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Title: *Predictive Factors Leading to Prescribing of Butalbital-containing Medicines in the Emergency Department Setting of a Single-Site, Small Community Hospital.*

#### Abstract

Headache is a frequent presenting diagnosis for patients seeking care in the emergency department (ED). Optimal treatment of these patients in acute settings remains unclear. Recent data suggests exposure to butalbital-containing medicines (BCM) during acute migraine attacks may predisposes patients to worsening headaches. This study sought to describe variables associated with prescribing of BCM. Patients were retrospectively identified using ICD-10 codes for any type of headache presenting to the ED over a period of 18 months. Patients were stratified into two groups: those who received BCM and a random sample of those who did not receive BCM. Patient-related variables as well as headache and psychological diagnoses were compared. Of 126 patients analyzed, 106 were female and 20 were male. No significant difference ( $p = 0.329$ ) was found in prescribing of BCM based on gender. Physician assistants prescribed BCM at a significantly higher rate ( $p < 0.0001$ ) compared to other practitioners. Most common primary headache and psychological diagnoses were migraines and anxiety respectively. Patients  $\geq 18$  years old presenting to ED with a headache, most commonly presented with a migraine. Based off these findings, proper education is needed to ensure medication regimens are utilized through evidence-based guidelines or with proven efficacy.