
Annotation

The Cochrane Collaboration: progress in perinatal medicine

The Cochrane Collaboration is an international organisation that aims to help people to make well informed decisions about health by preparing, maintaining, and ensuring the accessibility of systematic reviews of the benefits and risks of health care interventions. Systematic reviews differ considerably from conventional reviews in that they are based on a scientific process designed to minimise bias. The importance of reviews to inform busy clinicians is obvious as we are now swamped by a huge body of primary medical literature and all of us struggle to keep up to date even with our specialty areas of clinical or scientific interest. Unfortunately, all too often we are ill served by conventional reviews whether published in books or in journals: they are frequently out of date at the time of publication if the topic is progressing rapidly; different “experts” can reach entirely different conclusions after reviewing the same topic as readers; we are usually not informed how the reviewer chose to select certain references and ignore others as a consequence; we cannot be sure if the review can be trusted or not.

The systematic review, in contrast, is based on an explicit and rigorous process that includes: a clear description of the objectives, explicit criteria for including studies an attempt to identify all relevant studies, whether published or not, explicit description of why apparently relevant studies have not been considered, extraction of data, pooling of data from similar studies (meta-analysis), description of results drawing appropriate conclusions and discussing implications for clinical practice and future research

At present, the building blocks for Cochrane systematic reviews are exclusively randomised controlled trials, both because of the scientific strength of this method of assessing health care interventions and because of the methodological difficulties of dealing with other types of scientific data. This is not to say that all important questions in perinatal medicine can be addressed by randomised controlled trials—for example, is cadmium a teratogen?—nor that other disciplines have not succeeded in applying meta-analyses to other types of data.

The main product of the Collaboration is the Cochrane Database of Systematic Reviews which is published in electronic form by Update Software, Oxford at three monthly intervals within the “Cochrane Library,” together with databases of clinical trials, methodological papers, and abstracts of other systematic reviews. The structure of the Collaboration has evolved to meet this goal and it has four dimensions—review groups, centres, fields, and methods working groups (including software development).

The collaborative review groups are responsible for preparing and maintaining the systematic reviews, and they have expanded greatly in number (nearly 30 now registered) since their genesis in the perinatal field. In addition to review groups covering trials in pregnancy and childbirth and the neonatal period, there are productive review groups in, for example, infectious diseases and subfertility, and many others at an earlier stage of develop-

ment, for example in cystic fibrosis and menstrual disorders. Each group has an administrative base, a coordinating editor, other editors, and (usually) a multidisciplinary, multinational panel of reviewers. The administrator coordinates electronic and manual searching of the relevant literature for randomised controlled trials, helps the reviewers where necessary, and produces the group’s module of reviews for publication in the Cochrane Library.

In addition to the collaborative review groups, there are now 12 Cochrane Centres scattered around the world. These provide support for review groups located in the geographical area for which the Centre is responsible. Cochrane “Fields” exist to reflect dimensions of interest other than health problems, such as the elderly, or primary health care.

Perinatal medicine provided prototype models for development of other Cochrane review groups and it is worth describing recent developments as there have been several important changes. The first pilot database produced was the Oxford Database of Perinatal Trials which followed the publication of the milestone book *Effective Care in Pregnancy and Childbirth*.¹ The Oxford Database was developed by staff at the National Perinatal Epidemiology Unit, Oxford, and was successful in showing that such a project was feasible and that it would attract, as reviewers, committed people from many different countries and several different professional backgrounds. With the formation of the Cochrane Collaboration, the database metamorphosed into the Cochrane Pregnancy and Childbirth Database and the project was led at an editorial level by Murray Enkin, Emeritus Professor of Obstetrics and Gynaecology at McMaster University, Hamilton, Canada. Around this time, neonatologists who had contributed to the Oxford Database formed their own grouping and successfully published the sister book *Effective Care of the Newborn*²; they have also formed the core of the Cochrane Neonatal Group which had, until recently, been quiescent but which is now actively compiling systematic reviews of neonatal care for electronic publication.

Following Murray Enkin’s retirement as editor, the administrative base of the Cochrane Pregnancy and Childbirth Group moved to the Liverpool Women’s Hospital in early 1995; the current editorial team comprise four obstetricians and one midwife from Australia, Canada, South Africa and the UK.

The Cochrane Pregnancy and Childbirth Database continued to be published until the end of 1995, but has now ceased publication, hopefully only temporarily. The reasons for this reflect some of the challenges that continue to face the Group: although many reviews had been kept assiduously up to date by the reviewers, others had not—there is no point in the electronic publication of out of date material; some of the older reviews were unstructured and failed to meet acceptable modern standards; there were too few reviewers attempting to maintain too many reviews (there is an additional problem of excessive anglocentricity in the project which we are actively

attempting to resolve by spreading the geographical and linguistic base of reviewers).

Systematic reviews on care during pregnancy and childbirth are now published exclusively in the Cochrane Database of Systematic Reviews, one of the components of the Cochrane Library; they are all up to date and meet current standards and, in time, we hope to again cover the entire specialty. Until that is achieved, there seems little merit in publishing a separate specialty specific database; once achieved, there may be merit in combining the output from the two perinatal Cochrane Groups. In the meantime, the interested reader should refer to a 1995 copy of the *Cochrane Pregnancy and Childbirth Database* for reviews that are not yet published in the Cochrane Library, but in the knowledge that the older review could be significantly out of date.

We have not glossed over the difficulties that have beset both groups in the recent past, but would not wish to end by leaving an impression of pessimism. Far from it, there are vibrant new reviews completed by new reviewers; there are many individuals who have recently volunteered to take

on reviews; there are new reviewers from developing countries and from non-English language countries. There is renewed activity on the neonatal front. Once the transition is complete, the outputs will be, we are confident, better than ever and even more informative for the clinicians, health planners, and consumers who have found these valuable in the past.

J P NEILSON

*Department of Obstetrics and Gynaecology
University of Liverpool
Liverpool
L69 3BX*

M I LEVENE

*Department of Paediatrics
University of Leeds*

Professor Neilson is Coordinating Editor of the Cochrane Pregnancy and Childbirth Group

Professor Levene is European Editor of the Cochrane Neonatal Group.

- 1 Chalmers I, Enkin M, Keirse MJNC, eds. *Effective care in pregnancy and childbirth*. Oxford: Oxford University Press, 1989.
- 2 Sinclair J, Bracken M, eds. *Effective care of the newborn*. Oxford: Oxford University Press, 1992.