Cochrane Stroke Group: Twenty years of evidence-based stroke medicine

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The Cochrane Stroke Group was one of the first specialist review groups set up within The Cochrane Collaboration and has been in existence for 20 years. Its key outputs include a number of high profile reviews in the area of the management of stroke, which have become one of the most important sources of information for clinical practice guidelines. The work of the group is only possible through a collaborative network of staff, editors, and authors.

Key words: clinical trial, methodology, prevention, rehabilitation, stroke, treatment

Introduction

The Cochrane Collaboration is an international health-care charity (1) established in 1993 by Iain Chalmers and colleagues to support the production and maintenance of systematic reviews relevant to health care (2). The establishment was inspired by the epidemiologist Archie Cochrane, who, in 1972, pointed out that the medical profession had failed to organize reliable summaries of randomized-controlled trials to inform decisions about healthcare treatments (3).

One of the key features of the Cochrane Collaboration has been the establishment of small specialist editorial groups called Cochrane Review Groups (2). The Cochrane Stroke Group was registered with the Collaboration on 1 August 1993 by Charles Warlow, Jan van Gijn, and Peter Sandercock, as one of the first Cochrane Review Groups (4). The Cochrane Stroke Group and The Cochrane Collaboration therefore both have their 20th anniversary this year. In this article we will summarize the progress over the first 20 years of this venture.

The Cochrane Stroke Group

The aim of the Cochrane Stroke Group is to identify and systematically review all controlled trials (particularly randomized-controlled trials) of interventions used for therapy, prophylactic treatment or rehabilitation of stroke patients (including subarachnoid hemorrhage), and for the organization of services for stroke patients. The Cochrane Stroke Group works to support review authors from around the world in the production and maintenance of systematic reviews and protocols (systematic reviews in preparation) of topics relevant to the management of stroke disease.

The Cochrane Stroke Group consists of a small editorial team, an editorial board, and the review authors. The editorial team is based in Edinburgh, UK, and consists of a managing editor, a trials search co-ordinator, a computer programmer/web developer, and a statistician. The group initially started with an editorial board of four people but has expanded over the years as the group’s activities have grown, and now consists of 25 editors from nine countries. The group is truly international, and its 647 authors come from developed and developing countries around the world. Throughout these 20 years the Chief Scientist Office of the Scottish Government has provided infrastructure funding for the Cochrane Stroke Group’s editorial office in Edinburgh.

Over the last 20 years the Cochrane Stroke Group has established several initiatives to help it maintain its core work. This includes a trials register of randomized-controlled trials in stroke and a number of computing resources to support online editorial activities. The Cochrane Stroke Group’s trials register has become arguably the best collection of clinical trials in stroke disease, and in September 2013 it contained over 20,295 references to over 8290 trials (both published and unpublished trials) and 1267 systematic reviews, including trials identified through personal contact and conference abstracts. The Cochrane Stroke Group’s website is a useful resource, and includes a link to The Cochrane Collaboration website, where abstracts of all the Cochrane systematic reviews are available free of charge (http://www.dcn.ed.ac.uk/csrg).

Contributions from the Cochrane Stroke Group

Figure 1 shows the growth in the number of systematic reviews and protocols from the Cochrane Stroke Group, covering a wide range of areas of stroke management (acute care, rehabilitation, prevention, organization of services). This output is made available through the Cochrane Database of Systematic Reviews in The Cochrane Library (5). The Cochrane Library is published by John Wiley & Sons Ltd and currently has an impact factor of 5.703, of which the Cochrane Stroke Group’s individual impact factor is 4.139, making it the second highest impact specialist stroke journal.

The Cochrane Stroke Group also has an important impact on clinical practice guidelines (6–11). Figure 2 shows the number of references to reviews from the Cochrane Stroke Group, in comparison with references to articles in the journals Stroke and Clinical Rehabilitation. For most recent clinical practice guidelines Cochrane reviews are the first or second most referenced source of evidence.

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Cochrane Stroke Group members have also been responsible for a large number of other activities, such as publications based on the Cochrane Stroke Group trials register (5), support for clinical practice guidelines (8), consultation exercises to prioritize stroke research (12), and an ongoing project collating a database of research in stroke (DORIS) (13). They have also been active in developing the methodology of evidence synthesis, on topics such as publication bias (5), subgroup analyses (14), hand-searching (15), reporting of outcomes (16), investigation of complex interventions (17), and reviews of diagnostic tests (18).

**Challenges**

The production and maintenance of systematic reviews require a considerable amount of work by volunteers, and maintaining this activity over the longer term is challenging, particularly to ensure that reviews are kept up-to-date. It is also challenging to maintain adequate funding, but the group is fortunate that in the United Kingdom systematic reviews are seen as crucial components of a knowledge-based health-care system.

**Future perspectives**

The work of the Cochrane Stroke Group will become increasingly important as the stroke trials literature continues to grow. On average about 1200 new reports of stroke trials have been added to the Cochrane Stroke Group’s trials register each year for the last few years (Brenda Thomas, personal communication). It is important to improve access to systematic reviews, and a recent agreement with John Wiley & Sons now provides free access to new or updated reviews after 12 months of publication. Cochrane reviews will probably also become an even more solid basis for clinical practice guidelines, and since 2011 The Cochrane Collaboration has had an official relationship with the World Health Organization (WHO), and whenever possible the WHO is now using Cochrane reviews for its clinical guidelines.

**Conclusions**

The Cochrane Stroke Group was one of the first specialist review groups set up within The Cochrane Collaboration and has been in existence for 20 years. Its key outputs include a number of high profile reviews in the area of the management of stroke, which have become one of the most important sources of information for clinical practice guidelines. The work of the group is only possible through a collaborative network of staff, editors, and authors.

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