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

Headache Medicine

ID: 432

Hospitalizations and cost due to primary headache according to sex and age group in northeastern Brazil: an ecological study (2015-2024)

Guilherme Felício Matos, Expedito Ronald Silva Lapa, Gustavo Henrique Silva Matta, Diogo Costa Garção

Federal University of Sergipe, Aracaju, Sergipe, Brazil

Guilherme Felício Matos
guilherme.ufs2024@gmail.com

Introduction
Primary headaches, especially migraine, are leading causes of disability with significant gender disparity, suggesting hormonal influence during female reproductive years. These conditions impose a high economic burden, making systematic monitoring within the SUS vital for healthcare planning and efficient resource allocation in Northeastern Brazil.

Objective
To analyze the epidemiological profile and economic impact of hospitalizations for primary headaches according to sex and age group in Northeastern Brazil between 2015 and 2024.

Methods
This is an epidemiological, retrospective, descriptive, and ecological study, based on secondary data extracted from the Hospital Information System of the Unified Health System (SIH/SUS) via the DATASUS/TABNET platform. The selection was based on the "ICD-10 Morbidity List" category, "Migraine and other headache syndromes" group, in the Northeast (2015-2024). Hospitalization frequencies, total costs, and mean costs per hospitalization were analyzed. To investigate hormonal influence, age groups were categorized into biological cycles: pre-menacme (0–14 years), menacme (15–49 years), and post-menopause (≥50 years). Statistical analysis was performed using R Software, considering $p < 0.05$.

Results
The Northeast registered 29,611 hospitalizations for primary headaches between 2015 and 2024, of which 63.96% occurred in women, with a peak occurrence in the 35–39 age group (2,803 cases). The gender disparity (female-to-male ratio > 2.0) was particularly marked between 20 and 39 years of age, reaching a peak of 2.47 in the 20–24 age group, whereas male predominance was restricted to childhood, with a ratio of 0.88 among individuals aged 1–9 years. Hormonal influence was confirmed by the statistically significant association between sex and life stages (χ^2=379.46; p<0.0001), demonstrating a higher concentration of women during the reproductive period. Of the total hospitalization cost of R$ 18,218,191.59, 59.49% was attributable to female patients. However, the average cost per hospitalization was 20.8% higher among men (R$ 691.55) than among women (R$ 572.24). Additionally, the postmenopausal group (≥ 50 years) presented the highest mean hospitalization cost (R$ 855.03), indicating that, despite the lower number of cases in this life stage, there is greater complexity in clinical management and potentially greater severity of the conditions presented.

Conclusion
Hospitalizations for headaches in the Northeast are influenced by hormonal and age factors, with greater female vulnerability during the menacme. In the economic sphere, although women concentrate the total financial volume, men and the elderly (post-menopause) generate the highest mean costs per hospitalization. These findings reinforce the need for targeted outpatient management strategies to optimize SUS resources and reduce the impact of high-cost hospitalizations.

Keywords:
Hospitalization
Brazil
Hospital costs
Primary headaches
Hormonal Influence

© Copyright 2025