

2. Search the Literature Using a Hierarchical Approach to Identify Evidence

The Search Strategy depends on the knowledge object being created/updated

- Background document or questions, Evidence Clip
- Foreground questions

2.1 Define and Document Search Strategy

Notes

- Prior to the formal search, the author asks International Review Panel for recent guidelines and systematic reviews on the topic that may be helpful.
- Author to identify initial search terms and spelling/terminology; search strategy to be documented in the WORD document of existing PEN content if updating or WORD document with approved questions if a new Knowledge Pathway.
- Confirm search terms from the PICO question by identifying any MeSH terms, and then use other important text words (words that do not have MeSH terms but are important for searching for the PICO question) (See PEN Searching PubMed Module: <http://www.pennutrition.com/WriterGuide.aspx>)
- Consider feedback from Core Group Reviewers. Input into search strategy should be requested within a week's time
- Search strategy to include (See [Appendix 4](#)):
 - date search completed (range if limits used)
 - search terms – (e.g., population, intervention and purpose of intervention, outcome as well as MeSH terms)
 - databases searched with any filters identified
- When grey literature is included, note: “We searched the grey literature (specify), asked experts (specify) to identify key literature for review”

International Review Panel Responsibilities

- Core Group members to review and provide feedback on the search strategy.

2.2 Conduct Search and Screen for Eligibility

Notes:

- Author will conduct the initial search
- The screening will be conducted by the author (generally one person unless someone from the Core Group wants to screen as well or there is an existing project where an existing process is in place and the results of the project are going to be repurposed for PEN). Make note of reasons why particularly noteworthy or controversial resources were excluded.
- Only conduct a more rigorous screen (two people independently screen or one screens, one verifies) at this point, if piggybacking onto a systematic review project with processes established – e.g. Cystic Fibrosis guideline project from DAA.
- Reassess the importance of outcomes - to ensure important outcomes identified in the review of evidence that were not initially considered are included and to reconsider the relative importance of outcomes in light of the available evidence – see [Appendix 5](#) (2).
- Initial Screen: **Does the study match the PICO of our PQ?**
 - There will be some assessment of quality at this stage (see 1 and 2 below).
 - Systematic reviews will be included based on quality, outcomes analyzed and date of search.
 - Primary studies that match the PICO will be included if there is no systematic review or if they have been published after a systematic review.
- The examination of the located evidence will be rigorous enough to decide whether searching can be discontinued, but not as rigorous as will be done to complete the GRADE tables in later steps. Note that some evidence will be easy to exclude, and others will require a bit more analysis. Document reasons for excluding

studies/guidelines etc. that you anticipate may be controversial or that you feel you may be challenged on.

Search and Screen Process

1. First search for relevant guidelines that include systematic reviews (SRs) using PubMed – Clinical Queries, Turning Research into Practice (TRIP) database (search engine with emphasis on evidence based medicine and clinical guidelines) and specialized databases relevant to the question such as, PsycINFO, SPORTDiscus or Natural Medicines Comprehensive Database. Screen for applicability (do they address the PICO question of interest?) and for quality using AGREE focusing on #7,8,9 for screening stage: AGREE II: http://www.agreetrust.org/wp-content/uploads/2013/06/AGREE_II_Users_Manual_and_23-item_Instrument_ENGLISH.pdf
2. If the guideline includes a recent rigorously conducted systematic review of the literature that matches the PICO (for all outcomes), additional searching is not necessary. If the guideline does not, search for the most recent SRs and protocols for reviews using PubMed - Clinical Queries and the Cochrane Library, respectively. Use the ROBIS tool to assess quality <http://www.robis-tool.info/> . If several SRs are found and consistent, use the most recent one, or select the one that is the highest quality or the one that most closely represents your PICO.
3. If the systematic review is of high quality, includes a search less than 2 years old and matches the PICO, further searching for more recent studies is not required. However, some authors may choose to continue to search for recent studies.
4. When systematic reviews are not available or not current, PubMed and relevant specialized databases will be searched for randomized controlled trials (RCTs); when RCTs are not available or not current, search for non-randomized studies (NRS).
5. Author will search the grey literature using the TRIP database and specific and relevant organizational databases such as National Health and Medical Research Council (NHMRC), National Institute for Health and Care Excellence (NICE), and nutrition specific organizations such as Food Standards, Health Canada etc. The Core Group may also identify/add to the grey literature.
6. The search strategy may need to be revised if no data is found and indirect literature will need to be assessed to inform the recommendations. Example: PICO question is related to nutritional status of the elderly people in long-term care, but the only studies found are in community living elderly. Need to assess if this information can be used, and if so rated down for indirectness since not about the population of interest.
7. Non-indexed journals will not be routinely searched unless it is considered a key journal for the topic in which case hand searching may be conducted.
8. Document search strategy using [Appendix 4](#)
9. Send search strategy showing literature retrieved along with International Review Panel questionnaire ([Appendix 6](#)) to core reviewers for feedback.