Searching for evidence-based information in eye care

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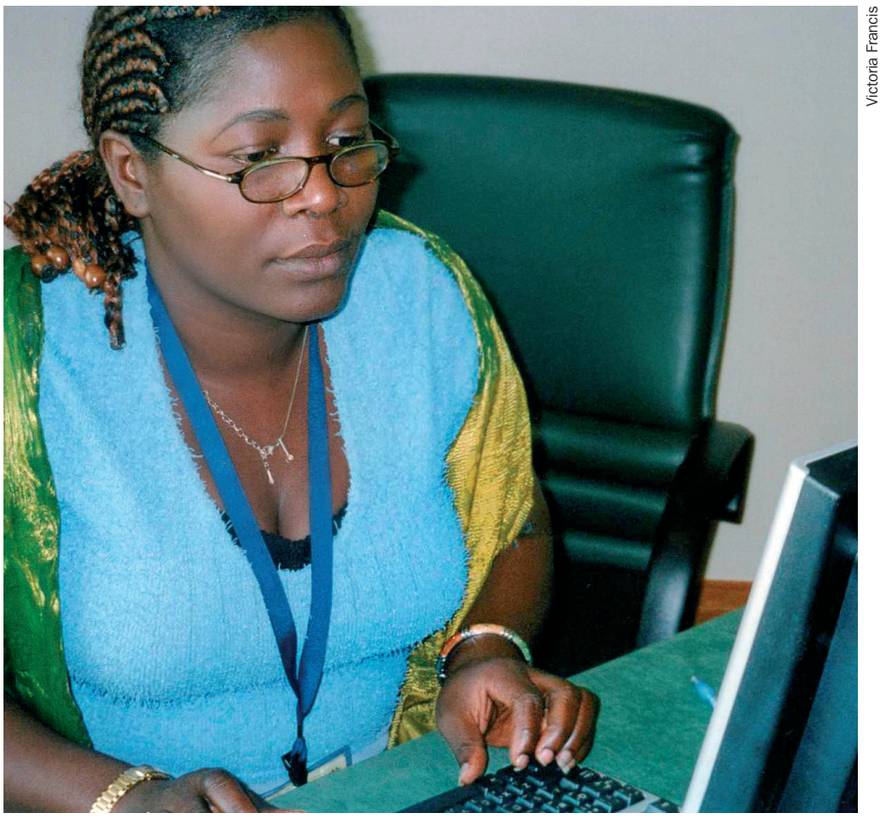

Victoria Francis

An eye care planner takes advantage of the internet to access reliable information. MALAWI

A growth in health awareness has led to an increase in the volume and availability of health information. Health care professionals may feel under pressure to read this increasing volume of material. A search on the internet is often a quick and efficient way to find information and this can be done by using one of the many search engines such as Google[1] or Google Scholar[2] or one of the health care information portals such as Omni.[3] A previous article by Sally Parsley in the Community Eye Health Journal provides a useful introduction to using the internet to access eye health information.[4]

It is understood, however, that not all those working in health care have access to the internet or computers powerful enough to carry out a search on the internet, so this article may not be useful to some of our readers.

Health information, which is available on the web, needs to be treated with some caution. Some websites have commercial backing and may be biased in their approach, while others may rely on out-of-date or inaccurate information and may not have had any input from health care professionals. Even after running a search on a reputable database such as Pubmed,[5] one needs to critically assess the quality of individual papers. For this reason, reliable websites and initiatives, which appraise and disseminate up-to-date information to produce the best available evidence, are extremely valuable.

The National Electronic Library for Health (NELH)[6] has comprehensive links to many sources of evidence-based information including online journals, some of which are open-access, meaning that they are free. Open-access online journals that look at the best available evidence include Clinical Evidence online,[7] which is available free to several groups of people including those in developing countries. Another is PLoS Medicine[8], which is an open-access, peer-reviewed medical journal, published monthly by the Public Library of Science.

Other initiatives in the UK such as the National Institute for Clinical Excellence (NICE),[9] The Centre for Evidence-based Medicine,[10] and Netting the Evidence,[11] give an introduction to evidence-based health care by providing support and access to helpful organisations and useful resources.

Among the most reliable of these resources are The Cochrane Collaboration[12] and The Cochrane Library.[13] These are both good sources of unbiased and reliable evidence-based information. While The Cochrane Library holds information which can be applied directly to clinical practice, the Collaboration website can be used as a source of information on training in evidence-based methods or further information on how to incorporate evidence into practice. The Cochrane Collaboration is an international not-for-profit organisation, providing up-to-date information about the effects of health care. There are more than 50 Review Groups around the world in as many different health care areas covering a broad spectrum of subjects. It is these Review Groups who assist review authors with the production of Cochrane Systematic Reviews of health care treatments and interventions for specific conditions. These reviews make up the Cochrane Database of Systematic Reviews (CDSR), one of the databases available on The Cochrane Library. Clinicians around the world use this comprehensive source of evidence to help with decision-making in patient care or to develop guidelines.

The Cochrane Library is the output of The Cochrane Collaboration and is published online and on CD every three months by John Wiley & Sons.[14] It has built up a reputation for being the best single source of reliable evidence-based information, but is actually a collection of seven different databases, which can be searched simultaneously. It is freely available throughout the UK and to most developing countries worldwide.

The Cochrane Library is made up of the following databases:

- The Central Register of Controlled Trials
- The Cochrane Database of Systematic Reviews
- The Cochrane Database of Methodology Reviews
- The Cochrane Methodology Register
- Database of Abstracts of Reviews of Effects
- Health Technology Assessment Database
- NHS Economic Evaluation Database.

The editorial base for the Cochrane Eyes and Vision Review Group (CEVG)[15] is the London School of Hygiene & Tropical Medicine, in the International Centre for Eye Health. It is possible to search The Cochrane Library for all of the CEVG editorial output by typing HM-EYES into the search box. This will show the total product of the CEVG which (at 2005-issue 3) is 34 completed reviews and 44 protocols. Protocols are prospective plans or proposals

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for reviews, which are ‘in process’ or about to be started.

Some CEVG reviews have few or no included trials and some rely purely on narrative for comparing and analysing the evidence. This is due to the scarcity of good quality trials in ophthalmology, particularly in those conditions prevalent in developing countries. Reviews that tend to have a greater number of included trials are those involving eye ailments that have many available commercial pharmacological treatments; an example of this would be ‘*Interventions for herpes simplex virus epithelial keratitis*’ which has 97 included trials. Due to the large number of trials involved and the ability to synthesise and analyse trial outcomes from a significant number of patients, the author is able to give some clear conclusions: “*The combination of an antiviral nucleoside with either debridement or with interferon speeds healing*.”

An example of a review with no included trials is ‘*Adjustable versus non-adjustable sutures for strabismus*’. This review relies on narrative to compare and synthesise the available evidence but the author is unable to give any clear conclusions due to the lack of available randomised trials and of patients involved. The author states in the conclusion that available trials were “*…non-randomised, few in number, and mainly retrospective*.” Such reviews are still valuable and important and serve to highlight the need for more high quality trials in a given health problem or treatment area.

The Central Register of Controlled Trials (CENTRAL) is a rich source of information on complete and ongoing trials. It can be a valuable resource when searching for trials that look at the effects of treatments, when no Cochrane systematic review is available. It is also a useful resource when searching for information to carry out a review. CENTRAL includes details of published reports of trials taken from bibliographic databases, and other published and unpublished sources. Each individual Review Group maintains their own register of controlled trials within their specified area and submits this for inclusion in CENTRAL every three months. The Cochrane Eyes and Vision Group’s (CEVG) register currently has 7,741 ophthalmology trials and these can be searched on The Cochrane Library by entering terms into the search-box.

In order to look at *only* those trials from the CEVG register one can enter SR-EYES into the search-box. All trials on the CEVG register have either been included in a CEVG reviews or are possibly eligible for inclusion. They have not been quality-assessed, however, so critical appraisal skills must be applied when examining the information they provide.

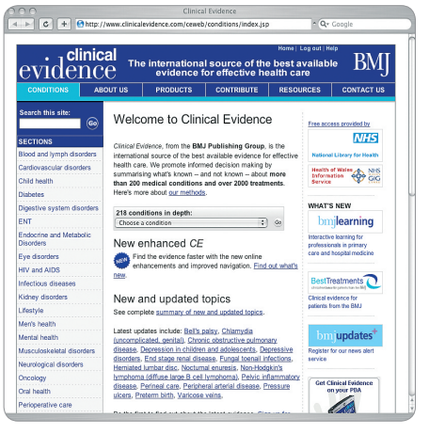
Other components of The Cochrane Library, which also provide high quality, reliable information, are the database of abstract of reviews of effects (DARE), the NHS Economic Evaluation Database (NHS EED) and Health Technology Assessment database (HTA). All three databases have information on reviews, evaluations or assessments that have been critically appraised or quality assessed and is the product of work carried out by The Centre for Reviews and Dissemination.

When a search is carried out on The Cochrane Library it can be simultaneously run across all of the databases. The results are presented as a number found out of the total number available. For example, when one searches for the term GLAUCOMA the results show that there are four reviews relevant to the search criteria out of a total 4,041 reviews available on the Cochrane Database of Systematic Reviews, six out of a total of 5,340 reviews available on DARE, 17 out of a total of 4,620 assessments available on the HTA database and 31 out of 15,884 available on the NHS EED database. A search across all databases is advisable in order to explore all available reviews, evaluations or assessments on a treatment or intervention, or when looking for options to treat a particular condition.

The Cochrane Library is a valuable resource of evidence-based information for health care professionals but in relation to other information sources can still be considered ‘new’. It has potentially much room for growth and even the most dedicated ‘Cochranites’ will admit that there are many gaps, which still need to be filled. However, as The Cochrane Collaboration evolves and Review Groups grow, the scope and volume of information held on The Cochrane Library will increase. The Cochrane Library will expand, ensuring that it remains the “best single source of evidence-based information.”

The Cochrane Collaboration is a not-for-profit organisation providing up-to-date information about the effects of health care
www.cochrane.org

PLoS Medicine is an open-access, peer-reviewed medical journal published monthly by the Public Library of Science (PLoS), a not-for-profit organisation
www.plosmedicine.org



Clinical Evidence, from the BMJ publishing group, is an information source of the best available evidence for effective health care
www.clinicalevidence.com

References

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