



PRISMA 2009 Checklist

Section/topic	Item No	Checklist item	Reported on Page Number/Line Number	Reported on Section/Paragraph
TITLE				
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Page2/line1-3	Title/Para1
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.	Page2/line5-22 and Page3/line1-8	Abstract/Para1-4
INTRODUCTION				
Rationale	3	Describe the rationale for the review in the context of what is already known.	Page3/line12 to Page4/line20	Introduction/Para1-3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Page4/line21 to Page5/line13	Introduction/Para4
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.	Page5/line14-20	Methods/Para1
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.	Page6/line8-18	Methods/Para3
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.	Page5/line21 to Page6/line7	Methods/Para2
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Page6/line2-4	Methods/Para2
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).	Page6/line4-12	Methods/Para2 and 3
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.	Page6/line19 to Page7/line3	Methods/Para4
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Page7/line10-15	Methods/Para5

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.	Page7/line3-9	Methods/Para4
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Page7/line16 to Page8/line5	Methods/Para6
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.	Page7/line20 to Page8/line3	Methods/Para6
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).	Page7/line3-9	Methods/Para4
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	Page8/line1-5	Methods/Para6
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.	Page8/line9-13 and figure1	Results/Para1
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.	Page8/line13-16 and table1	Results/Para1
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).	Page8/line18 to Page9/line9 and figure2	Results/Para2
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.	Page8/line18 to Page9/line9	Results/Para2
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	From Page9/line11 to Page12/line6	Results/Para3-9
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Page8/line18 to Page9/line9 and figure2	Results/Para2
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	Page12/line7-21	Results/Para10-11
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).	From Page13/line1 to Page16/line1	Discussion/Para1-6
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).	Page16/line2-14	Discussion/Para7
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Page16/line17-21	Conclusions/Para1

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.	Page17/line1-3	Acknowledgments

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.

Article information: <http://dx.doi.org/10.21037/atm-20-4043>

*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.