

# Inclusion of conference abstract data in systematic reviews of pharmacologic interventions in different disease areas



Zhang Y<sup>1</sup>

<sup>1</sup> HERON Group, Luton, England, UK

## Introduction

Systematic reviews (SRs) are conducted with the aim to review all the evidence relevant to answering a study question in a well documented and reproducible fashion.

In SRs of pharmacologic interventions this means including results data from all clinical trials that have been conducted at the time of the review.

Conference searching is often performed as part of SR methodology in order to capture up-to-date relevant data which are yet to be published in academic journals. These may be preliminary results from ongoing clinical trials, or simply results from completed trials which are yet to be published in an academic journal.

Conference searching can be a substantial undertaking as hand searching conference abstract books and extracting their data can be costly and time consuming. It is therefore reasonable to ask whether this is in fact a worthwhile activity, and whether conference searching will actually identify a worthwhile number of studies reporting data meeting an SR's inclusion criteria.

This study therefore investigates what proportion of study/trial data included in SRs of pharmacologic interventions is derived partly or solely from data published in conference abstracts, for three different major disease areas.

## Methods

The Cochrane Database of Systematic Reviews was searched for SRs on pharmacologic interventions (excluding SRs on purely herbal or nutritional interventions).

The Cochrane Database of Systematic Reviews was chosen as it is renowned for publishing high quality well documented SRs, and the ease of which it can be searched.

SRs were only included if it was clearly stated in the methodology section that conference searching had been conducted, or that conference abstracts are included as part of the Specialized Registers from which they obtained their data.

Completed, published, SRs for pharmacologic interventions in three major disease areas (each composed of two diseases) were included: psychological disease (depression<sup>1</sup> and bipolar disorder<sup>2</sup>), female cancers (breast cancer<sup>3</sup> and ovarian cancer<sup>4</sup>), and arthritis (osteoarthritis<sup>5</sup> and rheumatoid arthritis<sup>5</sup>).

In diseases where a large number of SRs met the inclusion criteria, the 10 most recently published SRs were selected.

The included studies lists of each included SR was reviewed and the total number of studies, the number of studies for which data was obtained solely from conference abstracts and the number of studies whose data was obtained partially from conference abstracts were extracted.

## Results

29 SRs were included and their included studies lists reviewed, 10 SRs were found each for the female cancers and arthritis disease areas, but only 9 SRs were identified in the psychological diseases area which met the inclusion criteria.

16 of the 29 SRs included studies found via conference searching: 3/9 for psychological disease, 9/10 for female cancers and 4/10 for arthritis.

553 different studies were reviewed in the 29 SRs. Taken all together, data for 82.5% (456/553) of all reviewed studies were obtained solely from articles published in academic journals, data for 11.6% (64/553) of all reviewed studies came solely from conference abstracts, and data for 6.0% (33/553) of all reviewed studies came from a combination of both journal articles and conference abstracts. The 553 different studies included in the 29 SRs were composed of 766 separate citations, of which 15.1% (116/766) were conference abstracts.

These results are summarised in Table 1.

**Table 1: Summarised results**

	Psychological disease	Female cancers	Arthritis
% studies published as journal article only (all SRs)	84.5	82.3	81.7
% studies published as conference abstracts only (all SRs)	4.9	9.3	17.8
% studies published as both conference abstracts and journal articles (all SRs)	10.7	8.5	0.5
Mean % studies published as journal article only	81.1	67.8	92.8
Mean % studies published as conference abstracts only	3.6	10.5	6.9
Mean % studies published as both conference abstracts and journal articles	15.3	21.7	0.3
% citations journal articles	87.9	83.3	84.0
% citations conference abstracts	12.1	16.7	16.0

## Results continued

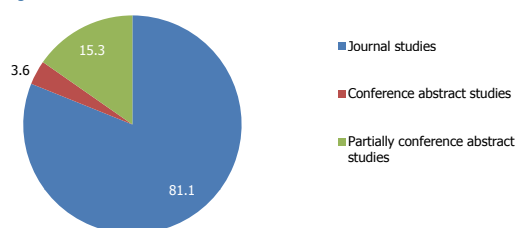
We can see from the results that, for the three disease areas considered, conference searching was most worthwhile in the female cancers disease area where more than a third of all studies included in the review had results data derived solely or partially from conference abstracts.

This is in contrast to the arthritis disease area where less than 8% of included studies had their data derived from solely or partially from conference abstracts.

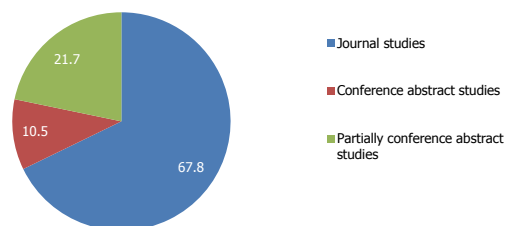
This data is displayed graphically in figures 1 to 3.

This shows that conference abstracts can make a major contribution to the data used in an SR, as well as that the size of this contribution varies with disease area.

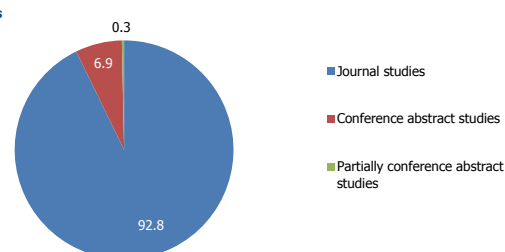
**Figure 1: Psychological disease**



**Figure 2: Female cancers**



**Figure 3: Arthritis**



## Conclusions

The proportions of studies for which data has been obtained solely or partially from conference abstracts varies in the three disease areas, and is substantial in at least one. There is therefore some evidence to suggest that conference searching can make a significant contribution to an SR, and that whether conducting conference searching is a worthwhile part of the SR may be dependent in part on the disease area in which the SR is to be conducted.

To better answer this question, it would be advantageous to conduct a more expansive review of SRs covering a larger number of disease areas.

It would also be useful to investigate the impact of conference-searched material on the quantitative results of SRs, via sensitivity analysis, to ascertain how great an effect results reported in conference abstracts has on the meta-analysis and/or mixed treatment comparisons results used for the comparison of intervention effectiveness.

## References

- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=DEPRESSN\\_3\\_3#DEPRESSN\\_3\\_3](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=DEPRESSN_3_3#DEPRESSN_3_3)
- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=DEPRESSN\\_4\\_3#DEPRESSN\\_4\\_3](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=DEPRESSN_4_3#DEPRESSN_4_3)
- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=BREASTCA\\_4#BREASTCA\\_4](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=BREASTCA_4#BREASTCA_4)
- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=GYNAECA\\_2#GYNAECA\\_2](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=GYNAECA_2#GYNAECA_2)
- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=MUSKEL\\_3\\_3#MUSKEL\\_3\\_3](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=MUSKEL_3_3#MUSKEL_3_3)
- [http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=MUSKEL\\_10\\_3#MUSKEL\\_10\\_3](http://onlinelibrary.wiley.com/book/10.1002/14651858/topics?filter=MUSKEL_10_3#MUSKEL_10_3)