



### Daftar Pustaka

1. Amelung, Volker Eric. 2013. *Healthcare Management: Managed Care Organisations and Instruments*, Heidelberg: Springer-Verlag Berlin
2. Marcinko, David Edward dan Hope Rachel Hetico, 2006. *Dictionary of Health Insurance and Managed Care*, New York: Springer Publishing
3. Morissey, Michael A. 2008. *Health Insurance*, Washington: AUPHA Press
4. Rickel, Annette U, dan Thomas N Wise, 2000. *Understanding Managed Care: An Introduction for Health Care Professional*, Switzerland: Karger AG
5. Samuel, David I, 2012. *Managed Healthcare in the New Millenium: Innovative Financial Modeling for the 21st Century*, CRC Press
6. Beik J. *Health Insurance Toda : A Participal Approach Second*. United States: Saunder Elsevier; 2015
7. Sabarguna BS. *Manajemen Medis*. Jakarta: Universitas Indonesia; 2012
8. Faizin A, Ilyas Y. *Pensiunan Karyawan PT. Asuransi Jiwasraya (Persero) Periode Januari 2011-November 2013*. <http://lib.ui.ac.id/naskahringkas/2015-08/S45306-Akbar> Faizin.
9. Nurwahyuni, A. and Setiawan, E. 2020. Kinerja Rumah Sakit Swasta dengan Pembayaran INA-CBGs di Era Jaminan Kesehatan Nasional: Casemix, Casemix Index, Hospital Base Rate. *Jurnal Ekonomi Kesehatan Indonesia*, 4(2): 1–10
10. Langenbrunner, J.C., Cashin, C. and Dougherty, S.O. 2009. *Designing and Implementing Healthcare Provider Payment System. How-To Manuals*. Washington, D.C.: The World Bank
11. Prasiska, T., Pujiyanto, P., & Absor, S. (2021). Hospital Baserate Klaim Persalinan JKN-KIS Rumah Sakit. *HIGEIA (Journal of Public Health Research and Development)*, 5(4), 577-586. <https://doi.org/10.15294/higeia.v5i4.51659>
12. OECD, 2013. *Managing Hospital Volumes Germany And Experiences From Oecd Countries*, s.l.: s.n
13. de Almeida Mello, J., Cès, S., Vanneste, D., Van Durme, T., Van Audenhove, C., Macq, J., Fries, B., & Declercq, A. (2020). Comparing the case-mix of frail older people at home and of those being admitted into residential care: a longitudinal study. *BMC geriatrics*, 20(1), 195. <https://doi.org/10.1186/s12877-020-01593-w>
14. Park YT, Lee J, Lee J. Association between Health Information Technology and Case Mix Index. *Healthc Inform Res*. 2017 Oct;23(4):322-327. doi: 10.4258/hir.2017.23.4.322. Epub 2017 Oct 31. PMID: 29181242; PMCID: PMC568803
15. Ammar, W., Khalife, J., El-Jardali, F., Romanos, J., Harb, H., Hamadeh, G., & Dimassi, H. (2013). Hospital accreditation, reimbursement and case mix: links and insights for



- contractual systems. *BMC health services research*, 13, 505.  
<https://doi.org/10.1186/1472-6963-13-505>
16. Khalife, J., Ammar, W., Emmelin, M., El-Jardali, F., & Ekman, B. (2020). Hospital performance and payment: impact of integrating pay-for-performance on healthcare effectiveness in Lebanon. *Wellcome open research*, 5, 95.  
<https://doi.org/10.12688/wellcomeopenres.15810.2>
17. Ginsburg PB, Carter GM. Medicare case-mix index increase. *Health Care Financ Rev.* 1986 Summer;7(4):51-65. PMID: 10311672; PMCID: PMC4191504
18. usse R, Geissler A, Aaviksoo A, Cots F, Häkkinen U, Kobel C, Mateus C, Or Z, O'Reilly J, Serdén L, Street A, Tan SS, Quentin W. Diagnosis related groups in Europe: moving towards transparency, efficiency, and quality in hospitals? *BMJ.* 2013 Jun 7;346:f3197. doi: 10.1136/bmj.f3197. PMID: 2374796
19. Kuster SP, Ruef C, Bollinger AK, Ledergerber B, Hintermann A, Deplazes C, Neuber L, Weber R. Correlation between case mix index and antibiotic use in hospitals. *J Antimicrob Chemother.* 2008 Oct;62(4):837-42. doi: 10.1093/jac/dkn275. Epub 2008 Jul 9. PMID: 18617509.
20. Mabotuwana T, Hall CS, Flacke S, Thomas S, Wald C. Inpatient Complexity in Radiology-a Practical Application of the Case Mix Index Metric. *J Digit Imaging.* 2017 Jun;30(3):301-308. doi: 10.1007/s10278-017-9944-y. PMID: 28083829; PMCID: PMC5422234.
21. Mendez CM, Harrington DW, Christenson P, Spellberg B. Impact of hospital variables on case mix index as a marker of disease severity. *Popul Health Manag.* 2014 Feb;17(1):28-34. doi: 10.1089/pop.2013.0002. Epub 2013 Aug 21. PMID: 23965045; PMCID: PMC3931432
22. Modra L, Higgins A, Vithanage R, Abeygunawardana V, Bailey M, Bellomo R. Sex differences in illness severity and mortality among adult intensive care patients: A systematic review and meta-analysis. *J Crit Care.* 2021 Oct;65:116-123. doi: 10.1016/j.jcrc.2021.05.019. Epub 2021 Jun 4. PMID: 34118502.
23. Murray, 2017: <https://acdis.org/articles/guest-post-cdi-buzz-about-cmi-what-your-facility-metrics-mean>
24. Peake MD, Thompson S, Lowe D, Pearson MG; Participating Centres. Ageism in the management of lung cancer. *Age Ageing.* 2003 Mar;32(2):171-7. doi: 10.1093/ageing/32.2.171. PMID: 12615560.
25. Kerr GD, Dunt D, Gordon IR. Effect of casemix funding on outcomes in patients admitted to hospital with suspected unstable angina. *Med J Aust.* 1998 Jan 19;168(2):57-60. doi: 10.5694/j.1326-5377.1998.tb126711.x. PMID: 946918



## Lampiran 1

**Tabel 23.** Proporsi Kunjungan Rawat Jalan dan Rawat Inap berdasarkan Variable Independen yaitu karakteristik Rumah Sakit dan Karakteristik Proporsi Kunjungan Pasien di Rumah Sakit Kerja Sama JKN Se Provinsi Banten Tahun 2019 -2022

Variable	Rawat Jalan		Rawat Inap	
	Kasus	Proporsi	Kasus	Proporsi
<b>KARAKTERISTIK RS</b>				
<b>Kabupaten / Kota</b>				
Kab. Lebak	760.749	5%	140.075	8%
Kab Pandeglang	164.514	1%	31.904	2%
Kab Serang	908.566	6%	139.627	7%
Kab Tangerang	3.012.856	19%	443.647	24%
Kota Cilegon	919.618	6%	93.062	5%
Kota Serang	834.355	5%	118.970	6%
Kota Tangerang	6.342.531	40%	640.616	34%
Kota Tangerang Selatan	2.771.482	18%	258.529	14%
<b>Jumlah</b>	<b>15.714.671</b>	<b>100%</b>	<b>1.866.430</b>	<b>100%</b>
<b>Kelas RS</b>				
Kelas B	4.767.645	30%	531.361	28%
Kelas C	10.643.055	68%	1.247.542	67%
Kelas D	303.971	2%	87.527	5%
<b>Jumlah</b>	<b>15.714.671</b>	<b>100%</b>	<b>1.866.430</b>	<b>100%</b>
<b>Hak Kelas</b>				
Hak Perawatan Kelas I	6.593.038	19%	690.695	37%
Hak Perawatan Kelas II	2.844.721	81%	328.913	18%
Hak Perawatan Kelas III	6.276.912	100%	846.822	45%
<b>Jumlah</b>	<b>15.714.671</b>		<b>1.866.430</b>	<b>100%</b>
<b>Kepemilikan</b>				
Pemerintah	2.919.650	19%	381.078	20%
Swasta	12.795.021	81%	1.485.352	80%
<b>Jumlah</b>	<b>15.714.671</b>	<b>100%</b>	<b>1.866.430</b>	<b>100%</b>



Variable	Rawat Jalan		Rawat Inap	
	Kasus	Proporsi	Kasus	Proporsi
<b>KUNJUNGAN PASIEN</b>				
<b>Jenis Kelamin</b>				
Laki-laki	6.678.374	42%	712.026	38%
Perempuan	9.036.297	58%	1.154.404	62%
<b>Jumlah</b>	<b>15.714.671</b>	100%	<b>1.866.430</b>	100%
<b>Usia</b>				
anak - anak	1.870.435	12%	495.260	27%
dewasa	11.469.798	73%	1.238.611	66%
Lanjut Usia	2.374.438	15%	132.559	7%
<b>Jumlah</b>	<b>15.714.671</b>	100%	<b>1.866.430</b>	100%
<b>Segmen Kepesertaan</b>				
Non PBI	12.418.533	79%	1.321.464	71%
PBI	3.296.138	21%	544.966	29%
<b>Jumlah</b>	<b>15.714.671</b>	100%	<b>1.866.430</b>	100%

Tabel 24. Proporsi Jumlah Rumah Sakit berdasarkan Kategori tertentu Data Sample BPJS Kesehatan Provinsi Banten Tahun 2019- 2022

Variabel	Jumlah Rumah Sakit	
	98 RS	
	n	%
<b>Kabupaten / Kota</b>		
KAB. LEBAK	4	4%
KAB. PANDEGLANG	3	3%
KAB. SERANG	4	4%
KAB. TANGERANG	24	24%
KOTA CILEGON	4	4%
KOTA SERANG	8	8%
KOTA TANGERANG	32	33%
KOTA TANGERANG SELATAN	19	19%
<b>Jumlah</b>	<b>98</b>	<b>100%</b>



Variabel	Jumlah Rumah Sakit	
	98 RS	
	n	%
<b>Kelas RS</b>		
Kelas B	17	17%
Kelas C	69	70%
Kelas D	12	12%
<b>Jumlah</b>	<b>98</b>	<b>100%</b>
<b>Kepemilikan</b>		
Pemerintah	18	18%
Swasta	80	82%
<b>Jumlah</b>	<b>98</b>	<b>100%</b>

**Tabel 25. Seleksi Bivariat**

No	Variabel	Rawat Jalan		Rawat Inap	
		<i>p-value</i>	Kesimpulan	<i>p-value</i>	Kesimpulan
1	Kelas RS	0,01	Kandidat	0,00	Kandidat
2	Kepemilikan RS	0,02	Kandidat	0,15	Kandidat
3	Wilayah Kabupaten / Kota RS	0,99	Bukan Kandidat	0,82	Bukan Kandidat
4	Proporsi Kunjungan pasien Laki-laki di RS	0,28	Bukan Kandidat	0,44	Bukan Kandidat
5	Proporsi Kunjungan Pasien Perempuan di RS	0,28	Bukan Kandidat	0,11	Kandidat
6	Proporsi kunjungan Pasien anak - anak di RS	0,06	Kandidat	0,22	Kandidat
7	Proporsi kunjungan Pasien dewasa di RS	0,21	Kandidat	0,13	Kandidat
8	Proporsi kunjungan Pasien lanjut usia di RS	0,01	Kandidat	0,00	Kandidat
9	Proporsi kunjungan Pasien Non PBI di RS	0,10	Kandidat	0,03	Kandidat
10	Proporsi kunjungan Pasien PBI di RS	0,10	Kandidat	0,03	Kandidat
11	Proporsi kunjungan Pasien Hak perawatan Kelas Satu	0,03	Kandidat	0,01	Kandidat
12	Proporsi kunjungan Pasien Hak perawatan Kelas Kelas dua	0,79	Bukan Kandidat	0,66	Bukan Kandidat
13	Proporsi kunjungan Pasien Hak perawatan Kelas Kelas tiga	0,05	Kandidat	0,07	Kandidat



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## ETHICS COMMITTEE APPROVAL

Ref. No. : KE/FK/1487/EC/2024

Title of the Research Protocol : Analisis *Case Mix Index* FKRTL Kerja Sama BPJS Kesehatan di Provinsi Banten Tahun 2019 – 2022

Document(s) Approved and version : Study Protocol version 02 2024

Principle Investigator : Yuli Prihastutik

Participating Investigator : Dr. drg. Julita Hendartini, M.Kes., AAK.

Date of Approval : **24 SEP 2024**  
(Valid for one year beginning from the date of approval)

Institution(s)/place(s) of research : Kota Tangerang, Kabupaten Tangerang, Kota Tangerang Selatan, Kota Serang, Kabupaten Serang, Kota Cilegon, Kabupaten Pandeglang dan Kabupaten Lebak, Provinsi Banten

The Medical and Health Research Ethics Committee (MHREC) states that the document above meets the ethical principle outlined in the International and National Guidelines on ethical standards and procedures for researches with human beings.

The Medical and Health Research Ethics Committee (MHREC) has the right to monitor the research activities at any time.

The investigator(s) is/are obliged to submit:

- Progress report as a continuing review (state its due time)
- Report of any serious adverse events (SAE)
- Final report upon the completion of the study

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