The GRADE approach is the most complete approach encompassing all factors but users will benefit from a better description of the

**Methods** The authors used an iterative process of suggesting guidance and obtaining feedback to arrive at a proposed approach.

**Results** For participants with missing data, systematic reviewers can use a range of plausible assumptions in the intervention and control arms. Extreme assumptions include ‘all’ or ‘none’ of the participants had an event, but these assumptions are not plausible. Less extreme assumptions may draw on the incidence rates within the trial (e.g., same incidence in the trial control arm) or in all trials included in the meta-analysis (e.g., highest incidence among control arms of all included trials). The primary meta-analysis may use either a complete case analysis or a plausible assumption. Sensitivity meta-analyses to test the robustness of the primary meta-analysis results should include extreme plausible assumptions. When the meta-analysis results are robust to extreme plausible assumptions, inferences are strengthened. Vulnerability to extreme plausible assumptions suggests rating down confidence in estimates of effect for risk of bias.

**Conclusions** This guide proposes an approach to establishing confidence in estimates of effect when systematic reviewers are faced with missing participant data for binary dichotomous outcomes in randomised trials.

**Background** Guideline developers addressing quality of evidence commonly confront studies with missing data.

**Objectives** To develop a framework for assessing risk of bias resulting from missing participant data for continuous outcomes in systematic reviews.

**Methods** We developed a range of progressively more stringent imputation strategies to challenge the robustness of the pooled estimates. We applied our approach to two systematic reviews.

**Results** We used 5 sources of data for imputing means for participants with missing data: [A] the best mean score among the intervention arms of included trials, [B] the best mean score among the control arms of included trials, [C] the mean score from the control arm of the same trial, [D] the worst mean score among the intervention arms of included trials, [E] the worst mean score among the control arms of included trials.

Using these sources of data, we developed four progressively more stringent imputation strategies. In the first example review, effect estimates were diminished and lost significance as the strategies became more stringent, suggesting the need to rate down confidence in estimates of effect for risk of bias. In the second review, effect estimates maintained statistical significance using even the most stringent strategy, suggesting missing data does not undermine confidence in the results.

**Discussion** Our approach provides rigorous yet reasonable and relatively simple, quantitative guidance that guideline developers can use for judging the impact of risk of bias as a result of missing participant data in systematic reviews of continuous outcomes.