
A Practical Guide to Delivering a Powerful Literature Review



Introduction

Literature reviews are useful activities which are used across all areas of research. They condense the evidence of complex topics into written reports that can be used to support decision-making or inform future research plans. There are different types of literature reviews which are used depending on the depth of evidence understanding required. These include:

- Narrative literature review
- Systematic review
- Mapping/scoping review
- Meta-analysis

Each of these reviews results in reports of varying depth and structure but they do have some common principles. They are analyses of the currently available evidence organised in narrative form alone or with the addition of tables¹. They can help address outstanding questions, highlight gaps in the evidence base, and identify opportunities for further research. More comprehensive/exhaustive reviews assess literature in accordance with pre-defined inclusion/exclusion criteria.

Literature reviews are indispensable to researchers and communicators in the healthcare and pharmaceutical industries. They are often conducted at the beginning of every evidence-generation activity, or may be an evidence generating activity in their own right. Reviews can be undertaken across different areas, from assessing healthcare pathways to evaluating support for a medical device or drug. Narrative and scoping reviews can help to form the basis for further research, by highlighting current problems and a way forward. Systematic literature reviews and meta-analyses are more in-depth and can provide a rigorous view of current research and its limitations. In turn, each type of review can be used to create a platform which can inform new practices and policymaking, and drive change. The following table acts as a starting point for matching the right type of review to some common strategic requirements.

Which type of review is needed?

PURPOSE / STRATEGY	REVIEW APPROACH RECOMMENDED
HTA or reimbursement submission	Systematic review (often with meta-analysis) -of safety & efficacy outcomes -of HRQoL -of resource use & costs
Identification of prioritised evidence gaps	Scoping review
Understand burden of illness	Narrative review
Provide the basis for a new piece or original research (e.g. inform Delphi Consensus statements)	Narrative review
Establish existing consensus (or conflict) on a defined approach	Systematic or narrative review (choice may depend on resources available and the ultimate purpose of the output)

In this paper, we'll look at the 5 key areas to consider when conducting a literature review.

1. Clarity and focus of the research question

Undertaking a successful, publishable, literature review requires a focused research question. It is important to think of the target audience and the problem that is to be addressed. Key aspects to consider in a research question are²:

Key aspects

FOCUS

Keep the question as narrow as possible, it must be able to be answered concisely in an article or report. A good question focuses on one aspect of a larger issue. For example:

OK

What are the difficulties in treating patients with diabetic macular oedema?



BETTER

What is the most significant barrier to treatment adherence in patients with diabetic macular oedema?

CLARITY

Do not leave room for interpretation within a research question. It should state what the issue is and who or what this affects. For example:

OK

How do practitioners address the risks associated with *Clostridium difficile*?



BETTER

What therapeutic steps can practitioners take to minimise the risk of recurrent infections of *Clostridium difficile* in patients?

COMPLEXITY

The question must leave room for analysis, requiring investigation and evaluation from the researcher. For example:

OK

How are surgical sealants used in lung surgery?



BETTER

What is the current guidance for use of surgical sealants to reduce postoperative air leaks in lung surgery?

Using the “PICO” format is useful when constructing a research question³. This helps by identifying the: Patient problem/Population, Intervention, Comparison, and Outcome. For example:

PICO format

In cardiorenal patients who develop hyperkalaemia, should RAASi therapy be maintained or discontinued in order to successfully reduce blood potassium levels?	
Patient problem /Population	Patients diagnosed with both chronic kidney disease & congestive heart failure who develop hyperkalaemia
Intervention	Maintained RAASi therapy
Comparison	Discontinued RAASi therapy
Outcome	Reduction in blood potassium levels

2. Establish clear inclusion/exclusion criteria

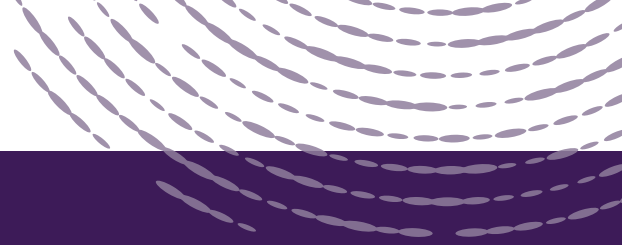
Selection criteria for literature reviews are a set of inclusion and exclusion guidelines for the types of articles which will be examined. They can depend on the style of the review being undertaken.

Whilst narrative reviews may require a historical understanding of a topic and include seminal research, a systematic review may be more targeted. A common inclusion criterion is that studies must have been published within a certain time frame (e.g., the last five years).

Selection criteria should be based on the research question. If the target research population is based in a specific country, it may be necessary to exclude international research. The inclusion guidelines should state elements of a publication which must be present to be included, with exclusion guidelines stating which criteria will disqualify a study from inclusion⁴. Some examples are listed below:

Criteria

INCLUSION CRITERIA	EXCLUSION CRITERIA
Study Type e.g., the study must be a randomised clinical trial	Publications which were reviews, case studies and grey literature were excluded
Participant Type e.g., the study must examine women over the age of 40	Studies examining effects in men or individuals under 40 were excluded
Intervention Type e.g., the intervention must have been undertaken on newly diagnosed individuals with no co-morbidities	Studies which used the intervention on participants who had undergone previous treatments were discounted
Outcome Type e.g., studies must have reported outcomes based on recognised pain rating scales	Studies which only reported outcomes for functional abilities were excluded
Timeframe e.g., studies must have been published between 2016-2021	Studies outside the outlined period were excluded



3. Identify the most appropriate information sources

Narrowing down literature for inclusion in more systematic reviews involves two stages. Initially, any duplicated results will be removed, before each study is individually analysed to ensure it meets the inclusion criteria. When analysing studies against predefined inclusion and exclusion guidelines it is important to assess the quality of the study⁵. It can be helpful to create a quality assessment checklist before any searches are undertaken.

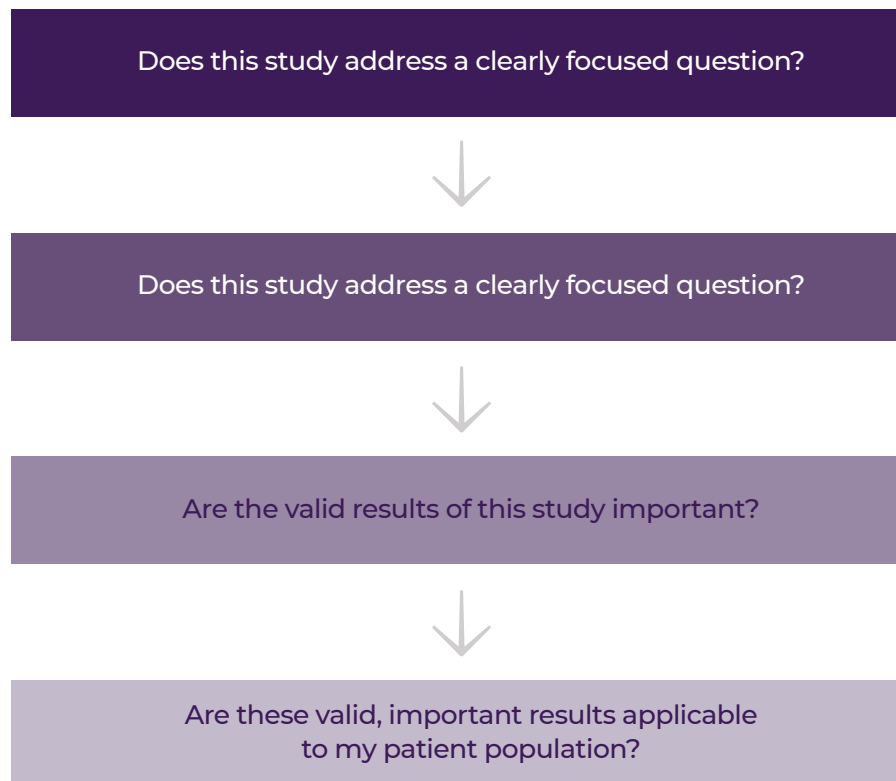
Quality assessment will provide a basis for further analysis and help when constructing the discussion for the final publication. Quality assessment may also provide a basis for additional inclusion and exclusion criteria. However, scoping reviews or mapping reviews with time constraints may not have explicit quality guidelines. Examples of aspects of research quality are illustrated below:

Aspects of research policy

-  Are the aims and objectives adequately described?
 -  Is the description of the methods sufficient enough to be reproducible?
 -  Is the data presented consistently? (e.g., do numbers in tables match those in graphs or text?)
 -  Are the limitations of the study acknowledged?
 -  What references have been used in the research and are these reliable?
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The critical appraisal tool coined by the Centre for Evidence-Based Medicine is designed to help researchers systematically assess the quality of clinical evidence based on their research question⁶. The tool asks four questions of clinical evidence:

Critical appraisal tool



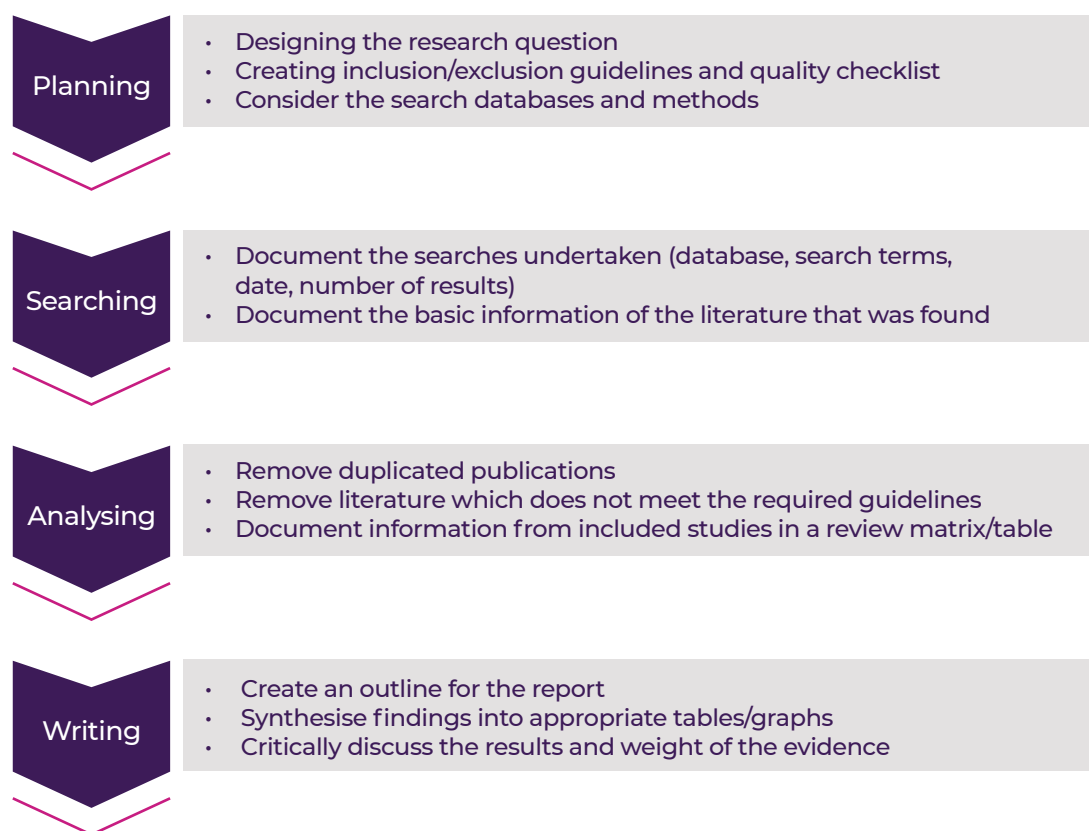
If the answer to any of these questions is no, then the evidence is not suitable to include in a review.

4. Consider the time and resources required to conduct effectively

Literature reviews can be time-consuming to undertake. As such, plenty of time should be put aside for each stage of the research. If a literature search is rushed, then researchers will risk missing salient studies to include. Conversely, it could also mean that literature which is not relevant or of a high standard will be included in the review.

More time should potentially be allotted for planning and analysing, as careful consideration at these stages will provide a good foundation for writing up. The stages you should consider are illustrated below:

Time and resource considerations



The time needed to search for literature should not be underestimated. The analysis of references within publications may lead to further research for inclusion, and therefore greater search time⁷.

5. Appropriate synthesis of the research findings

When writing up a literature review always bear in mind the target audience and the problem at the heart of the research⁸. Reports should always reflect the nature of the data gathered, and any conclusions must be aligned with the results. Overstepping the evidence and creating a false narrative from the data can have serious consequences. It is important to assess the weight of the evidence gathered and be able to discuss the limitations of included publications. However, synthesising results is more than critiquing each research paper.

Sources selected for review should be organised according to their themes, e.g., similar interventions, outcomes, and difficulties.

Using a review matrix or table helps to localise related information for assessment⁹. Themes should be discussed systematically, connecting ideas, and showing how different elements influence one another. This will enable the target audience to see the combined scope of the assessed research and problem area. Finally, the results of the review should be contextualised with a comparison to other relevant studies. A simplified work process for synthesising data in a literature review is shown below:

Synthesis of the research findings



Key takeaways

Overall, when conducting a literature review it is important to make sure that:

- The purpose of the review is clear, and the type of review selected is well-matched to deliver it
- The research question is clear and focused
- The criteria for studies to be included and excluded are defined
- The quality of the sources has been assessed
- The time allocated for each stage of the review is sufficient
- The conclusions are supported by the results

A strong literature review will inform the nature and scope of further research so that evidence generation can be approached strategically to see better decisions actioned in healthcare.

Triducive is an expert in conducting literature reviews that summarise currently available evidence in the level of detail you require to inform your evidence-generation plans. If you need to conduct a literature review, **get in touch** with the team at Triducive. You can also learn more about **what we do** and **how we have helped other organisations like yours** achieve success.

References

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The pharmaceutical industry's success is dependent on the effective functioning of medical affairs teams, and it is critical to ensure that medical affairs professionals have the skills and competencies required to meet the evolving needs of the industry. The role of medical affairs teams in the pharmaceutical industry has evolved in line with these needs in recent years, taking on an increasingly strategic emphasis, as articulated by the 2020 framework proposed by MAPS. The insights gathered from this survey of professionals highlight this growing importance and, importantly some of the specific areas where the biggest gains can be made.

Triducive intend to continue to gather input to the survey from MA colleagues with the aim of publishing an updated perspective on a regular basis.

Triducive are a health communications agency that focus on supporting life sciences and other private and public healthcare organisations to develop consensus-based insight, evidence and communications.

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