SSAI Clinical Practice Committee – guideline work flow v2

The following document outlines key steps (Figure 1) in the development and/or endorsement of Scandinavian SSAI clinical practice guidelines.

A. Formal matters

1. Suggestion for a Scandinavian clinical practice guideline or endorsement of an external clinical practice guideline?

Contact the SSAI Clinical Practice Committee (att: Morten Hylander Møller, mortenhylander@gmail.com).

2A. Proposal for a new SSAI clinical practice guideline?

The SSAI Clinical Practice Committee will assist in appointing national SSAI members to the guideline task force group, including selection of a task force leader.

Ideally, all five Scandinavian countries should be represented in the task force group.

The task force group will be sanctioned by the SSAI Board.

Importantly, task force members should accept and want to adhere to standards for preparing trustworthy clinical practice guidelines (GRADE [1]).

2B. Endorsement of an existing external clinical practice guideline?

The SSAI Clinical Practice Committee will assess if the guideline adheres to standards for preparing trustworthy clinical practice guidelines (GRADE [1]).

The decision will be sanctioned by the SSAI Board.

B. Methodological matters

3. Outline the clinical research question

Explicitly outline the clinical research question [2].

4. Formulate PICOs

Explicitly define

1) the **P**opulation of interest, including relevant subgroups
2) the **I**ntervention under scrutiny
3) the **C**omparator
4) relevant patient-important **O**utcomes [2]

Importantly, exclusively patient-important (clinically relevant) outcome measures should be included [3]. Potential benefits as well as potential harms should be assessed.

5. Search for literature

Systematically search for recently updated high-quality systematic reviews (answering the clinical research question), e.g. in Medline, Cochrane Library and Embase. If no systematic reviews are available, search for randomized controlled trials, and secondarily observational studies.

6. Generate an estimate of the effect for each outcome

Search for summary statistics (meta-analyses/Forest plots) in the identified updated systematic reviews. If no systematic reviews exist, generate summary estimates (Figure 2) of the identified randomized controlled trials (observational studies) using Review Manager (freeware).

7. Assess the quality of evidence using GRADE

Use the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system for assessing the quality of evidence/the confidence in the effect-estimates from “high” to “very low” (Figure 3)[1].

In brief, downgrade the quality of evidence for:

1) risk of bias, including lack of blinding, or early termination of studies [4]
2) inconsistency (unexplained heterogeneity) [5]
3) indirectness (including other patient populations or use of surrogate outcomes) [6]
4) imprecision (wide confidence interval around the effect estimate) [7]
5) publication bias [8]

In rare cases the quality of evidence can be up-graded [9].

8. Move from evidence to recommendations

When moving from evidence to recommendations, four factors should be considered:

1) benefits and harms
2) quality of evidence
3) values and preferences (of patients or their proxies)
4) cost considerations

GRADE classifies recommendations as “strong” when virtually all informed patients would choose the recommended management strategy. “Weak” recommendations apply when fully informed patients would choose different management strategies, and reflects a close call between benefits and harms, uncertainty regarding treatment effects, questionable cost-effectiveness, or variability in values and preferences [1,10].

9. Prepare summary of findings tables

Use GradePro (freeware) to prepare summary of finding tables with anticipated relative and absolute effects for the outcomes, together with the confidence in the effect-estimates[11,12].

10. Manage conflicts of interest

All authors should explicitly manage intellectual and financial conflicts of interest on a recommendation per recommendation basis [13].

11. Write up the guideline

Write up the guideline, including details on the key steps above [13].

It may be of help to consult recently published SSAI clinical practice guidelines [14,15].

12. Forward the guideline to the SSAI Clinical Practice Committee

In order to make sure that the guideline adheres to standards for preparing trustworthy clinical practice guidelines (GRADE), please forward the guideline to the SSAI Clinical Practice Committee (att: Morten Hylander Møller, mortenhylander@gmail.com).

The SSAI Board will be informed about the CPC’s recommendation.

13. Submit the guideline

Following approval by the SSAI Clinical Practice Committee, the guideline should be submitted to *ACTA Anaesthesiologica Scandinavica.*

14. Time line

The Clinical Practice Committee of SSAI expects that Nordic clinical practice guidelines are completed within 12 months of constitution of the guideline task force.

For questions of any kind regarding the development of Scandinavian SSAI clinical practice guidelines, please contact the Clinical Practice Committee (att: Morten Hylander Møller, mortenhylander@gmail.com).

Figure 1. Overview of development of Scandinavian clinical practice guidelines according to GRADE. From Guyatt et al.[16].

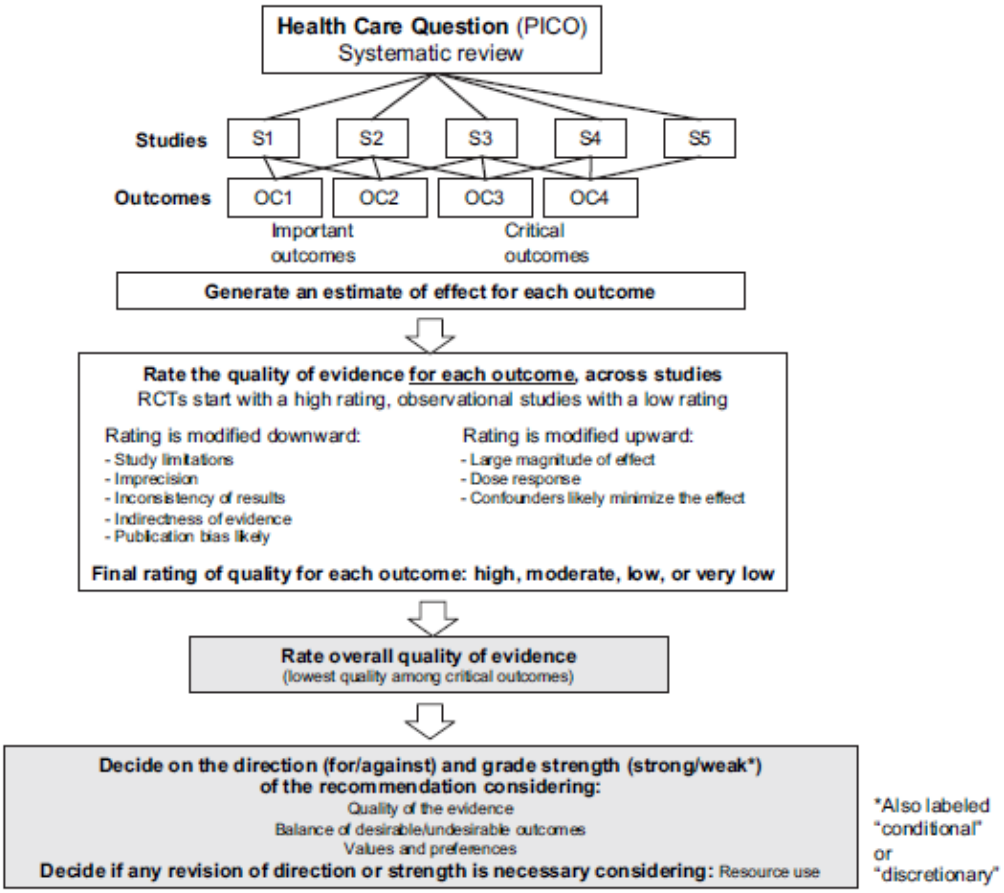

Fig. 1. Schematic view of GRADE's process for developing recommendations. *Abbreviation*: RCT, randomized controlled trials.

Figure 2. Example of summary estimates (meta-analyses/Forest Plots). From Perner et al.[14].

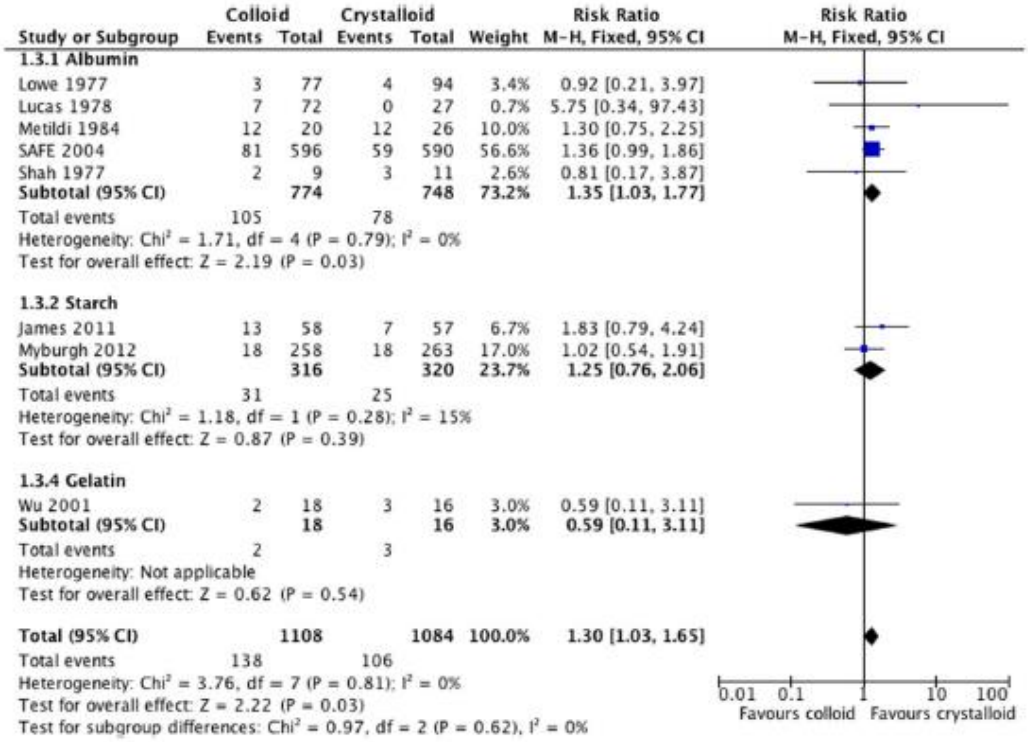

Fig. 2. Forest plot of all-cause mortality in randomised trials of crystalloid vs. colloid solutions for resuscitation of patients with trauma.[11,15,34-39] The trial results were sub-grouped based on the colloid solution (albumin, starch and gelatin) used in the trials. Size of squares for risk ratio reflects weight of trial in pooled analyses. Horizontal bars represent 95% confidence intervals.

Figure 3. Assessment of the quality of evidence according to GRADE. From Guyatt et al.[16].

Table 3
A summary of GRADE's approach to rating quality of evidence

Study design	Initial quality of a body of evidence	Lower if	Higher if	Quality of a body of evidence
Randomized trials	High ⇒	Risk of Bias −1 Serious −2 Very serious Inconsistency −1 Serious −2 Very serious Indirectness −1 Serious −2 Very serious Imprecision −1 Serious −2 Very serious Publication bias −1 Likely −2 Very likely	Large effect +1 Large +2 Very large Dose response +1 Evidence of a gradient All plausible residual confounding +1 Would reduce a demonstrated effect +1 Would suggest a spurious effect if no effect was observed	High (four plus: ⊕⊕⊕⊕) Moderate (three plus: ⊕⊕⊕◯) Low (two plus: ⊕⊕◯◯) Very low (one plus: ⊕◯◯◯)
Observational studies	Low ⇒			

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