



The optimal arterial oxygenation range in critical care

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Maintaining P_{aO_2} in the 70–150 mmHg range might lead to improved survival, compared to a P_{aO_2} outside of this range, in critically ill patients receiving oxygen therapy. Different P_{aO_2} targets in the 70–150 mmHg range might not lead to different outcomes. <https://bit.ly/3zTngq6>

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To the Editor:

Oxygen therapy remains a crucial intervention in critical care. One of the core aspects in oxygen therapy concerns the optimal oxygenation level, which is commonly measured in the form of partial pressure of arterial oxygen (P_{aO_2}). Multiple randomised controlled trials (RCTs) have been performed to investigate different oxygenation goals in critical care [1, 2]. However, one important challenge, as demonstrated by a recent network meta-analysis [2], is that most RCTs only compared two oxygenation levels that differed across studies, making it difficult to determine an optimal oxygenation goal [2]. While several meta-analyses have been performed, most have dichotomised oxygenation goals into liberal (*i.e.* targeting a higher oxygenation level) *versus* conservative (*i.e.* targeting a lower oxygenation level): a relatively qualitative oversimplification of the problem [3, 4]. Therefore, further investigations are needed to determine a more quantitative optimal oxygenation goal.