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# Hospitalizations for migraine and cephalic algic syndromes in the SUS in Sergipe (2015–2025): analysis of the epidemiological profile by sex, age group and temporal tendency

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**Introduction**
Migraine and other cephalic pain syndromes are highly prevalent conditions worldwide and represent a significant burden for healthcare systems, patients, beeing one of the most disabling neurological conditions globally, and imposing substantial economic burden through, particularly, working-age adults. In Brazil, the SUS serves as the primary source of care for most of the population, yet epidemiological studies on headache disorders remain concentrated in southeastern centers, leaving northeastern states significantly underrepresented. Sergipe, the smallest Brazilian state, faces structural vulnerabilities including limited access to specialized neurology services, making regional hospitalization data essential for evidence-based health planning.

**Objective**
To analyze the epidemiological profile and temporal trends of hospital admissions for migraine and cephalic pain syndromes in Sergipe between 2015 and 2025, with emphasis on sex, age group and length of stay.

**Methods**
Retrospective ecological study using secondary data from SIH/SUS for Sergipe, 2015–2025. Variables included year of admission, sex, age group, length of stay and mortality. Statistical analyses: simple linear regression for temporal trend; chi-square test for sex distribution; Mann-Whitney U test comparing length of stay between the Economically Active Population (EAP, 20–59 years) and non-EAP groups. Significance level: $p<0.05$.

**Results**
A total of 471 hospitalizations were recorded. Linear regression identified a significant upward trend ($\beta=3.84$/year; $R^2=0.464$; $p=0.021$), with a 230.4% increase from 2015 (n=23) to 2025 (n=76). Female sex predominated (66.7%; F:M=2:1; $\chi^2=52.33$; $p<0.001$). The EAP accounted for 63.9% of admissions, with mean stay of 9.30 vs. 8.1 days overall. Length of stay peaked at 40–49 years (11.2 days), following an inverted-U pattern across age groups. EAP patients had significantly longer hospitalizations than non-EAP (median 9.4 vs. 6.2 days; U=51,170; $p<0.001$).

**Conclusion**
Migraine-related hospitalizations in Sergipe showed a significant upward trend over the decade, disproportionately affecting women and the economically active population. The female predominance reflects well-established hormonal and neurobiological mechanisms. The concentration in the EAP, combined with longer stays in this group, suggests relevant indirect economic impact through workforce absenteeism — particularly significant in a state with limited outpatient neurological care. The inverted-U pattern peaking at 40–49 years indicates that mid-life adults face the most complex presentations. These findings reinforce the need for targeted preventive strategies and expanded regional health policies for headache management in Sergipe.

**Keywords:**
Migraine
Hospitalization
Epidemiology
Unified Health System

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