

- A dedicated website to clearly explain biases that systematic reviews are prone to
- Guidelines to help peer-reviewers, journal editors and the public understand appropriate systematic review team composition and assess potential for bias or poor conduct.

## REFERENCE

1. Ioannidis J. The mass production of redundant, misleading, and conflicted systematic reviews and meta-analyses. *The Milbank Quarterly*. 2016;**94**(3):485–514.

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## ESTIMATING THE EVIDENCE GAP IN NETWORK META-ANALYSIS

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**Objectives** Network meta-analysis (NMA) provides plots of interventions networks per outcome. Such plots also demonstrate all possible pairwise comparisons in a network. This paper discusses the gap between evidence expected from a given network and observed evidence from trials by use of a simple formula.

**Method** Published network meta-analyses in BMJ, JAMA, Lancet and New England Journal of Medicine were collected (2003-2019). The potential number of comparisons per network plot was calculated using  $(n*(n-1))/2^1$  and the number of direct comparisons from trials was deducted to obtain the 'evidence gap' per network plot. We also compared evidence gap in the networks with low or high number of intervention nodes. All steps were conducted by GA, repeated by FS and supervised by CEA.

**Results** We excluded four NMAs because of mixing study designs but were able to include 41 NMAs of randomised controlled trials (RCTs). We identified 77 network plots from NMAs. The plots consisted of between 2 and 31 intervention nodes. Only four plots were complete and based on only direct comparisons. The evidence gap was between 0.06 and 0.88 for the remainder - between 10% and 90% of the comparisons in the network have not yet been reported in RCTs. There is a positive and strong correlation between the number of interventions and the number of indirect comparisons ( $R^2 = 0.894$ ) highlighting the considerable gap in the certainty of body of evidence as presented in NMAs. The evidence gap is filled statistically without real-world evidence from trials and the results of NMA are particularly problematic when there are many interventions in the plot.

**Conclusions** Researchers who undertake NMAs should report network plots and a list of missing comparisons from the trials. They should also report the evidence gap to emphasise the proportion of the NMA which is based on data derived from real world experiments and the proportion from statistic-based inference. The findings of our research call for an update of the PRISMA for Network Meta-Analyses reporting guideline.

## REFERENCE

1. Shokraneh F, Adams CE. A simple formula for enumerating comparisons in trials and network meta-analysis. *F1000Research*. 2019 Jan 9; 8:38. DOI 10.12688/f1000research.17352.1

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## OUR DOCTORS NEED HELP! – 'EVIDENCE BASED MEDICINE DOCTORS INFORMATION CENTERS' COULD BE THE KEY TO FACILITATE DAILY PRACTICE

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Our doctors need help! – 'Evidence Based Medicine Doctors Information Centers' could be the key to facilitate daily practice Every month 150.000 articles are published in 20.000 different medical journals. In order to stay up-to-date with constantly increasing research one needs to read 500 Studies each week. That is 1,5m of paper every week. As a comparison: in 1980 it was it merely 1 study per week one had to read. As medical professional it can thus be very challenging and time consuming to find good and solid evidence in a myriad of research of today's society that is pressured to constantly publish new data and information. Even guidelines can be written incomprehensibly or might even be contradicting themselves. In order to critically question studies, some practice and additional training are needed, which are often neglected in medical education. Many doctors thus lack essential skills to select, understand and critically appraise information that is being presented to them. We need more tools for clinical practice that facilitate decision making in evidence-based medicine. The 'evidence-based medicine information center for doctors' is a great example of how this can be achieved. It is a project, originally initiated by the Cochrane Collaboration Austria, that answers clinical questions from everyday hospital life in the form of rapid reviews. The great thing about rapid reviews is that evidence is synthesized more quickly than in a systematic review, since certain methodological aspects are abbreviated, and all the important knowledge is compressed in a short and understandable matter. For each question the first step is a systematic literature search in several databases. Two research assistants then examine a large number of international studies to see whether they fit the question. After abstract screening all articles that are shortlisted are examined again and the entire study is checked for its quality, i.e. whether the methodological implementation meets internationally recognized standards. Finally, an assessment of how much confidence the Information Centre has in the results of the selected studies is included in each Rapid Review, which gives the doctors an explanation of how strong and trustworthy this evidence is. This tool, specifically designed for doctors, gives guidance in clinical decision making and answers, 'real life' and relevant questions that arise when good evidence cannot be found, is not understood or guidelines are simply unclear. Of course, one could argue that training could be a more efficient way to equip doctors with the skills necessary to assess evidence. But let's be realistic – who has the time? This tool should be implemented in every country to give our doctors the possibility to come into contact with those that have been trained to synthesize and assess evidence effectively. The clinical decisions our doctors make directly affect the health of our patients, so it should be our main priority to find and implement a solution that supports our medical professionals to make an informed and fair decision. If it works in Austria, why wouldn't it in other countries?