What is Cochrane all about?

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Recently the Australian Minister for Health, the Hon Kay Patterson, announced that Australia is purchasing the Cochrane Library for all Australians. Australians will now have access to the library free of charge through the web.

What is the Cochrane Library and how can it be used?

The Cochrane Collaboration

The Cochrane Collaboration is a loose knit organisation of people located throughout the world who are dedicated to providing the work necessary to produce the Cochrane Library. The library is an attempt to present research findings in a way that can be easily accessed by clinicians. It is named after Archie Cochrane, a British epidemiologist who highlighted the great gap between research being undertaken, published and stored carefully in libraries, and the actual clinical decisions made by clinicians.[1] The gap seems to be ever widening: more and more information is discovered about diseases and their best management, but doctors seemed to ignore this information when making clinical decisions. Treatments are being used that are ineffective (or even harmful), and effective treatments are not used.[2,3]

Iain Chalmers, an obstetrician practising in Oxford, attempted to redress this in the area of obstetrics. He developed the Oxford Database of Perinatal Trials, which was followed by a series of systematic reviews, Effective Care in Pregnancy and Childbirth.[4] From this kernel came the worldwide collaboration, extending beyond perinatal care. There are now 50 Collaborative Review Groups acting as editorial bases to coordinate the systematic review of the literature searching for answers about different treatments.

How the Cochrane Collaboration gets reviews undertaken

The engine of the Cochrane Collaboration is the systematic review. This is a piece of research that attempts to answer a question of effectiveness for a clinical treatment. The subject matter is the literature itself. 'Reviewers' (as the authors of this research are called, rather confusingly) systematically search the literature for any research that answers the treatment question. Reviews are presented as a document that looks like a research paper, ie. there is an abstract, methods, results and conclusions. Sometimes the data from the reviewed research can be combined, in which case the systematic review is called a 'meta-analysis' (meta meaning after).

The process for completing Cochrane Reviews is complicated: potential reviewers submit a question to answer (called a Title at this stage). When accepted, this discourages others working on the same question (to reduce duplication of effort). The reviewers are then asked to submit a full Protocol, which is the methods intended to conduct the review. This is subject to peer review, and after any necessary amendments are made, the reviewers are invited to actually complete the review. When this is submitted to the Collaborative Review Group, another peer review process is undertaken before it is accepted and published in the Cochrane Library. There are several steps to a review (Table 1). From a user's point of view, the focus is on the library, ie. gaining access to the contents to inform clinical decisions about treatments.

Inside the Cochrane Library

The library has several components (Figure 1). There is a section that contains the Cochrane Reviews described above. These systematic reviews and meta-analyses are often the best quality available.[5] There is a section that lists Cochrane Review Protocols - those halfway through the process described (Table 1). There are nearly 1500

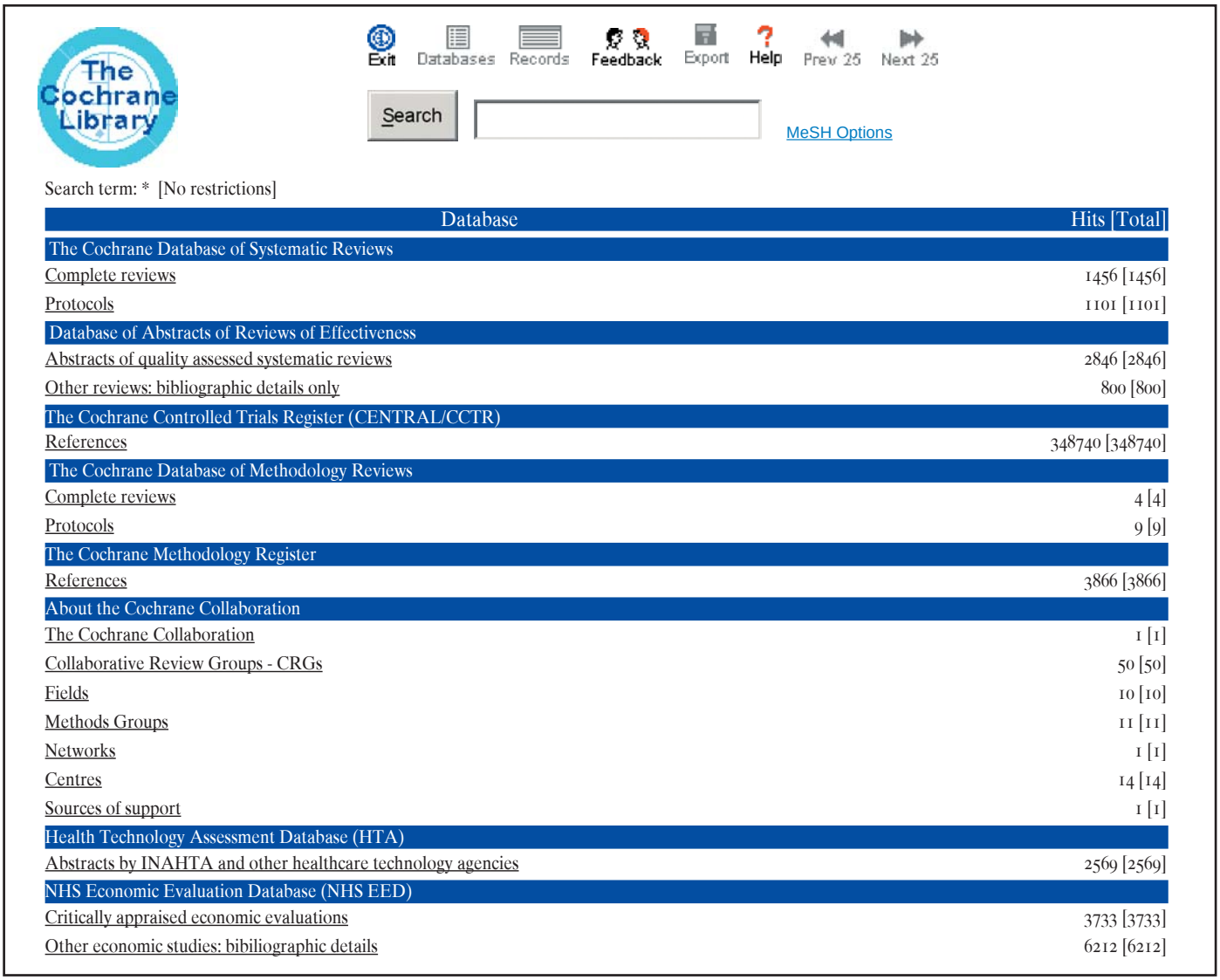

Figure1. Entering the Cochrane Library

Table 1. Steps to a review

Reviewers actions	Cochrane processes
1 Selecting a clinical question	submitting a Title: checking for duplication
2 Deciding the important outcomes	submitting the Protocol Peer review
3 Searching the literature	
4 Deciding on the quality of what was found	
5 Deciding what it means	submitting the Review Peer review
6	Publishing the Review in the Cochrane Library
7 Updating the review (go back to 3 above)	submitting the Updated Review Peer review Updating the Review in the Cochrane Library

Table 2. Hierarchy of evidence within the Cochrane Library

Best

1 Cochrane review

2 Other reviews (in the Database of Abstracts of Reviews of Effectiveness, and the Health Technology Assessment Database)

3 Controlled Trials Register

Cochrane Reviews, perhaps summarising approximately 10% of all trials. Of course the question you have may not even have been subject to a trial. Therefore, there are many questions that may not have been reviewed.

However, there is other information that may be very useful. First, there is a listing of systematic reviews not undertaken by the Cochrane Collaboration but by other organisations (these are assembled by the NHS Centre for Reviews and Dissemination in the Database of Abstracts of Reviews of Effectiveness) (Figure 1). These are only published in summary form.

Second, there is a list of trials, many with abstracts. These include trials that can easily be found on electronic databases such as Embase and Medline. In addition, trials have been identified by people in the Cochrane Collaboration from either those less well indexed by hand searching journals or from the 'grey' literature (conference proceedings for example, which are not automatically electronically indexed). This Controlled Trials Register is a very useful source of information about trials of treatments. Many recently developed health technologies and pharmaceuticals have been reviewed by government and other health care technology agencies and summaries of these are provided in the Health Technology Assessment Database.

Finally, there are sources of information about method issues, and the governance of the Cochrane Collaboration that are often less interesting to clinicians chasing a question.

How to use the Cochrane Library

The library is electronic. It exists either as a set of CDs or through a web interface. The latter is likely to be the way most commonly accessed by people, however, the CD version will be of special benefit to those who cannot use the web.

There is a front page that helps direct you to the library's different sections. Searching is undertaken in a query window, and the 'hits' are displayed in the different sections (Figure 1). The number of hits yielded by the search are displayed beside each section. There is a help button to assist in searching - something not always straightforward to learn. It is best to begin at the best level of evidence (Table 2).

Conclusion

The Cochrane Library is designed to make life easier. It pays to learn one's way around the library. There is a huge amount of information available. Moreover our patients now have access to the library - it will be worth knowing something about it for that reason alone!

References

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