Extracting large sets of data from systematic reviews: developing a basis for separating, storing and using information on trials

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Background

Qualitative and quantitative data relevant to randomised controlled trials (RCT), manually extracted and analysed within Cochrane reviews, are available to those who have access to the Cochrane Library. If, however, one wished to re-use these data, all information has to be extracted from that *review* before that process can start. There are great benefits of widely sharing data – and drawbacks in not sharing. This work explores whether it is possible to i. extract all trial data from the systematic reviews; and prepare these data to be widely accessed. Therefore, the aim is to make the process of transposing data from RCTs into a web-based curated, accessible database easy.

Method

Resources for this work are 200 systematic reviews of the Cochrane Schizophrenia Group (Nottingham) and open source software. We produced a Java-based App with functionality to extract all trial data from a list of systematic reviews. (The reviews, available in ReviewManager5 format, are parsed as the app accesses relevant parts of the reviews; in turn the data within the included studies are parsed into a format that can be downloaded, uploaded and reused).

This creates the possibility for results to be stored in a way that:

- all relevant data are ready to be used by others
- data can be auto-tidied re-planted back into the source review

Results

The product of this work is a simple end-user App. By its use Cochrane groups can create a database with all data they have extracted for their reviews.

The future

Supporting auto-extraction, auto-curation, wide dissemination and re-use of well-extracted data has advantages for all. There are many imaginative things that can be done with these data for all categories of end-users.