▪ Headache Medicine 2026, Supplement ▪ p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

ID: 212

Hospital morbidity due to migraine and headache disorders in females from 2016 to 2025 in the Brazilian Unified Health System (SUS)

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Introduction
Migraine is a chronic, disabling neurological disorder. It disproportionately affects females and is linked to lifetime hormonal fluctuations. Most cases are managed in outpatient settings, but severe presentations may require urgent intervention and hospitalization. Analyzing the data of these admissions offers critical insights into the epidemiological profile of migraine among Brazilian women.

Objective
To examine patterns of hospital admissions for migraine and headache among Brazilian women from 2016 to 2025.

Methods
This descriptive, retrospective and quantitative study used data from DATASUS. The study population included women aged 10-59 hospitalized for migraine and headache (ICD-10: G43 and G44) in Brazil from 2016 to 2025. Variables analyzed were year, age groups (10-19,20-29,30-39,40-49,50-59),region, and race/color. Descriptive statistics, such as absolute and relative frequencies, annual means, and standard deviation (SD), were used to describe trends. To address regional population disparities, annual average admissions were expressed per 100,000 women in each macro-region, using official DATASUS population estimates as the denominator.

Results
From 2016 to 2025, 56,885 hospitalizations of females (μ=5.688,5±914,5 casos/ano) were reported. The highest clinical burden was among women aged 30-39 (23,8%; μ=1.357,4±221,7) and 20-29 (23,5%; μ=1.336,7±224,2). The 40-49 group accounted for 21.5%, while the 10-19 (15.5%) and 50-59 (15.6%) groups had lower proportions. Annual admissions increased to 6,304 in 2019, declined during the 2020-2021 pandemic (μ=4.507,5±160,5), and peaked at 7,345 in 2025. The Southeast (18,947) and Northeast (15,971) had the highest absolute numbers of hospitalizations. But after adjusting for population, the South macro-region had the highest clinical pressure (13.16 admissions per 100,000 women), followed by the Northeast (7.45), Central-West (6.13), Southeast (5.93), and North (5.92). Most hospitalizations involved Brown (Pardo) (43.6%) and White (39.5%) women. Black (3.3%) and Indigenous (0.1%) women were underrepresented. Race/color data were missing in 11.7% of records.

Conclusion
Female hospitalizations for migraine in Brazil result from both neuroendocrine changes and social factors. Admissions peaked during reproductive and working years due to estrogen fluctuations and psychosocial stress, then declined after menopause. The decrease during the pandemic may suggest patient absenteeism and bed reallocation, while the increase in 2025 could indicate post-pandemic stress, disrupted outpatient care, and medication overuse during isolation. Also, population-adjusted data showed that the South macro-region faced the greatest clinical pressure per capita, which may reflect the impact of climatic factors and greater healthcare access. At last, the racial breakdown revealed the invisibility of Black and Indigenous women, besides barriers to care and underreporting within the SUS.

Keywords:
Migraine disorders
Hospitalization
Women's health
Descriptive epidemiology

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