

## Letters to the editor

### The National Early Warning Score 2 (NEWS2)

Editor – Hodgson *et al*<sup>1</sup> demonstrate that the recent modification of the National Early Warning Score (NEWS) – NEWS2 – prove less sensitive than NEWS in identifying in-hospital death for patients with acute exacerbations of chronic obstructive pulmonary disease (AECOPD). Professor Williams argues that Hodgson *et al* have misapplied the NEWS2 SpO<sub>2</sub> scale (*SpO<sub>2</sub> scale 2*) to all patients with AECOPD,<sup>2</sup> rather than employing it only in those with confirmed hypercapnic respiratory failure (HCRF) as recommended.<sup>3</sup> Williams suggests Hodgson's study highlights the need for 'further education' to avoid improper use of NEWS2 in patients without HCRF, implying that if training is not undertaken NEWS2 will create a risk for such patients. This risk might be worthwhile if NEWS2 performed better than NEWS in patients with HCRF. However, in another study of NEWS2,<sup>4</sup> we evaluated *SpO<sub>2</sub> scale 2* in patients with/without HCRF. We observed reduced sensitivity for in-hospital mortality compared to NEWS for patients in two groups – those with confirmed HCRF and those at risk of HCRF (eg patients with chronic lung disease). Importantly, if used in error in patients not at risk of HCRF, NEWS2 generally reduces discrimination compared to NEWS.

We agree with Hodgson *et al* that *SpO<sub>2</sub> scale 2* might be applied in error to other patient groups (eg those admitted with AECOPD, but without HCRF) when NEWS2 is implemented across hospitals and ambulance trusts. While the NEWS2 recommendations<sup>3</sup> are clear that HCRF should first be confirmed before using *SpO<sub>2</sub> scale 2*, the British Thoracic Society recommendations state that

*For most patients with known COPD or other known risk factors for hypercapnic respiratory failure ... a target saturation range of 88–92% is suggested pending the availability of blood gas results ...*<sup>5</sup>

This presents a dilemma, especially for ambulance staff, regarding whether to initially titrate oxygen therapy to maintain saturations of 88–92% for all patients at risk of HCRF, or to wait until HCRF is confirmed.

As Hodgson *et al* suggest, this conflict could be addressed by further exploration of the relationship between oxygen therapy, oxygen saturations and the risk of adverse outcomes. Currently, the only studies comparing the performance of NEWS2 and NEWS<sup>1,4</sup> suggest that the added complexity of NEWS2 is unlikely to be offset by significant benefit to patients and might lead to harm. As NEWS2 is now mandated by NHS England,<sup>6</sup> prospective evaluation of its application in the 'real world' must be urgently and carefully conducted. ■

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