non medical tools	179.370.146
Care expense of tools and building	1.000.000.000

Depreciation cost of building	1.382.809.726
Expense of electricity, water, telephone and generator	288.787.400
Cleaning expense	192.986.000
Expense of office stationary and house hold appliances	68.051.200
Medical expense	6.960.000.000
Nutrition expense	660.000.000
Total	21.472.477.677

Table 8. income expense per unit

unit	Sum of income/ year in IDR	Presentage	Expense unit in IDR
Emergency Unit	347.183.300	2%	229.450.000
Central Surgical Installation (operating) unit	3.641.655.600	22%	1.144.964.500
Out patient	2.886.000.000	4%	575.170.098
Inpatient	2.449.072.000	12%	756.389.500
Maternity/VK	1.502.928.000	4%	548.868.300
Pharmacy	9.632.427.857	48%	6.960.000.000
Laboratory	1.190.489.000	4%	524.281.900
Radiology	282.736.000	1%	177.715.200
Nutrition	1.032.199.000	4%	564.642.062
Total	22.964.690.757	100%	14.481.481.560

Expense counting in emergency unit (pre operation) gets total expense IDR. 229.450.000. all expenses divide by sum of patient in 2019 approximately 10.285 then for each or 1 patient indirect overhead resource is IDR 22.309 per activity.

Expense counting in Central Surgical Installation unit (operating) gets total expense IDR.1.144.964.500 all expenses divide by sum of patient who had operation in Central Surgical Installation unit (operating) in 2019 amount 906 then for each or 1 patient indirect overhead resource is IDR 1.263.757 per activity.

Expense counting in inpatient unit (post operative) is IDR.756.389.500 the expense is burdened together with sum of day of inpatient unit as many as 3.800 days inpatient unit in 2019. Then for 1 patient with 1 day care get indirect overhead resource IDR.199.049

4.1 Heading-level 1

Title of sub-heading must be in Times New Roman, font size 12, Italic, Line spacing must be single. Spacing must be 0 pt. before and after.

Type your sub-heading paragraphs here. Text must be in Times New Roman, font size must be 12. Line spacing must be single.

4.5 Determine overhead direct resource

Table 9. Direct expense Overhead resource in emergency unit/pre operation, Central Surgical Installation unit/operating, and inpatient unit /post operative

Kinds of expense	Emergency unit (pre operation) Expense in IDR	Central Surgical Installation unit	inpatient unit /post operative Expense in IDR
------------------	---	---------------------------------------	---

		(operating) expense in IDR	
All employee salaries	486.282.180	1.077.858.500	699.034.000
Training	30.487.000	48.765.600	25.743.000
Depreciation cost of medical and non medical tools	25.675.900	20.700.650	23.875.530
Care expense of tools and building	55.521.200	167.221.080	79.812.150
Depreciation cost of building	125.650.500	110.810.700	115.780.450
Expense of electricity, water, telephone and generator	8.865.800	14.765.850	9.865.700
Cleaning expense	9.931.900	6.657.900	12.857.080
Expense of office stationary and house hold appliances	18.754.900	15.967.800	17.850.600
Medicine expense	89.441.850	157.400.325	152.375.700
Nutrition expense	7.715.760	8.221.600	20.441.850
Total	858.326.990	1.628.370.005	1.157.636.060

Direct expense counting which is paid by emergency unit/pre operation in 2019 costs IDR.858.326.990. those total expenses is given to emergency unit patient/pre operation in 2019 as much as 10.285, per patient will be given overhead expense direct resource IDR.83.454

Direct expense counting which is paid by Central Surgical Installation unit (operating) in 2019 as much as IDR.1.628.370.005. total expense total expense is given to patient in Central Surgical Installation unit (operating) in 2019 as many as 906, per one patient will be given overhead expense direct resource as much as IDR.1.686.942.

Direct expense counting which is paid by inpatient unit /post operative in 2019 as much as IDR.1.157.636.060. the total expense is given both patient and inpatient unit/post operative as many as sum of inpatient unit day which is 3.800 days in 2019. Then for each patient with one day care get overhead expense direct resource as much as IDR.304.641.

4.6 Additional direct and indirect expense for apendiktomi dan tonsilektomi patient

Table 10. Total direct cost and Overhead apendiktomi

Kinds of expenses	Emergency Unit /pre operation expense in IDR	Central Surgical Installation unit (operating) Expense in IDR	Inpatient unit /post operative Expense in IDR
Direct expense	696.700	3.585.111	878.126
Resource overhead indirect expense	22.309	1.263.757	199.049
Resource overhead direct expense	83.454	1.686.942	304.641
Total	8.720.089		

Table 11. Total direct cost and overhead tonsilektomi

Kinds of expenses	Emergency unit /pre operation expense in IDR	Central Surgical Installation unit (operating) Expense in IDR	Inpatient unit /post operative Expense in IDR
Direct expense	700.642	3.520.718	908.762

Resource overhead indirect expense	22.309	1.263.757	199.049
Resource overhead direct expense	83.454	1.686.942	304.641
Total	8.690.274		

Counting uses ABC for patient who had apendiktomi action in emergency unit/ pre operation, in Central Surgical Installation unit (operating) and in inpatient unit/post operative class 3 up to 3 days as much as IDR.8.720.089 in RSMRA compare to INA CBGS rates as much as IDR.2.507.700. and for patient who diagnose tonsilektomi action in emergency unit/pre operation, in Central Surgical Installation unit (operating) and also in inpatient unit/post operative class 3 up to 3 days as much as IDR.8.690.274 in RSMRA compared with INA CBGS rates as much as IDR.2.926.600

4.7. Discussion

Based on the research which is done, there is different or lack of rates between INA CBGS and ABC method. According to ABC method rates is obtained that Apendiktomi cost IDR. 8.720.089, Tonsilektomi cost IDR 8.690.274, while INA CBGS method rates Apendiktomi diagnoses cost IDR. 2.507.700, Tonsilektomi cost IDR 2.924.600. The cause of different or lack between INA CBGS rates and ABC rates is that the counting of INA CBGS is in a form of package which is determined by BPJS including (medicine, medical service, consultation expense, nutrition, etc) while ABC rates charge activity expense to product or service based on the consumption used.

The biggest expense comes from Central Surgical Installation unit/operating because Central Surgical Installation unit/operating is a unit which has big investment especially from the equipment side. Medical expense and consumptive stuff is the second highest expense from all surgery action not only apendiktomi but also tonsilektomi. From the research result or observation there is misused of the medicine which is not suitable with national formularium, doctor obedience in time when he gives medicine based on formularium and clinical pathways very influencing to action quality and efficiency rates in RSMRA. Inspite of medicine and consumable stuff, medical surgeon doctor services and THT also consume big expense which is service of operation action medic in Central Surgical Installation unit (operating), pre operation unit, post operation service. This is because some of the operator doctor is not permanent doctor but quest doctor who can not be scheduled permanently to do operation apendiktomi action and tonsilektomi di RSMRA. So the service which is accepted indeed the agreement between both side between medical specialist (ENT and surgeon) with RSMRA. High spending on office expense and subscribe through interview which is done by accounting chief of RSMRA, subscribe expense and office is expence wich include expenses of electricity, telephone and cleaning water and other expense. This is because the usage of electricity for equipment in Central Surgical Installation unit (operating) is very high, so it is necessary to intervere to control the expense of electricity in the aim to do thrifty in the use of electricity, in Central Surgical Installation unit (operating) by decreasing the use of AC whenever it is not necessary used especially in Central Surgical Installation unit (operating).

5. SUMMARY AND SUGGESTION

Based on the research result,

Table 12. rates result INACBG and ABC rates

Diagnosis	INACBGS rates	ABC rates
Apendiktomi	IDR.2.507.700	IDR.8.720.089
Tonsilektomi	IDR.2.924.600	IDR.8.690.274

There is different or lack rates between INA CBGS and ABC method rates, needs to be revised and fixed INA CBGS rates based on real situation nowadays.

Its better for the hospital management to save the use of tools as efficient as possible including do saving for high cost in operating room also needs saving especially on the use of operation lamp and AC only when operating action is doing thr use of medicine should based on hospital formularium which is available in hospital pharmacy. Search and receive medical specialist to be accepted as permanent employee in the hospital for the government generally and accept medical doctor permanently especially for Muhammadiyah hospital in Moga. For the government especially The National Casemix of the ministry of health of Republic Indonesia better to revise rates on action which is done in the hospital and it should be based on the real situation nowadays..

References

- Aldogan M, Austill D, Kocakulah MC, 2014, 'The excellence of activity-based costing in cost calculation case study of a private hospital in Turkey,' *Journal of Health Care Finance*, June, 1-27.
- Anderson N, Griffiths H, Murphy J, et al. Is Appendicitis Familial? Br Med J 1979 Sep 22; 2: 697e8.
- Andriansyah, R., Handayani, S. R., Azizah, D.F. (2013). Penerapan Metode *Activity Based Costing* Dalam Penetapan Tarif Rawat Inap Pada Rumah Sakit (Study Pada Rumah Sakit Islam Gondanglegi Malang).
- Brunicardi FC, Anderson DK, Billiar TR, et al. Shwartz's Principles of Surgery 9th Ed. USA: McGrawHill Companies. 2010.
- Dudley, H. A.F, 1992, *Hamilton Bailey Ilmu Bedah Gawat Darurat* IEdisi II, diterjemahkan oleh A. Samik Wahab & Soedjono Aswin, Yogyakarta, Gadjah Mada University.
- Grace, P. A & Neil R, Borley, 2007, *At a Glance Ilmu Bedah* Edisi 3, diterjemahkan oleh Vidha Umami, Jakarta, Erlangga.
- Kuchta D & Zabek S, 2011, 'Activity-based costing for health care institutions,' 8th *International Conference on Enterprise Systems, Accounting and Logistics Thassos Island Greece*, 11-12 Juli: 300-311
- Menteri Kesehatan Republik Indonesia. (2014). Peraturan Menteri Kesehatan Tentang Petunjuk Teknis Istem Indonesia Case Based Groups (INA CBGS) (PMK Nomor 27 Tahun 2014).
- Putra PRS, Indra dan Jafar N. 2014, Ability to pay dan catastrophic payment pada peserta pembayar mandiri bpjs kesehatan kota makassar. *Jurnal Kesehatan*, 4 (3): 283-290.
- Panduan Praktek Klinis, Panduan Praktek Klinis Tindakan, Clinical Pathway di Bidang Telinga Hidung Tenggorok-Kepala Leher Vol 1 tahun 2015.

- Roztock, N. *et al.* 2004. A procedure for smoothing implementation of *Activity Based Costing* in small companies. *Engineering Management Journal*, 16(4), 19.
- Sabiston, D. C, 1992, *Buku Ajar Bedah*, diterjemahkan oleh Petrus Andrianto & Timan I.S, 185-196, Jakarta, EGC.
- Septianis, D, Misnaniarti dan Alwi, Masnir 2010 Perbandingan Biaya Pelayanan Tindakan Medik Operatif Terhadap Tarif INA-DRG pada Program Jamkesmas di RSUP Dr. Mohammad Hoesin Palembang, *Jurnal Management Pelayanan Kesehatan*, Vol.13.
- Smeltzer, S. C & Brenda G. Bare, 2002, *Buku Ajar Keperawatan Medikal Bedah Brunner & Suddarth's* Edisi 8, diterjemahkan oleh Y. Kuncara, Andy hartono, Yasmin asih & Monica Ester, 1097-1098, Jakarta, EGC.
- Supriono. 1999. *Akuntansi Biaya, Pengumpulan Biaya dan Penentuan Harga Pokok*. Edisi Kedua. Yogyakarta: BPFE
- Thabrany H. 2014. Jaminan Kesehatan Nasional. Jakarta. Raja Grafindo Persada. 1998. Penetapan dan Simulasi tarif Rumah Sakit. Pelatihan RSPAD 2-5 November 1999.

Rate Analysis of Activity Based Costing (Abc) Method on Indonesian Rate Case Based Groups (Ina Cbgs) In Appendictomic and Toncilectomic Measures in Hospital

ORIGINALITY REPORT

5%

SIMILARITY INDEX

5%

INTERNET SOURCES

0%

PUBLICATIONS

0%

STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

3%

★ newinera.com

Internet Source

Exclude quotes On

Exclude bibliography On

Exclude matches < 2%