

RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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COPD action plans

Exacerbations of chronic obstructive pulmonary disease (COPD) are periods of worsening COPD symptoms, during which patients experience increased dyspnoea, cough and /or sputum production. Observational studies have shown patients often delay seeking medical advice for up to one week after symptom onset, and delays are associated with worse clinical outcomes and an increased risk of hospitalisation. Exacerbations become more frequent as COPD progresses, and in patients with severe COPD often result in hospital admission for management of respiratory failure.

As with other chronic diseases, patient self-management approaches have been used in COPD with the aim of improving exercise capacity and health-related quality of life, and reducing hospitalisations. Independent from pulmonary rehabilitation, structured programs may include a number of components, such as education, action plans, scheduled follow-up or access to a case-manager between regular medical reviews.

Written, individualised COPD action plans have some similarities with those used for asthma, and typically are colour-coded into green, yellow and red zones. The green zone summarises the patient's usual maintenance therapy, and the yellow zone describes exacerbation symptoms and how bronchodilator therapy, prednisolone and/or antibiotics should be used in response. Although more than half of COPD exacerbations are related to infection, other causes include congestive heart failure, pulmonary embolism or exposure to airway irritants. As symptoms may overlap, patients should be advised to contact their respiratory nurse or general practitioner when starting emergency courses of prednisolone and antibiotics which the patient may already have on hand. The red zone describes warning signs and symptoms of severe exacerbations and recommends ambulance and/or emergency department attendance.

A 2010 Cochrane review of COPD action plans with limited patient education (up to one hour) found that plans helped patients to recognise exacerbations and respond with initiation of antibiotics and corticosteroids. There was no evidence of reduced healthcare use or improved quality of life.

Self-management studies which have reported a reduction in exacerbation duration and healthcare use have all included a formal education program and access to a case-manager. For example, randomised controlled studies in Canada (n = 181) and the US (n = 743) found an approximately 40% reduction in COPD-related hospital admission or emergency department attendance amongst patients receiving education, an action plan and monthly calls from a case manager. However not all studies have been positive. In a Dutch study (n = 233), action plans in combination with ongoing support of a case-manager reduced the time taken to report an exacerbation by 2.9 days and resulted in lower symptom intensity. There was no difference in hospital admissions and emergency room visits. In a US Veterans Affairs study (n = 426), a comprehensive care management program (intensive group & individual education, action plan & scheduled telephone calls) was associated with increased mortality in the intervention group, which led to early termination of the trial. Possible causes for this unexpected result could not be identified. These heterogeneous results suggest that self-management programs including action plans may not be appropriate for all COPD patients. Cognitive impairment, depression, anxiety and social isolation in some patients with severe COPD may limit ability to respond appropriately.

COPD action plans for patients at the Repatriation General Hospital are available at S:\Procedures RGH-SAHS intranet (use a colour printer). Respiratory nurses and clinical pharmacists should be contacted to ensure patients receive appropriate education. Referral to the hospital's pulmonary rehabilitation program should be considered. Action plans are also available on the Australian Lung Foundation website at <http://www.lungfoundation.com.au/professional-resources/general-practice/copd-action-plan>

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FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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