Recent meta-analyses neglect previous systematic reviews and meta-analyses about the same topic: a systematic examination.

As the number of systematic reviews is growing rapidly, we systematically investigate whether meta-analyses published in leading medical journals present an outline of available evidence by referring to previous meta-analyses and systematic reviews. We searched PubMed for recent meta-analyses of pharmacological treatments published in high impact factor journals. Previous systematic reviews and meta-analyses were identified with electronic searches of keywords and by searching reference sections. We analyzed the number of meta-analyses and systematic reviews that were cited, described and discussed in each recent meta-analysis. Moreover, we investigated publication characteristics that potentially influence the referencing practices. We identified 52 recent meta-analyses and 242 previous meta-analyses on the same topics. Of these, 66% of identified previous meta-analyses were cited, 36% described, and only 20% discussed by recent meta-analyses. The probability of citing a previous meta-analysis was positively associated with its publication in a journal with a higher impact factor (odds ratio, 1.49; 95% confidence interval, 1.06 to 2.10) and more recent publication year (odds ratio, 1.19; 95% confidence interval 1.03 to 1.37).
Additionally, the probability of a previous study being described by the recent meta-analysis was inversely associated with the concordance of results (odds ratio, 0.38; 95% confidence interval, 0.17 to 0.88), and the probability of being discussed was increased for previous studies that employed meta-analytic methods (odds ratio, 32.36; 95% confidence interval, 2.00 to 522.85). Meta-analyses on pharmacological treatments do not consistently refer to and discuss findings of previous meta-analyses on the same topic. Such neglect can lead to research waste and be confusing for readers. Journals should make the discussion of related meta-analyses mandatory.