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# Billing profile and standardization of clinical procedures in headache admissions in the Brazilian Public Health System

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**Introduction**
The decision to hospitalize a patient for primary headache aims to interrupt the refractory pain cycle. In the Brazilian Public Health System (SUS), each admission generates a Hospital Admission Authorization (AIH) that describes the billed procedures. Because these pathologies do not require high-technology interventions, bed occupancy typically comes down to maintaining venous access for polytherapy. Thus, mapping the effectively billed codes is essential to audit the true complexity of the service provided and understand what the public system finances when approving these admissions.

**Objective**
To identify and quantify the main clinical and diagnostic procedures billed in the admissions of patients with a primary diagnosis of headache and migraine (ICD-10 G43 and G44) within the SUS, in the period from 2019 to 2023.

**Methods**
This is an epidemiological, retrospective, descriptive, and national-based study, built exclusively from official microdata of the Hospital Information System (SIH/DATASUS). The patient cohort was extracted, consolidated, and analyzed in the RStudio environment using the microdatasus package, encompassing the 2019-2023 quinquennium. The sample considered all valid AIHs in the national territory under diagnoses G43 and G44. The primary dependent variable focused on the Performed Procedure column, which records the SIGTAP code of the main therapeutic act billed by the hospital.

**Results**
The database audit, composed of the definitive universe of 51,214 admissions in the quinquennium, demonstrated structural monotony in the therapeutic support offered by health units. There was an overwhelming and absolute predominance regarding the "Clinical Treatment of Migraine/Headache", which was present in 33,050 records (approximately 64.5% of the entire national sample). The subsequent most frequent procedures were concentrated on generic urgent clinical support and observational care, with scarce representation of advanced imaging exams or high-complexity interventions billed directly as the main procedure in the AIH. This profile evidences that hospitalization is purely based on keeping the patient resting under sequential infusion of fluid therapy, corticosteroids, antiemetics, and conventional intravenous analgesics.

**Conclusion**
The concentration of billing on a single basic procedure demonstrates that the hospital acts primarily as a hydration and analgesia hub. Prolonged hospitalization does not reflect the need for advanced technology, but rather the structural lack of outpatient support for pain control. This highlights a critical allocative inefficiency: the SUS finances the high operational costs of a complete AIH to offer a treatment that could be executed much more efficiently and less expensively in infusion centers, day hospitals, or in the Emergency Care Units (UPAs) themselves.

**Keywords:**
Resource allocation
Clinical coding
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