



# Cochrane Eyes and Vision Group Newsletter

Number 6

November 1999

## All change

There have been several changes at the Cochrane Eyes and Vision Group editorial base since our last newsletter.

We welcome a new editor, Liam Smeeth, to the team. Liam is a practising general practitioner and an epidemiologist with an interest in eye conditions. He is responsible for one of the Eyes and Vision Group's first reviews: Screening the elderly for visual impairment in the community. As a new editor, Liam is particularly keen to see an increase in the number of published reviews from the Eyes and Vision Group. There are a fairly large number of reviews 'in process'. If any reviewers would like support or advice in completing their review and getting it published, please contact Liam at:

[liam.smeeth@lshtm.ac.uk](mailto:liam.smeeth@lshtm.ac.uk)

Luca Rossetti has stepped down as an editor of the group due to pressures of other commitments. We hope Luca will return to the editorial team when time allows, and we thank him for his contribution to the group.

Stephen Swift has joined the editorial team, as computer networking technician. One of 'Swift's' main tasks will be to work with Shona and the rest of the editorial team to get the Eyes and Vision Group web site up and running.

Finally, you will have noticed that Katherine Oldfield has changed her name. Kate Henshaw will be away for five months next year, from February to June. Our Assistant review group co-ordinator, Shona Burman-Roy, will be taking over while Kate is away. If you need to contact Shona during that time, you can use the same contact details, as shown at the bottom of this page.

## BMJ Clinical Evidence

The BMJ recently published the first issue of Clinical Evidence, a compendium of evidence for clinicians that summarises the best available evidence for the effectiveness of common and important clinical intervention. Clinical Evidence will be published twice per year and the range of subjects covered will gradually increase. It is aimed at a general audience including GPs, nurses and non-clinicians such as health service managers. Included were chapters on glaucoma and diabetic retinopathy. The next issue is due for publication in December.

There is a real need for new chapters on a range of eye conditions. The ideal people to write a chapter for Clinical Evidence are often the people undertaking a Cochrane Review in the area. Our new editor Liam Smeeth has worked as an editor on Clinical Evidence. If you think you might be interested in contributing a piece to Clinical Evidence, Liam is able to give advice about the kind of thing that is needed. You can have a look at a sample of Clinical Evidence at:

<http://www.evidence.org>.

You can contact Liam at: [liam.smeeth@lshtm.ac.uk](mailto:liam.smeeth@lshtm.ac.uk)



## IN THIS ISSUE

- 1 Editorial
- 2 Feedback from the 1999 Colloquium
- 4 Workshops
- 5 General information
- 6 More general information
- 7 Titles, protocols, reviews
- 8 Other relevant items in the Cochrane Library
- 9 Membership form
- 11 Trial registration form
- 12 Title registration form

## REPORT FROM THE 1999 COLLOQUIUM

This year the Colloquium was hosted by the Italian Cochrane Centre. It was held within the beautiful 16<sup>th</sup> century Università' San Tommaso D'Aquino in Roma. Here are some notes from four of the workshops:

---

### Using the results of systematic reviews and trials – assessing and applying the evidence. Di O'Connell

---

by Shona Burman Roy

One of the running themes at the Rome Colloquium was 'Getting the Evidence into Practice'.

Since the dawn of Cochrane time in 1992, contributors to the CDSR have been steadily amassing a body of evidence. Seven years on and there are 663 reviews and 624 protocols on the Cochrane Library. The Collaboration is facing a new challenge – to ensure that Cochrane evidence is available to those making informed decisions. It is as much our responsibility to reach the health care consumer as it is to reach the policy maker in this respect.

Di O'Connell ran an introductory workshop called 'Using the results of systematic reviews and trials – assessing and applying the evidence'. She presented some general principles of how to quantify research findings and some salient points to consider when deciding whether an intervention is viable in a given situation.

The process is logical and simple. One can construct a table to assess the relative dimensions (level, quality and relevance) and treatment effects (strength and magnitude) of research findings. Then the broad assessment needs to be considered in terms of applicability – how 'implementable' is the intervention and how well does the assessment apply to the individual.

This was a well run workshop that offered a view from a different perspective. It was very interesting to see how others evaluate reviews and how reviews contribute to the decision making process. Look out for this workshop in South Africa!

---

### 8<sup>th</sup> International Cochrane Colloquium

October 25<sup>th</sup> – 29<sup>th</sup> 2000  
Cape Town, South Africa

The theme of the Cape Town Colloquium is 'Evidence for Action: challenges for the Cochrane Collaboration in the 21<sup>st</sup> Century', For more information contact us or visit <http://www.mrc.ac.za/conference/cochrane.htm>

---

### An introduction to statistical aspects of reviews. Doug Altman

---

by Kate Henshaw

This workshop explained in simple terms some common, yet often confusing concepts. Detailed notes on the workshop are available from the editorial base, but here are some of the key points:

#### Basic statistical methods for binary outcomes

*Risk difference (RD)* = absolute risk reduction (%)

*Relative risk (RR)* = risk ratio

*Odds ratio (OR)* = ratio of bad to good outcomes in group 1 ÷ the ratio of bad to good outcomes in group 2

*Relative risk reduction (RRR)* = 100% - RR

*Numbers needed to treat (NNT)* = 1/RD

#### Ratio of risks or ratio of odds

Neither is uniformly better. Mostly they agree closely for uncommon events but may differ for common events. Risk ratios depend on whether the outcome is good or bad. The risk ratio of a good outcome is not equal to risk ratio of a bad outcome. But odds ratios are equivalent, so OR good = 1/OR bad. Which to choose needs careful consideration.

#### Basic statistical methods for continuous outcomes

*Weighted mean difference*: Assumes a constant unit of measurement in all trials. Summarises effect as the difference between means in the same units as used in the trials. Assumes a normal distribution.

*Standardised mean difference*: The treatment effect is the difference in means divided by the pooled standard deviation. Effect size in units of pooled SD. Assumes a normal distribution. If time to event then this is not normally distributed, therefore we don't know how robust the measure is.

#### Standard deviation versus standard error

*Standard deviation* describes variability of observations. *Standard error* describes the imprecision in estimated mean.

#### Fixed versus random effects

Fixed effect assumes all the trials have the same treatment effect. The Random effects model assumes that the true treatment effect has a distribution around the average. It estimates the variability from trial results, and therefore leads to greater weight for small trials than the fixed model.

#### Outcomes

Trials are less likely to be biased in their reporting if they have published most outcomes. Outcomes are less likely to be biased if many trials report it.

---

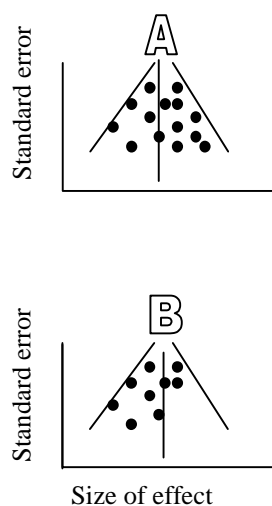
---

## Bias in systematic reviews: sources of bias and how to detect bias. Matthias Egger

---

by Jennifer Evans

The most interesting part of the workshop was in the discussion of the interpretation of 'funnel plots'. These are scatter plots of the effect estimates against their standard error.



Plot A shows no association between study size and effect size. In plot B, the funnel plot is asymmetric. This is known as the 'small study effect'. One of its interpretations may be publication bias but other explanations have also to be considered. For example, it may be that the larger studies were in fact giving a subtly different intervention due to time or resource constraints.

The main take home messages from the discussion on funnel plots were

1. Don't plot risk difference as your 'effect'. Use odds ratio or risk ratio.
2. Don't plot against precision (1/se) but rather against the standard error directly. This needs a bit of fiddling with to get the plot the right way up. RevMan 4 currently does funnel plots using precision but this will be changed in the future.
3. When you see an asymmetric plot consider true heterogeneity as well as publication bias.
4. You need at least 5 trials to do a funnel plot.

There are statistical tests of whether the plot is asymmetric. See Matthias Egger BMJ 1997. Another author in this field is Jonathan Sterne.

---

**See page 5 for a picture of the Eyes and Vision team in Rome**

---

## Assessing the quality of reports of randomized trials included in systematic reviews: attitudes, practice, evidence & guides. David Moher

---

by Jennifer Evans

This workshop was interesting because it was obvious that the four presenters differed in their views on how to assess the quality of trials included in reviews and what to do with that assessment. There appear to be two camps: 'scales' and 'components'. The former aims to summarise the quality of trials by producing a summary quality score for each trial. This is usually a number ranging from 1 to X depending on the scale. In general, the summary score is derived from replies to a series of questions such as: 'Was the treatment randomly allocated' 'Was the assessment of outcome masked to treatment group'. However, there are currently 25 different scales and depending on which scale you use you will get a different ranking of trial quality. Which questions are included and how the overall summary is calculated are arbitrary. There was some debate about whether the 'Jadad' scale was 'validated' but it does not include one of the most important aspects of trial quality, namely, concealment of treatment allocation.

Workshop participants were asked to assess the quality of two trials using two different scales. We found that, using scale X, trial A was of better quality than trial B. However, when the trials were assessed using scale Y, trial B apparently was the better quality trial. Matthias Egger has done this exercise with all 25 scales and published the results in JAMA 1998.

The workshop confirmed my view that using scales for the assessment of trial quality in meta-analyses is fraught with difficulty. It is more transparent to assess components of study quality. These can be divided up into features such as concealment of allocation, masking of outcome assessment and handling of patient exclusions etc. The relationship between these aspects of trial quality and trial outcome has been assessed empirically by looking at whether they are associated with trial outcome (authors include Ken Schulz, Doug Altman, Iain Chalmers). For example, it is well established that concealment of treatment allocation and masking of outcome assessment are important such that trials where these aspects are poorly done or reported overestimate the effects of treatment.

Incorporating the results of trial quality assessment in the review is even less clear cut. If you believe in scales this is easier because you have a nice neat numerical score that you can use to weight your meta-analysis. If you are not convinced, it is probably best to present and discuss the results of the quality assessment. You can also look at whether excluding trials with poor scores in any components affects the results of your review.

References: Chapter 6. Health Technology Assessment 1999; vol 3(12).

---

## Workshops 1999/2000

If you would like further information or an application form for any of these workshops please contact us. Cochrane workshops are free, but reviewers must pay for accommodation and travel. Fees apply for other workshops.

### Australasian Cochrane Centre

Date	Location	Type of workshop
9-10 March 2000	Brisbane, Australia	Preparing a review protocol, using RevMan
31 May 2000	Melbourne, Australia	Preparing a review protocol, using RevMan
26-27 July 2000	Auckland or Dunedin, NZ	Preparing a review protocol, using RevMan (to be confirmed)
4-5 Oct 2000	Adelaide, Australia	Preparing a review protocol, using RevMan (to be confirmed)

### Canadian Cochrane Centre

19 Nov 1999	McMaster University	Impact of the Cochrane Collaboration: past, present, and future.
-------------	---------------------	--

### Chinese Cochrane Centre

22-24 Nov 1999	Chengdu	Introduction to evidence based medicine & the Cochrane Collaboration
26-28 Nov 1999	Chengdu	Introduction to systematic reviews and RevMan 4.0

### Dutch Cochrane Centre

25 Nov 1999	Dutch Cochrane Centre	Developing a systematic review
17-19 Jan 2000	Dutch Cochrane Centre	Evidence based medicine in clinical practice
24 Feb 2000	Dutch Cochrane Centre	Developing a systematic review
25 May 2000	Dutch Cochrane Centre	Developing a systematic review

### New England Cochrane Center

9-10 Dec 1999	Boston, USA	How to conduct and apply Cochrane systematic reviews.
---------------	-------------	---

### Nordic Cochrane Centre

22-25 Nov 1999	Copenhagen	Evidence based medicine
22-26 May 2000	Oslo	Evidence based medicine
13-16 Nov 2000	Copenhagen	Evidence based medicine

### UK Cochrane Centre

15 Nov 1999	Edinburgh	Developing a protocol for a review
16 Nov 1999	Edinburgh	Getting a review into RevMan
6 Dec 1999	Liverpool	Developing a protocol for a review
7 Dec 1999	Liverpool	Getting a review into RevMan
16 Dec 1999	London	Developing a protocol for a review
17 Dec 1999	London	Getting a review into RevMan
14 Jan 2000	Oxford	Getting a review into RevMan
3 Feb 2000	Manchester	Developing a protocol for a review
4 Feb 2000	Manchester	Getting a review into RevMan
20 March 2000	Oxford	Developing a protocol for a review
21 March 2000	Oxford	Getting a review into RevMan
17 May 2000	Oxford	Developing a protocol for a review
18 May 2000	Oxford	Getting a review into RevMan
26 June 2000	Oxford	Developing a protocol for a review
27 June 2000	Oxford	Getting a review into RevMan
11 Sept 2000	Oxford	Developing a protocol for a review
12 Sept 2000	Oxford	Getting a review into RevMan

## Other Evidence-Based Health workshops

### Systematic Reviews Training Unit, Institute of Child Health - UK

18-21 Jan 2000	Institute of Child Health, London	Getting on with your Systematic Review
----------------	-----------------------------------	--

Contact Leanne Jones: [srtu@ich.ucl.ac.uk](mailto:srtu@ich.ucl.ac.uk) Further information at <http://www.ich.ucl.ac.uk/srtu>

### Centre for Statistics in Medicine - UK

Feb-March 2000	Oxford, UK	"An Introduction to Statistical Methods in Medicine": Tuesdays 2pm-5pm Contact Tracy Edwards: <a href="mailto:t.edwards@icrf.icnet.uk">t.edwards@icrf.icnet.uk</a>
4-5 July 2000	St Catherine's College, Oxford, UK	3rd Symposium on Systematic Reviews

Contact: Rochelle Seifas [r.seifas@icrf.icnet.uk](mailto:r.seifas@icrf.icnet.uk) Further information at <http://www.ihs.ox.ac.uk/csm/>

## The Eyes and Vision Group at the Colloquium Banquet, Roma 1999



**From left to right, back row:**

Jennifer Evans (Editor), Kate Henshaw (RGC), Kay Dickersin (Editor), Mark Wilkins (Reviewer) **Front row:**  
Richard Wormald (Co-ord. editor), Shona Burman-Roy (Assist. RGC), Catey Bunce (Stat editor)

*get ready for the*

### COCHRANE EYES AND VISION GROUP WEBSITE

[www.archie.ucl.ac.uk](http://www.archie.ucl.ac.uk)

The Eyes and Vision Group website is under construction and will be up and running very soon. You'll be able to download the newsletter and the latest summaries of reviews, register trials information on-line and access our links pages. The site will be officially launched on **January 5<sup>th</sup>** and we look forward to your comments.

The Cochrane Collaboration website is at:

[www.cochrane.org](http://www.cochrane.org)

## EVIDENCE-BASED ON-CALL

A team of clinicians at the Centre for Evidence-Based Medicine in Oxford, England has set up 'Evidence-Based On-Call' to meet the challenge of providing clinically relevant evidence-based advice at the bedside. EBOC will produce practical advice on common on-call problems by using the best evidence available to create easy-to-use guidelines.

The Oxford team will use high-quality techniques to search for the best journal articles on specific on-call problems. EBOC has developed an Internet authoring tool allowing clinicians with EBM experience to create one-page summaries of these articles. These critically-appraised topics or CATs, will be added to a central electronic database and used to create clinical guidelines. A panel of clinical experts will review each guide before it is published in print, on CD-ROM and on the Internet. The Oxford team will monitor the literature and update CATs and guides regularly.

The first book covering 50 acute medical problems will be published in spring 2000. Other specialities will be covered over the next three years.

The team is looking for clinicians from all specialities and at all levels of experience to participate in Evidence-Based On-Call. Check out the website at

<http://cebm.jr2.ox.ac.uk/eboc/eboc.html> for a sample guideline and some CATs. E-mail Chris Ball for more details email: [cmball@eboc.u-net.com](mailto:cmball@eboc.u-net.com)

### **Funding opportunities for health care practitioners who wish to take time out to prepare systematic reviews**

PPP Healthcare Medical Trust has set up a funding scheme which may be relevant to practitioners who wish to take time out to prepare one or more Cochrane reviews.

Applicants must be resident in the UK and between 10 and 15 years post qualification. If you would like further information and an application form please let us know.

## Reviews without trials

It is often thought that there is no point in doing a review if there are no trials that have looked at the question at hand. Iain Chalmers, at the UK Cochrane Centres says: "If the question is important and there are no reliable data available with which to address it, then the world needs to know that. There are several potentially useful consequences of doing this. Firstly, a reader may draw attention to a trial which has been overlooked. Secondly, a patient may realise that their preferences should dominate in any decisions about choice of treatment and thirdly, researchers and research funding organisations will see that there is an important gap in reliable evidence and take steps to plug it. Cochrane Reviews can be and have been helpful in all of these ways."

### **DATES FOR YOUR DIARY**

UK contributors meeting 7-8 April 2000

Australasian contributors meeting 1-2 June 2000

*These meetings are for anyone involved or interested in the Cochrane Collaboration. Contact us for details.*

## Register Corner...

The Eyes and Vision Group's specialised register now contains 4403 reports of controlled trials. The register will undergo a

major overhaul next year with the release of Meerkat – Collaboration developed software. The register will be study based rather than report based as it is now. We still aim to incorporate all trials within our scope in the register. Here's how you can help.....

- ⊗ If you have attended or presented at a conference, or have access to conference proceedings, please let us know. We are gathering a list of conferences to handsearch their proceedings.
- ⊗ If you are conducting a controlled trial please register basic details of it with us. This ensures that our systematic reviews incorporate findings from the latest research.
- ⊗ If you know of any trials that are have not yet been published or published only as an abstract, please tell us so that we can contact the principal investigator for further details.



## TITLES, PROTOCOLS & REVIEWS

The following titles, protocols and reviews are currently registered to the group. If you have any ideas for reviews, please let us know by completing a Title Registration Form (see page 11).

Registered titles	Contact reviewer
NEW Bleb needling for glaucoma	Andrew Feyi-Waboso
Reading aids for people with low vision	Elizabeth Hawes
NEW Endonasal vs external dacryocystorhinostomy for nasolacrimal duct obstruction	Vinidh Paleri
NEW Interventions for cystoid macular oedema in uveitis	Gwenyth Freeman
NEW Interventions for idiopathic intercranial hypertension	Christian Lueck
Interventions for infantile esotropia	Jugnoo Rahi
Interventions for ocular sarcoidosis	Nelson Sabrosa
Interventions for onchocerciasis	Ellen Schwartz
Interventions for ophthalmia neonatorum	Aziz Sheikh
Interventions for preventing herpes simplex keratitis	Nigel Barker
NEW Interventions for primary angle closure glaucoma	Paul Foster
Interventions for thyroid eye disease	Mike Wearne
NEW Interventions for toxoplasma uveitis	Adnan Tufail
NEW Medical versus surgical interventions for primary open-angle glaucoma	Tony Wells
NEW Multifocal lenses for pseudophakic presbyopic correction	Martin Leyland
Oral antivirals for recurrent HSK in corneal grafts	Graham Fraenkel
NEW Pharmacological therapy for diabetic retinopathy	Leopold Schmetterer
NEW Photodynamic therapy for age-related macular degeneration	Richard Wormald
NEW Surgery for bilateral paediatric cataract	Vernon Long
NEW Vitamin A for xerophthalmia	Shona Burman-Roy
Protocols in editorial process	Contact reviewer
Interventions for normal tension glaucoma	Thomas Sycha
Surgery for involutional lower lid entropion	Kostas Boboridis
Laser photocoagulation therapy for diabetic retinopathy	Lucia Iochides
Protocols published on the Cochrane Library	Contact reviewer
Antibiotics for trachoma	Denise Mabey
Antimetabolites for glaucoma surgery	Richard Wormald
Corticosteroids for optic neuritis	Roy Beck
NEW Interventions for central retinal artery occlusion	Dilani Siriwardena
Interventions for improving coverage of screening schemes for diabetic retinopathy	Gill Grimshaw
Interventions for preventing ophthalmia neonatorum	Vimal Kapoor
Interventions for recurrent corneal erosions	Nigel Barker
Intra versus extra-capsular extraction for cataract	Torkel Snellingen
Surgical techniques for retinal detachment	Juliet Thompson
Reviews in editorial process	Contact reviewer
Interventions for herpes simplex virus epithelial keratitis	Kirk Wilhelmus
Interventions for preventing cystoid macular edema	Luca Rossetti
Topical therapy for primary open-angle glaucoma	Luca Rossetti
Interventions for hyphema	Luca Rossetti
Reviews published on the Cochrane Library	Contact reviewer
Antibiotics for acute bacterial conjunctivitis	Aziz Sheikh
Antioxidants for age-related macular degeneration	Jennifer Evans
Antioxidants for preventing macular degeneration	Jennifer Evans
Decompression surgery for non-arteritic ischaemic optic neuropathy	Kay Dickersin
Ginkgo Biloba for macular degeneration	Jennifer Evans
Screening the elderly for visual impairment in the community	Liam Smeeth

## OTHER INFORMATION PUBLISHED ON THE COCHRANE LIBRARY OF RELEVANCE TO EYES AND VISION

The Cochrane Library contains a number of reviews and protocols relevant to ophthalmologists and related disciplines in addition to those prepared by the Eyes and Vision Group.

### Cochrane Reviews

Antihypertensive therapy in diabetes mellitus.  
 D-Penicillamine for preventing retinopathy of prematurity in preterm infants.  
 Early light reduction for preventing retinopathy of prematurity in very low birth weight infants.  
 Gradual versus abrupt discontinuation of oxygen in preterm or low birth weight infants.  
 Inositol for respiratory distress syndrome in preterm infants.  
 Prophylactic nasal continuous positive airways pressure for preventing morbidity and mortality in very preterm infants.  
 Pharmacotherapy for Behcet's syndrome.  
 Peripheral retinal ablation in premature infants with threshold retinopathy of prematurity.  
 Restricted versus liberal oxygen exposure for prevention of morbidity and mortality in preterm or low birth weight infants

### Cochrane Protocols

Antibiotics for treating leptospirosis  
 Effects of intensified insulin treatment in insulin-dependent diabetes mellitus (IDDM)  
 High versus low targeting of blood oxygen levels in preterm or low birth weight infants

### Database of Abstracts of Reviews of Effectiveness

A systematic overview of the incidence of posterior capsule opacification.  
 Does medical treatment of mild intraocular hypertension prevent glaucoma?  
 Eye infections after refractive keratotomy.  
 HLA-DR matching in corneal transplantation. Systematic review of published evidence.  
 Impact of diabetic retinopathy screening on a British district population: case detection and blindness prevention in an evidence-based model.  
 Medical prophylaxis and treatment of cystoid macular edema after cataract surgery - the results of a meta-analysis.  
 Management of cataract.  
 Pre-school vision screening: results of a systematic review.  
 Screening for diabetic retinopathy: a quantitative overview of the evidence, applied to the populations of health authorities and boards.  
 Synthesis of the literature on visual acuity and complications following cataract extraction with intraocular lens implantation.

Vitamin E prophylaxis to reduce retinopathy of prematurity: a reappraisal of published trials.

### DARE: bibliographic details only

Clinical profile of astemizole. A survey of 50 double-blind trials.  
 Excimer laser photorefractive keratectomy: the correction of myopia and astigmatism.  
 Randomized clinical trials on medical treatment of glaucoma. Are they appropriate to guide clinical practice?

### Health Technology Assessment

Analysis of the MTI Photoscreener for the early detection of visual anomalies in children.  
 Cataract surgery in Saskatchewan.  
 Cataract surgery in hospitals and office based practices.  
 Cost-effectiveness of the non-mydratic retinal camera.  
 Diabetic retinopathy - The value of early detection.  
 Endocyclodestruction with ophthalmologic laser microendoscope.  
 Evaluation of excimer laser for photorefractive keratectomy.  
 Excimer laser in ophthalmology.  
 Excimer laser photorefractive keratectomy: the correction of myopia and astigmatism.  
 Health products comparison: accessories for eye surgery.  
 Health products comparison: intraocular lenses.  
 Laser excimer in ophthalmology.  
 Laser corneal sculpting.  
 Laser trabeculoplasty as primary therapy for glaucoma  
 Lasers in sight. Laser correction of refractive errors  
 Phototherapeutic keratectomy with excimer laser.  
 Preschool vision screening.  
 Preventing blindness in diabetes. Briefing note.  
 Refractive laser surgery.  
 Scanning laser ophthalmoscope (SLO) for diagnosis and monitoring of glaucoma.  
 The screening of primary open-angle glaucoma.  
 The excimer laser for use in ophthalmology.  
 Tinted lenses in treatment of the reading disabled.