Use of network meta-analyses in WHO guideline recommendations

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Abstract

Background: Clinical practice guidelines (CPGs) are defined as "statements that include recommendations intended to optimize patient care, that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options". Currently, guidelines have increasingly used systematic reviews and meta-analyses of randomized, controlled trials (RCTs) to form the basis of recommendations. Standard meta-analytic techniques can be used if the guideline addresses pairwise comparisons, for example, treatment A versus treatment B. If a guideline is attempting to address the question of which treatment is best among multiple options, however, standard meta-analysis may not be adequate. By contrast, network meta-analysis (NMA), a method that uses information from both direct and indirect comparisons and makes inferences about the comparative effectiveness of all the treatments of interest in a single analysis, is particularly suited in such situations. Although NMA offered several advantages to the process of developing clinical guidelines, only 8% of 138 NICE guidelines had used NMA in 2012. NMA is expected increasingly to use and adapt for develop clinical guidelines in the future.

Objective: To investigate how many guideline recommendations were based on NMA. And what advantages have been provided for guidelines based-on NMA when compared to pairwise meta-analysis.

Method: WHO (http://www.who.int/en/) was searched to identify all published CPGs from inception to February, 2017. We collected the general information of included CPGs, recommendations from each guideline, and compared the recommendations with previous one based-on pairwise meta-analysis. Comparison analysis was used to explore the advantages of NMA to form the recommendations.

Results and conclusions: This study is ongoing and results will be presented at the Evidence summit as available.