

**Analisis Peramalan Kebutuhan Tempat Tidur Sebagai Upaya Efisiensi Mutu
Pelayanan RS Citra Husada Jember Tahun 2026–2035**

*(Analysis of Bed Demand Forecasting as a Measure to Improve the Quality and
Efficiency of Services at Citra Husada Hospital in Jember for 2026–2035)*

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ABSTRACT

Bed availability is a crucial factor in supporting hospital inpatient services. Inaccurate planning regarding bed requirements can lead to inefficient bed utilization and compromise the quality of care. This study aims to forecast patient days, length of stay, numbers of discharged (surviving and deceased) patients, ideal bed requirements, and bed utilization efficiency, as well as to formulate recommendations for bed relocation and expansion at Citra Husada Jember Hospital for the 2026–2035 period. This quantitative descriptive study utilized secondary data from 2016 to 2025, covering patient days, length of stay, discharge numbers (surviving and deceased), and bed capacities across VVIP, VIP, Class I, Class II, Class III, ICU, Isolation, and Perinatology units. Forecasting was conducted using the Double Exponential Smoothing method. Bed requirements were calculated based on Bed Occupancy Rate (BOR) targets of 75% and 85% and Turn-Over Interval (TOI) targets of 1–3 days, followed by evaluation using the Barber–Johnson graph based on BOR, TOI, Average Length of Stay (ALOS), and Bed Turnover (BTO) parameters. The results indicate that the highest efficient bed requirements are in the Class III unit (75–143 beds), followed by Perinatology (21–40 beds) and ICU (9–18 beds). A BOR of 75% combined with a TOI of 1 day proved to be the most efficient approach for the majority of care classes. Recommendations include relocating 3 beds from VIP to Class I and 11 beds from Class II to Class III, alongside a phased increase in bed capacity—particularly in Class III, Perinatology, and ICU units. This capacity expansion must be supported by the development of inpatient facilities in accordance with Standard Inpatient Class (KRIS) regulations to meet service demands through 2035.

Keywords: *bed demand, Double Exponential Smoothing, Barber–Johnson, BOR, TOI.*