



COPD: The Case for Building the Capacity of Pulmonary Rehabilitation

Prepared by Alberta Breathes, July 2011

Alberta Breathes is a coalition of agencies and over 500 individuals working to improve lung health and decrease the burden of respiratory disease in Alberta. We have prepared a series of briefing papers to solicit input from members, and to inform and engage stakeholders on prioritized areas for immediate action. These papers support a vision for a provincially coordinated system of care to optimize respiratory health. For more information, regarding Alberta Breathes please visit: www.albertabreathes.ca

Summary of Issue:

Chronic Obstructive Pulmonary Disease (COPD), a systemic chronic lung disease, is the third leading cause of death across Canada and the only major cause of death that is on the rise. It is under-diagnosed and is often not well managed, in spite of practice guidelines and proven strategies. COPD places a significant strain on the health care system from repeated emergency department with resulting hospitalizations and the longest length of stays among major chronic illnesses. COPD costs Albertans roughly \$1.25 billion per year in health care and lost productivity. Actions to better manage COPD would contribute significantly to improving Albertans' health and reducing the burden on acute services.

Recommended Actions:

Advocate for a discharge process of follow-up that includes Pulmonary (COPD-specific) Rehabilitation within 8 weeks of an exacerbation (COPD flare-up or lung attack)¹, which includes resistance (weight) and aerobic exercise, along with smoking cessation counseling, and is no less than 6 to 8 weeks in duration. Supportive actions include:

- Expand Alberta's capacity to provide Pulmonary Rehabilitation for COPD patients, including the use of Telehealth to allow access in rural and remote areas of Alberta.

- Promote a standardized provincial policy to guide the format of Pulmonary Rehabilitation in new sites and to help ensure the best outcomes for all sites.

Return on Investment:

- In Alberta, COPD exacerbations (flare-ups or lung attacks) are the number one cause for hospitalizations with the longest length of stays, as compared to other major chronic diseases. The average length of stay for COPD in Canada was 11 days, costing an average of \$10,018².
- Pulmonary Rehabilitation that includes COPD-specific self-management support has significantly improved shortness of breath, exercise tolerance, and health-related quality of life, while reducing hospitalizations and length of hospital stays^{1;3-6}.
- Pulmonary Rehabilitation provided shortly after discharge due to COPD exacerbation significantly reduces COPD related re-admission⁷.
- It can be estimated that the per person cost of Pulmonary Rehabilitation would be \$27 more than usual care⁸, and that it is estimated for every dollar invested there would be an overall savings of \$1.70.

Context:

- COPD is treatable at any stage of the disease and optimal management is varied according to its stage and severity⁹.
- Pulmonary Rehabilitation is equally beneficial to individuals with moderate or severe COPD and for both males and females, and has been shown to be more effective at improving the health of COPD patients than standard medications¹⁰.
- The number of women dying from COPD increased by 112% in the last 25 years¹¹. Women with COPD are more frequently hospitalized at an earlier age than men and they suffer from more severe shortness of breath than men¹².

Definitions:

- **Chronic Obstructive Pulmonary Disease (COPD):** refers to a systemic lung disease with several causes (most commonly smoking) that is life-threatening though it is treatable; COPD is the preferred term to include several diseases such as emphysema and chronic bronchitis.



- **Pulmonary (COPD-specific) Rehabilitation:** refers to a multidisciplinary intervention that is intended to restore the patient to the highest possible level of independent functioning; it includes a minimum of breathing and exercise techniques (ideally also smoking cessation counseling, nutrition, patient-specific education and support, and effective use of medications) and it is designed to reduce breathlessness and exacerbations.

Prevalence of COPD: In 2007, the Public Health Agency of Canada estimated that 7.2% of Canadians aged 55 and older had a diagnosis of COPD¹¹. Experts say this prevalence is an underestimation – and is perhaps double this – due to the common misdiagnosis, late diagnosis, and inconsistent coding of COPD.

Impact of COPD on Health and Quality of Life: COPD is strongly associated with severe depression¹³ and ischemic heart disease, and is known to exacerbate other chronic diseases.¹⁴

Rationale for Recommendation:

- Though Alberta does have some Pulmonary Rehabilitation in place, only 2% of our COPD population has access to these cost-effective programs; many of these programs are underfunded and therefore unable to service the burden. COPD education is offered in 35 sites across Alberta (not including private clinics and Pulmonary Function Labs); however, only 7 of these provide any form of rehabilitation.
- There are currently 130 Certified Respiratory Educators in Alberta (221 including those Certified only in Asthma Education), that account for 23% of all Certified Educators in Canada. Though largely untapped, this expertise is widely spread with approximately one third of Educators in the Calgary area, another third in the Edmonton area, and a third in rural Alberta.
- While these services and health care providers exist, funding for educational services is sporadic and many Certified Educators are unable to use their expertise fully due to a lack of funding and positions.
- Most of Alberta's Primary Care Networks do not

have COPD included in their business plans, despite it being the only chronic disease on the rise in Canada.

- At least 50% of direct costs of COPD are related to hospitalizations for exacerbations; re-admissions for subsequent exacerbations are high, often within 8 weeks of discharge.

Pulmonary Rehabilitation has been endorsed by informed and professional bodies:

Canadian Consensus Guidelines state:

- An urgent need exists to increase access to Pulmonary Rehabilitation programs.
- Where formal rehabilitation programs are not available, patients should be encouraged to undertake a home-based exercise program to prevent progressive muscle deconditioning.

Alberta Breathes' Standards state:

- *All Albertans with COPD should have local access to Pulmonary Rehabilitation (or comparable integrated disease management and risk reduction programs), when rehab is deemed appropriate for that patient according to the current Canadian Guidelines. Pulmonary Rehabilitation services should consider accessibility and the transport needs of individuals and caregivers. Individuals should have access to programs/services that are individually tailored to optimize physical, emotional, and social health.*
- *All Albertans with acute respiratory exacerbation should receive a timely assessment of control/severity and evidence-based management and follow-up according to guidelines.*

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