AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both

1. Did the research questions and	inclusion criteria for the review include th	e comp	oonents of PICO?
For Yes:  V Population V Intervention Comparator group Outcome	Optional (recommended)		Yes No
	ntain an explicit statement that the review t of the review and did the report justify a		
For Partial Yes: The authors state that they had a written protocol or guide that included ALL the following:	For Yes: As for partial yes, plus the protocol should be registered and should also have specified:		<b>'</b> Yes
<ul> <li>□ review question(s)</li> <li>□ a search strategy</li> <li>□ inclusion/exclusion criteria</li> <li>□ a risk of bias assessment</li> </ul>	a meta-analysis/synthesis plan, if appropriate, <i>and</i> a plan for investigating causes of heterogeneity justification for any deviations from the protocol		Partial Yes No
3. Did the review authors explain	their selection of the study designs for incl	lusion i	n the review?
For Yes, the review should satisfy ONE of the following:  **Explanation for including only RCTs*  OR Explanation for including only NRSI  OR Explanation for including both RCTs and NRSI		<b>\rightarrow</b>	Yes No
4. Did the review authors use a co	omprehensive literature search strategy?		
For Partial Yes (all the following):  searched at least 2 databases (relevant to research question) provided key word and/or search strategy justified publication restrictions (e.g. language)	For Yes, should also have (all the following):  searched the reference lists / bibliographies of included studies  searched trial/study registries included/consulted content experts in the field where relevant, searched for grey literature conducted search within 24 months of completion of the review	7	Yes Partial Yes No
and achieved consensus on which  ☐ OR two reviewers selected a sam	ntly agreed on selection of eligible studies		Yes No

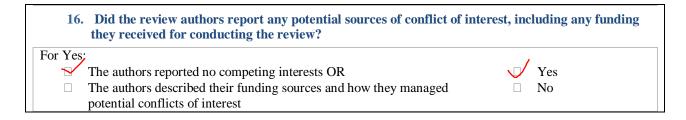
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6. Did the review authors perforn	n data extraction in duplicate?	
For Yes, either ONE of the following:  at least two reviewers achieved c included studies  OR two reviewers extracted data	onsensus on which data to extract from from a sample of eligible studies and st 80 percent), with the remainder	Yes  No
	e a list of excluded studies and justify the ex	xelusions?
For Partial Yes:	For Yes, must also have:	actusions.
provided a list of all potentially relevant studies that were read in full-text form but excluded from the review	Justified the exclusion from the review of each potentially relevant study	<ul><li>✓ Yes</li><li>□ Partial Yes</li><li>□ No</li></ul>
8. Did the review authors describ	e the included studies in adequate detail?	
For Partial Yes (ALL the following):  described populations	For Yes, should also have ALL the following:  described population in detail	Yes Yes
<ul> <li>described interventions</li> <li>described comparators</li> <li>described outcomes</li> <li>described research designs</li> </ul>	described intervention in detail (including doses where relevant) described comparator in detail (including doses where relevant) described study's setting timeframe for follow-up	□ Partial Yes □ No
individual studies that were inc	tisfactory technique for assessing the risk cluded in the review?	of bias (RoB) in
RCTs For Partial Yes, must have assessed RoB from	For Yes, must also have assessed RoB from:	
<ul> <li>unconcealed allocation, and</li> <li>lack of blinding of patients and assessors when assessing outcomes (unnecessary for objective outcomes such as all-cause mortality)</li> </ul>	<ul> <li>allocation sequence that was not truly random, and</li> <li>selection of the reported result from among multiple measurements or analyses of a specified outcome</li> </ul>	<ul><li>✓ Yes</li><li>□ Partial Yes</li><li>□ No</li><li>□ Includes only NRSI</li></ul>
NRSI For Partial Yes, must have assessed RoB:	For Yes, must also have assessed RoB:  Methods used to ascertain	√ Yes
<ul><li>☐ from confounding, and</li><li>☐ from selection bias</li></ul>	exposures and outcomes, and selection of the reported result from among multiple measurements or analyses of a specified outcome	<ul><li>□ Partial Yes</li><li>□ No</li><li>□ Includes only RCTs</li></ul>
10. Did the review authors report	on the sources of funding for the studies in	cluded in the review?
	rces of funding for individual studies included that the reviewers looked for this information y authors also qualifies	

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11. If meta-analysis was performed did the review authors use appropriate combination of results?	e metho	ods for statistical
RCTs		
For Yes:	<b>5</b> /	Yes
The authors justified combining the data in a meta-analysis		Yes No
AND they used an appropriate weighted technique to combine study results and adjusted for heterogeneity if present.		No meta-analysis
AND investigated the causes of any heterogeneity	Ш	conducted
For NRSI		
For Yes:		
☐ The authors justified combining the data in a meta-analysis		Yes
☐ AND they used an appropriate weighted technique to combine		No
study results, adjusting for heterogeneity if present		No meta-analysis
☐ AND they statistically combined effect estimates from NRSI that		conducted
were adjusted for confounding, rather than combining raw data,		
or justified combining raw data when adjusted effect estimates were not available		
□ AND they reported separate summary estimates for RCTs and		
NRSI separately when both were included in the review		
12. If meta-analysis was performed, did the review authors assess the potential individual studies on the results of the meta-analysis or other evidence studies.		
For Yes:		- / 37
included only low risk of bias RCTs	<u>\</u>	Yes
OR, if the pooled estimate was based on RCTs and/or NRSI at variable	L	No mate analysis
RoB, the authors performed analyses to investigate possible impact of RoB on summary estimates of effect.		No meta-analysis conducted
ROB off summary estimates of effect.		conducted
13. Did the review authors account for RoB in individual studies when interesults of the review?	erpreti	ng/ discussing the
For Yes:		,
included only low risk of bias RCTs		Yes
OR, if RCTs with moderate or high RoB, or NRSI were included the		No
review provided a discussion of the likely impact of RoB on the results		
14. Did the review authors provide a satisfactory explanation for, and disc heterogeneity observed in the results of the review?	cussion	of, any
For Yes:		
There was no significant heterogeneity in the results	£ =	1, 1
OR if heterogeneity was present the authors performed an investigation of		Yes
sources of any heterogeneity in the results and discussed the impact of this on the results of the review	L	] No
15. If they performed quantitative synthesis did the review authors carry of investigation of publication bias (small study bias) and discuss its likely the review?		
For Yes:,		/
performed graphical or statistical tests for publication bias and discussed	V	Yes
the likelihood and magnitude of impact of publication bias		No
		conducted

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