



Evaluation of BPJS Financing Efficiency and Characteristics of Outpatient ENT Patients In 2023 – 2025 Based on INA CBGs Rates at RS X Surabaya

Andie Roesbiantoro¹, Rizka Dany Effendi², Budhi Setianto^{3,4}, Agus Aan Adriansyah⁵, Yauwan Tobing Lukiyono⁶, Nikmatus Sa'adah⁷

^{1,2} Doctoral Professional Education Study Program, Faculty of Medicine, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia

^{3,5} Department of Public Health, Faculty of Health, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia

⁴ Head of Hospital Planning, Development, and Management Information Systems Department, RS Islam Surabaya Ahmad Yani, 60243, Surabaya, East Java, Indonesia

⁶ Department of Medical Laboratory Technology, Faculty of Health, Universitas Nahdlatul Ulama Surabaya, 60237 Surabaya, East Java, Indonesia

⁷ Department of Dentistry, Faculty of Dentistry, Bhakti Wiyata Institute of Health Sciences, Kediri 64144, East Java, Indonesia

ARTICLE INFORMATION

Received: May 10, 2026

Revised: May 19, 2026

Available online: August 2026

KEYWORDS

BPJS Kesehatan; INA-CBGs; Poli ENT; Service financing; Service efficiency

CORRESPONDENCE

E-mail: budhisetianto@unusa.ac.id

A B S T R A C T

The National Health Insurance Program (JKN) through BPJS Kesehatan uses the INA-CBGs payment system to improve financing efficiency and the quality of hospital services. However, the increase in service complexity and changes in patient characteristics can affect service efficiency, especially in Ear, Nose, Throat (ENT) specialist services. This study aims to evaluate changes in patient characteristics, distribution of service financing, efficiency of INA-CBGs tariffs, and management of BPJS services for outpatient ENT Poly at Surabaya Islamic Hospital in 2023–2025. The research uses an evaluative method with a descriptive quantitative approach. The research data came from secondary data on TXT BPJS outpatient ENT which included patient characteristics, diagnosis, service cost components, hospital rates, and INA-CBGs rates. The sampling technique used total sampling of all BPJS patients in the outpatient ENT period of the study period. The results showed that patient visits were dominated by women and adult age groups. The most common cases are other minor chronic diseases. Total hospital costs increased from IDR 256,479,954 in 2023 to IDR 369,708,595 in 2025 with the largest cost component coming from consultations and medicines. Although the rate of INA-CBGs is still higher than the cost of hospitals, the difference in profits has decreased significantly. This study concludes that it is necessary to strengthen service efficiency, control costs, and optimize service management to maintain the financial sustainability of hospitals.

INTRODUCTION

The National Health Insurance (JKN) Program through BPJS Kesehatan is one of the government's strategic policies in Peraturan Menteri Kesehatan No.26 Tahun (2021) increase access to equitable, equitable, and sustainable health services for the people of Indonesia. In its implementation, hospitals use the Indonesia Case Base Groups (INA-CBGs) payment system, which is a package payment system based on the diagnosis and severity of the disease. The INA-CBGs system is designed to encourage cost efficiency and improve the quality of health services through controlling the financing of hospital services (Kementerian Kesehatan Republik Indonesia, 2022). However, several studies show that the implementation of INA-CBGs still faces various challenges, especially related to the mismatch between the real cost of hospital services and the claim rates received. These conditions can affect the efficiency of services and the financial sustainability of hospitals, especially in specialist services with high complexity of cases (Nuurjannah, 2021).

One of the specialist services that has quite complex financing challenges is the Ear, Nose and Throat (ENT) service. ENT services have a wide variety of cases ranging from acute diseases, chronic diseases, diagnostic measures, to procedural actions that require the continuous use of drugs, medical devices, and supporting examinations (Andi Roesbiantoro et al., 2025). Previous research related to BPJS services in specialist polyclinics generally only focused on the analysis of unit costs and the difference between INA-CBGs and hospital costs without evaluating changes in patient characteristics and longitudinal distribution of service financing (Roesbianto et al., 2022). In fact, changes in patient demographic trends, an increase in chronic cases, and changes in service patterns can affect the financing structure and the level of hospital service efficiency (Elhuriyah & Lendrawati, 2025).

Based on these conditions, an evaluative study is needed to analyze changes in patient characteristics, the distribution of service financing components, the efficiency of INA-CBGs tariffs, and the management of BPJS services at the ENT Poly of the Surabaya Islamic Hospital for the period 2023-2025 (Rita et al., 2025). This study has novelty because it integrates the analysis of changes in patient demographic profiles with the evaluation of service financing and tariff efficiency of INA-CBGs longitudinally in ENT outpatient services (Purba et al., 2023; Syesharini et al., 2020). This study is different from previous studies which mostly only assessed the difference in rates or unit costs of services without evaluating the relationship between changes in patient characteristics to the financing structure and efficiency of hospital services (Wilis, 2025).

The formulation of the problem in this study includes how the demographic characteristics of BPJS patients at the ENT Poly of Surabaya Islamic Hospital in 2023–2025 have changed, how the distribution of the BPJS service financing component has changed, how the level of service efficiency is based on the difference in hospital rates and INA-CBGs claims, and how to evaluate the management of the ENT Poly services in dealing with changes in patient characteristics and BPJS financing efficiency demands. The purpose of this study is to evaluate changes in patient characteristics, analyze the distribution of service financing, assess service efficiency based on INA-CBGs rates, and prepare recommendations for more effective and efficient service management in ENT outpatient services (Nasel et al., 2025; Wijaya & Winoto, 2025).

This study uses an evaluative descriptive quantitative approach by utilizing secondary data from BPJS outpatient ENT at Surabaya Islamic Hospital in 2023–2025. The analysis was carried out on patient characteristics based on age, gender, and disease diagnosis, as well as service cost components such as consultations, drugs, medical procedures, supporting examinations, radiology, and laboratories. The results of the research are expected to make a scientific contribution to the development of BPJS service

management based on efficiency and service quality, as well as become the basis for hospital policy making in controlling health service costs without reducing the quality of service to patients.

METHOD

This study uses an evaluative research method with a descriptive quantitative approach to evaluate changes in patient characteristics (Firman, 2024), distribution of service financing, efficiency of INA-CBGs tariffs, and management of BPJS services in outpatient cases of ENT at Surabaya Islamic Hospital for the period 2023–2025. The source of research data comes from secondary data in the form of outpatient BPJS TXT data obtained from the medical record unit and the hospital's BPJS claims section. The study population was all BPJS patients who were outpatient with ENT cases during the study period with sampling techniques using total sampling, so that all patient data that met the inclusion criteria was analyzed. The data used included patient characteristics based on age and gender, disease diagnosis, type of service action, service cost component, hospital rates, INA-CBGs rates, and the number of patient visits. Before analysis, the data is cleaned, coding, and validated to ensure the completeness and suitability of the research data.

Data analysis was carried out in an evaluative descriptive manner with the help of statistical software to describe changes in patient characteristics, distribution of service financing components, and service efficiency levels based on the difference in hospital rates and INA-CBGs claims (Nilmawati et al., 2025; Irdhina Putri Batrisyia, Fadli Robby Amsriza, 2024). Analysis was also carried out on changes in service costs such as consultation fees, nursing, medicines, supporting examinations, radiology, laboratories, and the use of medical devices. The results of the analysis were then evaluated to identify factors that affect service efficiency and changes in BPJS's financing structure in outpatient ENT services. Based on the results of the evaluation, recommendations were prepared for a more effective, adaptive, and efficient service management strategy in supporting the sustainability of BPJS services at the Surabaya Islamic Hospital (Nita Perlita, 2020). This study has passed the ethical review process at RS Islam Surabaya A. Yani with Ethical Clearance Number: 151.EC.KEP.RSIAY.07024.

RESULT

Table 1. Gender Distribution of BPJS Patients at the ENT Outpatient Clinic of RS X Surabaya, 2023–2025

No	Gender	2023	2024	2025
1	Men	798	884	958
2	Women	1,133	1,294	1,126
		1,931	2,178	2,084

From Table 1 Overall, BPJS outpatient visits at the ENT Poly are dominated by female patients, despite an increase in the proportion of male patients in 2025. This shows that the ENT Poly service still has a high and consistent utilization rate by BPJS participants at the Surabaya Islamic Hospital.

Table 2. Age Classification of BPJS Patients at the ENT Outpatient Clinic of RS X Surabaya, 2023–2025

No	Age Classification	2023	2024	2025
1	Infant (< 1 year)	16	9	11
2	Toddler(1-4 Years)	94	101	102
3	Child (5 - 9 Years)	177	191	132
4	Teenagers (10 - 18 Years Old)	182	201	202
5	Adults (19-59 years)	950	1,101	1,194
6	Senior (>60 years old)	512	575	443
		1,931	2,178	2,084

From Table 2 Outpatient BPJS patient visits at the Surabaya Islamic Hospital are dominated by the adult age group (19–59 years) with an increasing trend from 950 patients in 2023 to 1,194 patients in 2025. The elderly group ranks second, despite declining in 2025. Meanwhile, visits to patients of infant, toddler, children, and adolescents are relatively stable. Overall, total visits increased in 2024 and decreased slightly in 2025.

Table 3. INA-CBGs Codes of BPJS Patients at the ENT Outpatient Clinic of RS X Surabaya, 2023–2025

No	Type of Disease / Action	2023	2024	2025
1	Fracture	1	0	0
2	Other minor acute diseases	62	27	1
3	Other minor chronic diseases	1.719	1.896	1.099
4	Miscellaneous diagnostic procedures on the ears, nose, mouth, and throat	1	6	5
5	Miscellaneous procedures on the ears, nose, mouth, and throat	119	105	212
6	Function test procedures on the ears, nose, mouth, and throat	29	70	91
7	Miscellaneous CT scan	0	1	0
8	Consultation or other examinations	0	66	664
9	Gynecological minor procedures	0	1	0
10	Miscellaneous minor procedures on the ears, nose, mouth, and throat	0	1	2
11	Minor procedures on the skin	0	2	0
12	Moderate procedures on the ears, nose, mouth, and throat	0	1	2
13	Physical therapy procedures and small musculoskeletal procedures	0	1	0
14	Individual psychotherapy in children with mental health problems	0	1	0
15	Wound care	0	0	3
16	Cauterization and packing procedures in the nasal cavity	0	0	2

17	Minor procedures on the thyroid gland, parathyroid, and thyroglossal ducts	0	0	1
18	Minor procedures on nodules of the spleen and tymus	0	0	1
19	Gynecological ultrasound procedure	0	0	1
Grand total		1.931	2.178	2.084

From Table 3 The number of BPJS visits to the outpatient ENT Poly at Surabaya Islamic Hospital in 2023–2025 is dominated by "Minor Chronic Diseases", with the highest number of cases in 2024 of 1,896 cases, then decreased to 1,099 cases in 2025. In addition, there has been an increase in "Consultation or miscellaneous examinations" which has increased sharply to 664 cases by 2025. The actions "Miscellaneous procedures on the ears, nose, mouth, and throat" and "Function test procedures" also show an increasing trend from year to year. Overall, total visits increased from 1,931 cases in 2023 to 2,178 cases in 2024, then decreased slightly to 2,084 cases in 2025.

Table 4. Revenue Classification Based on INA-CBGs Tariffs of BPJS Patients at the ENT Outpatient Clinic of RS X Surabaya, 2023–2025

No	Item	2023	2024	2025
1	Pasein Mansion	1931	2178	2084
2	Non-Surgical Procedures	8,920,000	5,260,000	28,455,300
3	Surgical Procedure	-	150,000	405,800
4	Konsultasi	116,300,000	131,122,900	118,696,800
5	Nursing	2,025,000	14,505,000	9,178,800
6	Tickets	58,010,000	65,510,000	62,575,000
7	Tool Rental	375,000	5,489,300	8,886,200
8	Support	60,000	1,583,000	11,834,500
9	Radiologi	4,315,000	4,592,700	7,375,000
10	Laboratory	250,000	840,000	3,670,000
11	Medication	66,224,954	88,767,225	118,631,195
12	Total Hospital Costs	256,479,954	317,820,125	369,708,595
	Cost/Patient	132,822	145,923	177,403

From Table 4. The cost of service for outpatient BPJS patients at the ENT Polytechnic of Surabaya Islamic Hospital shows an increasing trend during 2023–2025. Total hospital costs increased from IDR 256,479,954 in 2023 to IDR 317,820,125 in 2024 and IDR 369,708,595 in 2025. In line with that, the average cost per patient also increased from IDR 132,822 to IDR 177,403 per patient. The largest cost component comes from consultations and medications, which continue to increase every year. In addition, the cost of non-surgical, supportive, radiology, laboratory, and equipment rental procedures has also increased, indicating an increase in the complexity of services and the use of supporting measures in outpatients of the ENT Poly.

Table 5. Difference Between INA-CBGs Tariffs and Hospital Tariffs of BPJS Patients at the ENT Outpatient Clinic of RS X Surabaya, 2023–2025

No	Price	2023	2024	2025
1	INA CBGS Price	413,674,400	468,325,500	431,827,600
2	Hospital Price	256,479,954	317,820,125	369,708,595
3	Differences	157,194,446	150,505,375	62,119,005
		81,406	69,103	29,808

From Table 5 The INA-CBGs rate for BPJS patients in the outpatient Poli ENT at Surabaya Islamic Hospital during 2023–2025 is still higher than hospital costs, so it still provides a positive difference. However, the value of the difference has decreased from IDR 157,194,446 in 2023 to IDR 150,505,375 in 2024 and decreased significantly to IDR 62,119,005 in 2025. The average difference per patient also decreased from IDR 81,406 to IDR 29,808 per patient. This shows that the profit margin of BPJS outpatient services at the ENT Poly is decreasing from year to year.

DISCUSSION

Based on the results of the study, the demographic characteristics of BPJS patients in the outpatient Poly ENT at Surabaya Islamic Hospital in 2023–2025 showed changes in the number of visits, age distribution, and gender of patients. The number of visits increased from 1,931 patients in 2023 to 2,178 patients in 2024, then decreased slightly to 2,084 patients in 2025.

By gender, female patients still dominate visits, but the number of male patients is increasing every year. By age group, adult patients aged 19–59 years are the largest group and will continue to increase until 2025, while the elderly group will continue to occupy a large proportion despite a decline in the last year of the study. These findings show that ENT poly services are more widely used by productive age groups and patients with repetitive control needs. These results are in line with the research of BPJS services in Indonesian hospitals which states that the adult and elderly groups are the main users of specialist outpatient services due to the high prevalence of chronic and degenerative diseases (Elhuriyah & Lendrawati, 2025)

The change in the distribution of the BPJS service financing component at the ENT Poly shows an increase in total hospital costs from IDR 256,479,954 in 2023 to IDR 369,708,595 in 2025. The largest cost component comes from consultations and medications. In addition, the cost of supporting materials, radiology, laboratories, and equipment rental has also increased. This condition shows an increase in the complexity of services and the use of diagnostic examinations in BPJS patients. The increase in drug costs also indicates the increasing need for therapy in patients with chronic ENT disease. The results of this study are in accordance with the theory of cost of care in health services which states that increasing

service utilization, supporting examinations, and long-term therapy will have a direct impact on the increase in hospital service costs (Andi Roesbiantoro et al., 2025).

The level of service efficiency of the ENT Poly based on the difference in hospital rates and INA-CBGs claims shows that the service still provides a surplus for the hospital during the research period. The rate of INA-CBGs was recorded higher than hospital costs in the entire year of the study. However, the value of the surplus has decreased significantly from IDR 157,194,446 in 2023 to IDR 62,119,005 in 2025. The average difference per patient also decreased from IDR 81,406 to IDR 29,808 per patient. These findings show that service efficiency began to decline due to the increase in hospital operating costs faster than the increase in INA-CBGs rates (Roesbiantoro et al., 2022).

This condition is in line with various studies on the implementation of INA-CBGs in Indonesian hospitals which stated that hospitals face challenges in maintaining efficiency due to the increase in the price of drugs, consumable medical materials, and the complexity of BPJS patient cases (Azhari et al, 2020). The evaluation of the service management of the ENT Poly shows that hospitals need to strengthen service management to deal with changes in patient characteristics and the demands of BPJS financing efficiency. The dominance of adult patients and chronic disease cases shows the need to develop services based on continuity of care, strengthening clinical pathways, as well as controlling the use of drugs and supporting examinations so that services remain effective and efficient. In addition, the increase in diagnostic actions and examination of ENT function illustrates a change in service patterns towards more comprehensive and technology-based services. From the perspective of hospital management, this condition supports the theory of health service efficiency which emphasizes the importance of a balance between service quality, cost control, and financial sustainability of hospitals in the era of National Health Insurance.

CONCLUSION

Based on the results of the study, the characteristics of BPJS patients in the outpatient ENT Polytechnic at the Islamic Hospital Surabaya in 2023–2025 are dominated by female patients and the adult age group, with a relatively stable number of visits. The service financing component has increased every year, especially in the cost of consultations, drugs, and supporting examinations, which shows the increasing complexity of services. Although the INA-CBGs rate is still higher than the hospital cost so that the service still provides a surplus, the value of the difference in profits has decreased significantly from year to year. Therefore, it is necessary to strengthen service management through cost efficiency, optimization of clinical pathways, and control of the use of resources so that the quality of service and financial sustainability of hospitals are maintained.

REFERENCES

- Andi Roesbiantoro, Budhi Setianto, Agus Aan Adriansyah, Rizka Dany Afina, Diah Retno Kusumawati, N. S. (2025). Evaluation of INA-CBGs Tariffs in BPJS Outpatients as an Effort to Control Quality and Costs at the ENT Polylinic of Surabaya Islamic Hospital Andi. *Jurnal Ilmiah Kesehatan*, 18, 316–323.
- Azhari, A. A., Panjaitan, Z. N., Putri, N. A., Soleha, E., & Maysandy, L. (2020). Sosialisasi Pelaksanaan Sistem INA-CBGs di Pelayanan Kesehatan. *Jurnal Abdidas*, 1(3), 149–156.
- Elhuriyah, E., & Lendrawati, L. (2025). Analisis Tarif Layanan BPJS Kesehatan: Studi Kasus Pada Poliklinik Saraf Rumah Sakit X. *JEMSI (Jurnal Ekonomi, Manajemen, Dan Akuntansi)*, 11(6), 5656–5665. <https://doi.org/10.35870/jemsi.v11i6.5286>
- Firman, F. (2024). Analisis Pembiayaan berdasarkan Lama Rawat Pasien BPJS Diabetes Melitus Tipe II Komplikasi Sirkulasi Perifer di RSUD PKU Muhammadiyah Bantul. *Jurnal Ekonomi Kesehatan Indonesia*, 9(1). <https://doi.org/10.7454/eki.v9i1.1119>
- Irdhina Putri Batrisyia, Fadli Robby Amsriza, M. R. F. (2024). Analisis Trend Kunjungan dan Pola Pembiayaan Pasien Poliklinik Bedah Sebelum dan Sesudah Implementasi Jaminan Kesehatan Nasional (JKN) di RS AMC Muhammadiyah Yogyakarta. *MANUJU: MALAHAYATI NURSING JOURNAL*, 2(8), 306–312.
- Kementerian Kesehatan Republik Indonesia. (2022). Panduan Layanan Peserta Jaminan Kesehatan Nasional Kartu Indonesia Sehat (JKN-KIS). Riskedas 2018,3, 103-111. *Kemenkes 2022*, 3, 103–111.
- Nasel, F. A., Arimbi, D., & Makbul, A. (2025). Keseimbangan antara Efisiensi Biaya dan Hak Pasien dalam Studi Kebijakan Pembatasan Obat dalam BPJS Kesehatan. *Jurnal Ilmu Hukum, Humaniora Dan Politik*, 5(6), 5324–5332. <https://doi.org/10.38035/jihhp.v5i6.5693>
- Nilmawati, Y., Yanie, A., & Saputera, M. M. A. (2025). Analisis Selisih Biaya Riil Dan Tarif Paket INA-CBG's Dengan Faktor-Faktor Yang Mempengaruhi Biaya Pada Pasien JKN Rawat Inap Di Klinik Utama Setara Barito Kuala. *Jurnal Farmasi SYIFA*, 3(1), 17–21. <https://doi.org/10.63004/jfs.v3i1.604>
- Nita Perlita. (2020). Pengaruh Sistem Akuntansi terhadap Efisiensi Pengelolaan Klaim Jaminan Sosial di Indonesia. *Jurnal Ilmu Dan Riset Akuntansi* :, 5(7), 201–208.
- Nuurjannah, N. Y. (2021). IMPLEMENTASI KEBIJAKAN JAMINAN KESEHATAN NASIONAL (JKN) DI RUMAH SAKIT UMUM DAERAH (RSUD) KOTA BANDUNG PENDAHULUAN Berdasarkan Undang-Undang Nomor 36 Tahun 2009 Tentang Kesehatan Pasal 5 daya di bidang kesehatan . aman , bermutu , dan terjangkau . (3. *Jurnal Ilmiah Administrasi Pemerintahan Daerah (JIAPD)*, Vol 13(2), 63–77.
- Peraturan Menteri Kesehatan NO.26 Tahun. (2021). Peraturan Menteri Kesehatan Republik Indonesia Nomor 26 Tahun 2021. *Peraturan Menteri Kesehatan Republik Indonesia Nomor 26 Tahun 2021*, 26, 10–17.
- Purba, Y. T., Sinaga, A. G., & Simbolon, P. H. (2023). Analisis kebijakan program jaminan kesehatan nasional (JKN) terhadap akses pelayanan kebidanan. *Prosiding Seminar Nasional Bukit Pengharapan*, 26–30.
- Rita, M., Situmorang, M., Aprileony, J., Sekolah, E., Ilmu, T., Lancang, A., & Dumai, K. (2025). Implementasi Kebijakan Program Jaminan Kesehatan (JKN) dalam Meningkatkan Akses Pelayanan Kesehatan. *Jurnal Administrasi Pemerintahan Desa*, 07(01), 1–18.

- Roesbianto, A., Setianto, B., Adriansyah, A. A., Setiyowati, Bistara, D. N., & Sa'adah, N. (2022). Description Of Characteristics , Diagnosis And Financing Of BPJS Patients. *Medical Technology and Public Health Journal*, 6(2), 169–176.
- Roesbiantoro, A., Setianto, B., Adriansyah, A. A., Lukiyono, T., Afina, R. D., & Karmila, H. N. (2022). Campaign To Increase The Knowledge Of Health Cadres In Efforts To Prevent Hearing Loss Risks In Commemoration Of World Hearing Day. *Proceeding SNPM Unusa*, 2(3).
- Syesharini, R. A., Putri, Z. M., & Ananda, Y. (2020). Perbandingan Biaya Rawat Jalan Poliklinik Jantung Dengan Realisasi Klaim BPJS. *Jurnal Kesehatan Medika Saintika*, 11(2), 253–257.
- Wijaya, S. H., & Winoto, H. T. (2025). Penelaahan Efisiensi Unit Pelayanan Rawat Jalan Berdasarkan Kinerja Dokter dan Waktu Tunggu Pelayanan Pasien: Studi Kasus di RS UNAIR. *Jurnal Ilmu Manajemen Terapan*, 6(6), 374–389.
- Wilis, P. A. (2025). Analisis Perbandingan Biaya dan Penggunaan Obat Antara Pasien BPJS Kesehatan dan Non-BPJS Kesehatan Periode Januari-Desember 2022 di Klinik Pratama X Kota Bandung. *Jurnal Ekonomi Kesehatan Indonesia*, 10(2). <https://doi.org/10.7454/eki.v10i2.1144>