INAHTA Briefs

Issue 2011/043

Title **Pulmonary Rehabilitation for Chronic Obstructive Pulmonary Disease: Clinical, Economic and Budget Impact Analysis**

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

Reference CADTH Technology Report, Issue 126, March 2010. ISBN: 978-1-926680-38-5 (print); ISBN: 978-1-926680-39-2 (online)

Aim

To evaluate the effect of pulmonary rehabilitation (PR) programs for chronic obstructive pulmonary disease (COPD) on clinical and economic outcomes, and to assess the health services impact.

Conclusions and results

Specifically, our objectives are: to compare the clinical effectiveness of PR and pharmacotherapy (together) with pharmacotherapy alone; to determine the effectiveness of elements of PR programs, eg, aerobic exercise, education, strength training, nutritional and psychosocial interventions; to determine the cost effectiveness of PR and pharmacotherapy compared to pharmacological therapy alone; and, to assess the health services impact of implementing PR for adults with COPD in Canada.

Pulmonary rehabilitation (PR) was associated with improvements in short-term health-related quality of life, mental health measures, and activity levels in patients with stable COPD, at an additional cost. PR was also associated with a reduced number of hospitalizations. Findings suggested that patients with COPD could benefit from the use of PR regardless of age, sex, or disease severity. Home-based PR programs provided similar benefits to hospital-based outpatient PR programs. The appropriate duration and content of PR programs is unclear.

Recommendations

Not applicable.

Methods

We conducted a systematic review of the clinical and economic literature to assess the effectiveness of pharmacotherapy (usual care) and pharmacotherapy plus PR. We also performed a cost-effectiveness analysis using a health system perspective and estimated the budget impact of additional services. PR consisted of 3 sessions per week at 2.5 hours per session over 6 weeks. COPD prevalence data were used to estimate the number of patients to receive PR, and the budget impact of additional services was estimated by multiplying the unit cost of PR by the number of additional persons served per year.

Further research/reviews required

Factors that contribute to successful long-term management of COPD with PR (maintenance, program structure, content, and location) require further investigation.

Written by Hailey D, Jacobs P, Stickland M, Chuck A, Marciniuk DD, Mayers I, and Mierzwinsky-Urban M, CADTH, Canada