

## Equity considerations in EPOC reviews

### Differences in relative effects

Consideration of differences in relative effects for disadvantaged populations should be addressed similarly to any other subgroup analysis (see [What are explanatory factors and why should they be included in protocols?](#)).<sup>1,2</sup> Review authors should:

- Include plans for any subgroup analyses in their protocol, including
  - Specification of which subgroups will be investigated
  - The predicted direction of subgroup effect
  - The indirect evidence supporting the prediction (e.g. biological or sociological rationale; studies of other relevant populations, interventions or outcomes)
- Give consideration to all potentially disadvantaged groups for which the intervention might have a different effect based on the intervention's mechanism of action; including economic status, employment or occupation, education, place of residence, gender, and ethnicity
- Investigate a small number of subgroups (i.e. only those for which there is a plausible reason (indirect evidence) for anticipating a subgroup effect)
- Use appropriate tests of interaction to assess the probability that any observed differences might have occurred by chance
- Examine the consistency of subgroup effects across studies
- Examine the consistency of subgroup effects across related outcomes
- Clearly and comprehensively report all subgroup analyses, including the extent to which criteria for evaluating the credibility of each subgroup analysis were met<sup>2</sup>
- Use language that is consistent with the extent to which such criteria were met (and the extent to which we can be confident in the estimated subgroup effect) when reporting potentially important subgroup effects;<sup>3</sup> e.g.
  - If important criteria are not met (e.g. a high probability that the apparent subgroup effect might have occurred by chance or inconsistent subgroup effects across studies for which there is not a compelling explanation) report the difference in effects as hypotheses warranting further investigation and do not include them in the abstract or conclusions (“The difference in effect is uncertain.”)
  - If it is unlikely that differences in effects could have occurred by chance, but the estimated subgroup effect warrants low confidence due to other criteria not being met, report the subgroup effect as hypotheses and do not include them in the abstract or conclusions (“There may be a difference in effect.”)
  - If most of the criteria are met and it is likely that there is an important subgroup effect, report it as probable (“There probably is a difference in effect.”)
  - If all or nearly all of the criteria are met and a high degree of confidence is warranted, report it without qualification (“There is a difference in effect.”)
- In the absence of compelling evidence of a subgroup effect, assume that the best estimate of effect for any subgroup is the overall effect and they should report their findings accordingly.<sup>4</sup>
- If a population for which there is a plausible reason for anticipating a different effect was not included in any of the included studies, consider the evidence summarised in the review as indirect evidence for the relevant population and assess the extent to which the quality of evidence should be considered lower for that population<sup>5</sup>

### Applicability of the results of the review to disadvantaged populations

The applicability of the findings of a review to disadvantaged populations should be addressed similarly to considerations of applicability to any other population.<sup>6-10</sup> Review authors should:

- Routinely consider

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\* Potentially important subgroup effects are differences in the relative effect that are large enough that people might make different decisions based on the subgroup effect than they would based on the overall effect.

- economic status, employment or occupation, education, place of residence, gender, and ethnicity as potential reasons for there being a differences in the applicability of the results to disadvantaged populations and
- resource or capacity constraints, health system arrangements or baseline conditions as potential reasons for there being a differences in the applicability of the results to low-income countries<sup>10</sup>
- In the protocol specify any disadvantaged populations or settings for which the intervention is highly relevant and the results of the review might not be applicable because there is
  - Plausibility (indirect evidence) that the intervention might have a different relative effect based on the intervention's mechanism of action,
  - Evidence that suggests a difference in compliance and, therefore, a different effect
  - Evidence that suggests different baseline risks and, therefore, a different absolute effect
- Clearly report any disadvantaged population that was specified in the protocol and the reasons why consideration was given to the applicability of the results to the specified population
- Prepare a summary of findings table for the disadvantaged population if there are potentially important<sup>†</sup> differences in applicability
- In the discussion section of the review address the applicability of the results to populations for which the intervention is highly relevant and there are potentially important differences in applicability
  - Discuss why differences in the applicability of the results might lead to different decisions, but
  - Do not make recommendations (for any population)

## References

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2. Sun X, Briel M, Walter SD, Guyatt GH. Is a subgroup effect believable? Updating criteria to evaluate the credibility of subgroup analyses. *BMJ* 2009; 340:850-4.
3. Glenton C, Santesso N, Rosenbaum S, Strømme Nilsen E, Rader T, Ciapponi A, Dilkes H. Presenting the results of Cochrane systematic reviews to a consumer audience: a qualitative study. *Med Decis Making* 2010; 30:566-77
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6. Schünemann HJ, Oxman AD, Vist GE, Higgins JPT, Deeks JJ, Glasziou P, Guyatt GH, on behalf of the Cochrane Applicability and Recommendations Methods Group. 12.3 Interpreting results and drawing conclusions: Issues in applicability. In: Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from [www.cochrane-handbook.org](http://www.cochrane-handbook.org)
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<sup>†</sup> A potentially important difference in applicability is a difference in the size of the absolute effect (due to different relative effects, different levels of compliance or different baseline risks) or a difference in confidence in the estimates of effect (quality of evidence) that are large enough that people might make different decisions when taking this into consideration then they would make based on a summary of findings of the overall results of the review.