# Review of: "Clinical Audit: Oxygen Prescription with Target Saturations in Post Anesthesia Care Unit"

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Potential competing interests: No potential competing interests to declare.

The article by Hassan, Khan et al describes the outcomes of an audit of oxygen prescribing conducted within a post anaesthetic care unit assessed against local guidelines. The audit results show excellent compliance in terms of patients' records containing a valid oxygen prescription and documentation of oxygen saturation results (100% compliance for both), but minimal adherence to recording specifics of oxygen prescriptions and oxygen saturation target ranges, results which align with previous reports in the scientific literature.

Main criticisms:

In the current format, the results section is very difficult to follow. This could be addressed by providing 1) the reference for the oxygen prescription guidelines and 2) a clear initial explanation of the guideline components that were assessed within this audit. This information is essential for the reader to judge the relative importance of the compliance breaches subsequently seen in the results. The guidelines are explained (belatedly) within the conclusions section but need to be provided from the outset.

For example, perhaps this could be provided in a figure detailing either the guidelines or the audit questions used?

1) Documentation of valid prescription (yes/no)

2) Prescription specifying a target oxygen saturation range (yes/no)

3) Target oxygen saturations appropriate for the patient (yes/no)

4) Prescription specifies oxygen delivery device (yes/no)

5) Prescription specifies the duration for supplemental oxygen therapy (yes/no)

6) Oxygen prescription section completed in the drug chart (yes/no)

7) Documented observations of oxygen saturation (may also include frequency of observations and observations of respiratory rate, measures of respiratory distress, heart rate, pain, etc.) (yes/no).

Then the audit results could be combined in a single table to illustrate as follows:

| Guideline Component | Compliance (%) | Non-compliance (%) |
|---|---|---|
| Valid oxygen prescription | 100 | 0% |
| Target SpO2 appropriate | 3.3 | 96.7% |
| Specified target SpO2 range | 3.3 | 96.7% |
| Etc. | | |
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Secondly, the sequence of the paper seems unusual, as the readers will expect the conclusions to provide closure to the manuscript text. The authors have aspired to solutions for the oxygen prescribing deficits identified from the audit results, and these are described in the recommendations section. It would be good to see these mentioned and developed more within the discussion to give them more prominence, considering both local circumstances and broader applicability. At present, recommendations 1) “Acute medical clerking program” and 2) “Poster and other awareness materials” seem to provide some preliminary ideas which might find application in the clinical setting, whilst the subsequent recommendations require further clarification and specificity, as currently any links to solving the oxygen prescribing issues seem tenuous. Within the recommendations, there is a need to consider exactly how these might effect an improvement.

Further suggestions, comments, and questions:

The reader’s understanding would benefit from an explanation of local terminology/brand names (e.g., Kardex), acronyms, and editing or review by a native English speaker to avoid some areas where English wording sequence is incorrect and thus detrimental to meaning.

Statements made in the introduction should be accompanied by the relevant references, preferably using individual source references rather than citing the review paper.

Several references seem to be incorrectly assigned and so should be rechecked and amended.

Questions:

- How are the audit patients selected? Are they selected sequentially?

- Were the 30 patients subject to audit once or more than once?

- Was there a single data collection of SpO2 observations, or was observation frequency assessed as well?

- Did the authors make any assignment of an appropriate target saturation range, and, if so, were the subjects within range? (In other words, the results show that prescribing did not meet guidelines, but was there any evidence of clinical impact, i.e., patients receiving too little or too much oxygen?)