PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	IMPROVING THE UPTAKE OF SYSTEMATIC REVIEWS: A SYSTEMATIC REVIEW OF INTERVENTION EFFECTIVENESS AND RELEVANCE
AUTHORS	Wallace, John; Byrne, Charles; Clarke, Mike

VERSION 1 - REVIEW

REVIEWER	Alfonso Iorio McMaster University, Canada
REVIEW RETURNED	03-Aug-2014

GENERAL COMMENTS	The manuscript reports the results of a systematic review of interventions intended to improve the uptake of evidence syntheses and an overview of the above and two other previous SR from the same authors addressing barriers and facilitators to the uptake of evidence synthesis. The authors found 10 papers, and summarized the results in a very actionable way. They method they adopted is rigorous, the strength and limitation of the SR and the included papers are well discussed. The manuscript is well written, clear and sequential, and it advances the science in the field. Implications for practice and research are provided. As a single minor suggestion for improvement I would add the reference number for the 10 included studies in table 1 and 2.

REVIEWER	Susanne Heiwe Karolinska Institutet, Sweden
REVIEW RETURNED	05-Aug-2014

GENERAL COMMENTS	There is no outcome data presented from each included trial which makes it difficult to draw conclusions. I would like a presentation of outcome data from each included trial. When you state that it is not possible to pool data due to heterogenity, please provide information about the outcome in question and values for heterogenity. I would also like to see a figure/table showing your classification of risk-of-bias for each study, respectively. Please provide a detailed description of your search term strategies.

REVIEWER	Duncan Chambers

	CRD, University of York, UK
REVIEW RETURNED	05-Aug-2014

GENERAL COMMENTS	With reference to point 4 above, I would like to see clearer reporting of methods so that the reader can understand the differences between this review and others covering similar topics which are cited (refs 2, 8 and 9) but not discussed. The Cochrane review (2) covers 'use' of systematic reviews while the current manuscript deals with 'uptake'. It appears that only three of the studies in this review are also included in the Cochrane review. I would like to see a clearer statement of the inclusion criteria and how the authors defined 'uptake' and distinguished it from 'use'. I think it would also be useful to have (as a supplementary file) at least a selective list of studies excluded after reading the full text. Finally, I think it is essential to include some discussion of the differences among the various reviews (in the Discussion section) to place this research in context. It would also be helpful to have risk of bias results available at least as a supplementary file rather than 'on request'. Table 3 appears to start with the more effective interventions but perhaps this could be made clearer? The consideration of barriers and facilitators as addressed by the various interventions is a good feature of this paper. As noted above, I believe clearer reporting of the methods and context will improve the paper further and aid interpretation of the findings.

VERSION 1 – AUTHOR RESPONSE

1. First reviewer
1.1 Reference numbers: I have now added the reference number for the 10 included studies in all the relevant tables, as advised.

2. Second reviewer
2.1 Outcome data: I have now introduced a new table giving a brief summary of outcome data for each included trial. Because of the very diverse nature of the outcomes used in the 10 included trials, an I squared statistic or other such measure of heterogeneity would not have been appropriate. A new table (Table 3) outlining the diverse outcome measures used illustrates the heterogeneity of outcomes employed.
2.2 Risk of bias: For the sake of brevity, I have incorporated the risk of bias assessment for each individual study into a new table (Table 3) entitled: Risk of bias assessment and results of intervention studies. I have included reference numbers also in this table as advised by the first reviewer. So a new table has been introduced showing the classification of risk of bias for each study, respectively.
2.3 Search Term Strategies: I have added the following to explain the search terms and how they were derived: A combination of index terms and text words was used generated by the structured research question. A wide range of synonyms for uptake and improve were combined with various terms for systematic reviews. Search terms, including overview, systematic review and meta-analysis, were combined with terms for facilitator or intervention, together with the synonyms for improve or enhance. A wide range of search terms was employed including facilitator, incentive, improve, enhance, disseminate, utilise, translate, uptake, intervention, overview, synthesis, systematic review and meta-analysis. The search terms, using truncation, were linked into the search strategy utilising Boolean operators. The strategy was broadened or narrowed depending on need or result and

applied to the listed databases. Uptake encompassed connectivity, awareness, familiarity, adoption, use, and healthcare outcomes.

Table 2 is an example of how, using Boolean operators, the search strategies operated. The search was guided by strategies outlined by Robin Snowball in 'Finding the evidence: an information skills approach', in Evidence-based Practice, edited by Martin Dawes.
3. Third reviewer
Methods: The reporting of methods has been made clearer in order to highlight the differences between this review and others. The three studies2,8,9 are now discussed and elaborated on, as outlined below.
In the methods section, under Selection Criteria, I have added, 'Uptake' can refer to an increase in awareness, familiarity, adoption, and practical use of evidence. Measures of impact on decision makers' knowledge, attitude or behaviour, and also impact on patient care were included in this systematic review.
Use and uptake: In order to emphasise that our review was not focused exclusively on use of systematic reviews, I have added in the Introduction, Uptake incorporated an increase in awareness, familiarity and intellectual adoption as well as actual use in decision making, giving this review a broader focus than previous work in the area.2,8,9 Nor were the decision makers included in this review limited to specific professional backgrounds. 2,8,9

Inclusion criteria: I have now added a clearer, itemised statement of the inclusion criteria:
Inclusion criteria

To be included in the review, primary studies had to meet the following criteria:

• Addressed interventions aimed at increasing the uptake of evidence specifically from systematic reviews, meta-analyses and the databases that contained them
• Databases could include The Cochrane Library, The Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, Cochrane Pregnancy and Childbirth Database, Oxford Database of Perinatal Trials, and the Reproductive Health Library
• All decision makers, including doctors, nurses, policy makers, the public and patients, were eligible
• Reports in any language were included
• Studies could be randomised trials, cluster randomised trials, controlled clinical trials and before-and-after studies
• Interventions could arise from within the research community or from within an organisation using systematic review evidence
• Strategies could be single-stranded or multi-faceted, or combine two or more interventions
• The mode of delivery of the intervention could be print, electronic, audio/visual or face-to face
• When a comparison was employed, the comparator could be no intervention or an alternative intervention
• It was not required that the interventions had to be specifically tailored to overcome specified, pre-identified barriers in a systematic review
• Measures of impact on decision makers' knowledge, attitude or behaviour, and impact on patient care were included

Excluded studies: I have now added as a supplementary file, giving the full references:
Supplementary file

Studies that might be expected to meet criteria for inclusion in the review but did not

DOBBINS, M., CILISKA, D., COCKERILL, R., BARNSLEY, J. & DICENSO, A., 2002. A framework for

the dissemination and utilization of research for health-care policy and practice. The Online Journal of Knowledge Synthesis for Nursing, 9, 7. Not a survey, focus group or interview study, or an intervention.

GLASZIOU, P., GUYATT, G. H., DANS, A. L., DANS, L. F., STRAUS, S. & SACKETT, D. L. 1998. Applying the results of trials and systematic reviews to individual patients. ACP Journal Club, 129, A15-6. Not a survey, focus group or interview study, or an intervention.

GRIMSHAW, J. M., SANTESSO, N., CUMPSTON, M., MAYHEW, A. and MCGOWAN, J. 2006. Knowledge for knowledge translation: the role of the Cochrane Collaboration., Journal of Continuing Education in the Health Professions, 26, 55-62. Not a survey, focus group or interview study, or an intervention.

GRUEN, R. L., MORRIS, P. S., MCDONALD, E. L. and BAILIE, R. S., 2005. Making systematic reviews more useful for policy-makers. Bulletin of the World Health Organisation, 83, 480. A letter/essay.

LAVIS, J. N., 2006. Research, public policymaking, and knowledge-translation processes: Canadian efforts to build bridges. Journal of Continuing Education in the Health Professions, 26, 37-45. Not a survey, focus group or interview, or an intervention.

PETTICREW, M., WHITEHEAD, M., MACINTYRE, S. J., GRAHAM, H. & EGAN, M. 2004. Evidence for public health policy on inequalities: 1: the reality according to policymakers. Journal of Epidemiology and Community Health, 58, 811-6. Not specifically related to systematic reviews.

SILAGY, C. A., WELLER, D. P., MIDDLETON, P. F. and DOUST, J. A., 1999. General practitioners' use of evidence databases. Medical Journal of Australia, 170, 393. A comment on previous studies.

SHELDON, T. A., 2005. Making evidence synthesis more useful for management and policy-making. Journal of Health Service and Research Policy, 10 Suppl 1, 1-5. An essay, not a survey, focus group, or an interview, or an intervention.

VOLMINK, J., SIEGFRIED, N., ROBERTSON, K. and GÜLMEZOGLU, A. M., 2004. Research synthesis and dissemination as a bridge to knowledge management: the Cochrane Collaboration. Bulletin of the World Health Organisation, 82, 778-83. An essay. Not a survey, a focus group, an interview, or an intervention.

Discussion: I have added the following to the Discussion: This study systematically identified interventions that enhance the uptake of evidence from systematic reviews. Previous reviews tend to focus on practical use of systematic reviews2, rather than more general uptake incorporating an increase in knowledge or a change in attitude. Other reviews place an emphasis on practical use by specific decision makers such as policy makers8 or clinicians9 rather than including all stakeholders as occurs in this systematic review. This overview reported three interventions that had a statistically significant impact on at least one outcome measure rather than simply reporting a positive trend.8,9 Furthermore, this review did not base recommendations on studies deemed to have a low quality of evidence.9

Indeed, this investigation differed from others in that it incorporated a second overarching review to illustrate the extent to which the interventions addressed barriers and facilitators impacting on systematic review uptake. Importantly, this allowed a mixed-methods synthesis, taking account of barriers and facilitators, to generate recommendations about interventions to enhance review uptake.

Risk of bias: For the sake of brevity, I have incorporated the risk of bias assessment for each individual study into a new table (Table 3): Risk of bias assessment and results of intervention studies.
Effective interventions: I have clarified that that that the relevant table starts with the more effective interventions: The three interventions having a statistically significant impact on at least one outcome measure are listed first.
Methods and context: The clearer reporting of the methods and context has improved the paper and will aid interpretation of the findings.