Methods in Cochrane Reviews: a chose-and-pick model versus a structured model

Cochrane Methods Symposium

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Trusted evidence.
Informed decisions.
Better health.
When do difficult situations arise?

Methods to debate

**Use of emerging methods**

New developments or improvements in existing approaches are needed in some areas and apply to some CRGs (e.g. meta-analysis for sparse data)

**Use of existing methods**

Not all are suitable for CRs or reviews at all! Debate which one is more appropriate
Is MECIR enough to address these issues?

| 64 | Mandatory | Assessing statistical heterogeneity | Assess the presence and extent of between-study variation when undertaking a meta-analysis. |

**Incomplete methodological guidance**

| 65 | Highly desirable | Addressing missing outcome data | Consider the implications of missing outcome data from individual participants (due to losses to follow up or exclusions from analysis). |

**Under-developed methodology**

MECIR tells you *what* you are expected to do but now *how* you should do it! Handbook balances between being understandable and technically sound and cannot cover all detail.

Plus, recommendations in the Handbook are not binding!
What to do when disagreements arise?

Framework

Anarchy
Driving engine for innovation
Encourages people’s creativity
Gives a feeling of autonomy to CRGs
CGRs know best what’s appropriate for their reviews
When do difficult situations arise?

**Flexibility in CRGs**

**Anarchy**

**Tyranny – Aristocracy**

Guarantees minimum methodological standards for all reviews

Safeguards against a pick-and-chose approach

Makes the best use of resources – many Cochrane methodologists
When do difficult situations arise?

Flexibility in CRGs

Anarchy

Democratic federation

Tyranny - Aristocracy
Try to find a sensible business model

....Where methods in Cochrane Reviews can be picked from a pool of

- Optimal methods
- Appropriate methods
- Tolerated methods
- Inappropriate methods

List to be established by Methods Groups in collaboration with CRGs

A communication model is needed to feedback between Review Groups and the Methods Groups (e.g. prompting the Methods Groups when a new method is published, or flagging out methodological gaps –link with MIF)
Example: Challenges in SMG

Estimators of heterogeneity and alternative RE models

Discussion in SMG mailing list (couple year ago!) attracted our attention. There are different estimates of heterogeneity and alternative random effects models.

Concerns about Cochrane Reviews using out-of-date methods to synthesize data and draw conclusions!
Example: Challenges in SMG

Estimators of heterogeneity

An «Heterogeneity and Random Effects Task Force» was created – with experts from the field (included non-Cochrane researchers)

We reviewed the literature, examined simulation/empirical studies and compiled expert opinion

Reached consensus and summarized it in a paper

We have recommendations

With our own resources

This was an exceptional case
Example: Challenges in Methods Groups

- CRGs
- Reviewers
- Methods Groups
- Handbook
- Revman
A Democratic Federation needs:

Each Methods Group needs to
Review the literature
Assess the available methods for suitability for CRs
Come up with the list of optimal, appropriate and tolerated methods – and ‘no-no’ methods!
Inform MIF for important research gaps
Devise an interim policy for methodological gaps
Update the list of methods regularly

You can’t do this with volunteers!
SMG has now a part-time methodologist!
We need to do this now

Because prevention is always preferable to cure