

COCHRANE CAM REVIEWS COMMENTARY: IS THERE MORE TO QUALITY THAN THE RESEARCH METHOD ITSELF?

| Vinjar Fønnebo, MD, MSc, PhD |

The Cochrane Complementary Medicine Field is the group within the Cochrane Collaboration focused on facilitating the conduct of Cochrane systematic reviews of CAM therapies. The CAM Field represents an international collaborative effort among researchers, clinicians, consumers, and CAM practitioners from nearly every continent. The Field's central

office is located at the Center for Integrative Medicine, University of Maryland School of Medicine, 520 W. Lombard St., Baltimore, MD 21201. For more information, contact Eric Manheimer at: emanheimer@compmed.umm.edu. The Complementary Medicine Field is supported by Grant R24 AT001293 from the National Center for Complementary and Alternative Medicine

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Cochrane reviews have been rapidly established as the gold standard when questions are raised about efficacy or effectiveness of a treatment. An elaborate system of quality checks has ensured that Cochrane reviews address both known and unknown sources of bias that might threaten internal validity and, therefore, the rigorous Cochrane review is often considered the optimal study design for evaluating the "true" effect of a treatment. Cochrane reviews have thus been important in guiding clinicians and funders when determining which treatments to choose or fund.

Cochrane reviews also aim to take clinical relevancy into consideration. To ensure that Cochrane reviews address clinically relevant questions, the Cochrane Collaboration suggests not only that review teams should include authors with clinical knowledge of the subject area, but also that healthcare consumers should be asked to peer review completed reviews.¹ Although the Cochrane Collaboration has been ahead of other producers of systematic reviews in advancing and promoting methods to evaluate both internal validity and clinical relevance, much work still remains to be done, particularly with evaluating clinical relevance, which has, until now, been secondary to evaluating internal validity. Less attention to clinical

relevance might seem reasonable at first glance because investigators often come from the ranks of clinicians in the same clinical field. That is, no clinician/investigator would consider putting a treatment to the test in a randomized trial if it was "out of bounds" of the clinical field or was unthinkable as a treatment option in real life.

When the Cochrane collaboration ventured into the field of complementary and alternative medicine (CAM), the same approach to clinical relevance was followed. There are currently more than 400 Cochrane reviews in the area of CAM (http://www.compmed.umm.edu/integrative/cochrane_reviews.asp). Unfortunately, the primary trials in these reviews have often been performed by researchers with marginal knowledge/experience in CAM, teaming up with CAM clinicians knowing little about research methods. This has often led to an attempt to do research complying as far as possible with the pharmaceutical research model.² This rigorous research methodology has been important in developing the methodological quality of CAM research, but many studies have failed to ensure that the treatment being tested is of clinical relevance. This in turn poses an extra challenge for reviewers in the field.

Many systematic reviews on CAM therapies, and indeed, even Cochrane reviews,

are therefore at risk of suffering from three major weaknesses with regard to clinical relevance:

1. Primary trials that clearly do not reflect clinical or "best" practice are included.
2. Primary trials that represent mutually exclusive treatment traditions are combined in the same review.
3. Primary trials that address different research questions are combined in the same review.

The first point can be exemplified by a Cochrane review of acupuncture in migraine headaches,³ where I suggest 15 of 22 primary trials should be excluded for the following reasons: needling was not done in acupuncture points (four), impossible to rate adequacy of acupuncture treatment (two), both acupuncturists in the review team were less than 70% confident about appropriateness of acupuncture intervention (seven), and finally, all patients were needled in the same, standard set of acupuncture points (two).

The second point can be exemplified by a Cochrane review on homeopathy for chronic asthma,⁴ combining classical and complex homeopathy, and mixing in isopathy as well. Only one of the six trials customized the treatment to the patient's

symptom pattern, a key aspect of homeopathic theory. It must be said that the authors of this review did acknowledge that challenges existed with regard to combining trials.

The third point can be illustrated by a number of reviews combining trials that study the effect of the “whole system” of a CAM treatment with trials that address only one component of the whole treatment encounter. This is similar to the efficacy/effectiveness divide well known in research on conventional medicine. In CAM research, however, this includes more than studying a pharmaceutical drug in either a strictly controlled placebo-controlled or open-label real-life trial. In CAM, it implies that one is combining trials that include, for example, everything an acupuncturist would do or recommend in a 45-minute clinical encounter, with studies trying to decipher the isolated effect of having a needle inserted into your body at selected points.

If a systematic review makes claims about a treatment that few recognize within the corresponding clinical field, a

treatment that is not considered separately from other similar, but uniquely different treatments, and a treatment that is not clearly defined in relation to what research question was to be addressed, how much use is there in such a review?

Sadly, many CAM practitioners are unaware of the technical challenges in designing and conducting unbiased trials of clinically relevant CAM therapies, and conventional medicine practitioners and regulators and funders do not know the field of CAM well enough to understand that there is a problem. Many systematic reviews of CAM have therefore developed into a case of the Emperor’s New Clothes.

It is the responsibility of the CAM research community to address these challenges head on and make sure that the high-quality standards of the Cochrane collaboration are extended also to the field of clinical relevance. Only by addressing both methodological rigor and clinical relevance can research advance the evidence on CAM interventions. This might even be applicable in some areas of conventional medicine.

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Vinjar Fønnebo, MD, MSc, PhD, is director of the National Research Center in Complementary and Alternative Medicine at the University of Tromsø, Tromsø, Norway. He may be reached via email at: Vinjar.Fonnebo@uit.no.