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Hospital burden and costs of migraine and other headache syndromes in Brazil from 2014 to 2025

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Introduction
Migraine and other headache syndromes are highly prevalent neurological disorders associated with disability, impaired quality of life, reduced productivity and socioeconomic burden. Although these conditions are often managed in outpatient settings, hospital admissions may reflect more severe cases, diagnostic uncertainty or complications requiring inpatient care. Evaluating hospital burden and costs may help characterize the impact of these disorders on the public health system.

Objective
To analyze hospitalizations, hospital costs and length of stay due to migraine and other headache syndromes in Brazil from 2014 to 2025.

Methods
This descriptive ecological study used secondary public data from DATASUS/TABNET, obtained from the Hospital Information System of the Brazilian Unified Health System. Hospital admissions registered in Brazil between 2014 and 2025, by place of hospitalization and year of processing, under the ICD-10 morbidity list category "migraine and other headache syndromes" were included. The analyzed indicators were number of hospitalizations, total hospital amount, mean amount per admission, total hospital days and mean length of stay. Monetary values were assessed in nominal Brazilian reais. Percentage variations between 2014 and 2025 were calculated.

Results
Between 2014 and 2025, 121,594 hospitalizations due to migraine and other headache syndromes were recorded in Brazil. The number of admissions increased from 7,717 in 2014 to 13,335 in 2025, corresponding to a 72.8% increase. A decline was observed in 2020 and 2021, with 8,778 and 8,505 admissions, respectively, followed by progressive recovery from 2022 onward, reaching the highest value of the series in 2025. The total hospital amount recorded during the period was BRL 59,956,091.42, increasing from BRL 2,524,213.38 in 2014 to BRL 7,625,318.57 in 2025, which represents a 202.1% nominal increase. The mean amount per admission was BRL 493.08, rising from BRL 327.10 in 2014 to BRL 571.83 in 2025, with the highest mean value observed in 2021 (BRL 617.39). Total hospital days reached 480,392 in the period, increasing from 29,614 days in 2014 to 53,183 days in 2025, corresponding to a 79.6% increase. Mean length of stay remained relatively stable, ranging from 3.7 to 4.2 days, with an overall mean of 4.0 days.

Conclusion
Hospitalizations due to migraine and other headache syndromes imposed a relevant burden on the Brazilian public hospital system between 2014 and 2025. The increase in total hospital amount was proportionally greater than the growth in admissions and hospital days, while mean length of stay remained stable. These findings suggest an increasing economic burden of headache-related hospitalizations and reinforce the need to improve outpatient management, early diagnosis and strategies to reduce avoidable hospital admissions.

Keywords:
Migraine disorders
Hospitalization
Headache disorders
Health care costs

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