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COMPARISON OF ACTIVITY BASED COSTING UNIT COSTS AND RETRIBUTION TARIFFS FOR ROUTINE LABORATORY TESTS

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ABSTRACT
Giri Emas Regional Hospital Laboratory has been applying local government retribution tariffs since 2023. With improvements in operational services and quality, along with the hospital's change in status, there is an increasing need for the implementation of competitive and strategic tariffs. Objective to identify the unit costs of routine laboratory tests using the Activity-Based Costing (ABC) method and compare them with the local government retribution tariffs in Buleleng Regency. Method: The research was conducted using a descriptive quantitative approach from secondary data on laboratory and management records on direct and indirect costs at Giri Emas Regional Hospital from November 1, 2023, to December 31, 2024. The unit cost calculations reveal that certain laboratory tests have significantly higher costs, such as direct bilirubin (IDR 177,951), triglycerides (IDR 174,955), and total bilirubin (IDR 162,541). In contrast, tests like HCG (IDR 38,972) and Widal (IDR 43,020) have the lowest unit costs. Statistically, the median unit cost at Giri Emas Regional Hospital is higher than the local government retribution tariffs (median = 69,186 vs 44,000; $U = 47$, $p < 0.01$). Giri Emas Regional Hospital should conduct further evaluation of the differences between its unit costs and the retribution tariffs.

Keywords: activity based costing; retribution tariff; unit cost

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INTRODUCTION

Regional General Hospitals are regional government-managed hospitals mandated to provide curative and rehabilitative services integrated with promotive, preventive, referral, educational, and research functions (Pemerintah Kabupaten Buleleng, 2021). Clinical laboratories within regional hospitals are essential for diagnostic confirmation, treatment monitoring, health maintenance, and disease prevention (Menteri Kesehatan Republik Indonesia, 2013). In line with these responsibilities, laboratories must emphasize safety, quality assurance, and cost control (Pemerintah Kabupaten Buleleng, 2021).

Managing laboratories in the Industry 4.0 era is increasingly complex due to rising costs of advanced technologies, equipment maintenance, human resource needs, and regulatory compliance (Mercer & Wilkinson, 2014). Unit cost analysis is a critical tool, defined as the total cost required for one test, consisting of direct costs for example reagents, consumables, and laboratory staff as well as indirect costs such as maintenance, depreciation, and utilities (Najamuddin et al., 2025; Suryawati & Nandini, 2024).

Two costing approaches are commonly used: the conventional method, which allocates indirect costs proportionally but risks inaccuracies, and activity-based costing (ABC), which assigns costs according to actual activities, offering greater precision (Suryadi et al., 2025; Purwanti et al., 2022). Accurate unit cost calculation enables competitive pricing, efficient budgeting, resource optimization, and reduced government health expenditure burdens (Kusuma et al., 2024).

Since 2023, Buleleng Regional Government has set Giri Emas Regional Hospital laboratory tariffs though unclear calculation method (Pemerintah Kabupaten Buleleng, 2023). With the directive to transition into a Regional Public Service Agency, Giri Emas Regional Hospital must establish accurate laboratory unit costs to formulate competitive and sustainable tariffs. This study aims to analyze Giri Emas Regional Hospital laboratory unit costs and compare them with existing Buleleng Regency Government tariffs.

METHOD

This study used a descriptive quantitative approach to calculate the unit cost of routine laboratory examinations at Giri Emas Regional Hospital, including Complete Blood Count, AST, ALT, Glucose, Urea, Creatinine, Total Bilirubin, Direct Bilirubin, Uric Acid, Cholesterol, Albumin, Triglycerides, Widal, Blood Group, Stool Examination, Urinalysis, and HCG. The calculated unit costs were then statistically compared with the official retribution tariff established by the Buleleng Regency Government.

Secondary data on direct and indirect costs were collected from Giri Emas Regional Hospital laboratory and management records between 1 November 2023 and 31 December 2024. Data were obtained manually and electronically from finance department and laboratory management reports. Descriptive analysis was used to calculate unit costs based on the Activity-Based Costing (ABC) method. The steps included: (1) identifying activities involved in laboratory services, from patient registration to result reporting; (2) classifying direct and indirect costs, determining cost pools, and assigning cost drivers; (3) converting hospital-level costs into laboratory costs using appropriate numerators and denominators; (4) calculating cost pool rates; (5) multiplying each cost pool rate by its corresponding cost driver; and (6) summing allocated costs to determine the unit cost per examination. Unit costs were obtained by dividing total allocated costs by the number of examinations performed. Subsidies were determined by subtracting government tariffs from ABC-calculated unit costs.

Normality testing was performed using the Shapiro–Wilk test. A p-value ≤ 0.05 indicated non-normal distribution, while $p > 0.05$ indicated normality. Depending on distribution, unit costs were summarized as mean ± standard deviation or as median, minimum, and maximum values. Comparisons between ABC-based unit costs and government tariffs were analyzed using independent t-tests (for normally distributed data) or Mann–Whitney U tests (for non-normal data). Statistical significance was set at $p \leq 0.05$.

RESULT

A total of eight activities were identified in the Giri Emas Regional Hospital laboratory workflow, comprising three pre-analytical, two analytical, and three post-analytical processes. These activities were carried out by three responsible personnel groups: administrative staffs, laboratory analysts, and clinical pathologist (Table 1).

Table 1.
Identification of Activities in Laboratory Services

No	Phase	Activity	Responsible Party
1	Pre-analytic	Patient registration and registration	Administration
2		Laboratory test request and registration through HMIS*	Administration
3		Sample preparation and collection	Analyst
4	Analytic	Sample verification	Analyst
5		Sample processing	Analyst
6	Post-analytic	Result validation	Analyst
7		Result verification	Clinical Pathologist
8		Result reporting and entry into HMIS*	Analyst

*Hospital Management Information System

The allocation of direct and indirect costs to the laboratory is presented in Table 2. Office supplies was included as direct cost, while all other expenditures were categorized as indirect. Administrative staff activities were estimated to contribute 20% of their total workload to the laboratory, and salary costs were adjusted accordingly. Despite this adjustment, administrative salaries remained the largest component of indirect costs. No official record of laboratory room depreciation was available; therefore, depreciation was calculated based on the hospital construction cost (IDR 23,714,865,804), residual value (5%), and useful life (20 years), resulting in IDR 1,126,456,147 annually, converted to the laboratory area.

Table 2.
Conversion of Direct and Indirect Hospital Costs to Laboratory Costs

Type of Cost	Initial Cost (IDR)	Allocation	Hospital Proportion	Laboratory Proportion	Calculated Cost Pool (IDR)
Administrative Staff Salary	154,318,536	Number of hospital patients to laboratory	17,427	7,898	69,937,901
HMIS Maintenance	16,000,000	Hospital area to laboratory	3,514	40.44	184,132
Office Supplies	86,542,317	Hospital area to laboratory	3,514	40.44	995,951
Air conditioner maintenance	16,003,000	Hospital area to laboratory	3,514	40.44	184,167
Computer maintenance	16,003,000	Hospital area to laboratory	3,514	40.44	184,167
Water supply bills	354,200	Hospital area to laboratory	3,514	40.44	4,076
Internet & phone services bills	59,662,451	Hospital area to laboratory	3,514	40.44	686,611
Electricity bills	228,733,440	Hospital area to laboratory	3,514	40.44	2,632,322
Cleaning services	80,100,000	Hospital area to laboratory	3,514	40.44	921,811
Waste disposal services	61,891,040	Hospital area to laboratory	3,514	40.44	712,258
Laundry services	37,800,000	Number of hospital staff to laboratory	183	7	1,445,901
Security services	130,000,000	Hospital area to laboratory	3,514	40.44	1,496,073
Laboratory depreciation	1,126,456,147	Hospital area to laboratory	3,514	40.44	12,963,542

Forty-one types of medical consumables were used in laboratory services, including tubes, syringes, and reagents (Table 3). Among direct costs, personnel salaries were the largest component, with analysts contributing IDR 11,004 per test and clinical pathologists IDR 11,964 per test. Reagent costs varied substantially, with direct bilirubin (IDR 133,678/test) and triglycerides (IDR 130,682/test) being the most expensive.

Table 3.
Direct Costs Involved in the Laboratory Services of Giri Emas Regional Hospital

No	Type of Direct Cost	Calculated Cost Pool (IDR)	Driver	Cost Driver	Cost Pool Rates
			Consumables		
1	EDTA tubes	10,064,000	Number of CBC and blood group tests.	4,854	2,073
2	Serum tubes	13,587,000	Number of test - number of CBC, blood group, urinalysis, HCG, and stool tests.	15,291	889
3	Vaccutainers	4,479,600	Number of test - number of urinalysis, HCG, and stool tests.	20,145	222
4	Syringes 1 cc	1,322,000	Number of test - number of urinalysis, HCG, and stool tests.	20,145	66

No	Type of Direct Cost	Calculated Cost Pool (IDR)	Driver	Cost Driver	Cost Pool Rates
5	Syringes 3 cc	3,026,000	Number of test - number of urinalysis, HCG, and stool tests.	20,145	150
6	Plasters	1,858,571	Number of test - number of urinalysis, HCG, and stool tests.	20,145	92
7	Alcohol swabs	1,972,374	Number of test - number of urinalysis, HCG, and stool tests.	20,145	97
8	Micropipette blue tips	960,000	Number of test - number of CBC, blood group, HCG tests.	16,085	59
9	Micropipette yellow tips	3,058,272	Number of test - number of CBC, blood group, HCG tests.	16,085	190
10	Tissues	896,000	Number of tests.	21,064	43
11	Urine pots	1,760,550	Number of urinalysis and HCG tests.	796	2,212
12	Stool pots	660,000	Number of stool tests.	123	5,366
13	Glass objects	707,000	Number of urine and stool tests.	767	922
14	Cover glasses	350,200	Number of urine and stool tests.	767	457
15	Sample cups	8,744,000	Number of chemistry tests.	11,327	772
16	Handschoens	20,822,200	Number of tests.	21,064	989
17	Distilled water	3,774,000	Number of chemistry tests.	11,327	333
18	Masks	1,768,893	Number of tests.	21,064	84
19	Syringe boxes	785,000	Number of urine and stool tests.	767	1,023
20	Blood lancets	897,500	Number of glucose tests.	4,830	186
			Reagents		
21	Complete blood count	124,923,840	Number of CBC tests.	4,827	25,880
22	Glucose	21,195,600	Number of glucose tests.	4,830	4,388
23	Uric acid	11,988,000	Number of uric acid tests.	158	75,873
24	Cholesterol	8,862,240	Number of cholesterol tests.	144	61,543
25	AST	18,640,230	Number of AST tests.	1,392	13,391
26	ALT	18,640,230	Number of ALT tests.	1,392	13,391
27	Urea	39,571,500	Number of urea tests.	1,573	25,157
28	Creatinine	35,397,900	Number of creatinine tests.	1,573	22,503
29	Direct bilirubin	9,491,170	Number of direct bilirubin tests.	71	133,678
30	Total bilirubin	8,397,000	Number of total bilirubin tests.	71	118,268
31	Albumin	4,506,600	Number of albumin tests.	79	57,046
32	Triglycerides	5,750,000	Number of triglycerides tests.	44	130,682
33	Widal	5,546,460	Number of widal tests.	553	10,029
34	Blood group	1,542,000	Number of blood group tests.	27	57,111
35	Eosin	330,000	Number of stool tests.	123	2,683
36	Urinalysis	3,584,246	Number of urinalysis tests.	644	5,566
37	HCG	998,000	Number of HCG tests.	152	6,566
38	Tensioactive	9,145,290	Number of chemistry tests.	11,327	807
39	Extra wash solution	15,670,980	Number of chemistry tests.	11,327	1,384
40	Cuvette wash solution	3,300,000	Number of chemistry tests.	11,327	291
41	Office supplies	995,951	Number of tests.	21,064	47
			Laboratory Staff Salaries		
42	Analysts	231,785,400	Number of tests.	21,064	11,004
43	Clinical Pathologist	252,000,000	Number of tests.	21,064	11,964

Indirect costs included administrative salaries (IDR 69,937,901; IDR 3,320/test), utilities, service charges, internal & external quality control, equipment maintenance, and depreciation (Table 4). The Mindray BC-5380 hematology analyzer had the highest depreciation cost (IDR 6,517/test), followed by the Dialab Autolyser chemistry analyzer (IDR 3,964/test). Laboratory room depreciation contributed IDR 615/test.

Table 4.
Indirect Costs Involved in the Laboratory Services of Giri Emas Regional Hospital

No	Types of Indirect Cost	Cost Pool (IDR)	Driver	Cost Driver	Cost Pool Rates
			Salary		
1	Administration officer	69,937,901	Number of test	21,064	3,320
			Maintenance		
2	HMIS	184,132	Number of test	21,064	9
3	Air conditioners	184,167	Number of test	21,064	9
4	Computers	184,167	Number of test	21,064	9
			Bills		
5	Water supply	4,076	Number of test	21,064	0.2
6	Internet & Phones	686,611	Number of test	21,064	33
7	Electricity	2,632,322	Number of test	21,064	125
			Services		
8	Cleaning	921,811	Number of test	21,064	44
9	Laundry	1,445,901	Number of test	21,064	69
10	Waste disposal	712,258	Number of test	21,064	34
11	Security	1,496,073	Number of test	21,064	71
			Internal Quality Control (IQC)		
12	Hematology	16,830,960	Number of CBC test	4,827	3,487
13	Chemistry	25,172,580	Number of chemistry test	11,327	2,222
14	Urinalysis	738,000	Number of urinalysis test	644	1,146
			External Quality Control (EQC)		
15	Chemistry	1,900,000	Number of chemistry test	11,327	168
16	Urinalysis	1,800,000	Number of urinalysis test	644	2,795
17	Chemistry calibrator	2,299,200	Number of chemistry test	11,327	203
			Calibration		
18	Pipette	5,440,000	Number of tests - number of CBC and HCG tests.	16,085	338
19	Boeco SC 8 Boeco 28 A	1,200,000	Number of tests - number of CBC, blood group, stool, and HCG.	15,935	75
20	B Medical MP 380 CSG	1,650,000	Number of tests.	21,064	78
			Laboratory Maintenance		
21	Dialab autolyser	12,888,990	Number of chemistry test.	11,327	1,138
22	B Medical MP 380 CSG	15,251,786	Number of tests.	21,064	724
			Depreciation		
23	Laboratory	12,963,542	Number of tests.	21,064	615
24	Olympus CX33 Boeco BM 180	2,206,700	Number of urine and stool tests.	767	2,877
25	Mindray BC-5380	31,462,000	Number of CBC tests.	4,827	6,517
26	Dialab autolyser	44,905,000	Number of chemistry test	11,327	3,964
27	Rotator WP 60R	1,000,000	Number of CBC tests.	4,827	207
28	Pipette	955,000	Number of tests – number of CBC and HCG tests.	16,085	59
29	Boeco SC 8 Boeco 28 A	11,470,970	Number of tests – number of CBC, blood group, and stool tests.	15,935	719
30	Insight U500	4,890,000	Number of urinalysis tests.	644	7,593
31	B Medical MP 380 CSG	15,251,786	Number of tests.	21,064	724
32	Computer	843,271	Number of tests.	21,064	40

For glucose testing, total direct costs amounted to IDR 182,157,550, indirect costs IDR 53,774,426, and total cost IDR 235,931,976, yielding a unit cost of IDR 48,847.2 (Table 5). Similar calculations for other tests (AST, ALT, urea, creatinine, bilirubin, uric acid, cholesterol, albumin, triglycerides, blood group, CBC, stool, urinalysis, and HCG) are also performed but not presented detailed in the research.

Table 5.
Example of Unit Cost Measurement for Glucose Test

No	Cost	Driver	Cost Driver	Cost Pool Rates	Total (IDR)
		Direct Costs			
1	Serum tubes	Number of glucose tests.	4,830	889	4,293,870
2	Vaccutainers	Number of glucose tests.	4,830	222	1,072,260
3	Syringes 1 cc	Number of glucose tests.	4,830	66	318,780
4	Syringes 3 cc	Number of glucose tests.	4,830	150	724,500
5	Plasters	Number of glucose tests.	4,830	92	444,360
6	Alcohol swabs	Number of glucose tests.	4,830	97	468,510
7	Micropipette blue tips	Number of glucose tests.	4,830	59	284,970
8	Micropipette yellow tips	Number of glucose tests.	4,830	190	917,700
9	Tissues	Number of glucose tests.	4,830	43	207,690
10	Sample cups	Number of glucose tests.	4,830	772	3,728,760
11	Handschoens	Number of glucose tests.	4,830	989	4,776,870
12	Distilled water	Number of glucose tests.	4,830	333	1,608,390
13	Masks	Number of glucose tests.	4,830	84	405,720
14	Blood lancets	Number of glucose tests.	4,830	186	898,380
15	Glucose reagent	Number of glucose tests.	4,830	4,388	21,194,040
16	Tensioactive	Number of glucose tests.	4,830	807	3,897,810
17	Extra wash solutions	Number of glucose tests.	4,830	1.384	6,684,720
18	Cuvette wash solutions	Number of glucose tests.	4,830	291	1,405,530
19	Analysts salary	Number of glucose tests.	4,830	11.004	53,149,320
20	Clinical pathologist salary	Number of glucose tests.	4,830	11,964	57,786,120
21	Office supplies	Number of glucose tests.	4,830	47	227,010
		Indirect Costs			
22	Administration staffs salary	Number of glucose tests.	4,830	3,320	16,035,600
23	HMIS maintenance	Number of glucose tests.	4,830	9	43,470
24	Air conditioner maintenance	Number of glucose tests.	4,830	9	43,470
25	Computer maintenance	Number of glucose tests.	4,830	9	43,470
26	Water supply bills	Number of glucose tests.	4,830	0.2	966
27	Internet & telephones bills	Number of glucose tests.	4,830	33	159,390
28	Electricity bills	Number of glucose tests.	4,830	125	603,750
29	Cleaning services	Number of glucose tests.	4,830	44	212,520
30	Laundry services	Number of glucose tests.	4,830	69	333,270
31	Waste disposal services	Number of glucose tests.	4,830	34	164,220
32	Security services	Number of glucose tests.	4,830	71	342,930
33	Chemistry IGC	Number of glucose tests.	4,830	2,222	10,732,260
34	Chemistry EQC	Number of glucose tests.	4,830	168	811,440
35	Chemistry calibrator	Number of glucose tests.	4,830	203	980,490
36	Pipette calibration	Number of glucose tests.	4,830	338	1,632,540
37	Boeco SC 8 dan Boeco 28 A calibration	Number of glucose tests.	4,830	75	362,250
38	B Medical MP 380 CSG calibration	Number of glucose tests.	4,830	78	376,740
39	Dialab autolyser maintenance	Number of glucose tests.	4,830	1,138	5,496,540
40	B Medical MP 380 CSG maintenance	Number of glucose tests.	4,830	724	3,496,920
41	Laboratory depreciation	Number of glucose tests.	4,830	615	2,970,450
42	Dialab autolyser depreciation	Number of glucose tests.	4,830	3,964	19,146,120
43	Pipette depreciation	Number of glucose tests.	4,830	59	284,970
44	Boeco SC 8 & Boeco 28 A depreciation	Number of glucose tests.	4,830	719	3,472,770
45	B Medical MP 380 CSG depreciation	Number of glucose tests.	4,830	724	3,496,920
46	Computer depreciation	Number of glucose tests.	4,830	40	193,200
		Total Cost			235,931,976
		Number of Glucose Tests			4,830
		Unit Cost Glucose Test			48,847.2

Overall, the median laboratory unit cost was significantly higher than government tariffs (69,186 [range 38,972–177,951] vs. 44,000 [26,000–98,000]). Only Widal and blood group testing showed lower unit costs than government tariffs, while all other tests exceeded them, with the smallest gap in glucose and the largest in direct bilirubin (Table 6). Shapiro–Wilk tests confirmed that both calculated unit costs ($W=0.848$, $p<0.05$) and government tariffs ($W=0.758$, $p<0.01$) were not normally distributed. Accordingly, Mann–Whitney U tests were performed, demonstrating a statistically significant difference between unit costs and government tariffs ($U=47$, $p<0.01$).

Table 6.
Unit Costs, Cost Differences, and Price Subsidies of Laboratory Examination Types Compared with Buleleng Regional Government Retribution Tariff

Type of Laboratory Test	Unit Cost (IDR)	Buleleng Regional Government Retribution Tariff (IDR)	Cost Difference (IDR)	Cost Subsidies (IDR)	p^+
Complete blood count	69,186	40,000	-29,186	29,186	p<0.01
AST	57,664	44,000	-13,664	13,664	
ALT	57,664	44,000	-13,664	13,664	
Glucose	48,847	36,000	-12,847	12,847	
Urea	69,430	44,000	-25,430	25,430	
Creatinine	66,776	44,000	-22,776	22,776	
Total bilirubin	162,541	44,000	-118,541	118,541	
Direct bilirubin	177,951	44,000	-133,951	133,951	
Uric acid	120,146	44,000	-76,146	76,146	
Total cholesterol	105,816	44,000	-61,816	61,816	
Albumin	101,319	44,000	-145,319	145,319	
Triglicerides	174,955	60,000	-114,955	114,955	
Widal	43,020	70,000	+26,980	NA*	
Blood group	90,492	98,000	+7,508	NA*	
Routine stool examination	44,011	26,000	-18,011	18,011	
Urinalysis	55,976	34,000	-21,976	21,976	
HCG	38,972	26,000	-12,972	12,972	

*Not available
$^+$Mann–Whitney U test

DISCUSSION

The findings of this study indicate that the majority of routine laboratory examinations at Giri Emas Regional Hospital result in financial losses, as reflected by the negative gap between the calculated unit cost and the official tariff established by the Buleleng Regional Government. Losses were observed in the range of 23.7% to 75.3% per examination, with particularly high discrepancies in tests such as Total Bilirubin and Direct Bilirubin. Examination frequency influenced the unit cost: commonly performed tests such as Complete Blood Count and Glucose showed relatively smaller losses, whereas less frequently performed tests, including Total Bilirubin, exhibited larger deficits.

These results are consistent with previous studies reporting similar discrepancies between calculated unit costs and official tariffs (Suryadi et al., 2025; Lalamentik, 2023). However, methodological variations exist. For example Lalamentik (2023) accounted for profit-sharing with third parties—components not directly relevant to laboratory unit cost estimation. To avoid overestimation, the present study excluded medical personnel salaries (general practitioners, dentists, specialists, and nurses) from indirect costs, as their remuneration is sourced from other service-based allowances and incentives. This approach is supported by Purwanti (2022) and Normansyah (2022).

Indirect costs were allocated using the number of examinations as the primary cost driver, with preliminary conversions based on staff numbers or room area to ensure proportional allocation. For instance, costs related to hospital information system maintenance or electricity were distributed according to laboratory space utilization. This method enhances accuracy by reflecting the heterogeneous nature of indirect costs, which are not always directly correlated with examination volume. Nonetheless, certain indirect cost components were not fully incorporated, such as laboratory staff training. Although training had not been conducted during 2023–2024, it is outlined in Giri Emas Regional Hospital's vision and mission. Routine training programs, anticipated to commence in 2025, are likely to increase future indirect costs, particularly in staff development.

A key strength of this study lies in its comprehensive inclusion of both direct and indirect cost components, supported by data validated through collaboration with laboratory coordinator. However, the absence of an integrated Laboratory Information System (LIS) posed limitations. Data were extracted from the hospital information system (HIS), which lacks detailed tracking of medical consumables. Consequently, calculations assumed full consumable usage for each test (e.g., one serum tube and vacutainer per examination), even when multiple tests could be conducted using the same sample. This may have led to overestimation of consumable costs. The significant negative gap between ABC-based unit costs and regional government tariffs highlights the financial vulnerability of laboratory services, particularly in examinations such as bilirubin tests, uric acid, and triglycerides. To ensure sustainability, subsidies from regional government are necessary to offset operational deficits.

Based on these findings, several recommendations are proposed. First, documentation of consumable usage should be improved, ideally through the implementation of an integrated LIS. Such a system would enhance data accuracy, optimize resource utilization, and reduce the risk of cost overestimation. Second, efficiency measures should be implemented for consumables such as controls, calibrators, and reagents. Standard Operating Procedures for calibration, quality control, and repeat testing are essential to minimize waste. Switching certain low-demand tests, such as uric acid and cholesterol, to smaller analyzers with more stable reagents could further reduce losses. Third, strategies to increase examination volume should be prioritized. Public education, collaboration with primary healthcare providers, and the establishment of a Medical Check-Up unit may increase demand, reduce reagent wastage, and improve financial performance. Overall, the study underscores the urgent need for systematic improvements in laboratory cost management at Giri Emas Regional Hospital. Enhancing data accuracy, optimizing resource use, and increasing examination volume, combined with targeted government subsidies, will support the delivery of sustainable, high-quality laboratory services in Buleleng Regency.

CONCLUSION

The study calculated the unit costs of routine laboratory tests at Giri Emas Hospital using the ABC method, revealing costs higher than the local government retribution tariffs. A significant difference was found between the laboratory unit costs and the Buleleng regency tariff retributions, indicating financial disparities. It is recommended that the Buleleng regional government review or consider subsidizing the laboratory retribution tariffs to prevent operational deficits.

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