PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	2 / 4 / 19
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	5
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	5
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	5 / 6
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	5 / 6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	5 - 6
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	6
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	6
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	6

Supplemental material

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Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	6
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	6
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	6 Figure 1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	7 Table 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	9 Figure 2A
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Figure 3 - 5 Table 2 / 4 Suppl. S6 / S7
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	9 - 12 Figure 3 - 5 Table 4 Suppl. S6 / S7
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	9 Figure 5 B
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	9 - 12 Figures 3C/D 4C/D
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	14
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	16
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	14-15
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	18

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit: **www.prisma-statement.org**. Page 2 of 2

MOOSE Checklist for Meta-analyses of Observational Studies

Item No	Recommendation	Reported on Page No
Reporting of background should include		
1	Problem definition	4
2	Hypothesis statement	-
3	Description of study outcome(s)	page5 table 1
4	Type of exposure or intervention used	page5 table 1
5	Type of study designs used	page5 table 1
6	Study population	page5 table 1
Reporting of search strategy should include		
7	Qualifications of searchers (eg, librarians and investigators)	title page
8	Search strategy, including time period included in the synthesis and key words	page 5
9	Effort to include all available studies, including contact with authors	page 5
10	Databases and registries searched	page 5
11	Search software used, name and version, including special features used (eg, explosion)	none
12	Use of hand searching (eg, reference lists of obtained articles)	page 5
13	List of citations located and those excluded, including justification	table1 figure 1
14	Method of addressing articles published in languages other than English	page 5
15	Method of handling abstracts and unpublished studies	figure 1
16	Description of any contact with authors	none
Reporting of methods should include		
17	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	pages 4, 5
18	Rationale for the selection and coding of data (eg, sound clinical principles or convenience)	page 5
19	Documentation of how data were classified and coded (eg, multiple raters, blinding and interrater reliability)	page 5
20	Assessment of confounding (eg, comparability of cases and controls in studies where appropriate)	n.a.
21	Assessment of study quality, including blinding of quality assessors, stratification or regression on possible predictors of study results	page 6
22	Assessment of heterogeneity	page 6
23	Description of statistical methods (eg, complete description of fixed or random effects models, justification of whether the chosen models account for predictors of study results, dose-response models, or cumulative meta-analysis) in sufficient detail to be replicated	page 6
24	Provision of appropriate tables and graphics	Tables 1-4, figures 1-5 Suppl. S1-7
Reporting of results should include		
25	Graphic summarizing individual study estimates and overall estimate	figs 3-5
26	Table giving descriptive information for each study included	page 7 table 1
27	Results of sensitivity testing (eg, subgroup analysis)	pages 10-12 figures 3-5
28	Indication of statistical uncertainty of findings	pages 10-12 figures 3-4

Item No	Recommendation	Reported on Page No
Reporting of discussion should include		
29	Quantitative assessment of bias (eg, publication bias)	pages 14-15 Suppl. S4
30	Justification for exclusion (eg, exclusion of non-English language citations)	page 16
31	Assessment of quality of included studies	page 15
Reporting of conclusions should include		
32	Consideration of alternative explanations for observed results	Pages 14-16
33	Generalization of the conclusions (ie, appropriate for the data presented and within the domain of the literature review)	page 16
34	Guidelines for future research	pages 15 - 16
35	Disclosure of funding source	page 18