



Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: Endorsement by the Scandinavian Society of Anaesthesiology and Intensive Care Medicine

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Abstract

Background: Awake proning in spontaneously breathing patients with hypoxemic acute respiratory failure was applied during the coronavirus disease 2019 (COVID-19) pandemic to improve oxygenation while avoiding tracheal intubation. An updated systematic review and meta-analysis on the topic was published.

Methods: The Clinical practice committee (CPC) of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine (SSAI) assessed the clinical practice guideline “Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: A rapid practice guideline” for possible endorsement. The Appraisal of Guidelines for REsearch and Evaluation (AGREE) II tool was used.

Results: Four out of six SSAI CPC members completed the appraisal. The individual domain totals were: Scope and Purpose 90%; Stakeholder Involvement 89%; Rigour of Development 74%; Clarity of Presentation 85%; Applicability 75%; Editorial Independence 98%; Overall Assessment 79%.

Conclusion: The SSAI CPC endorses the clinical practice guideline “Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: A rapid practice guideline”. This guideline serves as a useful decision aid for clinicians caring for critically ill patients with COVID-19-related acute hypoxemic respiratory failure

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and can be used to provide guidance on use of prone positioning in this group of patients.

KEYWORDS

AGREE II, clinical practice guideline, COVID-19, critical care, critically ill, prone ventilation, proning

1 | BACKGROUND

Awake proning in spontaneously breathing patients with hypoxemic acute respiratory failure was applied during the coronavirus disease 2019 (COVID-19) pandemic to improve oxygenation while avoiding tracheal intubation.¹

An updated systematic review and meta-analysis on the topic was published.² This review formed the basis for a rapid practice guideline on awake proning in patients with COVID-19-related hypoxemic acute respiratory failure.³

2 | METHODS

The Clinical Practice Committee (CPC) of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine (SSAI) assessed the clinical practice guideline 'Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: A rapid

practice guideline' for possible endorsement.³ The Appraisal of Guidelines for REsearch and Evaluation (AGREE) II tool was used.⁴ Details on the endorsement process is available elsewhere.⁵

3 | RESULTS

Four out of six SSAI CPC members completed the appraisal, as the two members who co-authored the guideline were excluded from the evaluation, as per the SSAI endorsement process.⁵

The individual domain totals were: Scope and Purpose 90%; Stakeholder Involvement 89%; Rigour of Development 74%; Clarity of Presentation 85%; Applicability 75%; Editorial Independence 98%; Overall Assessment 79% (Figure 1).

The breakdown of the individual appraisers (de-identified) is available in the Supporting information S1.

4 | DISCUSSION

Agreement between the SSAI CPC appraisers was high and the overall assessment of the guideline was good. The appraisers did not identify any major shortcomings, and all domains were well rated (Figure 1).

The guideline may be used in daily clinical practice in the Nordic countries without major adaptation or modification.

The clinical practice guideline 'Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: A rapid practice guideline' serves as a useful decision aid for clinicians caring for critically ill patients with COVID-19-related acute hypoxemic respiratory failure and can be used to provide guidance on the use of prone positioning in this group of patients.

5 | CONCLUSION

The SSAI CPC endorses the clinical practice guideline 'Awake proning in patients with COVID-19-related hypoxemic acute respiratory failure: A rapid practice guideline'.³

AUTHOR CONTRIBUTIONS

All authors drafted, revised, and approved the article.

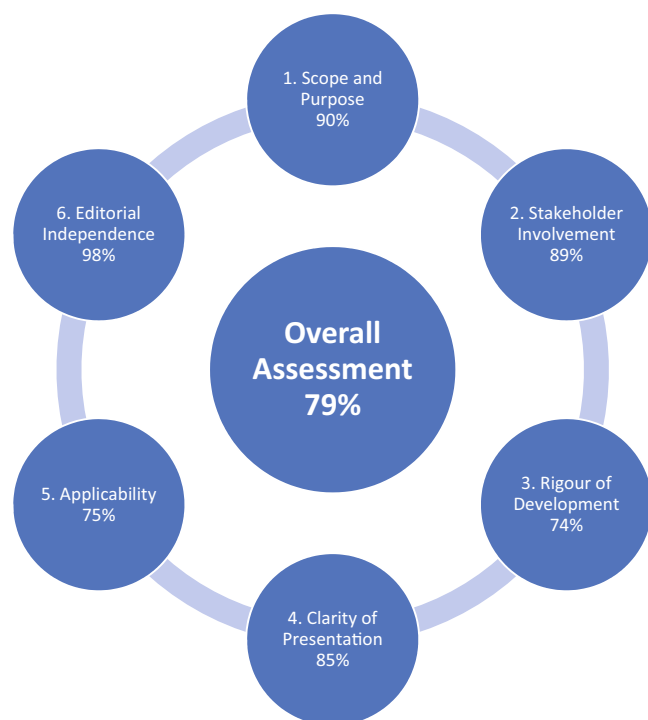


FIGURE 1 Summary of the Appraisal of Guidelines for REsearch and Evaluation (AGREE) II assessment.

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MC and MHM were co-authors of the original guideline and did not participate in the AGREE II evaluation. No other authors had any direct or indirect conflicts of interest.

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DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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REFERENCES

1. Alhazzani W, Parhar KKS, Weatherald J, et al. Effect of awake prone positioning on endotracheal intubation in patients with COVID-19 and acute respiratory failure: a randomized clinical trial. *JAMA*. 2022;327:2104-2113.
2. Weatherald J, Parhar KKS, Al Duhailib Z, et al. Efficacy of awake prone positioning in patients with covid-19 related hypoxemic respiratory

failure: systematic review and meta-analysis of randomized trials. *BMJ*. 2022;379:e071966.

3. Myatra SN, Alhazzani W, Belley-Cote E, et al. Awake prone in patients with COVID-19-related hypoxemic acute respiratory failure: a rapid practice guideline. *Acta Anaesthesiol Scand*. 2023;67:569-575.
4. Brouwers MC, Kho ME, Browman GP, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *J Clin Epidemiol*. 2010;63:1308-1311.
5. Rehn M, Chew MS, Olkkola KT, Orn Sverrisson K, Yli-Hankala A, Moller MH. Endorsement of clinical practice guidelines by the Scandinavian Society of Anaesthesiology and Intensive Care Medicine. *Acta Anaesthesiol Scand*. 2019;63:161-163.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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