

The Canadian COPD Alliance  
L'Alliance canadienne sur la MPOC



## **How to Start a Pulmonary Rehabilitation Program**

### **FINAL REPORT**

**Prepared By Sherra Solway, Consultant**

**July 2, 2008**

## **1.0 Introduction**

Pulmonary rehabilitation is a multimodal, multidisciplinary approach to improving the functional status and quality of life of people with chronic lung disease. Endurance exercise training is the cornerstone of rehabilitation programs, but along with exercise comes increased understanding of the disease process, improved coping skills, and a focus on empowering the patient for self-management (ATS, 2008).

Pulmonary rehabilitation programs vary in their scope, duration, and whether they are conducted in an inpatient or outpatient setting. Many health care professionals, including physicians, nurses, dietitians, physical and occupational therapists and respiratory therapists may be involved with these programs. All programs generally include education and counseling, psychosocial support, exercise and nutritional guidance (BC Health Guide, 2008).

## **2.0 Project Purpose**

The purpose of this project is to develop the role of the Canadian COPD Alliance as *the source* for individuals developing a pulmonary rehabilitation program in Canada.

## **3.0 Available Resources**

A detailed literature and Internet search was conducted to identify available resources on how to start a pulmonary rehabilitation program. The following resources were identified:

*American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR)*

<http://www.aacvpr.org>

*American College of Chest Physicians (ACCP) /CHEST*

<http://www.chestnet.org/patients/guides/pulmonary/index.php>

*American Thoracic Society/European Respiratory Society Pulmonary Rehabilitation Guidelines*

<http://www.thoracic.org/sections/publications/statements/pages/respiratory-disease-adults/atserspr0606.html>

*Canadian Thoracic Society COPD Guidelines Web Site*

[http://www.copdguidelines.ca/home-accueil\\_e.php](http://www.copdguidelines.ca/home-accueil_e.php)

*Guidelines for Pulmonary Rehabilitation Programs. Third Edition.* Written by the American Association of American Association of Cardiovascular and Pulmonary

Rehabilitation (AACVPR), 2004. Human Kinetics Publishers, ISBN: 0736055738

*Lung Centers of America*  
<http://lungrehab.com/LungRehab.html>

*Pulmonary Education & Research Foundation (PERF)*  
<http://www.perf2ndwind.org>

*Pulmonary Rehabilitation: Guidelines to Success. Third Edition.* Written by Bartolome R Celli and Gerilynn L Connors, 2000. Lippincott Williams & Wilkins Publishers, ISBN: 0781719895

*Rehab in a Box* - a joint venture sponsored by the Saskatoon Health Region, Lung Association of Saskatchewan and the University of Saskatchewan and developed by Trent Litzenberger, Program Coordinator, and Vicki Kennedy, COPD Nurse Specialist, Saskatchewan Pulmonary Rehab Program. Note: project not yet completed; anticipated availability is September 2008. Interim materials are available (Optimizing Wellness in COPD: Practical Tips for Starting and Building a Pulmonary Rehabilitation Program. Powerpoint presentation and venue checklist developed by Trent Litzenberger)

*The Pulmonary Rehabilitation Toolkit* developed by The Australian Lung Foundation and the Australian Physiotherapy Association, © 2006, [www.pulmonaryrehab.com.au](http://www.pulmonaryrehab.com.au)

#### **4.0 Quality Indicators**

Quality indicators to evaluate the resources were developed based on those used by the American Thoracic Society for its "Best of Web" review (ATS, 2008). Indicators, criteria and rating scale are presented in Table 4.1 and overall rating descriptions are presented in Table 4.2 below.

**Table 4.1: Quality Indicators**

<b>Category</b>	<b>Criteria for Consideration</b>	<b>Rating Scale</b>
<b>Authority</b>	<ul style="list-style-type: none"> <li>- Clear identification of names of contributors and organizations</li> <li>- Contributors and organizations recognized as leaders and authorities</li> <li>- Contact information is available</li> <li>- Material is from experimental evidence Vs. individual opinions</li> <li>- Sources are documented</li> <li>- Bias or sponsorship</li> </ul>	<p><b><u>5 Point Scale</u></b></p> <p><b>5=Excellent</b>  <b>4=Good</b>  <b>3=Satisfactory</b>  <b>2=Poor</b>  <b>1=Serious Flaws</b></p>
<b>Currency</b>	<ul style="list-style-type: none"> <li>- All material is up-to-date</li> <li>- Resource is dated</li> <li>- Is timeliness important?</li> </ul>	

<b>Accuracy</b>	<ul style="list-style-type: none"> <li>- Content is evidence-based</li> <li>- Speculative areas are clearly identified</li> </ul>	
<b>Ease of Use &amp; Readability</b>	<ul style="list-style-type: none"> <li>- Easy to find information</li> <li>- Simple layout and aesthetically pleasing</li> <li>- Searchable</li> <li>- Understandable</li> </ul>	
<b>Utility</b>	<ul style="list-style-type: none"> <li>- Material free or membership required</li> <li>- Downloads are easy</li> <li>- Essential for a specific purpose</li> <li>- Contains information not readily available from other resources</li> <li>- Good teaching resource</li> <li>- Practical and clinically useful</li> </ul>	

Additionally, each resource was given an overall rating as outlined in Table 4.2 below

**Table 4.2: Overall Ratings**

Overall Rating	Description
□□□□□ <b>5 Star</b>	<ul style="list-style-type: none"> <li>- Outstanding, top resource</li> <li>- Provides essential information or material that may be difficult to obtain from other sources</li> <li>- Use of other resources may be unnecessary</li> <li>- Extremely useful for its purpose</li> </ul>
□□□□ <b>4 Star</b>	<ul style="list-style-type: none"> <li>- Excellent resource with much useful information</li> <li>- Worthy of reviewing</li> <li>- Most subcategory ratings good to excellent</li> <li>- Material is reliable, authoritative, current and useful</li> </ul>
□□□ <b>3 Star</b>	<ul style="list-style-type: none"> <li>- Valuable resource</li> <li>- Material is reliable, current and useful but may be difficult to use or rates lower on subcategories</li> <li>- May be a source for specific, limited information or have a specific niche</li> </ul>
□□ <b>2 Star</b>	<ul style="list-style-type: none"> <li>- May be useful but better resources are available</li> <li>- Restricted by cost or subscription</li> <li>- Low subcategory scores</li> <li>- Could have bias or minor potential for harm or inaccuracies</li> </ul>
□ <b>1 Star</b>	<ul style="list-style-type: none"> <li>- Hardly worth mentioning</li> <li>- Use with caution or don't use at all</li> <li>- Not evidence-based</li> <li>- Misinformation, potential for harm</li> </ul>
□ <b>½ Star</b>	

## 5.0 Review and Evaluation of Resources

Each resource was evaluated by two to three independent reviewers with experience and expertise in pulmonary rehabilitation. The following summaries reflect an equal weighting of each evaluation.

<b>American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR)</b> <a href="http://www.aacvpr.org">http://www.aacvpr.org</a>		
This review pertains primarily to the FREE components of the web site only. Membership is required for the remainder of the web site.		
<b>Authority</b>	4	Sponsored by the American Association of Cardiovascular and Pulmonary Rehabilitation, a professional society and worldwide leader in the area of cardiac and pulmonary rehabilitation. This web site has input from leading experts (physicians, nurses, respiratory therapists, exercise physiologists, occupational therapists, and vocational rehabilitation specialists) and investigators in the field. Contact information is readily available.  The site focuses on both cardiac and pulmonary rehabilitation but appears stronger in the cardiac areas. Additionally, while the site does refer the reader to a list of many vital scientific articles in the field of rehabilitation, certain sections (e.g. demonstrated outcomes) lack proper citation.
<b>Currency</b>	4	References are fairly recent and appear to be regularly updated. Some of the material on pulmonary rehabilitation (e.g. criteria for inclusion) is not current but the site does refer the reader to up-to-date landmark articles. Material on policy, reimbursement and certification appears well up-to-date. Copyright is identified as 2003 but there is no mention of last update.
<b>Accuracy</b>	4	The content that focuses on policy, reimbursement and program certification is accurate. The free components are evidence based but some key articles are not included.
<b>Ease of Use &amp; Readability</b>	4	Excellent navigation and a site map is available. Drop down menus are easily navigated and direct the user to a variety of general sections (education, legislative and regulatory, program certification, employment, resources and publications) and a members only section. The pulmonary rehabilitation section refers to some resources and references but membership is required to access many. Layout is simple and rather aesthetic and overall, the site is searchable and understandable.
<b>Utility</b>	4	This informative web site has a large amount of free material. Excellent information on education, legislative and reimbursement issues, program certification, and publications is available. Membership is \$185 and \$75 for students. In the member only section, the organization's bimonthly newsletter, newsletter for medical directors of pulmonary rehabilitation, the outcomes resource guide, and

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		legislative contact personnel directory are available. This is an essential and useful resource for pulmonary rehab program directors who require information on policy, reimbursement and certification in the United States.
<b>Overall Rating</b>	□□□□	Good resource to those who are providing pulmonary rehabilitation services. Educational information is available to all. Additional excellent resources are available to members.

<b>American College of Chest Physicians (ACCP) /CHEST</b> <a href="http://www.chestnet.org/patients/guides/pulmonary/index.php">http://www.chestnet.org/patients/guides/pulmonary/index.php</a>		
The ACCP is a professional society. The website includes information for members on pulmonary rehabilitation as well as educational resources in clinical medicine and in practice management		
<b>Authority</b>	4.5	Articles are scholarly and peer reviewed. The ACCP along with the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) updated their evidence-based pulmonary rehabilitation guideline in CHEST in 2007. While authors involved in this guideline are renowned, authors of the specific index are not specified.
<b>Currency</b>	4	Most documents on this website indicate the date of posting but there is no date specified for when the site as a whole was updated.
<b>Accuracy</b>	4.5	The description of pulmonary rehabilitation in the patient education section is accurate and detailed, yet understandable. The joint ACCP/AACVPR rehabilitation statement is excellent for its content and accuracy. In an era of evidence-based medicine, the evidence-based guidelines are important, especially with the likely financial burden of providing rehabilitation to a growing population of patients with COPD and other chronic respiratory ailments.
<b>Ease of Use &amp; Readability</b>	4	The combined ACCP/AACVPR guidelines document is a landmark article. To get to it, one has to go under the Education tab, select "Evidence-Based Guidelines", and from the list select "Current ACCP Guidelines". The approach to these articles is not very intuitive. In the search window, typing the term "pulmonary rehabilitation" does bring up the patient education section as well as the joint ACCP/AACVPR statement, along with a host of articles published under PCCU and other titles, where there is a mention of rehabilitation. The articles are not sorted by relevance.
<b>Utility</b>	4	Satisfactory but 'dry' resume about pulmonary rehabilitation programs. The joint statement from ACCP and AACVPR is one of the state of the art articles that is a must for all involved in pulmonary rehabilitation. The patient education section and the link to the joint ACCP/AACVPR statement are free. For other articles and network activities related to pulmonary rehabilitation, membership to the college is necessary.
<b>Overall Rating</b>	□□□□	This site may be worth bookmarking and returning to periodically.

<b>American Thoracic Society/European Respiratory Society Pulmonary Rehabilitation Guidelines</b> <a href="http://www.thoracic.org/sections/publications/statements/pages/respiratory-disease-adults/atserpr0606.html">http://www.thoracic.org/sections/publications/statements/pages/respiratory-disease-adults/atserpr0606.html</a>		
Two of the most respected organizations in the field of pulmonary medicine combined their resources to come up with this comprehensive guideline.		
<b>Authority</b>	5	Written by a committee of experts in the field of pulmonary rehabilitation and approved by the American Thoracic Society (ATS) Board of Directors and the European Respiratory Society (ERS) Executive Committee. Both organizations are respected international professional organizations and recognized leaders in this area.
<b>Currency</b>	4.5	Published in 2006.
<b>Accuracy</b>	5	Evidence based guideline backed by an exhaustive literature review and expert consensus/opinion.
<b>Ease of Use &amp; Readability</b>	4	Readable and broken down into easily readable segments based on the components of pulmonary rehabilitation. It is easy to navigate but it is not an interactive website and therefore not searchable; it is solely a pdf file.
<b>Utility</b>	4	Free access. It is a good and comprehensive review of the theory supporting pulmonary rehabilitation including a breakdown of the essential components and the evidence that supports effectiveness. This is a downloadable printable document. While both important and practical issues are addressed, the document lacks practical tips and specific information on the actual process needed to set up and run a pulmonary rehabilitation program.
<b>Overall Rating</b>	□□□□	When it comes to theory, this may be considered the most authoritative guideline on pulmonary rehabilitation to date. This guideline represents a vital source document for any pulmonary rehabilitation program.

<b>Canadian Thoracic Society COPD Guidelines Web Site</b> <a href="http://www.copdguidelines.ca/home-accueil_e.php">http://www.copdguidelines.ca/home-accueil_e.php</a>		
This web site is part of an ongoing initiative to raise awareness of the Canadian Thoracic Society COPD Guidelines and their key messages for the management of COPD.		
<b>Authority</b>	5	Developed by the Canadian Thoracic Society (CTS)
<b>Currency</b>	5	Regularly updated
<b>Accuracy</b>	5	Most recent available CTS evidence based guidelines available.
<b>Ease of Use &amp; Readability</b>	4	Easy to navigate and information is presented in a easy to use format. The web site is not interactive and therefore not searchable.
<b>Utility</b>	3.5	Free access. Documents are downloadable and printable. The CTS COPD Guidelines and web site provide practical guidance to family physicians, specialists, and other health care professionals involved in COPD management as well as patients with COPD and their families; however, specific information on how to start a pulmonary rehabilitation program is not included.
<b>Overall Rating</b>	□□□□	Good resource for the overall management of COPD

the American Association of American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), 2004. Human Kinetics Publishers, ISBN: 0736055738		
<b>Authority</b>	4	Developed by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR). There is no obvious source of bias or sponsorship. Authors are identified; many are well-known authorities and researchers in the area of pulmonary rehabilitation. Most statements are referenced; however, on many occasions, references pertain to position statements rather than individual studies. There are few unsubstantiated positions and assumptions; however, a reasonable portion of the text comprises recommendations based on 'clinical experience', rather than scientific evidence. As an example, the text provides a comprehensive list of patient conditions that should be referred to a pulmonary rehabilitation program, but does not mention that the effectiveness of pulmonary rehabilitation programs has only be convincingly demonstrated for patients with COPD.
<b>Currency</b>	3.5	Published in 2004. Material is relatively up-to-date but not comparable to current statements.
<b>Accuracy</b>	3	The majority of content is evidence-based; however, there are notable omissions in the content of some chapters. Examples include: (i) under patient education and skills training, there is no mention of Bourbeau's study or the use of action plans; and (ii) under measures for promoting maintenance, there is no mention that almost all published studies in this area have not been successful in maintaining the gains made following pulmonary rehabilitation for more than 12 – 24 months. Furthermore, there is no section dedicated to pulmonary rehabilitation during or immediately following an acute exacerbation, barriers to maintenance of gains or even an overview of the results of the meta-analysis with expected effect sizes in important outcomes. Perhaps more concerning is that not all speculation is clearly identified making statements that are not supported by the literature (e.g. "using proper breathing techniques is essential for strength and endurance training to improve functional capabilities"). There are many comments based solely in clinical opinion (e.g. psychosocial intervention usually requires ten hours of treatment within the program). Finally, there is bias ignoring important cardiovascular benefits of aerobic training with repeatedly inferred health benefits including improved morbidity. Albeit more difficult, these adaptations are possible in patients with COPD but not generally achieved in pulmonary rehabilitation.
<b>Ease of Use &amp; Readability</b>	3.5	Chapters and index make it easy to find information; however, authors are not identified on chapter title pages or table of contents. References are found at the end of the text, not at the end of each chapter. Information is presented in a user-friendly format for ease in applying the guidelines to patients. While the content is set out clearly in each chapter, there is some overlap between chapters that detracts from clarity. For example, the chapters on patient assessment and outcome measures could have been combined. The layout, format and organization are

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		understandable and the language is appropriate for the intended audience.
<b>Utility</b>	3.5	<p>The book can be purchased for \$50, which is relatively inexpensive. The text provides a scientific, practical, clinically useful framework to help practitioners understand the current requirements for accrediting pulmonary-based facilities; designing, implementing, or updating accredited pulmonary rehabilitation programs; and delivering optimal care to persons with symptomatic respiratory needs. This text addresses program issues in exercise, outcomes, and management and contains useful appendices including a comprehensive set of practical forms, guidelines, questionnaires, assessment tools examples of pulmonary rehabilitation programs, as well as a typical pulmonary rehabilitation facility.</p> <p>The material is not essential, nor does it contain information not readily available from other resources. Much of the detail in the text provides an overview of pulmonary rehabilitation, rather than specific “how do” advice. For example, the chapter on exercise assessment and training states that aerobic training of the lower limbs is essential, but does not provide a practical method for prescribing a training intensity. In the chapter on outcome assessment, it would have been useful to include a summary of the minimal clinically important difference for the most commonly applied measurement tools. Finally, some of the commentary reflects “American” practice patterns and issues surrounding pulmonary rehabilitation.</p>
<b>Overall Rating</b>	□□□□	<p>This book constitutes a useful resource those interested in developing and maintaining a pulmonary rehabilitation program. It provides a good appreciation and summary of the important components of a pulmonary rehabilitation program and program management procedures.</p> <p>This resource would be most useful for individuals with little or no knowledge of pulmonary rehabilitation programs as much of the information provided is somewhat basic.</p>

<b>Lung Centers of America</b> <a href="http://lungrehab.com/LungRehab.html">http://lungrehab.com/LungRehab.html</a>		
Lung Centers of America is a private company dedicated to the delivery of pulmonary rehabilitation services.		
<b>Authority</b>	1	Private for-profit company that self declares expertise and experience in setting up and operating pulmonary rehabilitation programs. Contact information (i.e. email and phone) is available for general information, sales and customer support; lacks clear identification of individuals involved. Not all sources are documented.
<b>Currency</b>	2	2007 references are cited but most references are dated. Unable to determine how regularly site is updated.
<b>Accuracy</b>	1	Cannot determine or verify if evidence-based; sources not documented. There is no clear description of the pulmonary rehabilitation program offered – only references and promises to help establish one.
<b>Ease of Use &amp; Readability</b>	2	Information is relatively easy to find but layout is not aesthetically pleasing. Web site is not interactive and therefore not searchable.
<b>Utility</b>	1	Provide 'kit' and consultation on starting up and operating pulmonary rehabilitation program including all initial exercise and therapeutic equipment, staff training and business development. This web site and service is specific to the American health care system. Some information could not be downloaded. This site is clearly commercial in nature and does not provide useful information or practical ideas.
<b>Overall Rating</b>	□	Private for-profit company and resource not appropriate or credible for the Canadian health care system. There is no original or useful information.

<b>Pulmonary Education &amp; Research Foundation (PERF)</b> <a href="http://www.perf2ndwind.org">http://www.perf2ndwind.org</a>		
The PERF website provides information to both clinicians and patients about current topics in chronic lung disease.		
<b>Authority</b>	3.5	Sponsored by the Pulmonary Education and Research Foundation, an American not-for-profit organization. The "About Us" section is well done and clearly identifies reputable and recognizable board members and contributors. Sponsorship is not clearly identified. Most of the material is evidence based with opinion pieces and news items clearly identified as such. Materials primarily for patient education.
<b>Currency</b>	3	Resources are dated over a range of dates; some of the linked scientific articles are more than five years old, but are good source material for chronic lung disease. New articles are identified as such.
<b>Accuracy</b>	3.5	Information provided for patient education appears accurate. While speculative areas are identified, difficult to differentiate evidence from author's personal point-of-view or to identify areas of controversy.
<b>Ease of Use &amp; Readability</b>	3.5	The web site is poorly laid out and somewhat difficult to navigate. While it is set up so that the reader can focus on areas of interest, the design and layout are pedestrian.

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		Language is generally easily understood by lay readers
<b>Utility</b>	3.5	Material is mostly free for download and requires Adobe Acrobat to view. A small fee (~\$20) is required for the mailed newsletter. Reasonable patient teaching source on pulmonary rehabilitation, COPD, weight training, and oxygen use. Some medication and device names given as American and generic trade names not always available in Canada.
<b>Overall Rating</b>	□□□□	Good resource for professionals who are particularly interested in patient education, pulmonary rehabilitation and chronic lung disease.

***Pulmonary Rehabilitation: Guidelines to Success. Third Edition.*** Written by Bartolome R Celli and Gerilynn L Connors, 2000. Lippincott Williams & Wilkins Publishers, ISBN: 0781719895.

**Note: Fourth Edition, written by [John E. Hodgkin](#), [Bartolome R. Celli](#) and [Gerilynn A. Connors](#) will be available September 2008. Mosby Publishing, ISBN: 0323045499.**

A resource manual for pulmonary rehabilitation providers practicing in a variety of settings. This text combines theory with resources for practice, addresses the need for team care of chronic obstructive pulmonary disease patients and demonstrates how to organise and manage an effective pulmonary rehabilitation program.

<b>Authority</b>		Expertise is drawn from 53 contributing authors who share their perspectives, experience, and data from both national and international pulmonary rehabilitation programs.
<b>Currency</b>		Published in 2000
<b>Accuracy</b>		Frequent citing of references to recent guidelines and consensus statements from groups such as the American Thoracic Society, American College of Chest Physicians, American Association of Cardiovascular and Pulmonary Rehabilitation, and the Agency for Health Care Policy and Research. Contributors have provided extensive review and analysis of the literature in support of evidence-based practices.
<b>Ease of Use &amp; Readability</b>		
<b>Utility</b>		Contains useful information on program design, management issues, marketing, patient assessment, outcome measurement as well as forms, protocols and schedules. An international pulmonary rehabilitation section features perspectives from Canada, Europe, Japan, South America, the Philippines, and the United States.
<b>Overall Rating</b>		

<b>The COPD Toolkit</b> <a href="http://www.copdtoolkit.ca">www.copdtoolkit.ca</a>		
<b>Authority</b>		Produced by the Saskatoon Health Region, the Lung Association of Saskatchewan and the University of Saskatchewan.
<b>Currency</b>		Released Fall 2009.
<b>Accuracy</b>		<u>The COPD Toolkit© web site (<a href="http://www.copdtoolkit.ca">www.copdtoolkit.ca</a>) is a Canadian on-line repository where all health care professionals involved in COPD management can access, share, evaluate, develop and refine resources for COPD management. The Tools are currently used in the LiveWell™ Chronic Disease Management Program conducted in the Saskatoon Health Region and range from PowerPoint presentations for patient education to referral forms to flow sheets for COPD management.</u>
<b>Ease of Use &amp; Readability</b>		<u>The Tools posted on-line at <a href="http://www.copdtoolkit.ca">www.copdtoolkit.ca</a> are freely available to health care professionals working in COPD management. After completing a registration form, health care professionals who download the Tools will be asked to post a review of the Tool utilized in the Comments area of each Tool. They will also be invited to post any Tools which they have developed for COPD management.</u>
<b>Utility</b>		<u>Health care professionals will have no restrictions on which tools may be used and are welcome to adapt the tools to their local setting. The benefits in registering on-line include:</u> <ul style="list-style-type: none"> <li>- <u>able to read other health care professionals' comments about the Tools</u></li> <li>- <u>able to upload your Tools following approval by the COPD Toolkit© Team</u></li> <li>- <u>able to complete Tool evaluation on-line in the Comments area for each Tool</u></li> </ul>
<b>Overall Rating</b>		<b>This resource was in development at the time of compiling materials for this report and therefore was not reviewed with the rating scale.</b>

<b>The Pulmonary Rehabilitation Toolkit</b> <a href="http://www.pulmonaryrehab.com.au">www.pulmonaryrehab.com.au</a>		
A comprehensive toolkit produced by the Australian Lung Foundation and the Australian Physiotherapy Association to provide current evidence-based information and practical tips on starting and running a pulmonary rehabilitation program.		
<b>Authority</b>	4.5	Developed by The Australian Lung Foundation and the Australian Physiotherapy Association and written by a committee of respirologists, physical therapists, nurses and psychologists from Australia. There is a contact e-mail and website listed. There are references provided for most information, and a full reference list at the end of the section.
<b>Currency</b>	4.5	Released March 2006 with a link available to access news and updates available since the first release. One can subscribe with an email address and receive updates via email.
<b>Accuracy</b>	4.5	Overall, the information is very accurate. Some information

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		on exercise prescription is questionable; specifically on providing a cycling exercise prescription for cycling from the results of a six-minute walk test with no mention of graded exercise testing as an option.
<b>Ease of Use &amp; Readability</b>	5	The site is easy to navigate and links are easy to understand and follow. All downloadable documents worked and were easy to open in Word or Adobe Reader.
<b>Utility</b>	5	Free access and no login required. Provides excellent practical tools to run and set up a successful pulmonary rehabilitation program. The available pulmonary rehabilitation checklist very beneficial for those starting a new program. Available resources include examples of brochures, referral letters, invitations, and assessment tools.
<b>Overall Rating</b>	□□□□	This is an excellent resource for health professionals starting pulmonary rehabilitation program. The section on patient education is particularly helpful as it provides seminar outlines and resources.

## 6.0 Potential Adaptation of The Pulmonary Rehabilitation Toolkit Developed by the Australian Lung Foundation and the Australian Physiotherapy Association

As indicated in section 5.0 above, the Australian Lung Foundation and the Australian Physiotherapy Association have developed an outstanding web-based resource (5 star rating) in the form of a comprehensive toolkit of evidence-based information and practical tips on starting and running a pulmonary rehabilitation program.

The CCA has received permission from the Australian Lung Foundation (Heather Allan, Executive Director – COPD National Program, March 3, 2008) to adapt the toolkit for use in Canada with a request of acknowledgement as follows, or similar to:

“The following has been adapted with permission from ***The Pulmonary Rehabilitation Toolkit*** developed by The Australian Lung Foundation and The Australian Physiotherapy Association, © 2006, [www.pulmonaryrehab.com.au](http://www.pulmonaryrehab.com.au)”

This resource was subsequently reviewed in detail to identify areas that would require change for the Canadian context. Although the toolkit was specifically developed to help health professionals establish pulmonary rehabilitation programs in metropolitan, regional and rural settings throughout Australia, the review revealed limited areas requiring adaptation for Canada. Indeed, only suggestions for transportation and funding would require modification. However, it is recommended that the patient referral process and corresponding sample forms provided be flagged for further reviewed provincially, as specific adaptation in accordance with relevant health care and privacy legislation may be warranted.

## 7.0 Key Contacts

The Canadian Thoracic Society, Canadian Respiratory Health Professionals and Breathworks databases were used as reference sources to identify individuals across Canada as experts who may be consulted when developing a pulmonary rehabilitation program. The following individuals have given permission to have their names and contact information listed.

Name	Contact Information	Province
Patrick Leung Education Consultant, Calgary COPD & Asthma Program, Chronic Disease Management, Calgary Health Region	P: 403-870-6677 F: 403-374-0354 E: patleung@shaw.ca	Alberta

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<b>Name</b>	<b>Contact Information</b>	<b>Province</b>
Dr. Jeremy Road  Respirologist, Vancouver Hospital, Medical Director, Provincial Respiratory Outreach Program	P: 604-875-4241 F: 604-875-4195 E: jeremy.road@vch.ca	British Columbia
Dr. Darlene Reid  Professor, Department of Physical Therapy, UBC	P: 604-875-4111 Ext 66056 F: 604-875-4851 E: Darlene.reid@ubc.ca	British Columbia
Dr. Su-Er Guo  Assistant Professor, School of Nursing, University of Victoria Co-Investigator, NEXUS & ICEBERGS, University of British Columbia	P: 250-472-5663 F: 250-721-6231 E: <a href="mailto:suerguo@uvic.ca">suerguo@uvic.ca</a>	British Columbia
Alanna Simms  Physical Therapist, Vernon Jubilee Hospital, Health Improvement Network	P: 250-558-1200 ext 1790 or 250-503-3712 F: 250-503-3722 E: alanna.simms@interiorhealth.ca	British Columbia
Heather Caisley  Professional Lead, Respiratory Therapy Riverview Health Centre	P: 204-478-6240 F: 204-478-6284 E: HCaisley@RHC.MB.CA	Manitoba
Cheryl Winger  Respiratory Disease & Rehabilitation Clinician	P: 204-578-4203 F: 204-578-4956 E: wingerc@brandonrha.mb.ca	Manitoba
Rosh Narrandes  Clinical Advisor – Physiotherapy, Critical Care and Surgery Services, GG549 Health Sciences Centre	P: 204-787-2924 E: rnarrandes1@exchange.hsc.mb.ca	Manitoba
Sylvie Boucher  Clinique pulmonaire Hôpital régional d'Edmundston	P: 506-739-2411 E: sylvie.boucher@rrs4.ca	New Brunswick
Dr. Roger Goldstein  Director, Respiratory Rehabilitation Program, West Park Healthcare Centre	P: 416-243-3631 F: 416-243-8947 E: rgoldstein@westpark.org	Ontario
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## **8.0 References**

American Thoracic Society (ATS). Best of the Web. Accessed on-line February & March 2008 at: <http://www.thoracic.org/sections/clinical-information/best-of-the-web/>

American Thoracic Society (ATS). Pulmonary Rehabilitation. Accessed on-line March 10, 2008 at: <http://www.thoracic.org/sections/clinical-information/best-of-the-web/pages/patient-care/pulmonary-rehabilitation.html>

BC HealthGuide. Pulmonary Rehabilitation for Chronic Obstructive Pulmonary Disease. Accessed on-line April 5, 2008 at: <http://www.bchealthguide.org/kbase/topic/detail/other/hw257776/detail.htm>