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Letter to the Editor

Reply to: Performance of the National Early Warning Score in hospitalised patients infected by Covid-19

To the Editor,

The letter by Villar et al. suggests that our publication ‘*The performance of the National Early Warning Score in hospitalised patients infected by Covid-19*’¹ did not emphasise the ‘main’ message of the Royal College of Physicians (RCP) guidance on NEWS2 and deterioration in patients with COVID-19.² We disagree.

The RCP’s ‘main’ message is that “. . . NEWS2 should be used when managing patients with COVID-19 . . .” This was accompanied by the recommendation that “. . . **ANY** increase in oxygen requirements should trigger an escalation call to a competent clinical decision maker . . .”,² based on a concern that in patients with COVID-19 infection, treated with oxygen, oxygen requirements “. . . might increase rapidly if their respiratory function deteriorates but this may not result in any significant increase in the NEWS2 score . . .”² The wording of the RCP’s qualifying statement indicates a possible but not certain occurrence, and, to our knowledge, there is no published research that quantifies the frequency of missed deterioration/delayed care escalation or the risk associated with NEWS’ binary weighting system when it is used in patients with COVID-19.

Decisions regarding the escalation of a patient’s care are separate to the discriminant ability of an early warning score.³ As stated in our publication, we investigated the ability of NEWS or NEWS2 to discriminate the combined outcome of either death or intensive care unit (ICU) admission within 24 h of a vital sign set.¹ What is striking about our results is that when used in patients with proven COVID-19 infection, NEWS/NEWS2’s discrimination is virtually identical to that of patient cohorts without COVID-19. We did not undertake a separate analysis of failed escalations resulting from any theoretical impact that the binary weighting of NEWS2 may have on model performance but did suggest that future research could investigate this hypothesis and cited the RCP guidance as the appropriate reference. We had no reason to cite or discuss the work of the Cambridge group into the impact of estimated F_IO₂ on NEWS/NEWS2 values^{4,5} in our publication, as its studies were conducted in patients following cardiac surgery and their findings may not be transferrable to patients with COVID-19 infections.

Physicians of London’s National Early Warning Score (NEWS) Development and Implementation Group, which developed NEWS and NEWS2. Professor Prytherch assisted the Royal College of Physicians of London in the analysis of data validating NEWS. Professor Chauhan, Dr Meredith, Dr Kostakis and Mr Price declare no conflict of interests.

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Conflict of interest

The following potential conflicts of interest are declared by the authors of this letter. Professor Smith was a member of the Royal College of

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