



# PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
Title	1	Risk factors for mortality of COVID-19 patients during the early outbreak of COVID-19: A systematic review and meta-analysis	1
<b>ABSTRACT</b>			
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.	5, 6
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	7, 8
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	7, 8
<b>METHODS</b>			
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.	9
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.	9
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.	8, 9
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	8, 9
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).	9
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.	8-10
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	9
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.	10, 11
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	10, 11
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I <sup>2</sup> ) for each meta-analysis.	10, 11



# PRISMA 2009 Checklist

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).	10, 11
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	10, 11
<b>RESULTS</b>			
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.	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.	11, 12
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).	Table 2 and table 3
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.	11-17
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	11-17
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Table 2 and table 3
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	13, 14
<b>DISCUSSION</b>			
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).	18-21
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).	21
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	22
<b>FUNDING</b>			
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.	4

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](http://www.prisma-statement.org).



## PRISMA 2009 Checklist

Page 2 of 2

Article information: <http://dx.doi.org/10.21037/apm-20-2557>

\*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.

**MOOSE Statement—Checklist of items that should be included in reports of *Meta-analysis Of Observational Studies in Epidemiology (MOOSE)***

<b>Items</b>	<b>Reported on page</b>
<b>Reporting of background should include</b>	
Problem definition	1
Hypothesis statement	7
Description of study outcome(s)	7
Type of exposure or intervention used	7, 8
Type of study designs used	7, 8
Study population	7, 8
<b>Reporting of search strategy should include</b>	
Qualifications of searchers (eg, librarians and investigators)	8, 9
Search strategy, including time period included in the synthesis and keywords	8, 9
Effort to include all available studies, including contact with authors	8, 9
Databases and registries searched	8, 9
Search software used, name and version, including special features used (eg, explosion)	8, 9
Use of hand searching (eg, reference lists of obtained articles)	8, 9
List of citations located and those excluded, including justification	Figure 1
Method of addressing articles published in languages other than English	9
Method of handling abstracts and unpublished studies	9
Description of any contact with authors	1, 2
<b>Reporting of methods should include</b>	
Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	9-11
Rationale for the selection and coding of data (eg, sound clinical principles or convenience)	9
Documentation of how data were classified and coded (eg, multiple raters, blinding, and interrater reliability)	9-11
Assessment of confounding (eg, comparability of cases and controls in studies where appropriate)	9-11
Assessment of study quality, including blinding of quality assessors; stratification or regression on possible predictors of study results	Supplementa ry Table 1

Assessment of heterogeneity	11
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	10-11
Provision of appropriate tables and graphics	Tables 1-3, Figure 1,2 and supplementar y materials
<b>Reporting of results should include</b>	
Graphic summarizing individual study estimates and overall estimate	Figure 1,2 and supplementar y materials
Table giving descriptive information for each study included	Table 1,2
Results of sensitivity testing (eg, subgroup analysis)	14
Indication of statistical uncertainty of findings	11-17
<b>Reporting of discussion should include</b>	
Quantitative assessment of bias (eg, publication bias)	6
Justification for exclusion (eg, exclusion of non-English-language citations)	4
Assessment of quality of included studies	Supplementa ry Table 1
<b>Reporting of conclusions should include</b>	
Consideration of alternative explanations for observed results	18-21
Generalization of the conclusions (ie, appropriate for the data presented and within the domain of the literature review)	22
Guidelines for future research	22
Disclosure of funding source	4

Article information: <http://dx.doi.org/10.21037/apm-20-2557>

\*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.

