

Trends of Utilization of Antiepileptic Drugs Among Pregnant Women in Manitoba

A 20-year utilization study

Walid Shouman¹, Joseph Delaney¹, Alekhya Lavu¹, Sherif Eltonsy¹

1. College of Pharmacy, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada

INTRODUCTION

- Studies in Canada and around the world have shown an increase in the utilization of antiepileptic drugs (AEDs) in the general population.
- Both epilepsy and AEDs could affect healthy pregnancies and lead to adverse neonatal outcomes.

Objective

To examine the time-trends of utilization of AED therapies among pregnant women in Manitoba, Canada.

METHOD

- We conducted a population-based cohort study using administrative health databases at Manitoba Centre for Health Policy (MCHP).
- Pregnancies of women living in Manitoba between 1995 and 2018 were included.
- Utilization was identified by Anatomical Therapeutic Chemical codes.
- Four groups of pregnant women were created based on AED exposure and epilepsy diagnosis.
- A woman was considered to have epilepsy if she has 1 or more medical claims or 1 or more hospitalization for epilepsy during the 5 years prior to delivery.
- Utilization trends of AEDs were examined using linear regression.

RESULTS

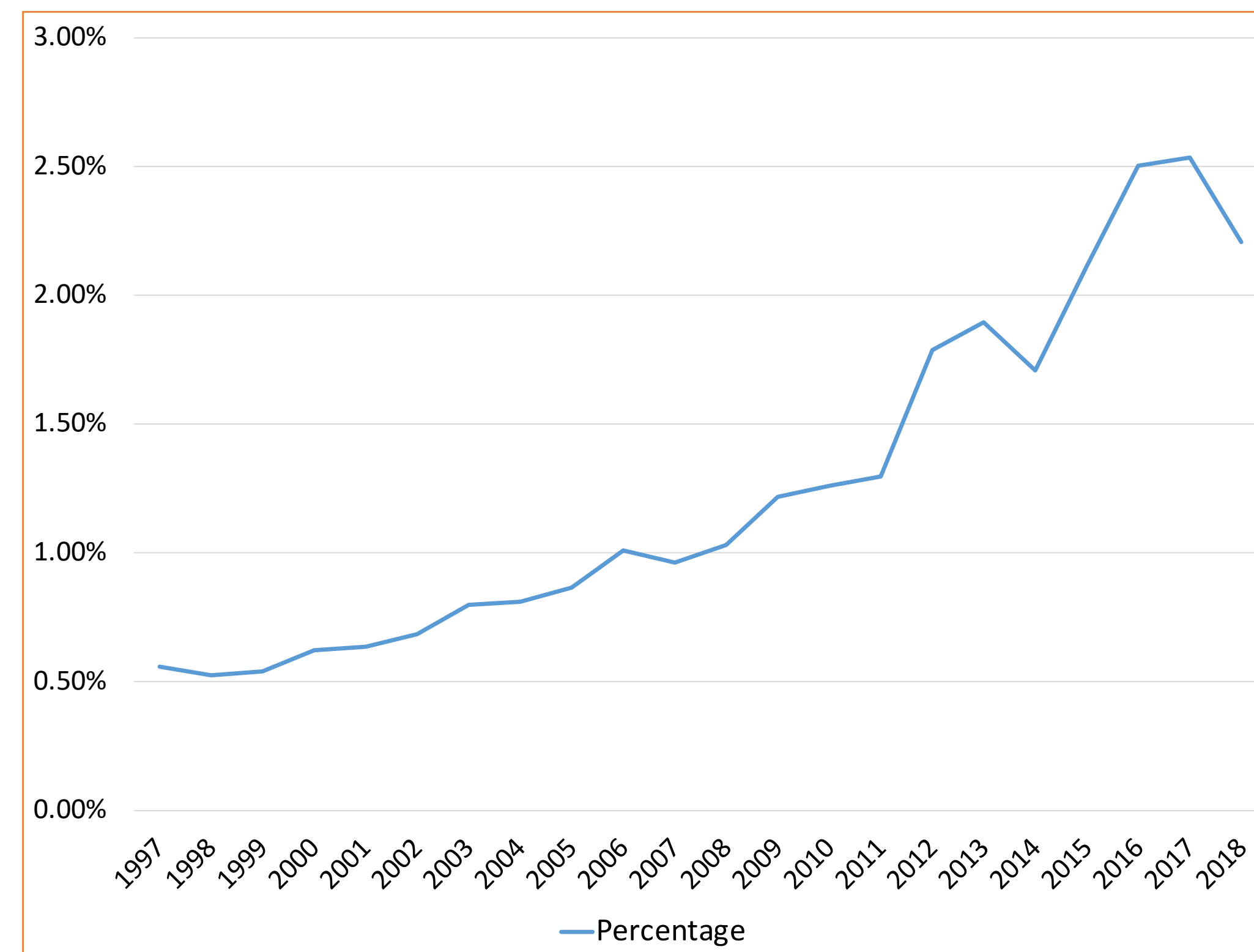


Figure 1: Annual percentage of women exposed to AEDs

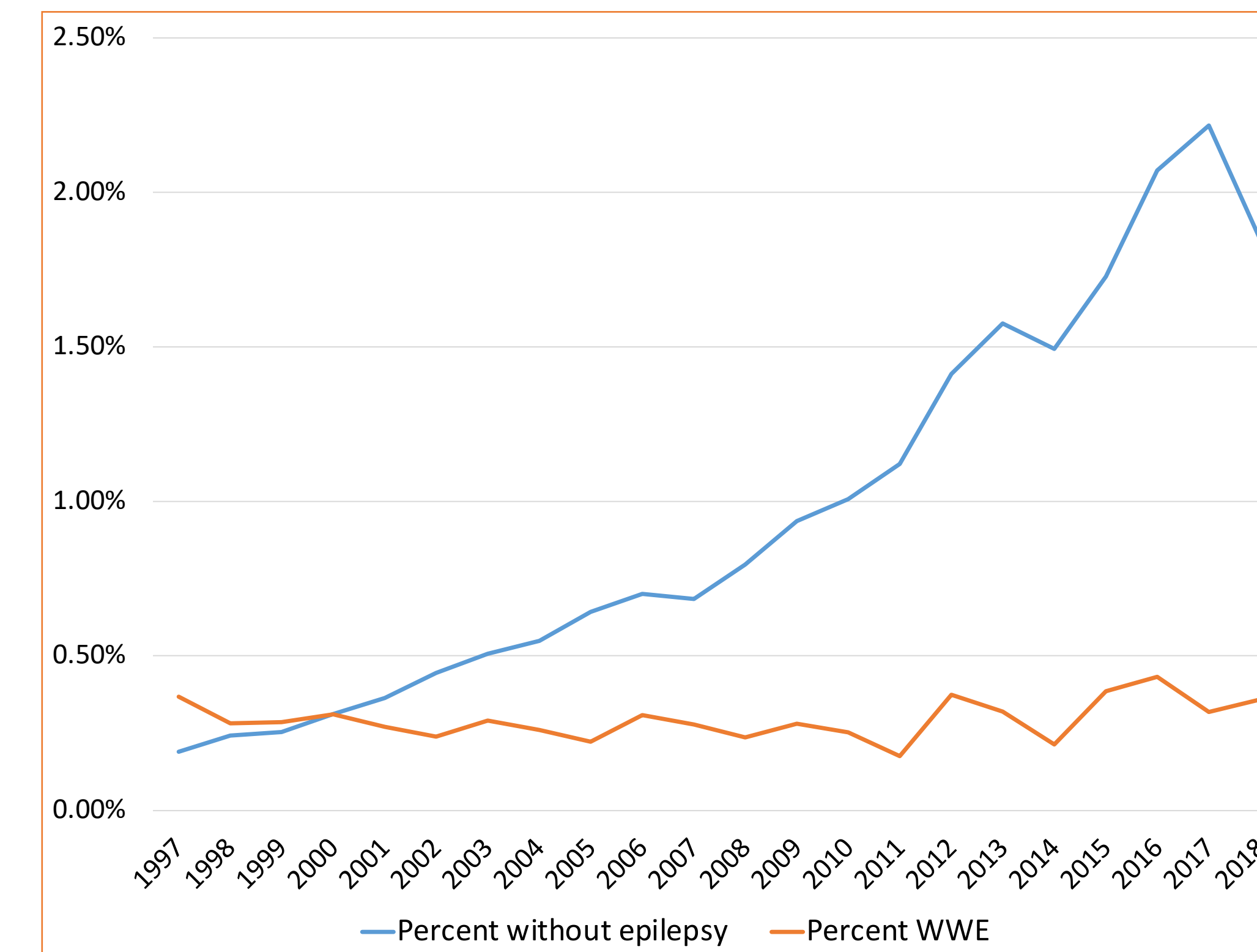


Figure 2: Annual percentage of women exposed to AEDs by epilepsy diagnosis

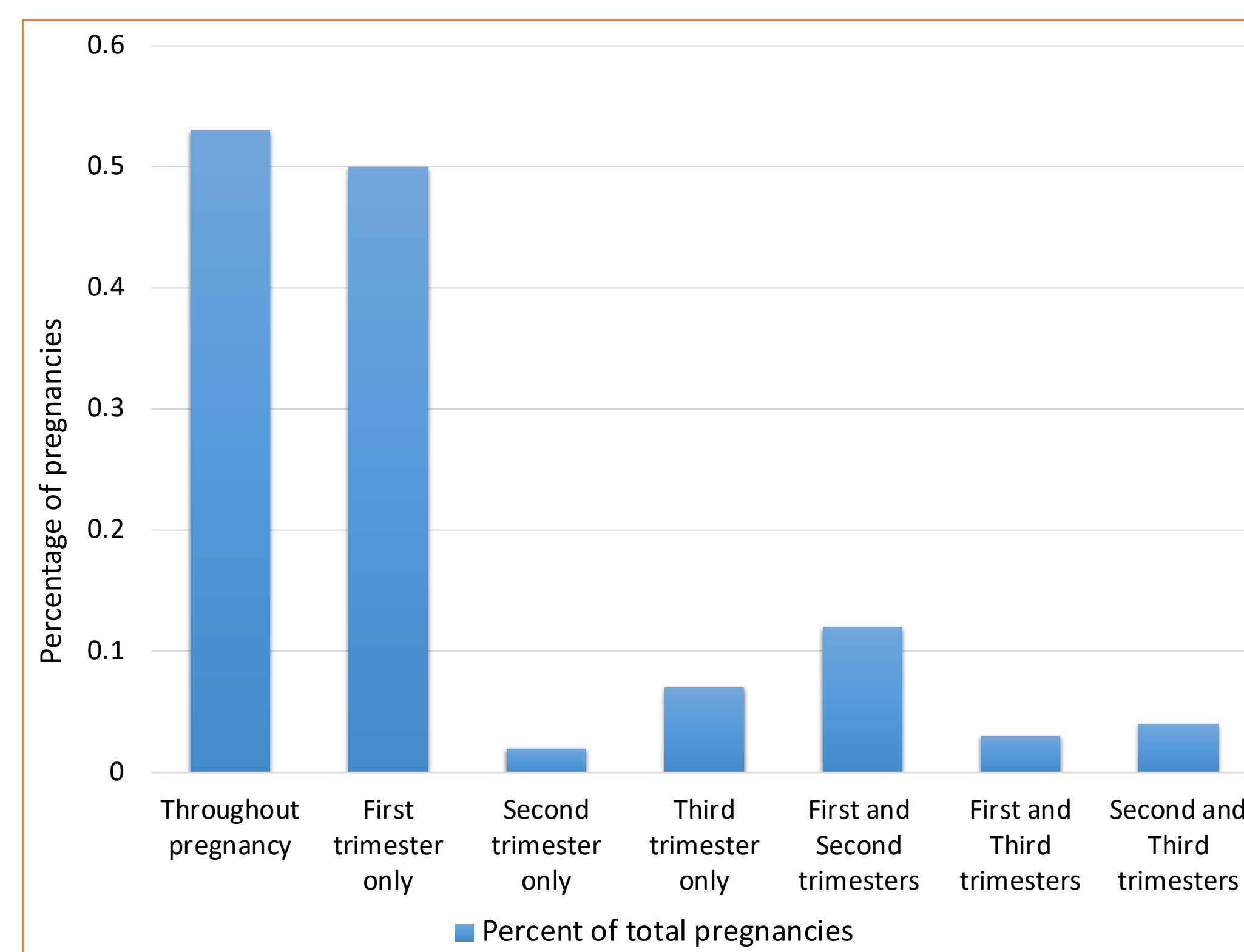


Figure 3: Exposure during trimesters

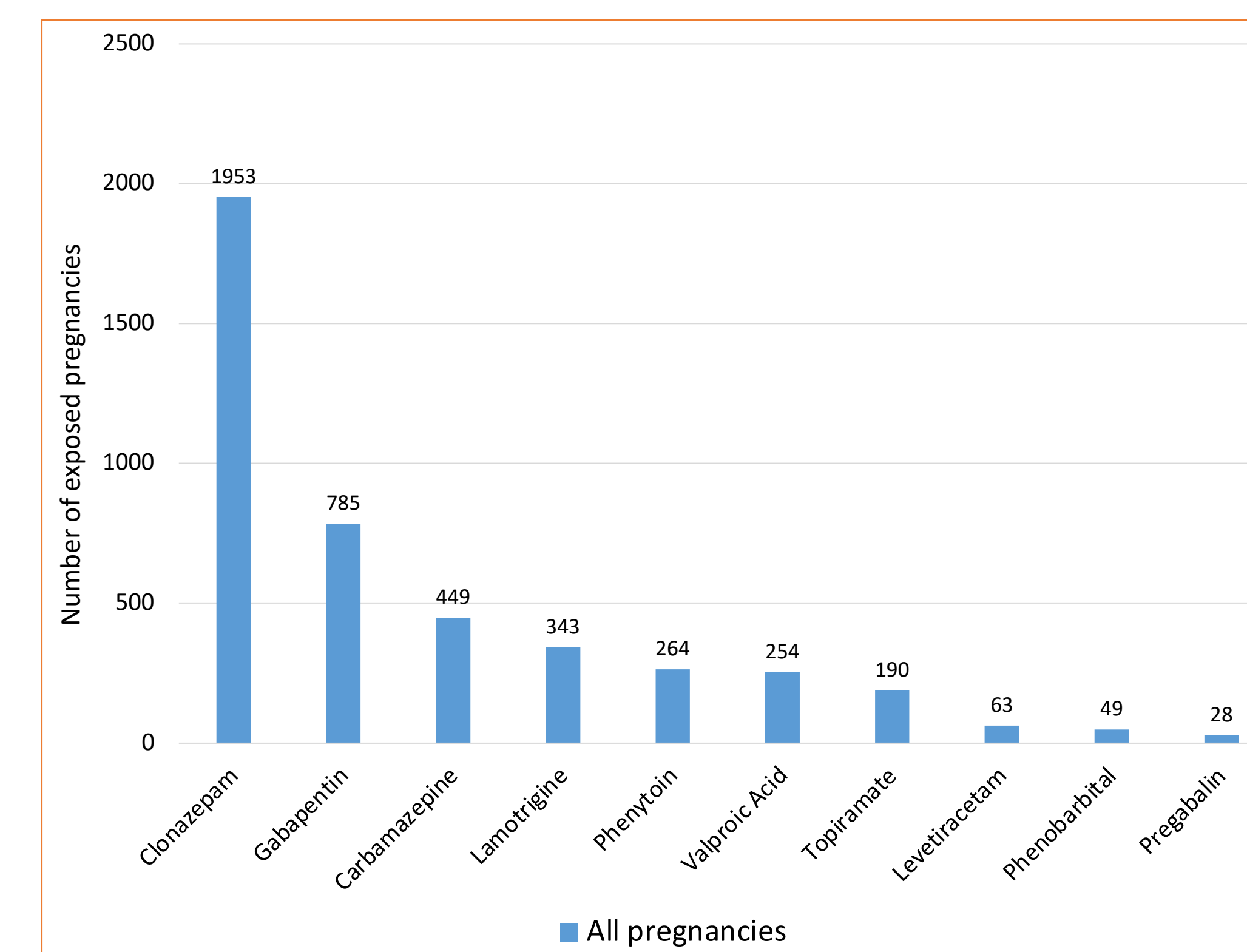


Figure 4: Top 10 most used AEDs in pregnancy

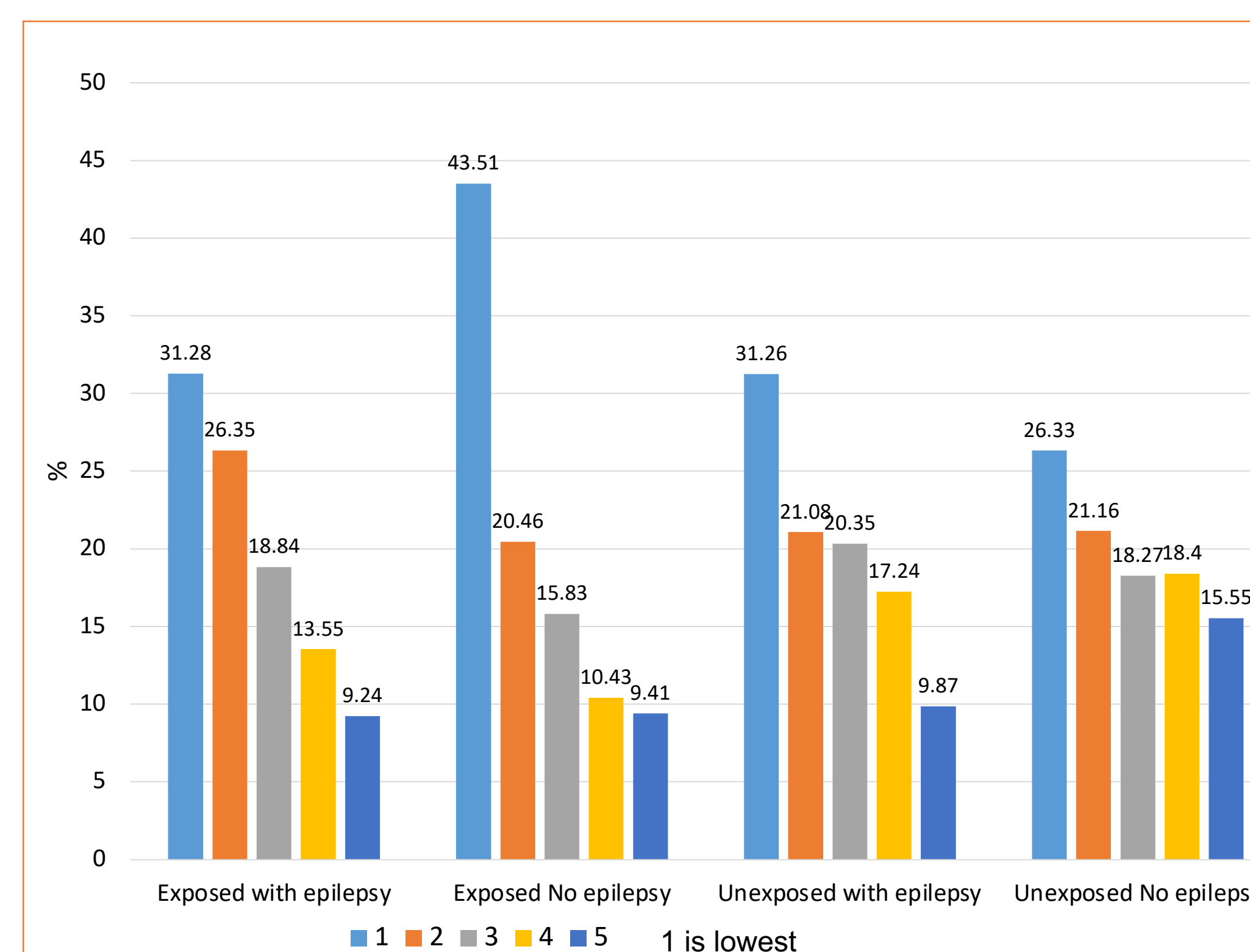


Figure 5: Socioeconomic statuses by group

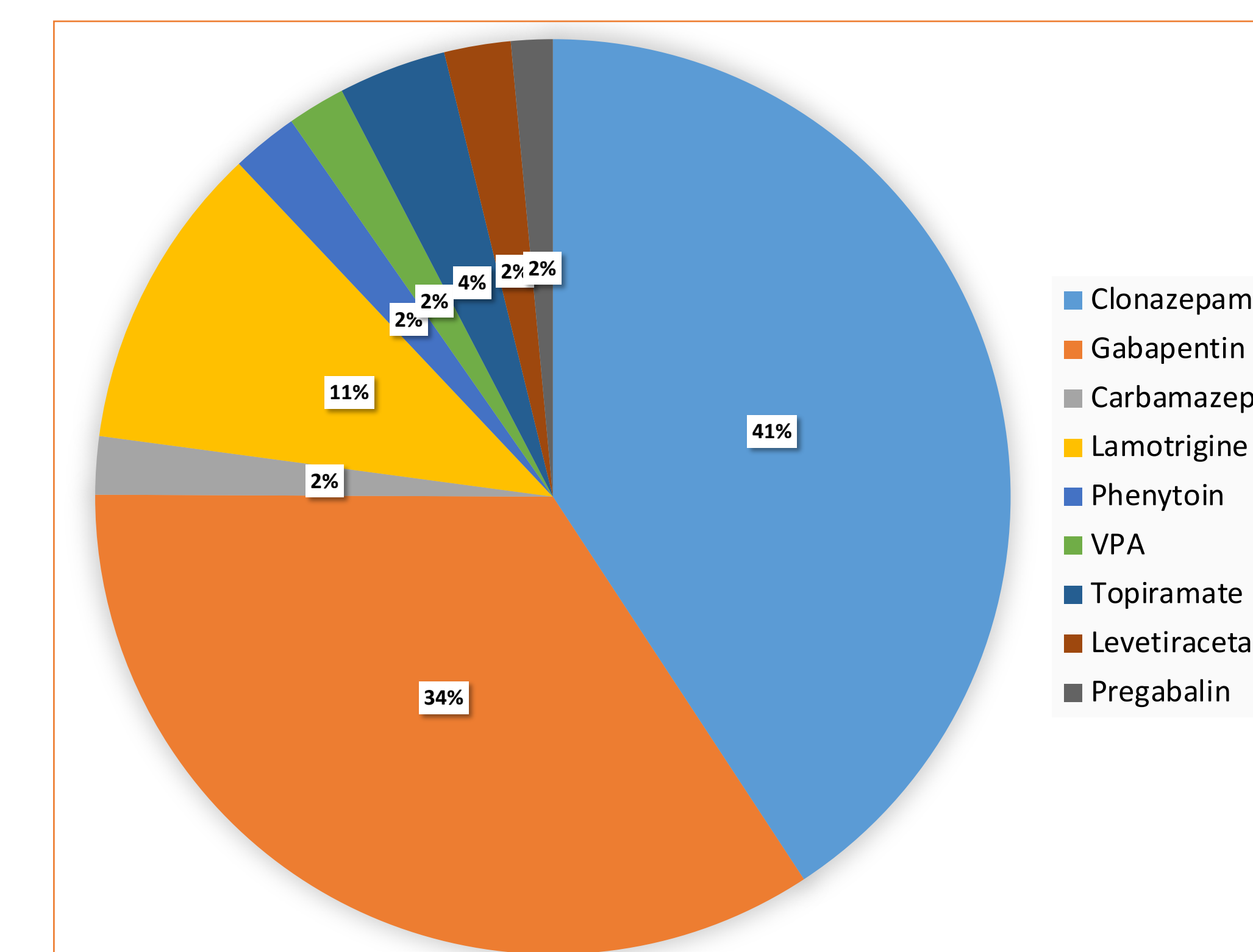


Figure 6: AEDs prescriptions in 2018

- Out of 273,492 pregnancies identified, 812 (0.3%) had epilepsy diagnosis and were exposed to AEDs, 963 (0.35%) had an epilepsy diagnosis and were unexposed, and 2742 (1%) were exposed to AEDs and did not have epilepsy diagnosis.
- The number of pregnancies exposed to AEDs increased from 0.56% in 1997 to 2.21% in 2018 ($\Delta\% = 1.66\%$; CI= -2.21,0.49).
- The percentage of pregnant women with epilepsy exposed to AEDs was 0.37% in 1997 and 0.36% in 2018 ($\Delta\% = -0.01\%$; CI= -0.11%, 0.2%).
- The percentage of pregnant woman without epilepsy exposed to AEDs increased from 0.19% in 1997 to 1.85% in 2018 ($\Delta\% = 1.66\%$; CI= -0.37, 0.34%).

CONCLUSION

- No major shifts in the use of AEDs were observed among women with epilepsy.
- Concerns about the increase use of AEDs driven by indications other than epilepsy require additional research on the safety of these agents and their indications to inform prescribers and policymakers.

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Contact

Walid Shouman

shoumanw@myumanitoba.ca

+1 (514) 349-5590



University
of Manitoba