



244 | 11 | 0
Views | CrossRef citations to date | Altmetric

Original Article

Projected economic impact of clinical findings of generic entry of topiramate on G4 European countries

Pierre Emmanuel Paradis, Dominick Latrémouille-Viau, Yuliya Moore, Natalia Mishagina, Marie-Hélène Lafeuille, Patrick Lefebvre, ...[show all](#)

Pages 1793-1805 | Accepted 15 May 2009, Published online: 05 Jun 2009

Cite this article <https://doi.org/10.1185/03007990903044374>

Sample our
Bioscience
Journals
>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

[Read this article](#)

Share

ABSTRACT

Objectives: To explore the effects of generic substitution of the antiepileptic drug (AED) topiramate (Topamax in Canada; to convert observed Canadian costs into the settings of France, Germany, Italy, and the United Kingdom (UK); and to forecast the economic impact of generic topiramate entry in these four European countries.

† Topamax is a registered trade name of Ortho-McNeil Neurologics, Inc., Titusville, NJ, USA

Research design and methods: Health claims from Régie de l'assurance maladie du Québec (RAMQ) plan (1/2006–9/2008) and IMS Health data (1998–2008) were used.

Patients with epilepsy and ≥ 2 topiramate dispensings were selected. An open-cohort design was used to classify observation into mutually-exclusive periods of branded versus generic use of topiramate. Canadian healthcare utilization and costs (2007 CAN\$/person-year) were compared between periods using multivariate models. Annualized per-patient costs (2007€ or 2007£/person-year) were converted using Canadian utilization rates, European prices and service-use ratios. Non-parametric bootstrap served to assess statistical significance of cost differences. Topiramate market was forecasted following generic entry (09/2009–09/2010) using autoregressive models based on the European experience. The economic impact of generic topiramate entry was estimated for each country.

Results: A total of 1164 patients (mean age: 39.8 years, 61.7% female) were observed for 2.6 years on average. After covariates adjustment, generic-use periods were associated with increased pharmacy dispensings (other AEDs: +0.95/person-year, non-AEDs: +12.28/person-year, $p < 0.001$), hospitalizations (+ 0.08/person-year, $p = 0.015$), and lengths of hospital stays (+0.51 days/person-year, $p < 0.001$). Adjusted costs, excluding topiramate, were CAN\$1060/person-year higher during generic use ($p = 0.005$). Converted per-patient costs excluding topiramate were significantly higher for generic relative to brand periods in all European countries (adjusted cost differences per person-year: €706–815, $p < 0.001$ for all comparisons). System-wide costs would increase from 3.5 to 24.4% one year after generic entry.

Limitations: Study limitations include the absence of indirect costs, possible claim inaccuracies, and IMS data limitations.

Conclusions: Higher health costs were projected for G4 European countries from the Canadian experience following the generic entry of topiramate.

Key words: :

Antiepileptic drugs Budget impact Cost conversion Generic substitution

Transparency

Declaration of funding

This analysis was sponsored by Janssen-Cilag EMEA, a division of Janssen Pharmaceutica NV.

Declaration of financial/other relationships

M.G. has disclosed that she is an employee of Janssen-Cilag EMEA. All other co-authors disclosed that they are employees of Analysis Group, Inc., which has received research grants to conduct this study from Janssen-Cilag EMEA.

All peer reviewers receive honoraria from CMRO for their review work. Peer reviewer 1 disclosed that he/she has received grant support from GlaxoSmithKline. Peer reviewer 2 disclosed that he/she has no relevant financial relationships.

Acknowledgment

Janssen-Cilag EMEA participated in the design, review, and approval of the manuscript. The authors disclosed no further assistance in preparation of this manuscript.

Notes

- † Topamax is a registered trade name of Ortho-McNeil Neurologics, Inc., Titusville, NJ, USA
- *Topamax is a registered trade name of Ortho-McNeil Neurologics, Inc., Titusville, NJ, USA

Related Research Data

[Topiramate](#)

Source: Drugs

[Estimation of Epileptic Foci Using the Dipole Tracing Method in Epileptic Seizures with Structural Lesions of the Brain](#)

Source: Journal of Epilepsy

[Off-patent drugs in Italy](#)

Source: The European Journal of Health Economics

[Moving Towards more Sustainable Healthcare Financing in Germany](#)

Source: Unknown Repository

[Economic impact of generic substitution of lamotrigine: projected costs in the US using findings in a Canadian setting](#)

Source: Current Medical Research and Opinion

[Are there potential problems with generic substitution of antiepileptic drugs?](#)

Source: Seizure

[Compulsory Generic Switching of Antiepileptic Drugs: High Switchback Rates to](#)

Related research

People also read

Recommended articles

Cited by
11

Information for

[Authors](#)

[R&D professionals](#)

[Editors](#)

[Librarians](#)

[Societies](#)

Opportunities

[Reprints and e-prints](#)

[Advertising solutions](#)

[Accelerated publication](#)

[Corporate access solutions](#)

Open access

[Overview](#)

[Open journals](#)

[Open Select](#)

[Dove Medical Press](#)

[F1000Research](#)

Help and information

[Help and contact](#)

[Newsroom](#)

[All journals](#)

[Books](#)

Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2026 Informa UK Limited [Privacy policy](#) [Cookies](#) [Terms & conditions](#)

[Accessibility](#)

 Taylor and Francis Group

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG