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Missed opportunities in health care education evidence synthesis

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Editor –We read with excitement the systematic review on how to teach evidence-based medicine (EBM) to medical trainees.¹ The conclusions of the paper¹ represent a concise and accurate reflection of this large synthesis of evidence. Unfortunately, we were left reflecting not on the evidence base illuminated by this review, but on the missed opportunities we will highlight herein. These examples are not in any way meant to represent a specific set of criticisms of this work,¹ but, rather, are intended as exemplars of wider methodological issues that currently exist within much published material on the synthesis of evidence in health care education.²

In the course of introducing the problems of teaching the synthesis of evidence to medical trainees, the authors¹ fail to mention any relevant conceptual framework or theoretical constructs. Such elements, even if they were to be highlighted with exemplars from other related disciplines such as education in primary research skills, would inform the reader and better situate the work. This is

a common problem; many very recently published examples from across the health education disciplines are similarly devoid of conceptual constructs.^{3–6}

The stated aim of Ilic and Maloney's review¹ is '[to] identify[ing] the most effective teaching for EBM'; thus, it represents what is known as a 'justification' review.⁷ This is not what its title, 'Methods of teaching medical trainees evidence-based medicine: a systematic review',¹ conveys to the reader; rather, the title suggests a 'descriptive' review and a paradoxically far more interesting focus. As has been discussed within the pages of this very journal on countless occasions, primary education research that focuses on questions of 'whether' education is effective often ignores far more illuminating and useful questions, such as those of 'how', 'why', 'when' and 'what'.⁷ This shift in focus is now also reflected in evidence synthesis.^{2,8}

The methodology of the study¹ is clearly transparent, robust and well reported, and is consistent with the actual aims of the study. However, this does not necessarily equate to the best outcome for the reader. The decision to limit the studies included to randomised controlled trials certainly limits the amount of evidence, but does not necessarily enhance the strength of the conclusions, given the reach of the tapestry of evidence often on offer within the field.⁹ Additionally, it is not clear whether any attempts to collect data on the spe-

cific interventions in order to allow replication or to contact authors for such data that were unavailable were made. It has recently been noted that whereas poor reporting of interventions in non-pharmacological trials is commonplace across disciplines, in the vast majority of cases authors will supply further details on request.¹⁰ Although contacting authors routinely might be considered a lofty standard for evidence synthesis, signposting for readers the extent to which the studies included did provide specific details of the courses in question would support readers who seek to replicate such works.¹¹

This study¹ is systematic, transparent and well communicated, and it succeeds in addressing the question of the effectiveness of education in EBM through a thorough synthesis of evidence. It is unfortunate that instances of such hard work within this and many other examples of systematic review items in education^{3–6} do not offer more to researchers and educators. Although consideration of the effectiveness of education is valid and important, far more illuminating opportunities exist in the synthesis of evidence. Such synthesis should consider delivering clarity to readers on the constituents of the education to which the evidence refers in order to facilitate the rapid replication of quality works and to more deeply clarify the answers to questions and thus to offer insight at a richer, conceptual

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level. Such forms of evidence synthesis may be more relevant to all involved and will support actual changes in educational practice and policy.

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