An Analysis of Indonesian Hospitals Casemix and Index in 2017-2019

Anni Yulianti[1], Endang Indriasih[2], Tati Suryati[3], Riris Dian Hardiani[4], Clement Drew[5]

*[1,2,3] **National Research and Innovation Agency***
*[4] **Ministry of Health***
*[5] **University of Tarumanegara***

anniyulithaufik@gmail.com; endang.indriasih@brin.go.id; tati.suryati@brin.go.id; ririsdian@yahoo.com; clementdrew10@gmail.com

Correspondence: Anni Yulianti
Email : anniyulithaufik@gmail.com

Abstract

Background: This assessment aims to analyze service performance and hospital efficiency by comparing Case Mix (CM) and Case Mix Index (CMI), of Health Social Security Agency (BPJS-Kesehatan) claims data for 2017 – 2019. There are almost 2000 provider general hospitals with various types from throughout all of 5 regions in Indonesia.

Results: The major findings shows the value of outpatient CM is increasing in almost all hospitals as well as for inpatient care, although there are variations in several regions. Most of the outpatient CM was found continuously increasing each year and observed highest in type C hospitals except for regions 1 in which type B hospitals showed the highest CM value. As CMI is heavily influenced by hospital's capacity, type A hospitals had the highest CMI than type B, C and D hospitals. Most of outpatient CMI increased, except for type D hospital in regions 1, 2 and 3. The inpatient CMI for class A hospitals in 2017 and 2018 were the highest than type B, C and D hospitals, nevertheless type B hospitals had highest CMI in 2019. In 2019 CMI tends to decrease in all class A hospitals. Based on the findings, many hospitals need to improve their service performance quality due to efficiency and reflect inadequate resources used.

Conclusion: CM and CMI is a reflection of the type of care a patient receives, the complexity of their cases and cost of care. Hospitals need to regularly monitor these indicators and unfortunately this has never been done in many hospitals. In the future, hospitals need conducting analysis to optimize their capacity as type B Referral Hospitals and make service cost efficiency both for inpatient and outpatient.

Keywords: *INA-CBGs, Case Mix, Case Mix Index,*

Biographies

Anni Yulianti is a researcher at the National Research and Innovation Agency. Previously Anni worked in National Institute of Health Research and Development, Ministry of Health Indonesia from 2000 - February 2022. She studied at Indonesia University and got her Magister of Public Health in 2005. Her main research interests are in health services, health financing and social health insurance.

Endang Indriasih is currently a researcher at the National Research and Innovation Agency. Previously she worked in National Institute of Health Research and Development, Ministry of Health Indonesia from 2000 - February 2022. She received a Doctor in public health in 2018 at the Indonesia University. Her main research interests are in, health Services, health information system, coding cause of death.

Tati Suryati, Graduated as a Public Health Doctor at the University of Indonesia in 2013. Worked as a senior researcher at NIHRD MoH Indonesia from 1997-2021, with expertise in health policy and health services. She has experience as a regional coordinator for the Indonesia Mortality Sample Registration Project (IMRSSP) research team in 2007 and the Sample Registration System in 2012-2015, as well as expanding the area for death registration system activities to several districts/cities. Since March 2022 affiliated with the National Research and Innovation Agency Indonesia.

Riris Dian Hardiani is a senior staff at the Center for Health Financing and Decentralization, National Agency for Policy and Health Development, Ministry of Health, Republic of Indonesia. She studied at Indonesia University and got her Magister of Public Health in 2020. Her major expertise is hospital payment system, especially on DRG.

Clement Drew is a medical doctor and lecturer at Medical Faculty of Tarumanegara University, Jakarta. He studied at Indonesia University and got her Magister of Epidemiology in 2021. His major expertise is Epidemiology and Biostatistics.