What is a clinical review?

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Editorial

Traditional clinical review articles, also known as updates, differ from systematic reviews and meta-analyses.[1] Systematic reviews comprehensively examine the medical literature, seeking to identify and synthesize all relevant information to formulate the best approach to diagnosis or treatment. Meta-analyses, sometimes known as quantitative systematic reviews seek to answer a narrow clinical question, often about the specific treatment of a condition, using rigorous statistical analysis of pooled research studies. Updates review the medical literature almost as carefully as a systematic review but discuss the topic under question more broadly and make reasoned judgements where there is little hard evidence, based upon the expertise of the reviewer. It may not include evidence from foreign language journals or look for unpublished data on a topic, so will tend to be more applicable to the local situation than a systematic review, as it may take into account local shortages of equipment or personnel.

A clinical review article is therefore on a broader topic than the other two and is usually by someone versed in the topic, whereas a systematic review or meta-analysis may be carried out by a technician, usually with advice from a specialist in the field. A clinical review should be evidence based and should fulfil a number of wider requirements for *Reviews in Clinical Gerontology*. The topic should be of common interest and relevance to geriatricians, gerontologists or the professionals working in those areas. It should be relevant to the continuing medical education needs of the readers and may include a list of the topics relevant to that need. It should include a section on how the literature search was done and

include the sources of the evidence-based reviews, such as the Cochrane Collaboration, DARE or the BMJ's Clinical Evidence, or relevant web-sites, for instance a search on Google using specific terms.

It may be helpful to include search terms, but these will always be tempered by the sieving process undertaken by the author, using that unsurpassed instrument, the brain, to decide if the paper identified is relevant to the subject or not. Even the best search strategy on a topic will still find a huge amount of dross. The process of assessing papers is known as critical appraisal. This has been described using the READER (Relevance, Education, Applicability, Discrimination, Overall Evaluation) model compared with free critical appraisal.[2] Participants using the READER model gave a consistently lower overall score and applied a more appropriate appraisal to the methodology of the studies. This method was both accurate and repeatable.

This process can be dispiriting as you plough through a large number of poor quality papers to find the nuggets of gold or even a bit of non-ferrous metal. This was underlined by a study comparing the clinical trials on the treatment of schizophrenia.[3] Data were extracted from 2000 trials on the Cochrane Schizophrenia Group's register to examine the quality of the studies. Generally, studies were short in duration; over half being for six weeks' treatment or less, small with a mean number of patients of 65 and poorly reported; 64% had a quality score of 2 or less with a maximum score of 5. Perhaps the most concerning was that the studies showed no signs of improving in quality over time.

Where possible evidence based on clinical outcomes relating to morbidity, mortality, or quality of life, and studies of primary care populations should be included. In articles submitted to *Reviews in Clinical Gerontology*, it is good practice to rate the level of evidence for key recommendations. The key to this should be given with

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the paper but the simplest example might be: level 1 (randomized controlled trial, meta-analysis); level 2 (other clinical trial evidence); level 3 (consensus/expert opinion).

Non-systematic review articles have had a bad press. A paper critically appraised all the clinical reviews published in six general medical journals in 1996.[4] They used explicit criteria that have been published and validated, to judge the reviews, and found that of 158 review articles, only two satisfied all 10 methodologic criteria. Less than a quarter of the articles described how evidence was identified, evaluated, or integrated; 34% addressed a focused clinical question; and 39% identified gaps in existing knowledge. Of the 111 reviews that made treatment recommendations, 48% provided an estimate of the magnitude of potential benefits (and 34%, the potential adverse effects) of the treatment options, 45% mentioned randomized clinical trials to support their recommendations, but only 6% made any reference to costs. Another paper by Bramwell, examining the reviews in the *Journal of Clinical Oncology* in the USA, similarly found poor results.[5]

Another paper on the subject looked at reviews on the treatment of neck pain,[6] and assessed the quality, conclusions, and agreement between reviews on the conservative treatment of neck disorders. Computerized bibliographic databases were searched for reviews published before January 1998 that included neck pain and evaluated conservative therapies. Only reviews that reported at least one controlled clinical trial were considered. Of 25 review articles selected, 12 were systematic reviews. Statistical pooling was performed only in two high-quality systematic reviews. The evidence was inconclusive for the use of conservative interventions or manipulation or traction in neck pain, but many of the reviews displayed major methodological flaws.

Even Cochrane Reviews can be improved upon. A recent study compared Cochrane reviews and reviews published in paper-based journals. Two assessment tools were used to collect the data, a 23-item checklist developed by Sacks[7] and a nine-item scale developed by Oxman.[8] Cochrane reviews were found to be better at reporting some items and paper-based reviews at reporting others. The overall quality was found to be low. The authors make the point that this represents a serious situation because clinicians, health policy makers, and consumers are often told that sys-

tematic reviews represent 'the best available evidence'. Since this study, the Cochrane Collaboration has taken steps to improve the quality of its reviews through more thorough pre-publication refereeing, training and support for reviewers, and improvements in peer review. Cochrane felt that the use of evidence-based criteria (i.e., the QUOROM statement)[9] for reporting systematic reviews may help further to improve their quality.

There is doubt that, when given the same excellent data, people will come up with different recommendations. Good examples of this have been seen in a series of disputes between the National Institute of Clinical Excellence (NICE) and the Drugs and Therapeutics Bulletin, where the two august bodies have come to different conclusions about the same treatment.[10] What are we practitioners to do? Read as many reviews as possible, I guess, especially those found in *Reviews in Clinical Gerontology*, then take a consensus.

Search strategy and selection criteria

For this review of reviews, I searched the PubMed database by the National Library of Medicine website for the past 20 years, and, from review of the authors, titles, abstract, and source location, articles in full were selected for further examination. Medline searches were repeated with Ovid Technologies, Version 4.4.1, through the BMA Search Site on 9 August 2003. I also searched the Internet using the Google search engine. References were selected according to the authors' identification of relevant topics for the review and did not include non-English language papers. Articles and their abstracts were initially collected using Reference Manager v.10.

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