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# Should anti-CGRP monoclonal antibodies always be the drug of first choice for migraine prophylaxis in Brazil? - a pharmacoeconomic study

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### Introduction

Efficacy (success of therapy under ideal conditions), efficiency (relationship between costs and results of a given intervention), and effectiveness (balance between efficacy and efficiency in clinical practice) are measures of evaluating health interventions. Thus, both in private practice and the public health system, knowledge of these pharmacoeconomic data should weigh in the choice of appropriate treatment. Migraine prophylaxis is included in this context, traditional medications (sodium valproate, topiramate, amitriptyline) can be obtained in the public health system, while galcanezumab (anti-GRP monoclonal antibody) is not routinely available.

### Objective

To compare the efficacy, efficiency, and effectiveness of Galcanezumab and traditional therapeutic alternatives (Sodium Valproate, Topiramate, and Amitriptyline).

### **Methods**

Efficacy data were obtained from the pertinent literature (PubMED) and cost values from the ABCFARMA magazine. For the analysis of economic impacts, the cost of living of an economically active adult individual in Brazil (IBGE) was considered.

#### Results

Efficacy: Galcanezumab has 50%; Topiramate: 31%; Amitriptyline: 40%; and Sodium Valproate: 35%. Efficiency: Galcanezumab 4%, Topiramate 103%, Sodium Valproate 77%, and Amitriptyline 200%. Finally, effectiveness was: Galcanezumab 27%, Topiramate 67%, Sodium Valproate 56%, and Amitriptyline 120%.

### Conclusion

Galcanezumab is the most efficacious; however, it is neither the most efficient nor the most effective. In a broader analysis, considering payers and patients' financial availability, it indicates that in real life, therapy based solely on efficacy may not be feasible. Therefore, anti-CGRP antibodies will not be the first-choice drugs in migraine prophylaxis under all circumstances.

