

01.03 - General practice and primary care

51970

Cost-effectiveness of integrated disease management for COPD in Ontario, Canada

COPD - management, Primary care, Health policy

A. Scarffe¹, A. Hussey², M. Ferrone², K. C. Jamieson³, A. P. Sayani³, R. W. Ormsby³, D. Payne⁴, N. M. Lederer⁵, M. A. Hamilton³, C. Licskai⁶

¹Bob Gaglardi School of Business and Economics, Thompson Rivers University - Kamloops (Canada), ²Asthma Research Group Windsor Essex County Inc. - London (Canada), ³Scientific Affairs, AstraZeneca Canada - Mississauga (Canada), ⁴Corporate Affairs, AstraZeneca Canada - Mississauga (Canada), ⁵BioPharmaceuticals Medical, AstraZeneca - Gaithersburg (USA), ⁶Shulich School of Medicine and Dentistry, Western University - London (Canada)

Introduction

COPD exacerbations are a source of considerable clinical and economic burden on patients and healthcare systems. Integrated disease management (IDM) in a primary care setting may be an effective strategy to mitigate burden by maximizing delivery of guideline-based care for COPD patients in Canada (Licskai et al., Thorax, 2024).

Aims and Objectives

To evaluate the cost-effectiveness and health-system impact of IDM for COPD patients in Ontario, Canada.

Methods

We conducted a probabilistic cost-utility analysis using a closed cohort, Markov model with 5,000 Monte Carlo simulations. The target population included all COPD patients in Ontario that were proportionately stratified by GOLD groups A to D with a starting age of 65. Usual care was parameterized according to population-based health administrative data from Ontario. IDM was parameterized according to an interrupted time series analysis of 2,451 patients from an established IDM program in Southwestern Ontario, Best Care (Licskai et al., Thorax, 2024).

Results

Over 5-, 10- and 25-year time horizons, IDM reduced annual primary care visits by 19.3%, 16.8% and 10.8%; COPD related ED visits by 41.1%, 35.4% and 23.3%; and COPD related hospitalizations by 44.8%, 38.6% and 25.5%. IDM dominated usual care leading to cost reductions of \$1,081, \$1,604, and \$925 CAD per patient over 5, 10 and 25 years. Among Ontario's 240,000 COPD patients 65+, this is anticipated to save 17,700 primary care visits, 5,808 COPD related ED visits, and 4,051 COPD related hospitalizations annually, and \$222M CAD overall, over a 25-year time horizon.

Conclusion

IDM is a dominant primary care model for COPD patients that reduces health-system burden in a Canadian setting.