

BEME Systematic Review

BEME Review Stages:

BEME provides support for developing systematic reviews as well as editorial service. The traditional BEME Review Process consists of 4 stages: topic registration, protocol development, review development and final adjudication of the Review and publication. The stages are outlined below:

Stage 1: Topic Registration (2-4 weeks)

- Prior to submitting a review, potential authors should:
 - Review the steps of the BEME process available at (<https://www.bemecollaboration.org/Steps+in+the+Review+Process/>), previously published reviews and currently registered topics
 - Select a topic. Issues to consider include:
 - Relevance / importance of the topic to educational practice or policy; potential impact on education more broadly
 - The research questions / specific objectives for the review
 - Feasibility of the review
 - Adequacy of the Review Team to the topic
- Register a Topic by completing the BEME registration form (<https://bemecollaboration.org/Step+3+Register+Topic/>) and submitting it to beme@amee.org
- This form will be reviewed by the chair (or designee) of the BEME Review Committee (BRC).
- A decision will be communicated to the authors within 2 weeks.
- If a topic is accepted, it will appear on the BEME website.
- This will reserve this topic area for the team, preventing overlap with previous and future works.

Stage 2: Protocol Development & Review (6 months maximum)

- The authors – now to be referred to as the **BEME Authors Team (BAT)** - have **6 months**

maximum to complete a formal protocol

(<https://bemecollaboration.org/Step+4+Protocol+Preparation/>) and return it to beme@amee.org.

- It is expected that the majority of teams will return a protocol within **3 months**. In rare instances (e.g., granted research) the authors may take up to **6 months**.
- It is critical during this time to complete a **pilot search** to verify the viability and feasibility of the review. Less than 10 primary papers (or < 20 for a scoping review whose aim is to map the literature) in the final review is *unlikely to be acceptable*. On rare occasions, several hundred papers may be included in a review *if* the author team demonstrate they have the capacity to complete such an ambitious project.
- Protocols not returned within **6 months** will be withdrawn from the BEME Review process (i.e., registration of the topic will terminate). Only under exceptional situations will an extension be given.
- During this **6 month** period, the BAT must contact BEME with questions or concerns relevant to protocol development.
- The BEME Protocol checklist (<https://bemecollaboration.org/Step+4+Protocol+Preparation/>) that is used by Reviewers to evaluate protocols is available to authors to facilitate the design of their protocol.
- Once a protocol is submitted, a BEME International Collaborating Centre (BICC) will be assigned to the review (<https://bemecollaboration.org/BICCs/>). The BICC subsequently serves as both a source of support / guidance to the BAT and as editor for the remaining steps in the process.
- The BICC will identify two reviewers to evaluate the protocol using the BEME Protocol checklist (<https://bemecollaboration.org/Step+4+Protocol+Preparation/>).
- The reviewers are expected to fill out the BEME Protocol Checklist with comments where improvements are needed. Reviewers should include page and line numbers in the checklist OR annotate the word file.
- The BICC lead will collate the reviews, summarize priority areas for revision, and recommend a decision to the BRC (accept, reject, major/minor changes) within **4 weeks** of receipt of the Protocol.
- The BRC editor will then have **2 weeks** to review the feedback, discuss any discrepancies with the BICC and communicate the final decision to the BAT (accept, reject, major, minor changes), with a cc to the BICC and BEME office beme@amee.org.
- If the Protocol requires revision, the BAT will be given **4 weeks** to make the necessary changes. *The BAT is strongly advised to directly contact the BICC for guidance at this stage if the protocol requires revisions.*
- The BAT should return the following information to the BRC and BICC
 - A letter in which they explain briefly how the comments of the reviewers were dealt with
 - An edited protocol with track changes
 - A clean (no track changes) edited protocol
- The BICC lead and BRC editor will discuss and return feedback and a decision to the BAT

within **2 weeks**.

- The BEME office will update the final data file and website and inform the BAT of the decision.
- If a revised protocol is not received within **4 Weeks**, the topic will be withdrawn from the BEME Review process. Only under exceptional situations will an extension be given.
- In general, an approved protocol will lead to publication in Medical Teacher if the subsequent steps are appropriately followed. However, we will cannot guarantee final publication if the authors deviate from their protocol or the process.

Stage 3: Review Development (~1 year)

- The BAT will have **12 months** to complete their review (**with an interim report at 6 months**). Depending on the complexity of the review, this timeline can be negotiated up front with the BEME office / BRC chair. If issues arise with the timeline during the review, the BAT should communicate with the BEME office, beme@amee.org, as soon as possible.
- The BAT should engage the supporting BICC lead as needed throughout the review process with questions or concerns. Similarly, if the BICC has concerns about progression of the review they may reach out at any time for a status update. In our experience, communication is often the key to successful completion! It is a BICC responsibility to share their concerns with BRC at any stage of the review.
- The BEME office will alert the BAT to send a very brief **interim report** to their BICC and the BRC chair at **6 months**. The interim report must include the completed Prisma diagram showing the total number of articles included. For most review types, the prisma diagram should also summarize the reasons articles were excluded at the full text stage. This will allow the BICC to verify that the review remains viable and feasible (i.e., there are not too few or too many articles) before the authors proceed to full data extraction and manuscript writing. Any concerns should be discussed.
- The first draft of the manuscript should be entered into Medical Teacher's Scholar One platform at <https://mc.manuscriptcentral.com/cmtc> within **one year** from protocol approval.
- If no review is received within **18 months**, the registration of the topic will be withdrawn.

Stage 4: Final Adjudication of the Review and Publication (1-2 months)

- The BICC will identify 2 reviewers from inside or outside their institution and provide their email addresses to the BEME office. The manuscript will be assigned to the 2 reviewers (and the BRC editor) using the Scholar One platform. One reviewer should be an expert in the topic area of the review, and one reviewer should have expertise in the type of review performed (e.g., scoping, realist, etc.) The BAT may suggest reviewers. The BICC reviews should be completed within **4 weeks** of receiving the manuscript. The BICC will suggest a decision to the BRC (accept, reject, major, minor changes).

- The BRC editor serves as the 3rd independent reviewer. After all independent reviews are completed, the BRC editor will summarize the reviews, prioritizing the feedback and giving a final overall recommendation to reject, accept or request major or minor revisions. This will be completed within **2 weeks** of receiving the manuscript.
- Final acceptance or rejection of the manuscript is based upon an agreed report from the responsible BICC and the BRC.
- If changes are required in the manuscript, the BAT will be informed and the BAT will be given **3 months** to make these changes. This time may be altered according to the degree of change necessary. The responsible BRC editor will ensure the recommendations of the reviewers are dealt with to a sufficient level.
- The Associate Editor for systematic reviews at Medical Teacher will briefly review the final product prior to acceptance, but the editorial decisions up to that point will be made by the BRC editor.
- If the revisions are not received within **3 months**, the file will be closed and the registration will be withdrawn.

BEME Alternative Review Process:

High quality systematic reviews may become a BEME review without progressing through Stages 1-4. This pathway is good for groups who already have significant expertise in reviews and do not require the support offered by BICCs and the BRC to be successful. The advantages to authors include the recognition of the review as meeting BEME's high standards, and the extended abstract / manuscript word limits (detailed below) which are reserved for BEME reviews.

- Manuscripts submitted to Medical Teacher through Scholar One, labelled as systematic reviews will be given an option to be considered as a BEME systematic review, if complementary to the BEME portfolio and consistent with the quality BEME model.
- A Medical Teacher reviewer, a BICC reviewer, and a BRC reviewer will be assigned to complete 3 independent reviews within **6 weeks** of receiving the manuscript. After consensus is reached the BRC will summarize the reviews, prioritizing the feedback and giving an overall recommendation to reject, accept or request major or minor revisions based on the collective feedback. This will be completed within **3 months** of receiving the manuscript.
- Final acceptance or rejection of the manuscript is based upon an agreed report, with primary decision-making delegated to the Associate Editor for systematic reviews at Medical Teacher.
- If changes are required in the manuscript, the authors will be informed and given **3 months** to make these changes. This time may be altered according to the degree of change necessary. The BRC editor will ensure the recommendations of the reviewers are dealt with to a sufficient level.
- The BRC will review the final product prior to acceptance.
- If a review submitted through the alternative process is rejected, this constitutes a rejection from Medical Teacher and the manuscript may not be resubmitted.

Important NOTES:

- A BEME Review is an academic paper, matching the high standards required for publication in substantive journals. The BRC has editorial authority to remove a Review from the process at any stage should it feel that it is either not progressing or is not going to achieve the necessary standard for publication. The authors will be informed of the reasons underlying rejection.
- BEME Review abstracts have a maximum word count of 300 words.
- BEME Reviews have a maximum word count of 6,000 - 8,000 words. Focused reviews should have a maximum word count of 3,000 – 4,000. A maximum of 5 tables / figures may be included in the main article, one of which must be the Prisma diagram. If there is a need for additional words / tables or figures, this must be negotiated with the Associate Editor for systematic reviews at Medical Teacher.
- Medical Teacher accommodates on-line ‘Supplementary Materials’ (i.e. appendices) to accommodate important but not essential elements of the BEME Review. Authors are asked to indicate clearly within their review paper, the tables and figures that are to be included as supplementary material.
- A table summarizing the characteristics of the included studies must be included in the main paper or as supplementary material.
- All BEME reviews should be titled as a ‘BEME’ review and describe a review subtype (scoping, realist, narrative or if none of these, systematic).
- **Authors should otherwise follow Medical Teacher Guidelines for Authors (<https://tandfonline.com/action/authorSubmission?journalCode=imte20&page=instructions#.VjDD2CsWlug>). Be sure to include Practice Points, Notes on Contributors, and format references correctly**

