

# PROcedure-SPECific postoperative pain management (PROSPECT) recommendations: a rigorous methodology to minimise bias

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on behalf of the PROSPECT Working Group

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## Background and Aims

- PROSPECT: web-based clinical decision support programme, which aims to formulate robust evidence-based recommendations for procedure-specific postoperative pain management.
- Initiated by an expert Working Group of surgeons and anaesthesiologists.
- The PROSPECT methodology has been refined, with the aim of increasing the rigour and transparency of the systematic review process and of the formulation of the consensus recommendations by the Working Group.

### Review of abstracts and identified papers

#### Inclusion criteria:

- Randomised clinical trials of analgesic, anaesthetic and operative interventions relating to the surgical procedure being reviewed
- Pain scores from a linear pain scale, e.g. visual analogue scale (VAS) or verbal or numerical rating scale (VRS, NRS)
- Only English language studies are included, due to time and resource constraints

**Subgroup** (consists of at least two members of the Working Group): agrees literature search terms, determines the level of evidence of each study, reviews the summary 'Outcomes Document', drafts transferable evidence, clinical practice information and recommendations

## Methods

- The refined methodology was formulated by the Working Group and first applied in the 2006 updated review of postoperative pain management for laparoscopic cholecystectomy.

### Assessment of quality and level of evidence of each study

The researcher performs quality assessment:

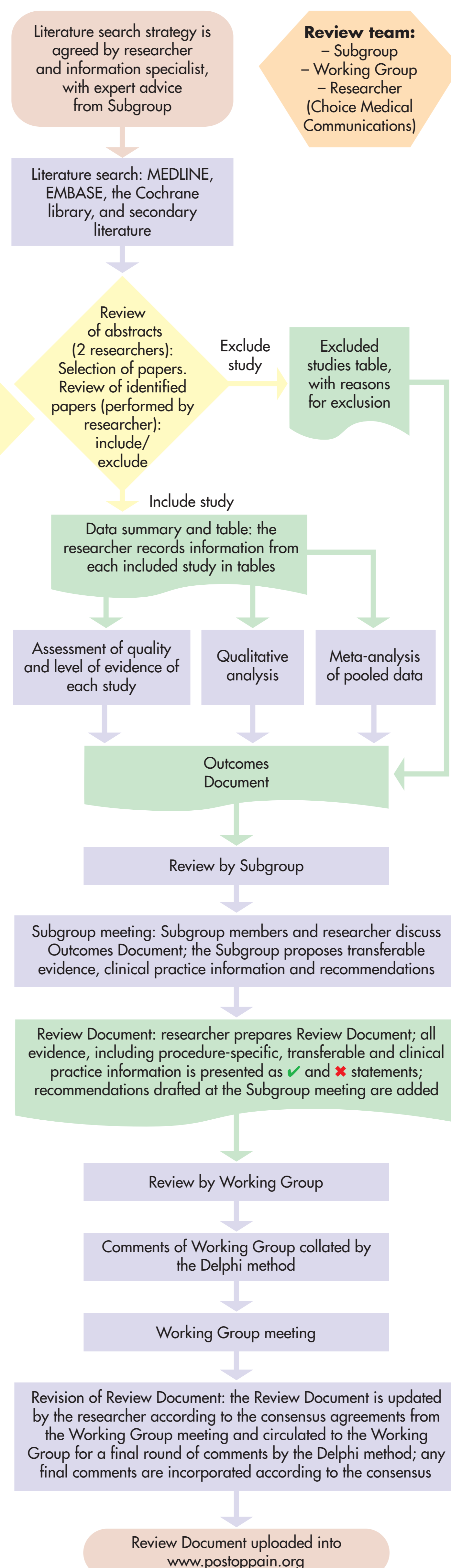
- quality scores are assigned, according to Jadad *et al.*,<sup>1</sup> to indicate appropriate randomisation (0–2), blinding (0–2) and statement of withdrawals (0–1)
- scores A–D are assigned to indicate adequacy of allocation concealment: A=adequate, B=unclear, C=inadequate; D=not used

The quality assessment is validated by the PROSPECT Subgroup. The level of evidence is then determined by the PROSPECT Subgroup and the researcher independently, according to Sackett *et al.*<sup>2</sup> Oxford Centre for Evidence-Based Medicine tables.

## Results

- The step-by-step process by which the PROSPECT Working Group formulates its recommendations is presented in the Procedural Flowchart.

### Procedural Flowchart



### Qualitative analysis

The researcher performs qualitative analyses for each group of studies that report similar treatment comparisons (for example, all studies comparing incisional local anaesthetics *versus* placebo); all analyses are reported in the summary Outcomes Document

### Meta-analysis of pooled data

The researcher performs quantitative analyses where possible, using Review Manager 4.2.2 software,<sup>3</sup> which has been developed for Cochrane Collaboration systematic reviews; quantitative analyses are reported in the summary Outcomes Document

### Working Group process: formulation of consensus recommendations

#### Delphi method

Following evaluation of the Review Document by the Working Group members, comments on the evidence and recommendations are forwarded only to the researcher, and not to the whole Working Group; individual comments are then collated for discussion at a round-table meeting

### Working Group meeting

Collated comments are discussed and the recommendations are finalised; where consensus is not reached by group discussion, a modified Nominal Group Process is used, which involves iterative rounds of discussion and voting, until consensus is reached

## Conclusion

- The process by which the PROSPECT Working Group formulates its recommendations has been refined to take greater account of the quality of available evidence and to reduce the potential for bias in the formulation of recommendations. This improved methodology should help fulfil the core aims of PROSPECT and give users added confidence in the evidence-based recommendations.

## References

1. Jadad AR, *et al.* *Control Clin Trials* 1996; **17**: 1–12.
2. Sackett DL, *et al.* *Evidence-Based Medicine: How to Practice and Teach EBM*. London: Churchill Livingstone, 2000.
3. RevMan Analyses [Computer program]. Version 1.0 for Windows. In: *Review Manager (RevMan) 4.2*. Oxford, England: The Cochrane Collaboration, 2003

### Acknowledgement

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