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Update to the PRISMA guidelines for network meta-analyses and scoping reviews and development of guidelines for rapid reviews: a scoping review protocol

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ABSTRACT

Objective: The objective of this scoping review is to develop a list of items for potential inclusion in the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) reporting guidelines for network meta-analysis (NMA), scoping reviews (ScRs), and rapid reviews (RRs).

Introduction: The PRISMA extensions for NMA and ScRs were published in 2015 and 2018. However, since then, their methodologies and innovations, including automation, have evolved. There is no reporting guideline for RRs. In 2020, an updated PRISMA statement was published, reflecting advances in the conduct and reporting of systematic reviews. These advances are not yet incorporated into these PRISMA extensions. We will update our previous methods for scoping reviews to inform the update of PRISMA-NMA and PRISMA-ScR as well as the development of the PRISMA-RR reporting guidelines.

Inclusion criteria: This review will include any study design evaluating the completeness of reporting, offering reporting guidance, or assessing methods relevant to NMA, ScRs, or RRs. Editorial guidelines and tutorials that describe items related to reporting completeness will also be eligible.

Methods: We will follow the JBI guidance for scoping reviews. For each PRISMA extension, we will i) search multiple electronic databases from inception to present, ii) search for unpublished studies, and iii) scan the reference lists of included studies. There will be no language limitations. Screening and data extraction will be conducted by 2 researchers independently. A third researcher will resolve discrepancies. We will conduct frequency analyses of the identified items. The final list of items will be considered for potential inclusion in the relevant PRISMA reporting guidelines.

Review registration: NMA protocol (OSF: osf.io/7bkwy); ScR protocol (OSF: osf.io/7bkwy); RR protocol (OSF: osf.io/3jcpe); EQUATOR registration link: https://www.equator-network.org/library/reporting-guidelines-under-development/reporting-guidelines-under-development-for-systematic-reviews/

Keywords: network meta-analysis; PRISMA; rapid review; reporting guideline; scoping review

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Introduction

Systematic reviews are pivotal underpinnings of evidence-informed practice and policy,[1] and hence should be accurately and completely reported. The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) reporting guideline provides a minimum set of recommended items to promote clear, transparent, and reproducible descriptions of what was done and what was found in a systematic review.[2] Lack of transparency in systematic reviews reduces their quality, validity, and applicability. Inadequate reporting hampers proper quality assessment, potentially leading to erroneous health recommendations and negative impacts on patient care and policy.[3,4] Based on our experience, systematic reviews with network meta-analysis (NMA), scoping reviews (ScRs), and rapid reviews (RRs)[5] are commonly requested by decision-makers.[6,7]

The original PRISMA statement, published in 2009, was developed to increase transparency and reproducibility of systematic reviews with meta-analyses of health care interventions.[8] Multiple extensions of PRISMA have been developed for other research synthesis methodologies.[9]

The application of NMAs has rapidly increased during the past decade across a range of health research disciplines.[10,11] NMA is now a commonly used statistical method applied when systematic reviews aim to assess the comparative effectiveness of multiple interventions.[12-16] The increased use of NMA is perhaps unsurprising because the method (compared with pairwise meta-analysis) addresses more "complex" questions more closely aligned to those asked in clinical decision-making.

An ScR is designed to answer an entirely different question. ScRs systematically identify and map the

nature and breadth of evidence on a particular topic, field, concept, or issue, often irrespective of source (ie, primary research, reviews, non-empirical evidence) within or across particular contexts.[5,17,18] ScRs use less in-depth analysis and typically include no quality or risk of bias assessment. ScRs often guide future research and can serve as a starting point for systematic reviews.

RRs are expedited systematic reviews whereby authors modify or omit processes to speed up completion of the review, which is crucial for timely decision-making.[19-21] The COVID-19 pandemic led to an increase in RRs[20,22-28] due to the rapid decision-making that was needed. This highlighted that systematic reviews, which take 1–2 years to complete,[29] could not meet the urgent needs of decision-makers and society.

Overall, there has been a steep increase in the number of NMAs, ScRs, and RRs in the past 5 years. A PubMed search in the years 2018–2023 (using the search terms "network meta-analysis [ti]," "scoping review [ti]," and "rapid review [ti]," respectively, with a search date of November 15, 2023) showed 6388 articles related to NMAs, 18,769 related to ScRs, and 1012 related to RRs (likely encompassing a combination of these research syntheses, review protocols, and methods articles on these topics). This is compared to 1954 articles relevant to NMAs, 2321 to ScRs, and 202 to RRs published up until 2018.

Evidence shows that the PRISMA guidelines improve reporting completeness.[30] However, important advancements in the relevant methodologies have occurred since the PRISMA extensions for NMA (2015)[10] and ScRs (2018).[31] Several pressing reasons necessitate a significant update to these PRISMA extensions.

First, we recently found that some elements were incompletely reported when assessing at a granular and comprehensive level (eg, authors did not report both the terms "systematic review" *and* "NMA" [or related forms of meta-analysis] in the title).[30] This research suggests that additional items or modification of the present items may be needed to reflect important aspects of NMAs not covered in the 2015 NMA extension.

Second, since publication of the PRISMA-NMA extension, there have been many methodological advances, including modelling of complex interventions,[32,33] modelling dose effects,[34] dealing with and assessing missing data,[35,36] assessing transitivity[37,38] (ie, similarity of the distribution of effect modifiers across treatment comparisons), and assessing certainty of evidence (eg, CINeMA[39] [Confidence in Network Meta-Analysis] and GRADE[40] [Grading of Recommendations, Assessment, Development and Evaluation]), for which reporting items may be necessary. Similarly, PRISMA-ScR does not include important aspects on reporting methods for extracting data,[41] synthesizing evidence,[42,43] use of automation tools,[43,44] and consideration on how ScRs differ from mapping reviews and evidence gap maps.[43,45] JBI updated their methods manual on ScRs in 2020[46] and these new developments have yet to be incorporated into PRISMA-ScR. Furthermore, since 2020, the JBI ScR methodology group has worked on several advancements in ScRs, such as engaging knowledge users in ScRs,[47] providing a formal definition of ScRs,[17] writing ScR protocols,[42] challenges and solutions for ScRs,[43] and data extraction in ScRs,[48] among others. Finally, to date there is no reporting guideline for RRs. A PhD project (Stevens) initiated work on an extension of PRISMA for RR, including a review of RR literature, an empirical evaluation of the completeness of reporting of RR literature,[49] and a survey of knowledge users[50]; however, this work is outdated and newer developments in RR methods are now available.[51-54] Recently, interim guidance on reporting RRs was published, but this has not been extensive and additional work on developing the PRISMA-RR is necessary.[55]

Third, in 2020, the PRISMA statement was updated to reflect advances in the conduct and reporting of systematic reviews. PRISMA 2020 uses a new structure of broad items, called elements. Updating these PRISMA extensions to ensure consistency will facilitate their inclusion in a web application that generates a reporting template and checklist customized to the characteristics and methods of the particular review.[56] Prior research assessing the impact of PRISMA guidance on the completeness of systematic review reporting has demonstrated considerable improvement in reporting over time.[30,57-61] However, it is logical to assume that if guidance does not reflect current methodological standards, health care recommendations and evidence-based decision-making may be adversely affected.

Finally, the original PRISMA extensions (NMA and ScR) do not include patients and the public as research partners, and thus, these valuable perspectives are omitted. Inclusion of these perspectives will

allow input and guidance into aspects of reporting that are important (particularly for consumers of systematic reviews with NMA, ScRs, and RRs), as well as into components of the explanation and elaboration documents, and, finally, dissemination through patient and public networks. Our multisectoral team involves journal editors, clinicians, policymakers, statisticians, methodologists, and patients along with members of the public.

In this protocol, we outline our planned methods for identifying items to be used in the update of the PRISMA extensions for NMA, ScR, and the development of PRISMA-RR. We will conduct an ScR to identify items for potential inclusion in the PRISMA reporting guidelines for NMA, ScR, and RR.

Review question

What are the items that should be reported in systematic reviews with NMA, ScRs, and RRs in order to be consistent with current best evidence?

Inclusion criteria

Concept

This review will consider studies that explore one of the following in the context of human health (including the psychology, education, and sociology disciplines) or philosophy, using any study design that:

- provides guidance, a tutorial, or a reporting guideline relevant to reporting NMAs, ScRs, or RRs; these may include a checklist, flow diagram, or text to guide authors in NMA, ScR, or RR reporting
- evaluates the completeness of reporting in NMAs, ScRs, or RRs
- evaluates reporting quality (as defined by the authors) in NMAs, ScRs, or RRs
- evaluates sources of bias in NMAs, ScRs, or RRs
- evaluates the risk of bias in NMAs, ScRs, or RRs
- evaluates the methodological quality (as defined by the authors) in NMAs, ScRs, or RRs.

Types of sources

The proposed scoping review will consider quantitative, qualitative, and mixed methods study designs for inclusion. Systematic reviews and text and opinion papers will also be considered for inclusion.

Methods

We will update 3 previous scoping reviews[21,49,62] conducted by members of the research team in parallel to identify additional, more recent studies pertaining to evaluations of reporting completeness and other key resources to inform the NMA, ScR, and RR extensions. We followed the PRISMA-P reporting guidelines for this protocol,[63] while the JBI guidelines for scoping reviews will be used to guide the methods of this scoping review.[42,46] Reporting of the final findings will follow the PRISMA-ScR guidelines.[31] The methods for this study were drafted using input from research synthesis experts and knowledge users, including patient and public partners. We registered the reporting guideline updates with the Enhancing the QUAlity and Transparency Of health Research (EQUATOR) Network website and uploaded the protocols to Open Science Framework on January 5, April 3, and June 17, 2024.[64-67]

Eligibility criteria

We will include all study designs that offer:

- reporting guidance or evaluate completeness of reporting NMAs, ScRs, and RRs; these may include a checklist, flow diagram, or text to guide authors in RR reporting
- studies assessing methodological quality relevant to NMAs, ScRs, or RRs
- editorial guidelines or tutorials that describe items related to reporting completeness for NMAs, ScRs, and RRs (eg, in the World Association of Medical Editors [WAME], International Committee of Medical Journal Editors [ICMJE], and Committee on Publication Ethics [COPE]).

If duplicate sources are identified, the most recent one will be selected. We will exclude commentaries, manuscript formatting publications, and journal author guidelines.

Search strategy

We will update our previously developed literature searches[21,49,62] based on feedback from the team. The literature search strategies will be developed by an experienced librarian (JM), and will be peer-reviewed by another librarian using the Peer Review of Electronic Search Strategies (PRESS) checklist.[68] We will search multiple electronic databases, including MEDLINE (1946–present), Embase (1947–present),

the Cochrane Library, and ERIC (1965–present).[69] The final literature searches for MEDLINE (Ovid) can be found in Appendix I. We will search for unpublished literature based on guidance from the Canadian Agency for Drugs and Technology in Health (CADTH) and Grey Matters[70]; for example, we will search Google Scholar and organizational websites (EQUATOR, PRISMA, CIHR, Agency for Healthcare Research and Quality [AHRQ], *JBI Evidence Synthesis*, Cochrane, UK National Institute for Health and Care Excellence,[23] Guidelines International Network, and IQWiG [Institute for Quality and Efficiency in Health Care] in Germany). The literature search will be supplemented by reviewing reference lists from included articles using the citationchaser tool (Zenodo, Geneva, Switzerland).[71,72] The search strategies will not be limited by publication status, study design, or language.

Study selection

To ensure reliability, all reviewers will pilot-screen 50 citations at level 1 (titles and abstracts) and 25 articles at level 2 (full-text papers) before screening all sources independently. Pilot tests will be repeated up until high percent agreement (> 75%) is achieved across the team at both levels. Two team members will work independently to screen for inclusion. Conflicts will be resolved through discussion with a third investigator. We will use the research synthesis software platform, Synthesi.SR[73] (Knowledge Translation Program, Toronto, Canada) for screening. Team members will translate non-English articles using DeepL Translate (DeepL, Cologne, Germany) and Crowdsourcing.[74] We will document the search and selection process with the PRISMA 2020 flow diagram.[2]

Data extraction

Two team members will independently extract data using a standardized form co-created by the reviewers. The categories from which items will be extracted will be as follows: goal of the study (eg, reporting completeness, reporting guidelines, methodological quality elements); study characteristics (eg, first author, year of publication, journal, study type [eg, survey, guideline]); key findings (eg, items relevant to reporting, completeness of reporting results as indicated in the relevant study); methods used, such as agreement activities used to develop reporting guidance (eg, Delphi exercise, face-to-face meetings); and progress of the study (ie, if there have been any updates). Prior to data extraction, we will conduct a calibration exercise on a sample of 10 included articles and modify the form as required. Data extraction will begin when sufficient percent agreement is observed (ie, >75%). Discrepancies will be resolved through discussion or by consulting a third team member, if needed.

Risk of bias appraisal and assessment for reporting bias

Methodological appraisal is generally not applicable to scoping reviews, and will not be conducted.[31]

Data analysis and presentation

Two researchers will categorize the study results into broader concepts independently using content analysis, as defined in the broader categories of PRISMA 2020 (such as title, abstract, introduction, methods, results, and discussion). The items extracted from each paper will be discussed between the extractors and the leads of each PRISMA extension (PRISMA-NMA: AAV and BH; PRISMA-ScR: ACT; PRISMA-RR: AS), with the possibility of refining the wording of these items for clarity, aiming to generate a set of consensus items from each paper. Then, once items from the included papers have been grouped by concept (eg, synthesis methods), in addition to deleting duplicate items, rewording of items will be considered to capture the content of all similar items. The final list of items deemed unique will be retained for discussion with the team of each PRISMA extension, who will assess for potential relevance to each research synthesis. We will present the number of studies identifying each of the unique items and relevant characteristics in tables and figures.

Next steps

We will update (or develop) the 3 PRISMA extensions to reflect current evidence and ensure engagement of all team members to co-develop a knowledge translation and dissemination strategy. This strategy will increase awareness and enable knowledge users—including authors, journal editors, peer reviewers, patients and the public, clinicians, and health care agencies—to use the updated reporting guidance. We will follow the "guidance for developers of health research reporting guidelines"[74,75] for updating the PRISMA extensions to NMA, ScR, and creating the PRISMA extension to RR. Overall, we will adopt the PRISMA 2020 structure of broad elements in developing the PRISMA extensions.[2] In

particular, we will revise the elements relevant to each research synthesis and will only add, remove, or revise the checklist elements, where necessary.

Patient involvement and dissemination

To ensure patient and public perspectives are fully integrated into this work, 3 patient partners (MS, JT, SL) were involved from project conception and helped to refine the research question. They will also advise on patient/public engagement, interpret findings, and plan dissemination. Patient/public partners will be involved in conducting the research, from protocol development, data collection, interpretation of results, and writing of the article. The results will be disseminated to lay audiences through press releases, social media, Strategy for Patient-Oriented Research (SPOR) Evidence Alliance (EA) website/newsletter, and presentations. We will financially compensate patient/public partners by applying principles outlined by the SPOR-EA policy, which was co-produced with patient partners.[76]

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Authors contributions

All authors declare that they meet the ICMJE conditions for authorship. AAV, ACT, BH, and AS conceived and designed the study. AAV wrote the first draft of the manuscript. All authors edited the manuscript and contributed to its revisions. All authors read and approved the final version of the manuscript.

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References

1. Hoffmann F, Allers K, Rombey T, Helbach J, Hoffmann A, Mathes T, *et al.* Nearly 80 systematic reviews were published each day: observational study on trends in epidemiology and reporting over the years 2000-2019. J Clin Epidemiol 2021;138:1-11.
2. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, *et al.* The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71.
3. Chalmers I, Bracken MB, Djulbegovic B, Garattini S, Grant J, Gulmezoglu AM, *et al.* How to increase value and reduce waste when research priorities are set. Lancet 2014: 383 (9912):156-65.
4. Ioannidis JP, Greenland S, Hlatky MA, Khoury MJ, Macleod MR, Moher D, *et al.* Increasing value and reducing waste in research design, conduct, and analysis. Lancet 2014: 383(9912):166-75.
5. Tricco AC, Zarin W, Ghassemi M, Nincic V, Lillie E, Page MJ, *et al.* Same family, different species: methodological conduct and quality varies according to purpose for five types of knowledge synthesis. J Clin Epidemiol 2018;96:133-42.
6. Methods and Applications Group for Indirect Comparisons. Homepage [internet]. MAGIC; n.d. [cited 2024 Jan 29]. Available from: https://dsenmagic.com.
7. SPOR Evidence Alliance. Homepage [internet]. SPOR; n.d. [cited 2024 Jan 29]. Available from: https://sporevidencealliance.ca/.
8. Moher D, Liberati A, Tetzlaff J, Altman DG, Group P. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med 2009;6(7):e1000097.
9. EQUATOR Network. Enhancing the QUAlity and Transparency Of health Research (EQUATOR). Homepage [internet]. EQUATOR Network; n.d. [cited 2024 Jan 26]. Available from: https://www.equator-network.org/.
10. Hutton B, Salanti G, Caldwell DM, Chaimani A, Schmid CH, Cameron C, *et al.* The PRISMA extension statement for reporting of systematic reviews incorporating network meta-analyses of health care interventions: checklist and explanations. Ann Intern Med 2015;162(11):777-84.
11. Right Review. Knowledge_Translation [internet]. Right Review; n.d. [cited 2024 Jan 26]. Available from: https://rightreview.knowledgetranslation.net/.
12. Rouse B, Chaimani A, Li T. Network meta-analysis: an introduction for clinicians. Intern Emerg Med 2017;12(1):103-11.
13. Dias S, Sutton AJ, Ades AE, Welton NJ. Evidence synthesis for decision-making 2: a generalized linear modeling framework for pairwise and network meta-analysis of

randomized controlled trials. Med Decis Making 2013;33 (5):607-17.
14. Sutton A, Ades AE, Cooper N, Abrams K. Use of indirect and mixed treatment comparisons for technology assessment. Pharmacoeconomics 2008;26(9):753-67.
15. Rucker G, Schwarzer G. Ranking treatments in frequentist network meta-analysis works without resampling methods. BMC Med Res Methodol 2015;15:58.
16. Salanti G, Ades AE, Ioannidis JP. Graphical methods and numerical summaries for presenting results from multiple-treatment meta-analysis: an overview and tutorial. J Clin Epidemiol 2011;64(2):163-71.
17. Munn Z, Pollock D, Khalil H, Alexander L, McLnerney P, Godfrey CM, *et al.* What are scoping reviews? Providing a formal definition of scoping reviews as a type of evidence synthesis. JBI Evid Synth 2022;20(4):950-52.
18. Colquhoun HL, Levac D, O'Brien KK, Straus S, Tricco AC, Perrier L, *et al.* Scoping reviews: time for clarity in definition, methods, and reporting. J Clin Epidemiol 2014;67(12):1291-94.
19. Khangura S, Konnyu K, Cushman R, Grimshaw J, Moher D. Evidence summaries: the evolution of a rapid review approach. Syst Rev 2012;1:10.
20. Tricco AC, Straus SE, Ghaffar A, Langlois EV. Rapid reviews for health policy and systems decision-making: more important than ever before. Syst Rev 2022;11(1):153.
21. Tricco AC, Lillie E, Zarin W, O'Brien K, Colquhoun H, Kastner M, *et al.* A scoping review on the conduct and reporting of scoping reviews. BMC Med Res Methodol 2016;16:15.
22. Cochrane Rehabilitation. REH-COVER - Rapid living Systematic Reviews [internet]. Cochrane Rehabilitation; n.d. [cited 2023 Dec 1]. Available from: https://rehabilitation.cochrane.org/special-projects/completed-special-projects/REH-COVER/rapid-living-systematic-reviews.
23. Ceravolo MG, Andrenelli E, Arienti C, Cote P, de Sire A, Iannicelli V, *et al.* Rehabilitation and COVID-19: rapid living systematic review by Cochrane Rehabilitation Field. 3rd ed. Update as of June 30, 2021. Eur J Phys Rehabil Med 2021;57 (5):850-57.
24. Ceravolo MG, Arienti C, de Sire A, Andrenelli E, Negrini F, Lazzarini SG, *et al.* Rehabilitation and COVID-19: the Cochrane Rehabilitation 2020 rapid living systematic review. Update as of August 31, 2020. Eur J Phys Rehabil Med 2020;56(5):642-51.
25. de Sire A, Andrenelli E, Negrini F, Lazzarini SG, Patrini M, Ceravolo MG, *et al.* Rehabilitation and COVID-19: the Cochrane Rehabilitation 2020 rapid living systematic review. Eur J Phys Rehabil Med 2020;56(6):839-45.
26. de Sire A, Andrenelli E, Negrini F, Patrini M, Lazzarini SG, Ceravolo MG, *et al.* Rehabilitation and COVID-19: a rapid living systematic review by Cochrane Rehabilitation Field. Update as of December 31, 2020 and synthesis of the scientific literature of 2020. Eur J Phys Rehabil Med 2021;57(2):181-88.
27. Andrenelli E, Negrini F, de Sire A, Patrini M, Lazzarini SG, Ceravolo MG, *et al.* Rehabilitation and COVID-19: a rapid living systematic review 2020 by Cochrane Rehabilitation Field. Update as of October 31, 2020. Eur J Phys Rehabil Med 2020;56(6):846-52.
28. Negrini F, de Sire A, Andrenelli E, Lazzarini SG, Patrini M, Ceravolo MG, *et al.* Rehabilitation and COVID-19: a rapid living systematic review 2020 by Cochrane Rehabilitation Field. Eur J Phys Rehabil Med 2021;57(1):166-70.
29. Petticrew M, Roberts H. Systematic reviews in the social sciences: a practical guide. Blackwell; 2006.
30. Veroniki AA, Tsokani S, Zevgiti S, Pagkalidou I, Kontouli KM, Ambarcioglu P, *et al.* Do reporting guidelines have an impact? Empirical assessment of changes in reporting before and after the PRISMA extension statement for network meta-analysis. Syst Rev 2021;10(1):246.
31. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, *et al.* PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018;169(7):467-73.
32. Veroniki AA, Seitidis G, Nikolakopoulos S, Ballester M, Beltran J, Heijmans M, *et al.* Modeling multicomponent interventions in network meta-analysis. Methods Mol Biol 2022;2345:245-61.
33. Rucker G, Petropoulou M, Schwarzer G. Network meta-analysis of multicomponent interventions. Biom J 2020;62(3):808-21.
34. Watt JA, Del Giovane C, Jackson D, Turner RM, Tricco AC, Mavridis D, *et al.* Incorporating dose effects in network meta-analysis. BMJ 2022;376:e067003.
35. Mavridis D, White IR. Dealing with missing outcome data in meta-analysis. Res Synth Methods 2020;11(1):2-13.
36. Chiocchia V, Nikolakopoulou A, Higgins JPT, Page MJ, Papakonstantinou T, Cipriani A, *et al.* ROB-MEN: a tool to assess risk of bias due to missing evidence in network meta-analysis. BMC Med 2021;19(1):304.
37. Watt J, Del Giovane C. Network meta-analysis. Methods Mol Biol 2022;2345:187-201.
38. Brignardello-Petersen R, Tomlinson G, Florez I, Rind DM, Chu D, Morgan R, *et al.* Grading of recommendations assessment, development, and evaluation concept article 5: addressing intransitivity in a network meta-analysis. J Clin Epidemiol 2023;160:151-59.
39. Nikolakopoulou A, Higgins JPT, Papakonstantinou T, Chaimani A, Del Giovane C, Egger M, *et al.* CINeMA: an approach for assessing confidence in the results of a network meta-analysis. PLoS Med 2020;17(4):e1003082.
40. Brignardello-Petersen R, Florez ID, Izcovich A, Santesso N, Hazlewood G, Alhazanni W, *et al.* GRADE approach to drawing conclusions from a network meta-analysis using a minimally contextualised framework. BMJ 2020;371:m3900.
41. Pollock D, Peters MDJ, Khalil H, McInerney P, Alexander L, Tricco AC, *et al.* Recommendations for the extraction, analysis, and presentation of results in scoping reviews. JBI Evid Synth 2023;21(3):520-32.
42. Peters MDJ, Godfrey C, McInerney P, Khalil H, Larsen P, Marnie C, *et al.* Best practice guidance and reporting

items for the development of scoping review protocols. JBI Evid Synth 2022;20(4):953-68.
43. Khalil H, Peters MD, Tricco AC, Pollock D, Alexander L, McInerney P, *et al.* Conducting high quality scoping reviews-challenges and solutions. J Clin Epidemiol 2021; 130:156-60.
44. Munn Z. Appendix 11.2 PRISMA ScR extension fillable checklist [internet]. JBI; n.d. [cited 2023 Dec 1]. Available from: https://synthesismanual.jbi.global.
45. Khalil H, Peters MDJ, McInerney PA, Godfrey CM, Alexander L, Evans C, *et al.* The role of scoping reviews in reducing research waste. J Clin Epidemiol 2022;152:30-35.
46. Peters MDJ, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, *et al.* Updated methodological guidance for the conduct of scoping reviews. JBI Evid Synth 2020;18 (10):2119-26.
47. Pollock D, Alexander L, Munn Z, Peters MDJ, Khalil H, Godfrey CM, *et al.* Moving from consultation to co-creation with knowledge users in scoping reviews: guidance from the JBI Scoping Review Methodology Group. JBI Evid Synth 2022;20(4):969-79.
48. Pollock D, Tricco AC, Peters MDJ, McInerney PA, Khalil H, Godfrey CM, *et al.* Methodological quality, guidance, and tools in scoping reviews: a scoping review protocol. JBI Evid Synth 2022;20(4):1098-105.
49. Stevens A. Facilitating rapid dissemination of knowledge: towards the development of a rapid review reporting guideline [dissertation]. Split, Croatia: University of Split School of Medicine; 2019.
50. McGrath TA, Alabousi M, Skidmore B, Korevaar DA, Bossuyt PMM, Moher D, *et al.* Recommendations for reporting of systematic reviews and meta-analyses of diagnostic test accuracy: a systematic review. Syst Rev 2017;6(1):194.
51. Garritty C, Hersi M, Hamel C, Stevens A, Monfaredi Z, Butler C, *et al.* Assessing the format and content of journal published and non-journal published rapid review reports: a comparative study. PLoS One 2020;15(8):e0238025.
52. Robson RC, Thomas SM, Langlois EV, Mijumbi R, Kawooya I, Antony J, *et al.* Embedding rapid reviews in health policy and systems decision-making: impacts and lessons learned from four low- and middle-income countries. Health Res Policy Syst 2023;21(1):45.
53. Dewidar O, Kawala BA, Antequera A, Tricco AC, Tovey D, Straus S, *et al.* Methodological guidance for incorporating equity when informing rapid-policy and guideline development. J Clin Epidemiol 2022;150:142-53.
54. Tricco AC, Garritty CM, Boulos L, Lockwood C, Wilson M, McGowan J, *et al.* Rapid review methods more challenging during COVID-19: commentary with a focus on 8 knowledge synthesis steps. J Clin Epidemiol 2020;126:177-83.
55. Stevens A, Hersi M, Garritty C, Hartling L, Shea BJ, Stewart LA, *et al.* Rapid review method series: interim guidance for the reporting of rapid reviews. BMJ Evid Based Med 2014 [online ahead of print].
56. Page MJ, Moher D, Brennan S, McKenzie JE. The PRISMATIC project: protocol for a research programme on novel methods to improve reporting and peer review of systematic reviews of health evidence. Syst Rev 2023;12(1):196.
57. Nguyen PY, Kanukula R, McKenzie JE, Alqaidoom Z, Brennan SE, Haddaway NR, *et al.* Changing patterns in reporting and sharing of review data in systematic reviews with meta-analysis of the effects of interventions: cross sectional meta-research study. BMJ 2022;379:e072428.
58. Page MJ, Shamseer L, Altman DG, Tetzlaff J, Sampson M, Tricco AC, *et al.* Epidemiology and reporting characteristics of systematic reviews of biomedical research: a cross-sectional study. PLoS Med 2016;13(5):e1002028.
59. Pratt M, Wieland S, Ahmadzai N, Butler C, Wolfe D, Pussagoda K, *et al.* A scoping review of network meta-analyses assessing the efficacy and safety of complementary and alternative medicine interventions. Syst Rev 2020;9(1):97.
60. Lee DW, Shin IS. Critical quality evaluation of network meta-analyses in dental care. J Dent 2018;75:7-11.
61. Page MJ, Moher D. Evaluations of the uptake and impact of the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement and extensions: a scoping review. Syst Rev 2017;6(1):263.
62. Hutton B, Salanti G, Chaimani A, Caldwell DM, Schmid C, Thorlund K, *et al.* The quality of reporting methods and results in network meta-analyses: an overview of reviews and suggestions for improvement. PLoS One 2014;9(3):e92508.
63. Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, *et al.* Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. Syst Rev 2015;4:1.
64. Stevens A, Tricco AC, Straus SE, Page MJ, Nussbaumer-Streit B, Tufte J , *et al.* Developing PRISMA reporting guidelines for rapid reviews: a study protocol. 2024 [cited 2024 Jun 28]. Available from: https://osf.io/3jcpe.
65. Nussbaumer-Streit B, Griebler U, Klerings I, Garritty C, Hamel C, Sommer I, *et al.* Protocol: use of rapid reviews and the Cochrane rapid review methods guidance to answer urgent health questions – a mixed methods study [internet]. Open Science Framework; 2021 [cited 2024 Jun 28]. Available from: https://osf.io/3a8zb.
66. Veroniki AA, Tricco AC, Stevens A, McKenzie J, Li T, Straus SE, *et al.* Updating the PRISMA reporting guideline for network meta-analysis: study protocol [internet]. Open Science Framework; 2024 [cited 2024 Jun 28]. Available from: https://doi.org/10.17605/OSF.IO/7BKWY.
67. Tricco AC, Straus SE, Logan S, Hartling L, Colquhoun H, Wilson M, *et al.* Updating the PRISMA reporting guideline for scoping reviews: study protocol [internet]. Open Science Framework; 2024 [cited 2024 Jun 28]. Available from: https://osf.io/mta4p.
68. McGowan J, Sampson M, Salzwedel DM, Cogo E, Foerster V, Lefebvre C. PRESS - Peer Review of Electronic Search Strategies: 2015 Guideline Explanation and Elaboration (PRESS E&E) [internet]. CADTH; 2016 [cited 2024 Jun 28].

Available from: https://www.cda-amc.ca/sites/default/files/pdf/CP0015_PRESS_Update_Report_2016.pdf.
69. Hirt J, Ewald H, Briel M, Schandelmaier S. Searching a methods topic: practical challenges and implications for search design. J Clin Epidemiol 2023;166:111201.
70. Canadian Agency for Drugs and Technologies in Health. Grey Matters: a practical search tool for evidence-based medicine [internet]. CADTH; n.d. [cited 2023 Dec 1]. Available from: https://www.cda-amc.ca/grey-matters-practical-tool-searching-health-related-grey-literature.
71. Lunny C, Veroniki AA, Hutton B, White I, Higgins J, Wright JM, *et al.* Knowledge user survey and Delphi process to inform development of a new risk of bias tool to assess systematic reviews with network meta-analysis (RoB NMA tool). BMJ Evid Based Med 2022.
72. Haddaway NR, Grainger MJ, Gray CT. Citationchaser: a tool for transparent and efficient forward and backward citation chasing in systematic searching. Res Synth Methods 2022;13(4):533-45.
73. Synthesi. SR Systematic Review Tool: ST [internet]. Michael's Hospital; 2006 [cited 2023 Dec 1]. Available from: https://knowledgetranslation.net/tool/synthesi-sr/.
74. Crowdsourcing. Crowdsourcing as human-machine translation [internet]. Wikipedia; 2023 [cited 2023 Dec 1]. Available from: https://en.wikipedia.org/wiki/Crowdsourcing_as_Human-Machine_Translation.
75. Moher D, Schulz KF, Simera I, Altman DG. Guidance for developers of health research reporting guidelines. PLoS Med 2010;7(2):e1000217.
76. SPOR Evidence Alliance. Patient and public partner appreciation policy and protocol [internet]. SPOR; 2022 [cited 2024 Jan 26]. Available from: https://sporevidencealliance.ca/wp-content/uploads/2022/01/SPOREA_Patient-and-Public-Appreciation-Policy_2021.01.14-1.pdf.

Appendix I: Search strategy

MEDLINE(R) ALL (Ovid) <1946 to November 21, 2023>

1) Network meta-analysis/ (5486)
2) ((network* or network-based or "mixed treatment "or mixed-treatment or "multiple treatment comparison" or mtc) adj2 (meta-analys#s or metaanalys#s or meta analys#s or" meta regression" or meta-regression)).tw,kf. (10,051)
3) ((Indirect comparison* or indirect treatment* or bayesian) adj2 (meta-analys#s or metaanalys#s or meta analys#s or "meta regression" or meta-regression)).tw,kf. (2738)
4) (Indirect comparison* or indirect treatment* or mixed-treatment or mixed treatment or bayesian).tw,kf. and (Review Literature as Topic/ or meta-analysis as topic/ or systematic review as topic/ or *Matched-Pair Analysis/ or Technology Assessment, Biomedical/) (878)
5) ((multiparamet* adj2 evidence adj2 synthesis) or (multi-paramet* adj2 evidence adj2 synthesis)).tw, kf. (30)
6) or/1-5 (11,749)
7) report*.ab. /freq = 3 or report*.kf. (459,722)
8) Publishing/ or Open Access Publishing/ or Periodicals as Topic/ or exp checklist/ or Publication Bias/ (89 201)
9) Research Design/ and (mt or st).fs. (50,941)
10) ((journal or periodical or publication or publish* or presentation) adj2 (report* or bias* or requirement* or adherence or compliance or guideline* or recommendation* or standard* or guidance or instruction* or checklist* or check list* or evaluat*)).tw,kf. (77,693)
11) ((clear* or fully or adequately or inadequately or completely or incompletely or poor* or transparent* or method* or quality or element* or requirement* or guideline* or recommendation* or standard* or guidance or instruction* or assess* or apprais* or bias* or characteristic* or criteri* or critiqu* or evaluat* or quality or checklist* or check list* or score$1 or scoring or adherence or compliance or approach* or item* or measure or measures) adj2 (report* or conduct)).tw,kf. (228,485)
12) or/7-11 (811,148)
13) **6 and 12 (1497)—NMA**
14) (scoping adj (review or reviews or study or studies or exercise* or project or projects or report or reports or meta-review*)).tw,kf. (24,365)
15) (systematic scoping review or systematic scoping reviews or mapping Review or mapping Reviews or literature map* or evidence map*).tw,kf. (2605)
16) 14 or 15 (25,272)
17) **16 and 12 (5810)—Scoping**
18) (rapid adj2 (review or reviews or assessment* or synthes#s)).tw,kf. (12,035)
19) ((expedited or accelerated or rapid) adj systematic review*).tw,kf. (340)
20) (brief review* or rapid evidence review* or Evidence Summar* or quick review* or Rapid Advice Guideline* or Rapid Evidence-Based Literature Review* or Rapid Interim Review* or Rapid Structured Literature Review* or Rapid Synthes#s).tw,kf. (22,645)
21) or/18-20 (32,743)
22) **21 and 12 (1852) RR**

