

## CORRESPONDENCE

## GOLD COPD classification and prognostic pessimism regarding ICU admission

Incorporation of the Global Initiative for Chronic Obstructive Lung Disease (GOLD) classification of severity of expiratory airflow limitation in chronic obstructive pulmonary disease (COPD) into the recent National Institute for Health and Clinical Excellence (NICE) guidelines is welcome and sensible.<sup>1</sup> Describing a forced expiratory volume in one second (FEV<sub>1</sub>) of 51% predicted as 'mild disease' fails to capture the loss of lung function and irreversible damage done. Recognition and optimal early management of COPD cannot be overemphasised to limit its long-term health consequences.

However, we have concerns that its adoption without adequate explanation in the UK could have unintended negative consequences in this patient group if presenting acutely unwell, when decisions regarding intensive care and use of invasive mechanical ventilation (IMV) are being made.

Widely varying ICU admission criteria and prognostic pessimism among UK critical care physicians regarding COPD have been demonstrated.<sup>2,3</sup> The description of a condition as 'severe', which could include those with an FEV<sub>1</sub> of up to 50% predicted and is not a comment on general functional capacity or physical frailty, may be misinterpreted by clinicians. This could then contribute to an overly nihilistic view of potential outcome and hence inappropriate refusal of intensive care for some who could benefit.

The recent National Chronic Obstructive Pulmonary Disease Resources and Outcomes Project report concerning acidosis and use of non-invasive ventilation (NIV) in COPD highlights several important issues regarding acute care.<sup>4</sup> The use of IMV was low, 110 out of 2143 acidotic patients received IMV and only 34 out of 1077 patients receiving NIV had treatment escalated to IMV. Given the methodology of this survey, it must be considered representative of UK practice.

First, we would suggest that in addition to explaining the reclassification and its meaning to patients as O'Reilly and Rudolf suggest, this change needs to be shared with colleagues responsible for acutely ill COPD patients. Second, care should be taken with clinical letters and discharge documentation. Many hospitals have now adopted electronic patient record systems enabling clinical letters to be viewed without the paper notes being present. We would suggest that in addition to the GOLD classification, functional exercise capacity is recorded besides the absolute and predicted values of FEV<sub>1</sub> and forced vital capacity.

By being aware of potential problems, we can hopefully gain the benefits of bringing our

practice in line with international colleagues without disadvantaging a vulnerable group.

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## REFERENCES

1. O'Reilly J, Rudolf M. What's nice about the new NICE guideline? *Thorax* 2011;66:93–6.
2. Wildman MJ, O'Dea J, Kostopoulou O, et al. Variation in intubation decisions for patients with chronic obstructive pulmonary disease in one critical care network. *QJM* 2003;96:583–91.
3. Wildman MJ, Sanderson C, Groves J, et al. Implications of prognostic pessimism in patients with chronic obstructive pulmonary disease (COPD) or asthma admitted to intensive care in the UK within the COPD and asthma outcome study (CAOS): multicentre observational cohort study. *BMJ* 2007;335:1132.
4. Roberts CM, Stone RA, Buckingham RJ, et al. Acidosis, non-invasive ventilation and mortality in hospitalised COPD exacerbations. *Thorax* 2011;66:43–8.

## Authors' response: 'What's nice about the new NICE guideline?'

We thank the correspondents for these kind and helpful comments.<sup>1</sup> In adopting the Global Initiative on Obstructive Lung Disease (GOLD) classification of severity of airflow obstruction, the National Institute for Health and Clinical Excellence (NICE) guideline update has introduced consistency with international guidelines including those of the American Thoracic Society and the European Respiratory Society. The NICE guidelines note that this classification relates specifically to degrees of airflow obstruction which are arbitrary and may not be closely related to degrees of clinical severity in chronic obstructive pulmonary disease (COPD).<sup>2</sup> The current use of the term 'severe' for airflow obstruction with forced expiratory volume in 1 s (FEV<sub>1</sub>) <50% in place of 'moderate' (NICE 2004) may also

help to underline the potentially serious nature of the lung function impairment and encourage smoking cessation and more active management.

The NICE guidelines stress the overriding importance of clinical criteria to assess COPD severity, and promote multidimensional assessment using a range of tools to assess breathlessness and functional capacity, ranging from the simple Medical Research Council (MRC) scale to the BODE Index, which includes breathlessness, BMI and exercise capacity as well as lung function.<sup>3</sup> Outcomes in COPD are known to be related to clinical factors, including severity of symptoms and exacerbation frequency, as well as lung function. These should be taken into account, together with comorbidities, in assessing patients admitted to hospital with acute exacerbation of COPD and in whom intensive care and use of mechanical ventilation is to be considered.<sup>4–6</sup>

It is acknowledged that there is variation in intensive care unit criteria for admission to manage COPD. This suggests a need for clear evidence-based criteria for intensive care support and intermittent mandatory ventilation (IMV) based on valid prognostic indicators rather than on a diagnostic classification of severity of airflow obstruction which is not intended for this purpose. Evidence-based guidance for the use of non-invasive ventilation (NIV) uses criteria other than severity of airflow obstruction. Failure of NIV leading to the need for IMV is predicted not by lung function but by the Acute Physiology and Chronic Health Evaluation II (APACHE II) score, pH, respiratory rate, and Glasgow coma score.<sup>7,8</sup>

The authors acknowledge the National COPD Resources and Outcome Project (NCROP) evidence of low use of IMV in patients with COPD, and agree that the data suggest a variable degree of nihilism for which there is no clear justification. The NICE guidelines note that the decision on which patients with exacerbations of COPD will benefit from intubation is difficult, and involves balancing health status with an estimate of expectation of survival. Factors that are likely to influence this decision are prior functional status, BMI, requirement for oxygen when stable, comorbidities and previous intensive treatment unit (ITU) admissions. Physiological thresholds for use of IMV have not been subjected to systematic evaluation and decisions are currently based on clinical judgement rather than objective data.<sup>9</sup> The severity of the acute illness (APACHE II), associated comorbidity and malignancy are predictors of in-hospital mortality in patients with COPD and acute respiratory failure.<sup>10</sup> There is clearly a need for further evidence-based assessment of predictors of outcome from IMV rather than inappropriate reliance on diagnostic stratification of FEV<sub>1</sub>.

The authors agree that there is a need to explain the reclassification and its meaning