Combining cost-effectiveness results into a single measurement: What is the value?

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We read with great interest the publication entitled "Economic evaluation of seasonal influenza vaccination in elderly and health workers: A systematic review and meta-analysis".[1] We value the incentive of the authors' approach to pooling the existing economic evidence; however, we question the value of combining incremental net monetary benefit into a single measure by meta-analysis. Using variance of results to weight study seems inappropriate, as the uncertainty in a cost-effectiveness analysis was not measured by sample size, but the uncertainty related to the input parameters. The large uncertainty around results should not be linked to lower weights. Moreover, there is widespread recognition among economists that the cost-effectiveness of a particular intervention depends on the local situation.[2] Although the authors aimed to improve the homogeneity of studies by conducting stratified meta-analyses by population, perspective, country income-level, and herd-effect, they failed to consider other factors which could significantly change the cost-effectiveness results, such as variance in healthcare system, opportunity cost, widespread methodological heterogeneity and industry-sponsored bias as the key items.[3,4] Previous research has shown that industry-funded health economic evaluations of herpes zoster vaccination report more favourable cost-effectiveness ratios than non-industry-funded evaluations.[5] This means companies could influence the results by publishing more economic evaluations reporting positive findings of their products. Finally, we noticed that all economic evaluations included by the authors are model-based economic evaluations, which are themselves syntheses. Conducting synthesis of such studies using meta-analysis method is not deemed to be appropriate.

Contributors

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Declaration of interests

None.

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