

Effects of individualised action plans for the self-treatment of exacerbations in COPD patients with comorbidities



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Study aim

Chronic Obstructive Pulmonary Disease (COPD) frequently coexists with other diseases, but inclusion of patients with severe comorbidities in COPD self-management trials is uncommon. COPD-specific action plans may potentially be unsafe or inefficient if serious comorbidities are present. We hypothesised that patient-tailored action plans directed towards COPD and comorbidities would accelerate appropriate treatment, and therefore would lead to reduced COPD exacerbation duration.

Methods

In this randomised controlled trial COPD patients with \geq one comorbidity (chronic heart failure, ischaemic heart disease, diabetes, anxiety, depression) were recruited from two hospitals in the Netherlands and three in Australia. Patients were randomised to a patient-tailored self-management intervention including exacerbation action plans for COPD and comorbidities (Figure 1) or usual care. All patients completed daily symptom diaries for 12 months. The primary outcome was the number of COPD exacerbation days per patient per year.

Results

We observed a significantly shorter COPD exacerbation duration for the 102 patients in the self-management group (median 5.8 (IQR 3.5-9.1) days) vs. the 99 patients included in the usual care group (median 7.9 (IQR 6.2-13.4) days). Self-management led to a reduction in respiratory-related hospitalisation rate (OR 0.43 (95% CI 0.23;0.81) and in the self-efficacy of behaviours that lead to breathing difficulties (COPD Self-Efficacy Scale behavioural risk factors domain, difference -0.26 (95% CI -0.52;-0.01)). It also led to a worsened emotional function (Chronic Respiratory Questionnaire domain; difference -0.41 (95% CI -0.70; -0.11)). No differences in all-cause hospitalisation (OR 0.81 (95% CI 0.46;1.43) or all-cause mortality rate (self-management n=4, usual care n=7; OR 0.53 (95% CI 0.15;1.89)) were noted.

Conclusion

Exacerbation action plans for COPD patients with comorbidities embedded in an individualised, multi-faceted self-management intervention represent an effective approach to reduce COPD exacerbation duration and respiratory-related hospitalisations.

Please indicate which symptoms have changed during the last 24 hours by ticking a box for every symptom:

		Day: 1 2 3 4 5 6 7						
A. Sputum production	Not more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slightly more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Significantly more than usual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B. Sputum colour	Usual for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Different from usual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C. Breathlessness	Not more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slightly more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Significantly more than usual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D. Did you have a fever (more than 38.5°C) or did you experience a significant change in coughing and/or wheezing in the last 24 hours?	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E. Weight	Not more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slightly more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Significantly more than usual (= at least 1. kg in 24 hrs)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Swelling of ankles or abdomen	Not more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slightly more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Significantly more than usual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G. Waking up at night short of breath	Not more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slightly more than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Significantly more than usual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

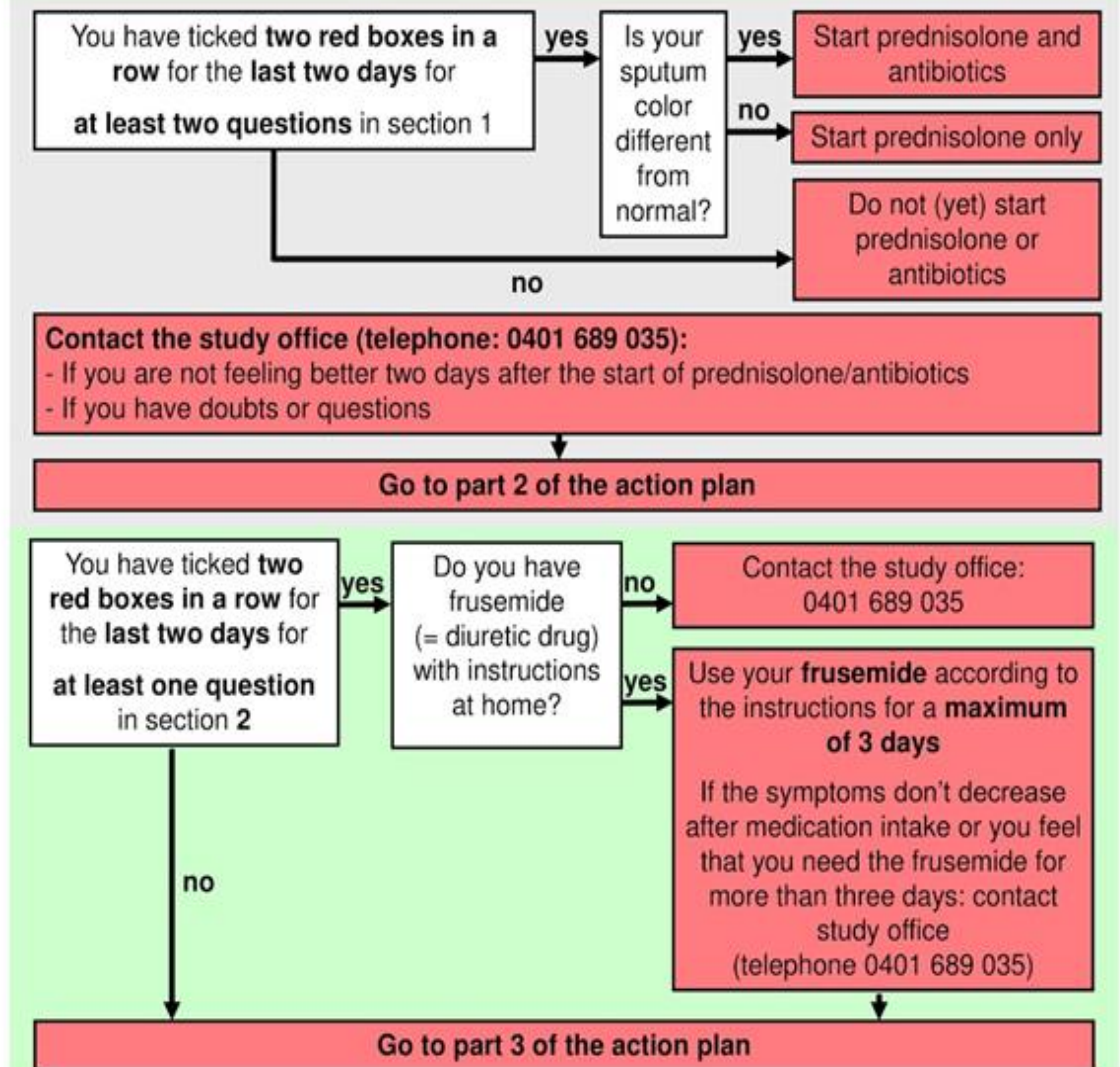


Figure 1. Example of a self-initiated action plan for a patient with COPD and chronic heart failure, linked to an individualised daily symptom diary

WAT BETEKENT DIT VOOR U?

Door het gebruik van een persoonlijk actieplan voor klachten van COPD en andere chronische ziekten kunt u klachten eerder herkennen en eerder zelf behandelen. Dit zorgt voor:

- ✓ Een kortere duur van een longaanval
- ✓ Minder kans op een opname voor longklachten
- ✓ Meer zelfvertrouwen

