COVID-19 Scientific Advisory Group
Rapid Evidence Brief Methodology

1. Question Generation

Questions for consideration of a Scientific Advisory Group (SAG) review are submitted to the committee co-chairs for consideration. SAG evidence requests are brought forward from a variety of sources including the Alberta Health Services (AHS) Emergency Coordination Centre (ECC), AHS Zone Emergency Operations Centres (ZEOCs), AHS Personal Protective Equipment (PPE) Task Force, or the Office of the Chief Medical Officer of Health (CMOH). Questions related to any aspect of COVID-19 are within scope.

Typically, questions are reviewed using the Rapid Review Methodology. On occasion, a question may be posed with a strict timeline that does not allow for discussion at an upcoming SAG meeting, and particularly if it is quite constrained in scope a full Rapid Review protocol may not be deemed necessary. These questions are treated as Rapid Evidence Briefs, and are normally completed in less than a week. These questions may involve an abbreviated literature search or targeted hand searching only.

2. Rapid Evidence Brief Team

Each question is assigned to a team that includes the following roles:

- Research librarian
- Writer
- Writing assistant
- Primary reviewer (A committee member or is closely affiliated with SAG and has subject matter expertise)
- Secondary reviewers (Subject matter experts who are not necessarily a SAG committee member)

3. Literature Search

Evidence for the accepted questions is identified by a combination of structured database searches and hand-searching. Support for the literature search is provided by AHS Knowledge Resource Services (KRS). A research librarian is assigned to the question and works with the writer to identify the key concepts and search terms for the research question.

In general, the search is limited to articles published in 2019-2021, with no jurisdictional or language limits. The databases searched usually include OVID MEDLINE, EMBASE, LitCovid, TRIP PRO, PubMed, WHO Global research on coronavirus (database), Google and Google Scholar. Additional databases can be requested by the writer as appropriate for the research question and the type of evidence expected. Canadian and international repositories and evidence services are hand searched to identify reviews that have been conducted by other jurisdictions.

Resources suggested by the primary and secondary reviewers are included on an *ad hoc* basis, as are relevant articles identified over the course of the literature review that may not have been identified in the database search.

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4. Evidence Screening and Synthesis

Literature is screened according to pre-determined inclusion and exclusion criteria. In addition to question-specific exclusion criteria, literature is subjected to the screening criteria used in the Mixed Methods Appraisal Tool (MMAT).

Due to the novelty of COVID-19 and the speed with which new evidence is available, a wide variety of evidence types are eligible for inclusion. Preprints, primary literature, secondary literature, and grey literature from reputable sources are eligible for inclusion in the evidence summary. Literature based on the author's opinion (such as commentaries, opinion letters, and editorials) are not excluded automatically but must balance the body of evidence with the research question. Articles from non-academic sources (such as news reports, blog posts, or social media sources) are generally not eligible for inclusion but may be important as context for the topic.

The evidence is presented as a narrative synthesis and potentially as tables. The exact structure and presentation of the report is left to the writer's discretion to best serve the evidence and the research questions.

5. Evaluation of the Evidence

A full critical appraisal of the evidence for an evidence brief is not feasible due to the short turnaround times required by the review requestor (often 24-72 hours). Therefore, a method was developed involving consideration of and comment on the volume, quality, applicability, and consistency of the evidence included in the report, paying special attention to sample sizes, comparators, and risk of bias. These comments are included in the appendix of reports that were completed after April 2020. This method draws on reputable evidence groups such as the Oxford Centre for Evidence-Based Medicine, the Cochrane Library, and the AGREE Trust. This approach evolved over first four weeks of the SAG process, so earlier reviews are heterogeneous in their appraisal method.

6. Expert Review & Revision

In most cases, the first draft of the report is reviewed by a primary and multiple secondary reviewers as well as the co-Chairs prior to submission, although sometimes depending on time constraints the co-chairs may fill those roles.

The primary reviewer is usually but not always a member of SAG and is responsible for reviewing the report, co-writing as needed, providing feedback, commenting on gaps and included data sources, and drafting or refining the recommendations.

The secondary reviewers are not necessarily affiliated with SAG but are subject matter experts who are able to provide additional feedback and suggested revisions and comment on gaps, and to provide any additional data sources. For rapid evidence briefs, the requester may be added as a secondary reviewer to ensure that they are aware of information as soon as it is drafted. The SAG co-chairs also provide feedback on the report and may request revisions prior to submission.

The SAG co-chairs will work with the writer and primary reviewer to finalize the report for submission. Secondary reviewers will be sent the final report when it is submitted to ECC for approval so they can indicate dissent if required.

Changes may be made to improve clarity or to incorporate feedback from the ECC Medical Leads upon submission.

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