




## REVIEW ARTICLE

# Surviving sepsis campaign: International guidelines for management of sepsis and septic shock in adults 2021 - endorsement by the Scandinavian society of anaesthesiology and intensive care medicine

Marius Rehn<sup>1,2,3</sup>  | Michelle S. Chew<sup>4</sup> | Klaus T. Olkkola<sup>5</sup> | Martin Ingi Sigurðsson<sup>6,7</sup>  | Arvi Yli-Hankala<sup>8,9</sup>  | Morten Hylander Møller<sup>10,11</sup> 

<sup>1</sup>Pre-hospital division, Air ambulance department, Oslo university hospital, Oslo, Norway

<sup>2</sup>The Norwegian air ambulance foundation, Drøbak, Norway

<sup>3</sup>Faculty of health sciences, University of Stavanger, Stavanger, Norway

<sup>4</sup>Department of Anaesthesia and Intensive Care, Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden

<sup>5</sup>Department of Anaesthesiology, Intensive Care and Pain Medicine, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

<sup>6</sup>Department of Anaesthesia and Intensive Care Medicine, Landspítali University Hospital, Reykjavík, Iceland

<sup>7</sup>Faculty of Medicine, University of Iceland, Reykjavík, Iceland

<sup>8</sup>Department of Anaesthesia, Tampere University Hospital, Tampere, Finland

<sup>9</sup>Faculty of Medicine and Life Sciences, University of Tampere, Tampere, Finland

<sup>10</sup>Department of Intensive Care, Copenhagen University Hospital Rigshospitalet, Copenhagen, Denmark

<sup>11</sup>Collaboration for Research in Intensive Care (CRIC), Copenhagen, Denmark

## Correspondence

Marius Rehn, Pre-hospital division, Air ambulance department, Oslo university hospital, Oslo, Norway, Postbox 4950 Nydalen, 0424 Oslo, Norway.  
Email: [marius.rehn@norskluftambulanse.no](mailto:marius.rehn@norskluftambulanse.no)

## Funding information

Funding was provided solely from the SSAI and institutional and/or departmental sources.

## Abstract

The Clinical Practice Committee of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine endorses the clinical practice guideline *Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021*. The guideline serves as a useful bedside decision aid for clinicians managing adults with suspected and confirmed septic shock and sepsis-associated organ dysfunction.

## KEYWORDS

adults, AGREE II, clinical practice guideline, sepsis, septic shock

## 1 | BACKGROUND

Sepsis and septic shock remain a leading global cause of mortality and morbidity.<sup>1-3</sup> Anaesthesiologists and intensivists are regularly involved in the identification, resuscitation and management of adults with sepsis and septic shock. In November 2021, the *Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021* was published.<sup>4</sup>

The Clinical Practice Committee (CPC) of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine (SSAI)

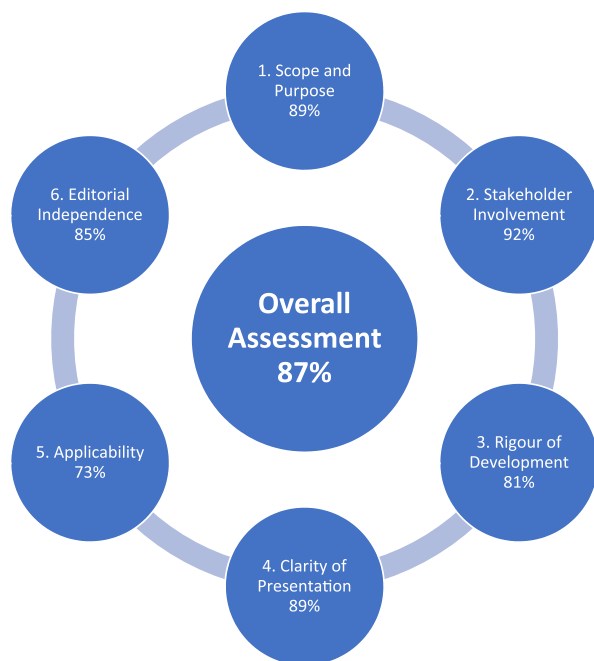
decided to appraise this guideline for possible endorsement to guide Scandinavian anaesthesiologists and intensivists in the identification, resuscitation, and management of adults with sepsis and septic shock.

## 2 | METHODS

The SSAI CPC assessed the guideline using the Appraisal of Guidelines for REsearch and Evaluation (AGREE) II tool,<sup>5</sup> as per the outlined process for endorsement of non-SSAI guidelines.<sup>6</sup>

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2022 The Authors. *Acta Anaesthesiologica Scandinavica* published by John Wiley & Sons Ltd on behalf of Acta Anaesthesiologica Scandinavica Foundation.



**FIGURE 1** Summary of the Appraisal of Guidelines for REsearch and Evaluation (AGREE) II assessment<sup>5</sup> [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

### 3 | RESULTS

Five SSAI CPC members completed the appraisal. One member co-authored the guideline and was excluded from the evaluation, as per the SSAI endorsement process.<sup>6</sup>

The individual domain totals were: 1) scope and purpose 89%; 2) stakeholder involvement 92%; 3) rigor of development 81%; 4) clarity of presentation 89%; 5) applicability 73%; 6) editorial independence 85%; 7) overall assessment 87% (Figure 1).

The breakdown of the individual appraisers (de-identified) is available in the Supplementary Material.

### 4 | DISCUSSION

This clinical practice guideline on the management of sepsis and septic shock in adults received overall high ratings on all domains with an acceptable agreement between the SSAI CPC appraisers. We believe this guideline can serve as a useful bedside decision aid for clinicians managing adults with suspected and confirmed sepsis and septic shock.

### 5 | CONCLUSION

The SSAI CPC endorses the clinical practice guideline the *Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021*.<sup>4</sup>

### DISCLOSURE OF INTEREST

No Clinical Practice Committee member had direct conflicts of interest. MHM was a co-author of the guideline assessed and did not participate in the AGREE II assessment, as per the SSAI endorsement process. No other authors had indirect conflicts of interest.

### ORCID

Marius Rehn  <https://orcid.org/0000-0001-9519-241X>

Martin Ingi Sigurðsson  <https://orcid.org/0000-0001-7054-0844>

Arvi Yli-Hankala  <https://orcid.org/0000-0002-5029-9181>

Morten Hylander Møller  <https://orcid.org/0000-0002-6378-9673>

### REFERENCES

1. Fleischmann C, Scherag A, Adhikari NK, et al. Assessment of global incidence and mortality of hospital-treated sepsis. current estimates and limitations. *Am J Respir Crit Care Med*. 2016;193(3):259-272. [10.1164/rccm.201504-0781OC](https://doi.org/10.1164/rccm.201504-0781OC)
2. Fleischmann-Struzek C, Mellhammar L, Rose N, et al. Incidence and mortality of hospital- and ICU-treated sepsis: results from an updated and expanded systematic review and meta-analysis. *Intensive Care Med*. 2020;46:1552-1562.
3. Rhee C, Dantes R, Epstein L, et al. Incidence and trends of sepsis in US hospitals using clinical vs claims data, 2009-2014. *JAMA*. 2017;318(13):1241-10.1001/jama.2017.13836
4. Evans L, Rhodes A, Alhazzani W, et al. Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021. *Intensive Care Med*. 2021;47:1181-247.
5. Brouwers MC, Kho ME, Browman GP, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *CMAJ*. 2010;182:E839-E842.
6. 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 may be found in the online version of the article at the publisher's website.

**How to cite this article:** Rehn M, Chew MS, Olkkola KT, Ingi Sigurðsson M, Yli-Hankala A, Hylander Møller M. Surviving sepsis campaign: International guidelines for management of sepsis and septic shock in adults 2021 - endorsement by the Scandinavian society of anaesthesiology and intensive care medicine. *Acta Anaesthesiol Scand*. 2022;66:634-635. doi:[10.1111/aas.14045](https://doi.org/10.1111/aas.14045)