Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement.

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MAIN OBJECTIVES

- Systematic reviews (SR) are the reference standard for synthesizing evidence in health care because of their methodological rigor.
- SR are based on pre-defined eligibility criteria and conducted according to a pre-defined methodological approach.
- The preparation of a protocol is an essential component of the systematic review process; it ensures that a
 systematic review is carefully planned and that what is planned is explicitly documented before the review
 starts.

SCOPE

The PRISMA-P checklist is intended primarily for the preparation of protocols of systematic reviews and metaanalyses that summarize aggregate data from studies

PRISMA-P: Preferred Reporting Items for A guideline to help authors prepare protocols for planned systematic reviews and meta-analyses

- Provides a minimum set of items to be included in the protocol.
- A protocol is intended to Protocols provide the rationale for the review and pre-planned methodological and analytic approach, prior to embarking on a review.
- Investigators should prepare a review protocol in advance of registering it in PROSPERO or COCHRANE so that details requiring further consideration may be thought in advance, avoiding the need for multiple amendments to registration information

SYSTEMATIC REVIEW

- A systematic review attempts to collate all relevant evidences that fits pre-specified eligibility criteria to answer a specific research question.
- It uses explicit, systematic methods to minimize bias in the identification, selection, synthesis, and summary of studies.
- When done well, this provides reliable findings from which conclusions can be drawn and decisions made.
- The key characteristics of a systematic review are:
 - o a clearly stated set of objectives with an explicit, reproducible methodology;
 - a systematic search that attempts to identify all studies that would meet the eligibility criteria;
 - o an assessment of the validity of the findings of the included studies (assessment of risk of bias and confidence in cumulative estimates);
 - o systematic presentation, and synthesis, of the characteristics and findings of the included studies

PROTOCOL

In the context of systematic reviews and meta-analyses, a protocol is a document that presents an explicit plan for a systematic review.

The protocol details the rationale and a priori methodological and analytical approach of the review.

PRISMA methodology

PRISMA-P does not contain a flow diagram documenting the flow of studies throughout the systematic review process. Such documentation is possible only after a review has been carried out and remains an essential component to include in the report of a completed systematic review or metanalysis; for further guidance, see the PRISMA Explanation and Elaboration document.

PRISMA-P 2015 checklist: recommended items to include in a systematic review protocol

| Title | | |
|---------------------------------------|-----|---|
| Identification | 1a | Identify the report as a protocol of a systematic review |
| Update | 1b | If the protocol is for an update of a previous systematic review, identify as such |
| Registration | 2 | If registered, provide the name of the registry (e.g., PROSPERO) and registration number |
| Authors | | |
| Contact | 3a | Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author |
| Contributions | 3b | Describe contributions of protocol authors and identify the guarantor of the review |
| Amendments | 4 | If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments |
| Support | | |
| Sources | 5a | Indicate sources of financial or other support for the review |
| Sponsor | 5b | Provide name for the review funder and/or sponsor |
| Role of sponsor/ funder | 5c | Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol |
| METHODS | | |
| Eligibility criteria | 8 | Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review |
| Information sources | 9 | Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage |
| Search strategy | 10 | Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated |
| Study records | | |
| Data management | 11a | Describe the mechanism(s) that will be used to manage records and data throughout the review |
| Selection process | 11b | State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis) |
| Data collection process | 11c | Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators |
| Data items | 12 | List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications |
| Outcomes and prioritization | 13 | List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale |
| Risk of bias in individual studies | 14 | Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis |
| Data | | |
| Synthesis | 15a | Describe criteria under which study data will be quantitatively synthesized |
| | 15b | If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., l^2 , Kendall's tau) |
| | 15c | Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression) |
| | 15d | If quantitative synthesis is not appropriate, describe the type of summary planned |
| Meta-bias(es) | 16 | Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies) |
| Confidence in cumulative evidence | 17 | Describe how the strength of the body of evidence will be assessed (e.g., GRADE) |