

**Deficiencies in the publication and reporting of the results of systematic reviews  
presented at scientific medical conferences**

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### **What is new?**

#### **Key findings**

- Despite the importance of systematic reviews in the delivery of evidence-based healthcare, and the large number of abstracts presented at scientific conferences, less than <1% of abstracts in our sample reported the findings of a systematic review, of which only 53% were published in full.
- Important aspects of the systematic review methods and results were consistently poorly reported in both the conference and the corresponding journal abstract, notably the: search date, method of assessing risk of bias, result (including number of studies and participants) for the main efficacy outcome(s), information about harms and limitations of the evidence.
- There were also important discrepancies between the conference and corresponding journal abstracts including deletion of studies, changes in reported efficacy and harm outcome(s) and in the nature or direction of the conclusions.

#### **What this adds to what is known**

- Our study provides a comprehensive assessment of the prevalence of systematic reviews reported in conference abstracts, their associated full publication and the quality of reporting.

#### **What is the implication, what should be changed**

- Serious deficiencies in reporting of abstracts of systematic reviews make it difficult for readers to reliably assess their findings. This makes them unusable and represents a considerable waste in already limited financial resources.
- We recommend journal editors and conference organisers actively implement PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) guidance for reporting abstracts of systematic reviews.

## ABSTRACT

**Objective:** To evaluate the publication and quality of reporting of abstracts of systematic reviews presented at scientific medical conferences.

**Study design and setting:** We included all abstracts of systematic reviews published in the proceedings of nine leading international conferences in 2010. For each conference abstract we searched PubMed (1 January 2010 to June 2013) to identify their corresponding full publication. We assessed the extent to which conference abstracts and their corresponding journal abstract reported items included in the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) for Abstracts checklist and recorded any important discrepancies between sources.

**Results:** We identified 197 abstracts of systematic reviews, representing <1% of the total number of conference abstracts presented. Of these 53% were published in full, the median time to publication was 14 months (IQR 6.6 to 20.1 months). While most conference and journal abstracts reported details of included studies (conference n=83/103; 81% vs. journal n=81/103; 79%), size and direction of effect (76% vs. 75%) conclusions (79% vs. 81%), many failed to report the date of search (27% vs. 25%), assessment of risk of bias (18% vs. 12%), the result for the main efficacy outcome(s) including the number of studies (37% vs. 31%) and participants (30% vs. 20%), harms(s) (17% vs. 17%), strengths (17% vs. 13%) and limitations (36% vs. 30%) of the evidence, or funding source (1% vs. 0%). There were discrepancies between journal and corresponding conference abstracts including deletion of studies (13%), changes in reported efficacy (11%) and harm (10%) outcome(s) and changes in the nature or direction of conclusions (24%).

**Conclusion:** Despite the importance of systematic reviews in the delivery of evidence-based healthcare very few are presented at scientific conferences and only half of those presented are published in full. Serious deficiencies in the reporting of abstracts of systematic reviews make it difficult for readers to reliably assess their findings.

**Keywords:** Systematic reviews; Randomized Controlled Trials, Evidence-based Healthcare; PRISMA Statement.

## **Introduction**

The aim of a systematic review is to identify, critically appraise and summarise evidence relating to a particular problem in an unbiased and systematic manner [1]. Systematic reviews represent the highest level of evidence in the “hierarchy of evidence” pyramid [2] and have received increased attention from scientists, editors, policy makers, and consumers. It is widely accepted that systematic reviews have the potential to ensure best practice and improve consistency in healthcare delivery by enabling users to make decisions based on the totality of the available evidence. The number of published systematic reviews is growing rapidly and it is estimated that there are now approximately 75 new trials, and 11 new systematic reviews of trials published per day [3]. However, in some parts of the world, because of a pay wall or poor internet connectivity, readers may only have access to the abstract of a systematic review. This means that sometimes decisions may be made on the basis of the abstract rather than the full publication [4].

In addition, a substantial body of research is first presented at scientific meetings and published as an abstract in the conference proceedings or on the conference website. Abstracts are important because they allow readers to quickly assess the relevance of the research to clinical practice and the research findings [5]. However, around half of research presented at scientific meetings is never published in full and failure to publish is associated with the significance of the study findings [6]. Much of this evidence has centred around clinical trials, where only 58% of conference abstracts reporting the results of randomized trials are ever published in full [6]. Even when published, there is a delay of around 19 months. There are also concerns about reliability and quality of clinical trials published in conference proceedings [7-10] and about the robustness of the trial results compared to their subsequent full publication [5]. To our knowledge no similar studies have been performed comparing conference abstracts of systematic reviews and their associated full publications.

The aims of our study were: 1) to determine the proportion of systematic reviews published as conference abstracts that are subsequently published in full; 2) to compare the quality of reporting of conference abstracts of systematic reviews and their corresponding journal abstracts; 3) to evaluate the consistency of information between conference abstracts of systematic reviews and their corresponding journal abstracts.

## **Methods**

### **Sample selection**

We selected all conference abstracts of systematic reviews evaluating healthcare published in the proceedings of nine leading international conferences in 2010. These were the: American College of Rheumatology, American Diabetes Association, American Heart Association, American Psychiatric Association, American Society of Anaesthesiologists, American Society of Clinical Oncology, American Society of Hematology, American Thoracic Society, and the Infectious Diseases Society of America (see supplementary material). We chose the proceedings of these conferences as they were known to publish abstracts of systematic reviews and all abstracts from the meetings are published online and are searchable in electronic format.

For each congress held in 2010, we systematically searched on the dedicated meeting website for abstracts reporting the results of systematic reviews using the search terms “systematic review” and / or “meta-analysis” in either the title or abstract. All abstracts were screened by two reviewers, to identify abstracts of systematic reviews. We broadly defined a systematic review as one where the authors’ stated objective was to summarise evidence from multiple studies and the abstract described explicit methods, regardless of the detail provided [1]. Systematic reviews of animal studies were excluded. For each identified conference abstract reporting the results of a systematic review, we then searched the US National Library of Medicine’s PubMed database (search date: 1 January 2010 to June 2013) to identify its full publication using the following strategy: 1) the abstract’s whole title; 2) part of the abstract’s title; 3) one or more key words and the name of the first author; 4) one or more key words and the name of the last author; 5) the name of the first and last author.

### **Data extraction and analysis**

Two people extracted data independently from each eligible conference abstract and the corresponding abstract of the full publication, if available. Assessors were blinded to the origin of the abstract (i.e. conference or journal); this was done by copying and pasting the relevant text from each abstract into a standardised Word document and removing any additional identifying features. Data extraction was carried out by teams of assessors working in pairs. Any uncertainties or disagreements were resolved by a third assessor (SH). Abstracts of systematic reviews were allocated at random so that each assessor extracted data from a similar number of abstracts. All assessors received training on how to complete the data extraction form.

For each systematic review we recorded the time interval between presentation at the scientific conference and the full publication, and whether it was an oral or poster presentation. We extracted

information on the type of systematic review, the type of intervention, the number and type of included studies, and the number of included participants. We then assessed adherence to each of the items included in the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analysis) for Abstracts checklist [4] and evaluated the extent to which each PRISMA item was reported in the conference abstract and corresponding journal abstract. PRISMA for Abstracts provides recommendations for reporting abstracts of systematic reviews [4], giving authors with a framework for summarising their systematic review that will meet the needs of many readers. An independent pair of assessors (not blinded to the origin of the abstract) then recorded discrepancies between the journal abstract and corresponding conference abstract, relating to the reporting of the results and the nature and direction of the conclusions of the systematic review. Data analyses were performed using STATA IC (version 12). All analyses were descriptive and summarized as frequencies (%) or median and interquartile ranges (IQR).

## **Results**

### Rate and time to publication of conference abstracts

We identified a total of 26840 conference abstracts from the proceedings of the different specialty meetings. Electronic searches using the search terms “systematic review” and / or “meta-analysis” in the title and abstract identified 299 possible reports, of which 197 were identified as conference abstracts of systematic reviews (Figure 1); this figure represents less than 1% of the total number of conference abstracts presented at these meetings. Excluded abstracts (n=102) were predominantly those where the term “systematic review” or “meta-analysis” appeared in the background or conclusion section (i.e. not the main focus of the study), or was a conference abstract reporting a meta-analysis but not part of a systematic review. Twenty-six percent (n=51/197) of the 197 conference abstracts of systematic reviews were published in full within one year of presentation at the conference, 47% (n=93/197) within two years and 53% (n=105/197) within three years at the time of our search. The median time to publication was 14 months (IQR 6.6 to 20.1 months) (425 days; IQR 200 to 634 days) (Figure 2; also see supplementary material). The majority of conference abstracts of systematic reviews were poster presentations (n=164/197; 83%); these had a slightly lower full publication rate than oral presentations (n=86/164; 52% versus n=19/33; 58%) (Table 1).

### Characteristics of included conference abstracts of systematic reviews

We included 103 systematic reviews with both a conference and corresponding journal abstract; two of the 105 full publications were excluded as there was no published abstract. The majority of conference abstracts reported systematic reviews comparing different types of treatment

intervention(s) (n=68; 66%), the majority (n=57/68; 84%) of which evaluated drug interventions. Other types of systematic review included diagnosis (n=7; 7%), prevalence (n=9; 9%) or prognosis (n=19; 18%). Around half (n=53; 51%) of systematic reviews included only reports of randomized controlled trials, however, for 20% (n=20) the type of included study was not reported. The median number of included studies per systematic review was 15 (IQR 8 to 27) with a median number of 3009 (IQR 1178 to 12870) included participants per review (Table 2).

#### Reporting of PRISMA for Abstracts items in conference and journal abstracts

The information included in abstracts is summarised in Table 3. PRISMA for Abstracts items reported in both conference and corresponding journal abstracts included use of the term “systematic review” or “meta-analysis” in the title (conference n=92; 89% vs. journal n=91; 88%), the number and type of included studies (n=83; 81% vs. n=81; 79%), description of the size and direction of the effect (i.e. which group is favoured) (n=78; 76%; vs. n=77; 75%) and general interpretation of the results and important implications (n=81; 79% vs. n=83; 81%). Items which were poorly reported included the date of the search (n=28; 27% vs. n=26; 25%), the method of assessing risk of bias of the included studies (n=19; 18% vs. n=12; 12%), the result for the main outcomes (benefit), including the number of studies (n=38; 37% vs. n=32; 31%), and number of participants (n=31; 30% vs. n=21; 20%) for each outcome, the result for the main outcome (harm), including the number of studies and number of participants (n=17; 17% vs. n=17; 17%), a brief summary of the strengths (n=18; 17% vs. n=13; 13%) and limitations (n=37; 36% vs. n=31; 30%) of the evidence. The source of funding for the systematic review and registration details were virtually never provided.

#### Important discrepancies between conference and corresponding journal abstracts

We identified a number of discrepancies between the conference and corresponding journal abstracts, firstly in the number of included studies and the number of participants. Where numbers were reported, 12 (n=12/96; 13%) journal abstracts reported fewer studies than the conference abstract and eight (n=8/68; 12%) reported fewer participants. In contrast, 31 (n=31/96; 32%) added new studies to the journal abstract and 28 (n=28/68; 41%) added new participants.

Based on the sample of 72 systematic reviews, where no new studies had been added to the journal abstract, we identified important discrepancies in the reported efficacy (n=8; 11%) and harms (n=7; 10%) outcome(s) and in the reported efficacy (n=8; 11%) and harm (n=5; 7%) subgroup analyses. The most common discrepancy was the omission of a significant subgroup(s) analysis from the journal abstract or the adding of one or more significant outcome measures to the journal abstract. In 10%

(n=7) of abstracts the limitations section, for example describing potential sources of heterogeneity or risk of bias, was also omitted from the journal abstract. The conclusion differed in 24% (n=17) of conference and corresponding journal abstracts. Where there was a discrepancy this was either because there was a change in the direction of the effect (n=5) (e.g. a shift of emphasis from inconclusive to conclusive or vice versa), or the focus of the conclusion was on one or more different outcomes or subgroups (n=12). (Table 4).

## **Discussion**

### Summary of main findings

Our study provides a comprehensive assessment of the prevalence of systematic reviews reported in conference abstracts, their associated full publication and the quality of reporting. Despite the importance of systematic reviews in the delivery of evidence-based healthcare, and despite the large number of abstracts presented at scientific conferences, less than 1% of the abstracts in our sample reported the findings of a systematic review, the majority of which were presented as posters. Of these studies, only around half were published in full within three years of presentation at the conference. Therefore for around half of systematic reviews the conference abstract remains the only lasting source of information about that study [6].

The majority of systematic reviews in our sample assessed reports of randomized trials and compared different types of drug interventions. While certain elements such as the data sources and conclusion were generally well reported, important aspects of the systematic review methods and results were consistently poorly reported in both the conference abstract and the corresponding journal abstract. Notably, the search date, the method of assessing risk of bias, the result (including number of studies and participants) for the main efficacy outcome(s), information about harms and limitations of the evidence were particularly poorly reported. We identified several important discrepancies between the journal and corresponding conference abstract. For example, authors added a new outcome with a statistically significant result, omitted a significant subgroup analysis, or changed the nature or direction of the conclusion. Surprising was the omission of whole studies from the journal abstract which occurred in 13% of systematic reviews. Reasons for this discrepancy are unclear. It could simply be that the authors subsequently identified duplicate studies, or that a study originally considered eligible was deemed not to be. It might also be an indication of selective reporting where studies with non-significant results were removed from the analysis [11]. The latter would warrant further investigation.



### Comparison with other studies

We are not aware of other studies focusing specifically on the reporting of systematic reviews published as conference abstracts and their associated full publications. However, several studies have looked at abstracts of systematic reviews published in journal articles and have found similar results in terms inadequate reporting of the systematic review methods and results [12-14]. For example, a study of 93 systematic reviews published in dental journals found 66% of abstracts failed to adequately describe the method of study appraisal or the method of data synthesis [12]. Another study assessing 182 abstracts of systematic reviews found that 42% did not describe the direction of the intervention effect in words and in 19% the direction of effect could only be determined by interpreting the numerical results. Statistical uncertainty was also poorly reported with 24% of abstracts not reporting either a confidence interval or p-value [14]. Other studies have predominantly focused on abstracts of randomized trials. However, there are a number of important similarities including the number of studies presented at conferences which are never published in full [6], the delay in time to publication [6], concerns about reliability and quality in particular a lack of information about the study methods [7-10] and the robust of the results compared to their subsequent full publication [5].

### Limitations of the evidence

Our study has several important limitations. First, we targeted a specific group of high profile international scientific conferences which were known to include systematic reviews and all abstracts from the meetings were searchable and published online. Thus our sample may not be fully representative. Second, we only searched the PubMed database for the full reports of systematic reviews presented as conference abstracts, so it is possible we may have missed full length publications indexed in other electronic databases. Third, only 53% of abstracts were published in full at time of our search so the reasons for non-publication need to be explored. For example, it could be that authors lost interest, or there may have been publication bias favouring reporting of systematic reviews with significant findings [15]. We were unable to investigate this further as often several outcomes were reported in the abstract and it was not always clear which was the primary outcome measure of the systematic review.

### Implications for systematic reviews

Failure to publish the results of systematic reviews represents a substantial waste of the time and resources invested in the conduct of the research. Even when published, inadequate and incomplete reporting means the readers cannot adequately assess what was done, what was shown, and what

the findings mean. Research that is not clearly and transparently reported, prevents clinicians from using interventions which have been found to be effective and this can have a detrimental impact on patient care. It is estimated that more than 50% of research reports are so poorly or incompletely reported they are unusable, and this represents a waste of tens of millions of pounds each year [16].

One way to tackle the problem of inadequate reporting has been the use of reporting guidelines. These contain the minimum information required when reporting medical research, thus enabling users of the research to understand how the study was conducted and to assess the validity and reliability of the study findings [17]. Reporting guidelines such as CONSORT (Consolidated Standards of Reporting Trials) for randomized trials [18] and PRISMA for systematic reviews [19] are endorsed by hundreds of journals and prominent international organisations worldwide. Specific guidance for the reporting of abstracts of randomized trials in journal and conference abstracts was published in 2009 [20] and a recent study showed that active implementation of the CONSORT guidance by journal editors led to improvements in reporting [21]. We would strongly recommend that journal editors and conference organisers implement a similar policy of active implementation of the PRISMA guidance for reporting abstracts of systematic reviews which was published in April 2013 [4], to help ensure that research reports better address the needs of the range of research users. Our study will provide important baseline information, prior to publication of PRISMA for Abstracts guidelines, against which future impact can be measured.

## **Conclusion**

Despite the importance of systematic reviews in the delivery of evidence-based healthcare, very few are presented at scientific conferences and only around half of these are published in full. Serious deficiencies in reporting of conference and journal abstracts of systematic reviews make it difficult for users to adequately determine how the review was carried out and assess the relevance of the findings. This makes them unusable and represents a considerable waste in already limited financial resources.

**Competing interests:** All authors have completed the Unified Competing Interest form at [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) (available on request from the corresponding author) and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; SH and DA are members of the PRISMA for Abstracts Group; no other relationships or activities that could appear to have influenced the submitted work.

**Author contributions:** SH and IB were involved in the design, implementation, and analysis of the study; and in writing the final manuscript. DA and PR were involved in the design and analysis of the study, and in commenting on drafts of the final manuscript. SH is responsible for the overall content as guarantor.

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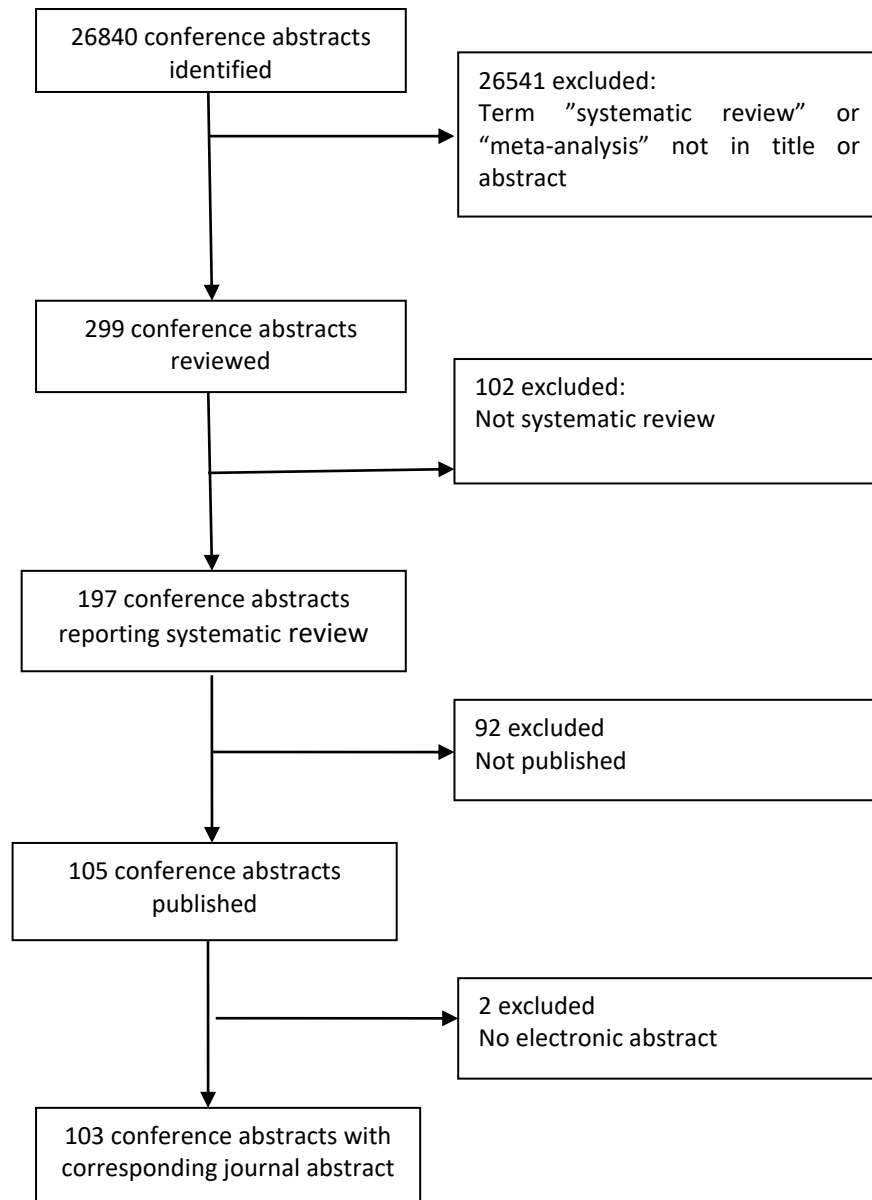
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## References

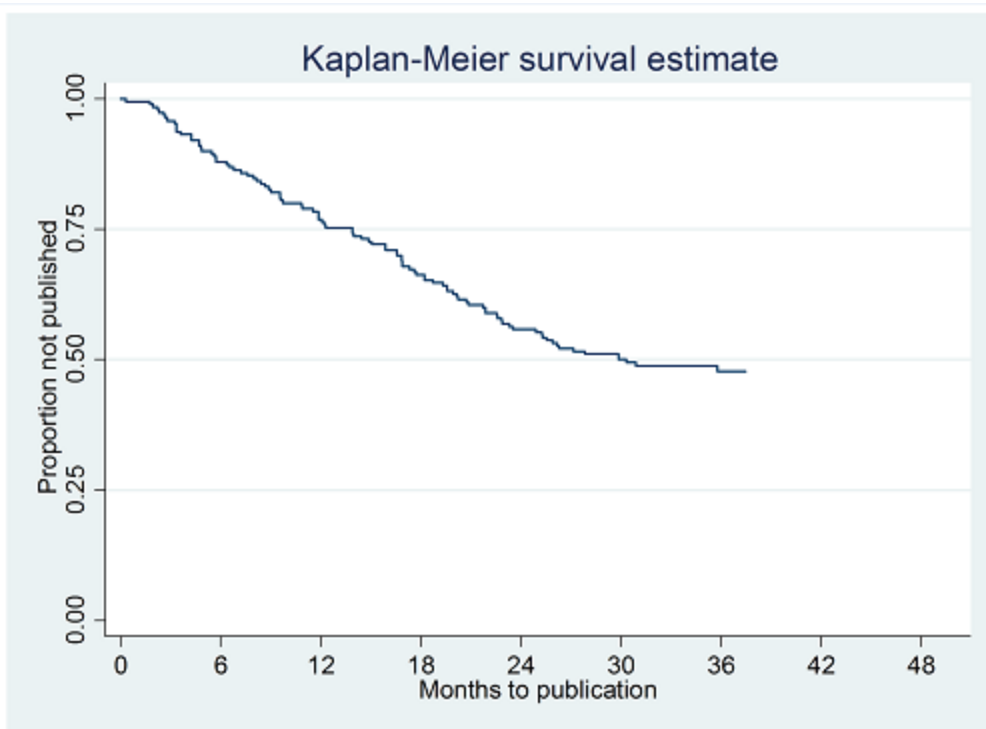
1. Moher, D., et al., Epidemiology and reporting characteristics of systematic reviews. *PLoS.Med*, 2007. 4(3): p. e78.
2. Guyatt, G.H., et al., Users' guides to the medical literature. IX. A method for grading health care recommendations. Evidence-Based Medicine Working Group. *JAMA*, 1995. 274(22): p. 1800-1804.
3. Bastian, H., P. Glasziou, and I. Chalmers, Seventy-five trials and eleven systematic reviews a day: how will we ever keep up? *PLoS.Med*, 2010. 7(9): p. e1000326.
4. Beller, E.M., et al., PRISMA for Abstracts: reporting systematic reviews in journal and conference abstracts. *PLoS.Med.*, 2013. 10(4): p. e1001419.
5. Hopewell, S., M. Clarke, and L. Askie, Reporting of trials presented in conference abstracts needs to be improved. *J Clin.Epidemiol.*, 2006. 59(7): p. 681-684.
6. Scherer, R.W., P. Langenberg, and E.E. von, Full publication of results initially presented in abstracts. *Cochrane Database.Syst.Rev.*, 2007(2): p. MR000005.
7. Berwanger, O., et al., The quality of reporting of trial abstracts is suboptimal: survey of major general medical journals. *J Clin.Epidemiol.*, 2009. 62(4): p. 387-392.
8. Wang, L., et al., Quality of reporting of trial abstracts needs to be improved: using the CONSORT for abstracts to assess the four leading Chinese medical journals of traditional Chinese medicine. *Trials*, 2010. 11: p. 75.

9. Ghimire, S., et al., Assessment of adherence to the CONSORT statement for quality of reports on randomized controlled trial abstracts from four high-impact general medical journals. *Trials*, 2012. 13: p. 77.
10. De, S.M., et al., Reporting quality of abstracts presented at the European Association of Urology meeting: a critical assessment. *J Urol.*, 2012. 188(5): p. 1883-1886.
11. Chan, A.W., et al., Empirical evidence for selective reporting of outcomes in randomized trials: comparison of protocols to published articles. *JAMA*, 2004. 291(20): p. 2457-2465.
12. Kiriakou, J., et al., Reporting quality of systematic review abstracts in leading oral implantology journals. *J Dent.*, 2013. 41(12): p. 1181-1187.
13. Seehra, J., et al., Reporting completeness of abstracts of systematic reviews published in leading dental specialty journals. *Eur.J Oral Sci*, 2013. 121(2): p. 57-62.
14. Beller, E.M., et al., Reporting of effect direction and size in abstracts of systematic reviews. *JAMA*, 2011. 306(18): p. 1981-1982.
15. Hopewell, S., et al., Publication bias in clinical trials due to statistical significance or direction of trial results. *Cochrane Database.Syst.Rev.*, 2009(1): p. MR000006.
16. Glasziou, P., et al., Reducing waste from incomplete or unusable reports of biomedical research. *Lancet*, 2014. 383(9913): p. 267-276.
17. Simera, I., et al., Transparent and accurate reporting increases reliability, utility, and impact of your research: reporting guidelines and the EQUATOR Network. *BMC.Med*, 2010. 8: p. 24.
18. Schulz, K.F., D.G. Altman, and D. Moher, CONSORT 2010 statement: updated guidelines for reporting parallel group randomized trials. *Ann.Intern.Med*, 2010. 152(11): p. 726-732.
19. Moher, D., et al., Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ*, 2009. 339: p. b2535.
20. Hopewell, S., et al., CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. *PLoS.Med.*, 2008. 5(1): p. e20.
21. Hopewell, S., et al., Effect of editors' implementation of CONSORT guidelines on the reporting of abstracts in high impact medical journals: interrupted time series analysis. *BMJ*, 2012. 344: p. e4178.

**Figure 1: Identification of conference abstracts of systematic reviews and corresponding journal abstracts**



**Figure 2: Rate and time to publication of conference abstracts (Kaplan-Meier survival estimate)**



**Table 1: Type of conference abstract and rate of publication**

<b>Meeting 2010</b>	<b>Abstract reporting systematic review</b>	<b>Oral (% published)</b>	<b>Poster (% published)</b>	<b>Overall (% published)</b>
American College of Rheumatology (ACR)	18	2 (50%)	11 (79%)	13 (72%)
American Diabetes Association (ADA)	8	1 (100%)	4 (57%)	5 (63%)
American Heart Association (AHA)	32	11 (58%)	6 (46%)	17 (53%)
American Psychiatric Association (PSY)	7	0	3 (50%)	3 (43%)
American Society of Anesthesiologists (ASA)	8	0	2 (29%)	2 (25%)
American Society of Clinical Oncology (ASCO)	57	0 (0%)	28 (50%)	28 (49%)
American Society of Hematology (ASH)	34	2 (67%)	13 (42%)	15 (44%)
American Thoracic Society (ATS)	25	1 (100%)	16 (67%)	17 (68%)
Infectious Diseases Society of America (IDSA)	8	2 (100%)	3 (50%)	5 (63%)
<b>Total</b>	<b>197</b>	<b>19/33 (58%)</b>	<b>86/164 (52%)</b>	<b>105/197 (53%)<sup>1</sup></b>

<sup>1</sup> No electronic abstract in published article (n=2); 103 conference and corresponding journal abstracts.

**Table 2: General characteristics of included conference abstracts of systematic reviews**

	n=103 (%)
Type of systematic review	
Intervention	68 (66%)
Diagnostic	7 (7%)
Prevalence	9 (9%)
Prognosis	19 (18%)
Intervention type (n=68)	
Drug	57 (84%)
Surgery/procedure	7 (10%)
Counselling/lifestyle	4 (6%)
Type of included studies	
RCT	53 (51%)
Non RCT	12 (12%)
RCT and non RCT	18 (17%)
Unclear	20 (20%)
Median number of included studies (IQR) <sup>1</sup>	15 (8 to 27)
Median number of included participants (IQR) <sup>2</sup>	3009 (1178 to 12870)

<sup>1</sup> Reported for 96 out of 103 conference abstracts

<sup>2</sup> Reported for 68 out of 103 conference abstracts



**Table 3: Reporting of PRISMA for Abstracts items in conference and journal abstracts**

Item	Description	Conference abstract n=103 (%)	Journal abstract n=103 (%)
Title	Identify the report as a systematic review, meta-analysis or both	92 (89%)	91 (88%)
Objectives	The research question including components such as participants, interventions, comparator, and outcomes	72 (70%)	64 (62%)
Eligibility criteria	Study and report characteristics used as criteria for inclusion	74 (72%)	66 (64%)
Information sources	Key databases searched	73 (71%)	62 (60%)
	Search dates	28 (27%)	26 (25%)
Risk of bias	Methods of assessing risk of bias	19 (18%)	12 (12%)
Included studies	Number and type of included studies	83 (81%)	81 (79%)
	Number of included participants	71 (69%)	69 (67%)
Synthesis of results (benefit)	Result for main outcomes, including number of studies for each	38 (37%)	32 (31%)
	Results for main outcomes, including the number participants for each	31 (30%)	21 (20%)
	If meta-analysis was done, include summary measures and confidence intervals	68 (66%)	63 (61%)
Synthesis of results (harm)	Results for main outcomes, including number of studies and participants. If meta-analysis was done, include summary measures and confidence intervals	17 (17%)	17 (17%)
Description of the effect	Direction of the effect (i.e., which group is favoured) and size of the effect in terms meaningful to clinicians and patients	78 (76%)	77 (75%)
Strengths and limitations of evidence	Brief summary of strengths of evidence (e.g., other supporting evidence)	18 (17%)	13 (13%)
	Brief summary of limitations of evidence (e.g., inconsistency, imprecision, indirectness, or risk of bias)	37 (36%)	31 (30%)
Interpretation	General interpretation of the results and important implications.	81 (79%)	83 (81%)
Funding	Primary source of funding for the review	1 (1%)	0 (0%)
Registration	Registration number and registry name	0 (0%)	0 (0%)

**Table 4: Discrepancies in reporting between conference abstracts and corresponding journal abstracts**

	<b>n=72 (%)<sup>1</sup></b>
Discrepancy in reported efficacy outcome(s):	8 (11%)
added significant outcome(s) to journal abstract	5
added non significant outcome(s) to journal abstract	1
omitted of significant outcome(s) from journal abstract	0
omitted non significant outcome(s) from journal abstract	2
Discrepancy in reported efficacy subgroup(s):	8 (11%)
added significant subgroup(s) to journal abstract	1
added non significant subgroup(s) to journal abstract	1
omitted significant subgroup(s) from journal abstract	4
omitted non significant subgroup(s) from journal abstract	2
Discrepancy in reported harm outcome(s):	7 (10%)
added significant outcome(s) to journal abstract	2
added outcome(s) to journal abstract (significance not defined)	0
omitted non significant outcome(s) from journal abstract	2
omitted outcome(s) from journal abstract (significance not defined)	2
added and omitted outcome(s) from journal abstract (significance not defined)	1
Discrepancy in reported harm subgroup(s):	5 (7%)
added significant subgroup(s) to journal abstract	1
added non significant subgroup(s) to journal abstract	1
omitted significant subgroup(s) from journal abstract	2
omitted subgroup(s) from journal abstract (significance not defined)	0
added and omitted subgroup(s) from journal abstract (significance not defined)	1
Limitations of evidence (e.g. heterogeneity, risk of bias, publication bias):	
added limitations	2 (3%)
omitted limitations	7 (10%)
Change in nature or direction of conclusion	17 (24%)
same outcome(s) /subgroup(s) reported but change in direction of effect	5
different outcome(s) / subgroup(s) reported	12

<sup>1</sup> Based on a sample of 72 systematic reviews where no new studies were reported as added to the journal abstract