

welcome, but collaborations need to deepen and grow to produce results that all health care professionals can use to the benefit of patients.

- 1 Badovinac R, Conway S, Neiderman R. Bibliometric Analysis of Evidence-based Dental Therapeutics literature. *IADR Abstract* 148.
- 2 Ellis J, Mulligan I, Rowe J, Sackett D L. Inpatient general medicine is evidence based. *Lancet*; **346**: 407–10, 1995.
- 3 Geddes J R, Game D, Jenkins N E, Peterson L A, Pottinger G R, Sackett D L. What proportion of primary psychiatric interventions are based on evidence from

randomised controlled trials? *Qual In Health Care*, 1996; **5**: 215–217

- 4 Chadwick B, Dummer P, Dunstan F, et al. *A systematic review of the longevity of dental restorations*. York: NHS Centre for Reviews and Dissemination, University of York, forthcoming.
- 5 <http://www.york.ac.uk/inst/crd/ehc52.htm>
- 6 <http://www.ihs.ox.ac.uk/cebd/>
- 7 Begg C, Cho M, Eastwood S, et al. Improving the quality of reporting of randomised controlled trials. *JAMA*, 1996; **276**: 637–639.
- 8 CEBD@bhadentph.demon.co.uk
- 9 <http://www.ihs.ox.ac.uk/cebd>

Jan Clarkson,
Helen Worthington and
Iain Chalmers

Reducing harm and maximizing benefit

We would all like to believe that what we do for our patients is for their own good and in their best interests. However, most clinicians can recall instances when a clinical intervention has been more detrimental than beneficial to a patient, and several procedures in dentistry are now considered to have done more harm than good. For example it was once believed that a certain width of attached mucosa was essential for periodontal health. Based on this premise patients were subjected to uncomfortable surgery which exposed bone and resulted in loss of periodontal support. A recent meta-analysis compared surgical versus non-surgical methods of treating periodontal disease and found that only the deepest pockets benefited from the surgery¹. The extraction of asymptomatic third molars on a massive scale also seems to have been a waste of resources for patients and the NHS, particularly because it has led to patient morbidity and mortality². Currently, there are questions about the effects of routine scale and polish³, the relative merits of different restorative materials⁴ and orthodontic methods⁵.

One problem facing clinicians and patients who want to reduce harm and maximise benefit from dental care is finding relevant, reliable research evidence. It is increasingly difficult for clinicians to locate and assimilate

information from the large volume of scientific papers published in peer reviewed journals, not to mention the continuing flow of unsolicited information extolling the virtues of the latest products. Faced with these problems, practitioners have turned to review articles as the most accessible sources of practical advice.

Unfortunately, review articles are often based on an unsystematic search for and evaluation of the relevant research evidence and thus often lead to biased conclusions. The information accessible to patients is perhaps even more biased and usually comes from sensational press coverage of new developments in the dental field. Many clinicians will have experienced a patient arriving for an appointment with a press clipping, asking for information and sometimes requesting a particular treatment.

In the future, it seems likely that consumers who have heard about evidence-based clinical practice will increasingly demand relevant and reliable information before deciding on their treatment options. For both clinicians and patients, the Internet is rapidly becoming a major source of up-to-date information on the effectiveness of clinical procedures. In addition, clinicians may become more actively involved in generating relevant evidence by conducting their own research. The recent push for

Cochrane Oral Health Group
Cochrane Suite
Manchester Dental Education Centre
Higher Cambridge Street
Manchester M15 6FH
UK

Tel: +44 161 275 7818
Fax: +44 161 275 7815
E-mail: emma.tavender@man.ac.uk

research in primary dental care is a sign of how importantly this is regarded.

But what reliable, relevant research information is already out there and how can this be utilised to provide an objective account of evidence to benefit patients now? The aim of the Cochrane Collaboration, which was established in 1993, is to help people make well-informed decisions about healthcare by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of healthcare interventions. One of the nearly fifty collaborative review groups in the Cochrane Collaboration — the Cochrane Oral Health Group — was registered in 1994 and it now has a broad range of contributors including dentists, statisticians, patients, and epidemiologists.

Those who have taken on the responsibility for preparing and maintaining Cochrane Reviews are often committed volunteers. They propose a relevant question about an aspect of clinical practice and then write a protocol to address the question. The structure of their reviews is explicit, with each stage clearly defined. In an effort to minimise bias, they concentrate on evidence derived from randomised trials. The identification of relevant randomised controlled studies has been made much easier for them with the development of the Cochrane Oral Health Group's specialised register, which currently holds over 4,500 citations relating to trials falling within the Group's scope. Because published studies are more likely to report positive results than neutral or negative results, every effort is made to identify and include unpublished studies. Potential studies for inclusion are identified from a search and have to satisfy clear selection criteria and a quality assessment that is usually made by two independent people. The relevant data from studies satisfying explicit inclusion criteria are extracted and, if appropriate, a statistical analysis in the form of a meta-analysis is carried out.

All the Group's protocols and complete reviews are subject to peer review and redrafting in the light of comments, and input from patients ensures that they are written in language that should

be widely understood when they are published electronically in *The Cochrane Database of Systematic Reviews*. Comments on Cochrane Reviews are welcomed. An important advantage of publishing using electronic media means that revisions and updates can be readily effected to maintain the currency and improve the validity of reviews.

The Cochrane Database of Systematic Reviews is one of the components of *The Cochrane Library*, which is increasingly acknowledged to be the best single source of evidence about the effects of, health care. It is proving helpful to clinicians, consumers and other people taking decisions in the health services, as well as to researchers and agencies funding clinical and health services research (who need to identify priorities for further research).

Members of the Cochrane Oral Health Group are working hard to ensure that evidence relevant to the interests of dental patients¹ is assembled and contributed to *The Cochrane Database of Systematic Reviews*. Any readers who would like to explore how they might contribute to the Group's work should contact the editorial base in Manchester (contact details shown below). Those interested in learning more about *The Cochrane Library* and the Cochrane Collaboration more generally should consult the website⁶.

1. Antezak-Bouckoms A, Joshipura K, Burdick E, Tulloch J F C. Meta analysis of surgical versus non-surgical methods of treatment for periodontal disease. *J Clin Periodontol* 1993; **20**: 259–268
2. Song F, Landes D P, Glennly A-M, Sheldon TA. Prophylactic removal of impacted third molars: an assessment of published reviews. *Br Dent J* 1997; **182**: 339–346
3. Her Majesty's Stationary Office. *Improving NHS Dentistry*. London: Her Majesty's Stationery Office, 1994.
4. Dummer P. *A systematic review on the longevity of routine dental restorations. (protocol) NHS Centre for Reviews and Dissemination*, University of York, York
5. Harrison J E, Ashby D. Orthodontic treatments for posterior crossbites. (Protocol). *The Cochrane Database of Systematic Reviews*. The Cochrane Collaboration; Oxford: Update Software; 1998. Updated quarterly. Available from BMJ Publishing Group, London.
6. <http://www.cochrane.co.uk>.