

# Opinion

## Reviewing people with COPD

### Introduction

Chronic obstructive pulmonary disease (COPD) is responsible for over 30,000 deaths, 1.4 million GP consultations, a million hospital bed days and costs the NHS over £800 million each year.<sup>1</sup> The socio-economic impact for both patients and their carers is considerable.<sup>2</sup> The National Strategy for Services for COPD highlights the need for personalised, structured and integrated care for people with COPD.<sup>3</sup>

There is expert opinion but little evidence to guide decisions on how frequently patients with COPD should be reviewed.<sup>4</sup> Since some patients will be asymptomatic while others need palliative care support, it is self-evident that a flexible approach is required. This Opinion Sheet aims to provide a practical approach, moving beyond the 'tick boxes' of the Quality Outcomes Framework (QOF).<sup>5</sup>

### Key components of a COPD review

There are four key components:

- Assessment of severity, risk of exacerbations and impact of the disease.
- Reinforcement of smoking cessation advice
- Step-up of management in response to increasing need
- Review of self-management advice

### 1. Assessment of severity

Severity of COPD is assessed by: breathlessness (MRC Score), lung function and exacerbation frequency.

#### The MRC dyspnoea scale

Breathlessness is a primary symptom of COPD, causing increasing disability as the disease progresses. The Medical Research Council (MRC) dyspnoea scale is a widely-used, validated method of assessing breathlessness.<sup>6</sup> It correlates with other measures of disability such as exercise tests, quality of life, and activities of daily living.<sup>7</sup> This simple measure, which can be used to identify patients with significant disability should be recorded annually for the Quality Outcomes Framework (QOF).<sup>5</sup>

#### FEV<sub>1</sub> recordings

By contrast, lung function does not correlate well with dyspnoea, functional status, or quality of life,<sup>7</sup> and may therefore under- or over-estimate the impact of the disease.<sup>4</sup> Serial FEV<sub>1</sub> recordings will, howev-

er, detect patients with rapidly progressing disease (a loss of 500ml or more over five years) who may need specialist referral.

#### Patient Reported Outcome Measures

There is increasing interest in the clinical use of short questionnaires (e.g. the COPD Assessment Tool – the CAT-<http://www.catestonline.org/>) to provide a measure of health status in COPD.<sup>3</sup>

#### Other indicators of control

The clinical record will indicate the frequency of exacerbations requiring antibiotics and/or oral steroid courses, providing an assessment of future risk and further evidence of the impact of the disease.

#### Further assessment as the disease increases in severity

Pulse oximetry should be widely available to ensure all patients eligible for long-term oxygen therapy (LTOT) are identified and referred for assessment.<sup>3,4</sup> Uncorrected, chronic hypoxia with subsequent cor pulmonale carries a poor prognosis with a 5-year survival less than 50%. Screening is appropriate for patients with moderate/severe COPD, peripheral oedema or polycythaemia. Pulse oximeters are relatively inexpensive and simple to use. To obtain a baseline reading, patients should rest for several minutes after any exertion. Anything that affects colour or detection of pulsation will affect the pulse oximetry readings. For example, coloured nail varnish, carbon monoxide poisoning, poor peripheral circulation, tremor or shivering. Persistent readings <92% suggest the need for referral for full assessment. The Read code for oxygen saturation is #8A44. For further information on pulse oximetry

please see the PCRS-UK opinion sheet number 28 ([http://www.pcrs-uk.org/resources/os28\\_pulse\\_oximetry.pdf](http://www.pcrs-uk.org/resources/os28_pulse_oximetry.pdf))

Body mass index (BMI): Difficulty eating because of breathlessness combined with the systemic effects of COPD often result in weight loss. Low BMI is associated with a poor prognosis, and patients with a BMI <20 may be referred for dietary advice.<sup>4</sup>

Detecting depression: Depression and anxiety are relatively common in patients with COPD, particularly in those who are hypoxic, severely dyspnoeic, with hospital admissions or socially isolated<sup>4</sup>. Consider screening for depression during COPD reviews.

Social impact: Enquire regularly about the patient's ability to undertake activities of daily living and how they (and their carer) are coping with day-to-day life.<sup>3,4</sup> Consider referral for advice on the benefits to which they may be entitled.

### 2. Reinforcement of smoking cessation advice

Stopping smoking slows the rate of decline in FEV<sub>1</sub>, reduces the rate of progression of symptoms, and improves survival.<sup>4</sup>

All patients with COPD should have their smoking status recorded and be offered cessation advice.<sup>3,4</sup> Brief advice in primary care is effective, but the use of pharmacotherapy combined with an appropriate support programme will optimise quit rates.<sup>8</sup> Practical advice on supporting smoking cessation for primary care clinicians is available on <http://www.theipcr.org/display/RESSMO/Tackling+the+e+smoking+epidemic> and PCRS-UK have

### MRC Dyspnoea Score

**Grade** Ask the patient to read the five statements below and indicate which of the following applies to them

1	Not troubled by breathlessness except on strenuous exercise
2	Short of breath when hurrying or walking up a slight hill
3	Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace
4	Stops for breath after walking about 100 m or after a few minutes on level ground
5	Too breathless to leave the house, or breathless when dressing or undressing

#### Data collection

Read codes for recording the MRC dyspnoea score are Grade 1: #173H, Grade 2: #173I, Grade 3: #173J, Grade 4: #173K and Grade 5: #173L

an opinion sheet on smoking cessation – number 17 ([http://www.pcrs-uk.org/resources/os17\\_smoking\\_cess.pdf](http://www.pcrs-uk.org/resources/os17_smoking_cess.pdf))

### 3. Step up management

Functional deterioration, rather than lung function, dictates the need not only to step up pharmacological treatment but also to offer appropriate social and nursing support for both the patient and his carer.<sup>4</sup> The GPIAG booklet “The diagnosis and management of COPD in primary care” available from [http://www.pcrs-uk.org/education/resources/copd\\_guidelinebooklet\\_final.pdf](http://www.pcrs-uk.org/education/resources/copd_guidelinebooklet_final.pdf) includes a patient centred approach to stepping up management.

#### Pharmacological treatment

Short- and long-acting beta<sub>2</sub>-agonists and antimuscarinics can relieve the increasing shortness of breath and improve exercise tolerance and quality of life.<sup>4</sup> Inhaled steroids and long acting bronchodilators or antimuscarinics reduce exacerbation rates in patients with moderate COPD who have exacerbations.<sup>4</sup> Mucolytics have a role in those with chronic productive cough.<sup>4</sup>

#### Inhaler technique

Poor inhaler technique renders inhaled treatment ineffective.<sup>4</sup> At least 75% of patients make mistakes when using an pressurised metered dose inhaler (pMDI), while just over a half can use dry powder devices or breath-actuated metered dose inhalers without errors.<sup>9</sup>

#### Pulmonary rehabilitation

Rehabilitation relieves dyspnoea and fatigue, improves emotional function and enhances patients’ sense of control over their condition.<sup>10</sup> Exercise should be encouraged in all patients with COPD, and patients with an MRC Dyspnoea score of 3 or more should be referring for pulmonary rehabilitation.<sup>3,4</sup> For further information on pulmonary rehabilitation please see PCRS-UK opinion sheet number 26 ([http://www.pcrs-uk.org/resources/os26\\_pul\\_rehab.pdf](http://www.pcrs-uk.org/resources/os26_pul_rehab.pdf))

### 4. Review self management

Early identification of, and intervention in, exacerbations has the potential to reduce disease progression, hospital admissions and improve quality of life.<sup>11</sup> Patients at risk of exacerbations should be given self-management advice and emergency courses of antibiotics and steroids to enable them to respond promptly to the symptoms of an exacerbation.<sup>3,4</sup> For further information on Self management please see PCRS-UK opinion sheet number 11 – ([http://www.pcrs-uk.org/resources/os11\\_copd\\_self\\_man.pdf](http://www.pcrs-uk.org/resources/os11_copd_self_man.pdf))

#### Supportive care

There is current evidence of considerable unmet clinical and social need for people with very severe COPD.<sup>3,4</sup> For primary care clinicians a major problem is the uncertain prognosis and the difficulty of knowing when and how to broach the topic of end-of-life care.<sup>12</sup> Some practical advice is available on the PCRS-UK Opinion Sheet 7 Palliative care for people with COPD ([http://www.pcrs-uk.org/resources/os7\\_palliative\\_care.pdf](http://www.pcrs-uk.org/resources/os7_palliative_care.pdf)).

#### Organisation of COPD review services

National guidelines recommend that people with mild and moderate COPD should have annual reviews, while those with more severe disease should be reviewed more frequently.<sup>3,4</sup> Whilst many of the measurements involved in a COPD review can be undertaken by a trained healthcare assistant, it is important that the patient’s needs are formally reviewed by a professional with appropriate training and experience. As the disease progresses, involvement of a multi-disciplinary team will become increasingly important.<sup>3,4</sup>

#### QOF and COPD reviews

The prevalence of COPD in the UK reported to QOF is less than 2%. The relatively high exception reporting rate (10.3% in England) probably reflects the proportion of severely disabled, often housebound, patients with severe disease.<sup>13</sup> Further tips

on COPD review can be obtained using PCRS-UK nurse resources on COPD review – please see [http://www.pcrs-uk.org/resources/practice\\_tools.php](http://www.pcrs-uk.org/resources/practice_tools.php)

Inclusion of the MRC Dyspnoea score as an essential component of a COPD review underlines the importance of objectively assessing the disability due to COPD.<sup>5</sup>

### Further reading

Mark L Levy, Philip H Quanjer, Rachel Booker, Brendan G Cooper, Steve Holmes, Iain Small. Diagnostic Spirometry in Primary Care: Proposed standards for general practice compliant with American Thoracic Society and European Respiratory Society recommendations. *Prim Care Respir J* 2009;**18**(3):130-147. doi:10.4104/pcrj.2009.00054

### References

1. Chief Medical Officer. *It takes your breath away. The impact of chronic obstructive pulmonary disease.* Annual report 2004
2. The Respiratory Alliance. *Bridging the Gap* 2003 <http://www.gpiag.org/news/bridging.php>
3. Department of Health. *National Strategy for Services for Chronic Obstructive Pulmonary Disease (COPD) in England.* London: DoH 2010
4. National Institute for Health and Clinical Excellence. National clinical guideline management of chronic obstructive pulmonary disease in adults in primary and secondary care. Updated 2010 *Thorax* 2004; **59**(Suppl.1):S1–232. Available at [www.nice.org.uk](http://www.nice.org.uk)
5. NHS Employers, British Medical Association Quality and Outcomes Framework guidance for 2012/13. Guidance for PCOs and practices. London, 2012
6. Fletcher CM, Peto R. The Significance of Respiratory Symptoms and the Diagnosis of Chronic Bronchitis in a Working Population. *BMJ* 1959;**2**:257-66.
7. Bestall JC, Paul EA, Garrod RA *et al.* Useful of the Medical Council (MRC) dyspnoea scale as a measure of disability in patients with chronic obstructive pulmonary disease. *Thorax* 1999;**54**:581-6.
8. West R, McNeill A, Raw M. Smoking cessation guidelines for health professionals: an update. *Thorax* 2000;**55**:987-99. [http://www.brit-thoracic.org.uk/bts\\_guidelines\\_smokecess.html](http://www.brit-thoracic.org.uk/bts_guidelines_smokecess.html)
9. Brocklebank D, Wright J, Cates C, *et al.* Comparison of the effectiveness of inhaler devices in asthma and chronic obstructive airways disease: a systematic review of the literature. *Health Technol Assess* 2001;**5**:1-149.
10. Lacasse Y, Goldstein R, Lasserson TJ, Martin S. Pulmonary rehabilitation for chronic obstructive pulmonary disease. *Cochrane Database of Systematic Reviews* 2006, Issue 4. Art. No.: CD003793. DOI: 10.1002/14651858.CD003793.pub2
11. Wilkinson T, Donaldson GC, Hurst JR, *et al.* Early Therapy Improves Outcomes of Exacerbations of Chronic Obstructive Pulmonary Disease. *Am J Respir Crit Care Med* 2004;**169**:1298-1303.
12. Murray SA, Boyd K, Sheikh A. Palliative care in chronic illness. We need to move from prognostic paralysis to active total care. *BMJ* 2005;**330**:611-12.
13. Doran T, Fullwood C, Gravelle H, *et al.* Pay-for-Performance Programs in Family Practices in the United Kingdom. *New Eng J Med* 2006;**355**:375-84.

**Table 1. Checklist of indicators for specific management**

Marker of severity	Action
Smoking status	Offer cessation support
MRC dyspnoea scale > 3	Offer pulmonary rehabilitation
Increasing symptoms	Commence long-acting antimuscarinics and/or long-acting beta <sub>2</sub> -agonists
Frequent (two or more) exacerbations in a year especially if FEV <sub>1</sub> <50%	Commence inhaled steroids and long-acting beta <sub>2</sub> -agonists
Oxygen saturation <92%	Refer for oxygen assessment
BMI <20 or >30	Refer for dietary advice
Depression	Consider drug or psychological

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