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Title **Long-Acting ß2-agonists (LABA) Plus Corticosteroids Versus LABA Alone for Chronic Obstructive Pulmonary Disease**

Agency **CADTH, Canadian Agency for Drugs and Technologies in Health**
Suite 600, 865 Carling Ave, Ottawa, Ontario K1S 5S8, Canada;
Tel: +1 613 226 2553, Fax: +1 613 226 5392; publications@cadth.ca, www.cadth.ca

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Aim

To determine, using Canadian evidence, the cost effectiveness of inhaled long-acting ß2-agonists (LABA) combined with an inhaled corticosteroid (ICS), known as combined therapy (CT), versus administration of LABA alone as a first-line agent in chronic obstructive pulmonary disease (COPD); and to measure the global economic impact of introducing CT versus LABA in Canada.

Conclusions and results

Available evidence suggests that CT results in fewer overall exacerbations and improved quality of life measures compared with treatment by LABA alone. No evidence suggests that mortality differs with different strategies. The lifetime cost of using a LABA (discounted at 5%) is 9636 Canadian dollars (CAD) per COPD patient. Adding an ICS for the most severe patients (Strategy 2) results in an increase of CAD 93 per patient; Strategy 3 increases costs by CAD 321; and Strategy 4 increases costs by CAD 3120. Each strategy is associated with an additional increase of 0.01 quality-adjusted life-year (QALY) per patient. Those who are prepared to pay up to CAD 50 000 for a QALY may perceive Strategies 2 and 3 as cost effective.

Recommendations

Not applicable.

Methods

Three relevant randomized controlled trials were identified through a systematic literature review. Estimates of changes in exacerbation, serious adverse events, and mortality rates were then derived. Using a Markov model, the 3-year and lifetime cost effectiveness of combination therapy (CT) compared with LABA alone was estimated for 4 disease management strategies. With Strategy 1 (base case), all patients were treated with LABA. With Strategy 2, in addition to the base case, ICS was given to patients with stage-3 disease only. With Strategy 3, in addition to the base case, ICS was given to patients with stage-2 and stage-3 disease only. With Strategy 4, in addition to the base case, ICS was given to all patients. The calculated budget impact of switching patients from LABA to CT was based on Alberta utilization data.

Written by Mayers I, Jacobs P, Marciniuk DD, Chuck A, and Varney J, CADTH, Canada

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