

CAM Systematic Reviews: The Cochrane Approach to Finding and Synthesizing Evidence

Margaret Sampson, MLIS
 Children's Hospital of Eastern Ontario
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Cochrane Logo



Cochrane Collaboration's Vision

That healthcare decision-making around the world will be informed by high-quality, timely research evidence, and that The Cochrane Collaboration will play a pivotal role in the production and dissemination of this evidence across all areas of health care, including complementary medicine.



The Cochrane Collaboration

International Organization

- Not for profit
- Registered as a charity in the U.K.
- Preparing, maintaining and promoting the accessibility of systematic reviews of the effects of healthcare interventions



Principles of the Collaboration

- Avoiding duplication
- Minimizing bias
- Keeping up-to-date
- Striving for relevance
- Promoting access
- Ensuring quality



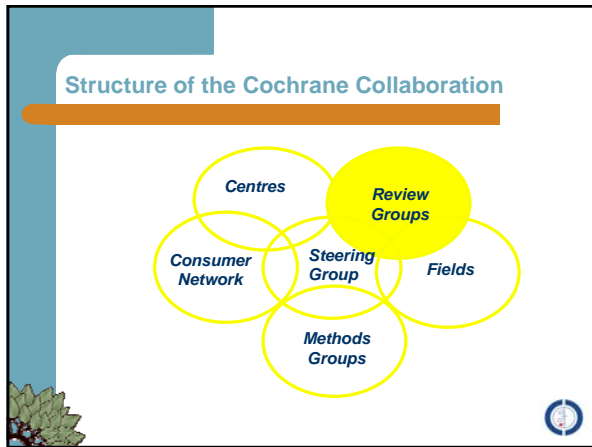
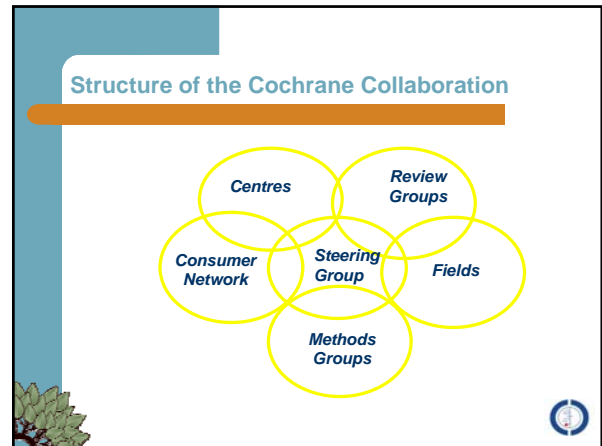
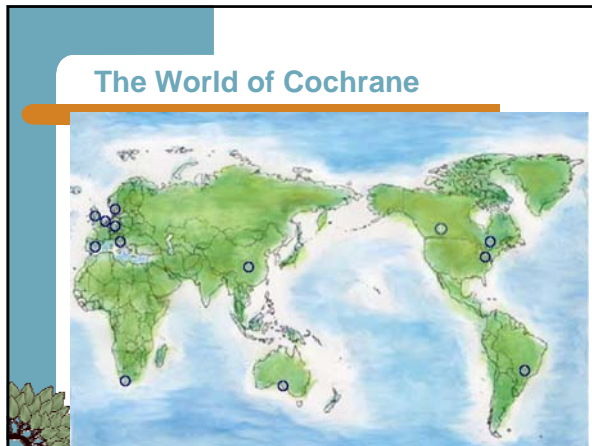
Evidence-based Medicine

EBM as the integration of

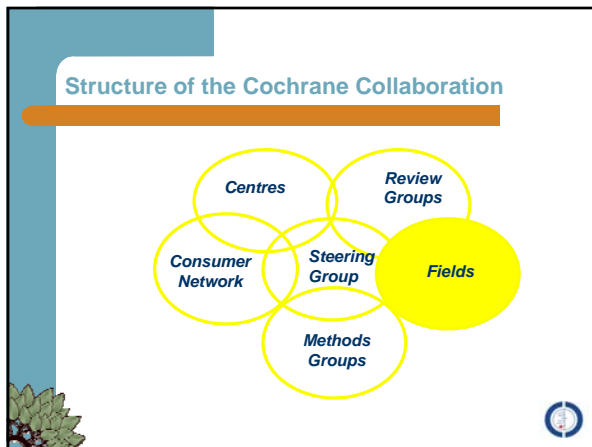
- Best available evidence from systematic research
- Clinical experience
- Patient values

Sackett et al. Evidence based medicine: How to practice and teach EBM. 2nd ed. 2000 New York



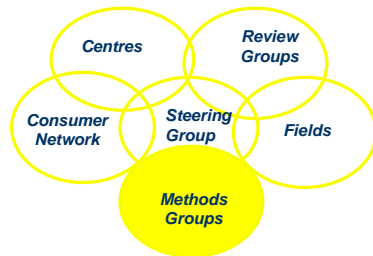


- ### Cochrane Review Groups
- Consist of an international group of experts with an interest in a health problem area
 - Work to prepare and maintain systematic reviews of the prevention, treatment, and rehabilitation of specified health care problems
 - Worldwide there are 51 registered review groups, 5 of which have their editorial base in Canada



- ### Cochrane Fields
- Represent a population, group, or type of care that overlaps multiple review group areas
 - e.g. CAM, Child health
 - Child Health field and the Health Equity field are located in Canada
 - Ensures their priorities are reflected in the work of review groups

Structure of the Cochrane Collaboration



Cochrane Methods Groups

- Develop methodology and advise the Collaboration on how the validity and precision of systematic reviews can be improved
- Examples: Statistical Methods, Information Retrieval, Non-Randomized Studies, Cochrane Qualitative Methods Group
- Bias Methods Group is located in Canada

Canadian Cochrane Network Sites

- Network sites provide/promote a regional or provincial presence/awareness, recruit and support people who wish to participate in the Collaboration
- Advise on future directions
- Promote the awareness, appreciation, distribution and use of Cochrane systematic reviews among their members

Affiliate Organizations

L'Agence d'évaluation des technologies et modes d'intervention en santé
 Arthritis Society
 Canadian Agency for Drugs and Technologies in Health
 Canadian Association of Occupational Therapists
 Canadian Association of Speech-Language Pathologists, and Audiologists
 Canadian Cancer Society

Affiliate Organizations, cont.

- Canadian Chiropractic Association
- Canadian Dental Association
- Canadian Health Libraries Association
- Canadian Institute for Health Information
- Canadian Institute for the Relief of Pain and Disability
- Canadian Medical Association
- Canadian Nurses Association
- Canadian Pharmacists Association

Affiliate Organizations, cont

- Canadian Physiotherapy Association
- Canadian Task Force on Preventive Health Care
- Canadian Women's Health Network
- College of Family Physicians of Canada
- Dietitians of Canada
- Institute for Clinical Evaluative Sciences
- Royal College of Physicians and Surgeons of Canada
- WorksafeBC, Evidence Based Practice Group, Clinical Services

Systematic Reviews

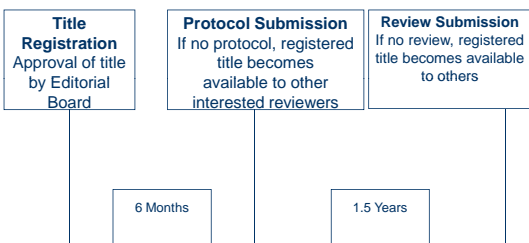
- Methodology for synthesizing evidence for maximizing precision and minimizing epidemiological bias:
 - Incomplete identification of evidence
 - Experimental bias in primary studies
 - Incomplete reporting of result

Review Team

- Two or more people
 - Minimize Bias
 - Varied regions, settings, perspectives, international collaboration encouraged
 - Range of Expertise
 - Content
 - Methodology (including statistical)
 - Searching (Trials Search Coordinator)

Commitment to the life of the Review!

Protocol and Review Process



Cochrane CAM Reviews

- Antioxidant vitamins failed to prevent age-related macular degeneration
- Water washes wounds well
- Hawthorn extract shows benefit in chronic heart failure
- Kava can, plant based treatment seems to work for anxiety
- Massage relieves cancer patients
- Milk thistle might not help if your liver gets damaged
- Not many compliments for complementary medicine in labour
- RCTs of Chinese medicinal herbs for the common cold
- Tennis: the elbow and the needle

Gems from Cochrane – NHS Clinical Knowledge Summaries

Centralized Identification of Trials

- CENTRAL – Cochrane register of controlled trials
- Review groups and fields contribute to registry
- Coordinated effort to hand search 1,700 journals
- Currently 527,885 trials

CM Registry

- Center for Integrative Medicine, Chalmers Research Group and Beijing University of Chinese Medicine collaboration
- Identify those trials within CENTRAL that are CAM
- Identify additional CAM trials and add to CENTRAL

CAM on PubMed - Ovid Translation

- National Library of Medicine CAM on PubMed
- Translated into OVID syntax
- Ran this against CENTRAL on OVID
- Identified over 25,000 CENTRAL records
- Available as a resource for those wishing to search a particular area
- available at http://www.compmed.umm.edu/integrative/cochrane_ovid.asp

Identify Additional CAM trials

- 10 most productive CAM databases
- Searched and screened
- Now indexing using a basic typology
- 2200 trials beyond MEDLINE and EMBASE
- Expected upload into CENTRAL for the 3rd quarter 2008 Cochrane Library

Challenges of CAM Trials

- Standardization of intervention, outcomes
- Randomization
- Blinding

N-of-1 Trials

- Standard RCT: patients randomized to condition A or condition B
- N-of-1: Single patient, with multiple crossovers: ABABAB
- Order can usually be randomized, interventions can sometimes be blinded
- N-of-1 trials from several patients can be combined meta-analytically

Johnston BC, Mills E. n-of-1 randomized controlled trials: an opportunity for complementary and alternative medicine evaluation. *J Altern Complement Med* 2004; 10(6):979-984

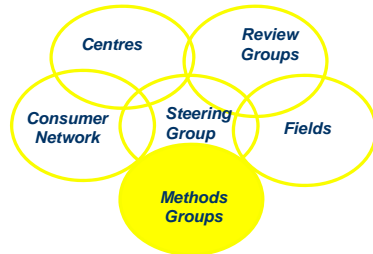
N-of-1 Trials

- Can individualize treatment targets
- Identify responders
- Optimize treatment formulations
- Useful for rapid onset/offset treatments
- Strongest level of evidence for treatment decisions for individual patients (Guyatt 2002)
- Minimize risk of drawing invalid conclusions about effectiveness of a particular therapy

Evidence Synthesis, Cochrane Style

- Quantitative – estimate of intervention effectiveness and confidence interval
- May include meta-analysis – statistical pooling of results from 2 or more trials
- Emerging interest in qualitative synthesis

Qualitative Cochrane



Cochrane Qualitative Methods Group

- Adding value
- Define and refine the question
- Enhancing reviews
- Extending reviews
- Supplementing reviews
- Part of a recent trend to widen the focus

Ways to Get Involved

- Become a reviewer, peer reviewer, or editor
- Orphan protocols, reviews, or updates
- Field, Methods Group, or Consumer Network
- Handsearch a journal
- Disseminate and apply the findings of reviews
- Sign up for CCInfo, a biweekly email newsletter with the latest news and information
<http://lists.cochrane.org/mailman/listinfo/ccinfo>

CAM Bursary

- 2 available annually
- US\$5000 each
- For registered Cochrane protocols in CAM topics that need additional support to finish
- <http://www.compmmed.umm.edu/cochrane.asp>

Summary

- Cochrane is active in the CAM field
- Coordinated effort to identify primary evidence for review and synthesis
- Supports through reviewer training, bursaries

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