Headache Medicine

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The hospital cost of headache admissions: efficiency of public spending

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Introduction
The sustainability of SUS depends on optimizing resources in low-complexity pathologies. Hospital admission for headache, when not supported by a secondary diagnosis, represents an inefficient use of the tertiary network. Although most attacks are manageable on an outpatient basis, referral to the hospital level generates high operational costs, including accommodation, intravenous supplies, and staff maintenance. Analyzing the disparity between the billed value of Hospital Admission Authorizations (AIH) and the length of stay is fundamental to understanding the efficiency of public spending and proposing adjustments in flow management that favor decentralized care.

Objective
To analyze the average cost of hospitalizations for headache or migraine (G43/G44) in SUS, measuring the correlation between the total billed cost, the length of hospital stay, and the efficiency in utilizing financial resources by Brazilian region during the period from 2019 to 2023.

Methods
An observational and retrospective epidemiological study based on SIH/DATASUS microdata. The sample (n = 51,306) was processed via RStudio to consolidate the nominal values spent on the AIHs and the average length of stay. Data were stratified by Brazilian macro-regions and hospital size. Linear regression analysis was applied to verify the impact of the length of stay on the final billed value for each hospitalization, seeking to identify bottlenecks in the allocation of public funds for the hospital management of pain syndromes.

Results
The total accumulated cost over the five-year period was BRL 23,450,780.00, with an average cost per hospitalization of BRL 457.00. It was identified that 65% of the total amount spent is directly linked to the length of hospital stay, with a positive correlation ($r = 0.68$; $p < 0.001$) between days of hospitalization and billed cost. The North and Northeast regions presented the highest average cost per day, despite recording lower hospitalization volumes than the Southeast. The analysis demonstrated that spending efficiency is inversely proportional to the stay: hospitalizations of less than 3 days concentrate most of the fixed costs, while stays over 5 days disproportionately increase variable spending on supplies and support.

Conclusion
The results show that the cost of hospitalizations for headache is severely impacted by prolonged stays. The current AIH billing model, which links fixed costs to bed time, perpetuates the inefficiency of public spending in conditions that should have a rapid resolution. Reducing the hospital stay through early discharge protocols and optimized outpatient management could generate significant annual savings for SUS. It is imperative that managers review the financial transfer policy, prioritizing rapid diagnostic efficiency and discouraging bed occupancy by conditions that do not require intensive hospital support.

Keywords:
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