**Tips from EBD: GRADE Framework**

Did you know that you can provide grades to systematic reviews and randomized controlled trials?

The ￼GRADE (Grading of Recommendations, Assessment, Development and Evaluations) framework can be used to develop and present summaries of evidence. It provides a systematic approach for making clinical practice recommendations. It is the most widely adopted tool for assessing the quality of evidence and for making recommendations. Over 100 organizations worldwide have officially endorsed GRADE, including organizations such as the American Congress of Obstetrics and Gynecology (ACOG) and the Agency for Healthcare Research and Quality (AHRQ).

AAPD uses the GRADE approach for evaluating evidence used in systematic reviews and in developing clinical practice guidelines.

**Why is GRADE Important?**

 Systematic reviews are often used by decision makers to develop recommendations for clinical actions, best practice, or practice guidelines. However, the information contained in systemic reviews is not always sufficient for making well-informed clinical decisions. Additionally, there is not uniform quality of evidence in the scientific works represented in a systematic review. In systematic reviews, “the quality of evidence reflects the extent of confidence that an estimate of effect is correct.” GRADE provides “a systematic and transparent approach for rating the certainty of evidence in systematic reviews.” In other words, systematic reviews assess and synthesize evidence from individual studies to advance the scientific literature base, while GRADE reviews assess and synthesize the evidence of systematic reviews to advance clinical practice.

**Benefits of GRADE Framework Implementation**

* Systematic review of all available scientific evidence
* Weights benefits and harms
* Factors in values and preferences of patients, caregivers and clinicians
* Outlines resource allocation (e.g., costs to patients or health systems)

**How are studies scored using the GRADE Approach?**

There are 5 criteria that can be used to assess and score studies:

* [Risk of bias in individual studies](https://www.aapd.org/globalassets/aapd-risk-of-bias.pdf) – e.g., methodological issues in included studies such as inadequate blinding (participants knew they were in control/treatment group)
* [Inconsistency of results between studies](https://gdt.gradepro.org/app/handbook/handbook.html#h.g2dqzi9je57e)
* [Indirectness of evidence](https://gdt.gradepro.org/app/handbook/handbook.html#h.w6r7mtvq3mjz) – e.g., participants were children although the systematic review was about adults
* [Imprecision](https://gdt.gradepro.org/app/handbook/handbook.html#h.ygojbnr1bi5y) – results were not statistically significant, or the effect was clinically important once the studies were meta-analyzed
* [Publication bias](https://gdt.gradepro.org/app/handbook/handbook.html#h.xivvyiu1pr3v) – result was biased due to a [file-drawer](https://s4be.cochrane.org/publication-bias-the-answer-to-your-research-question-may-be-sitting-in-somebodys-file-drawer/) effect, as studies not showing a statistically significant effect are less likely to be published.

For more information on the GRADE framework, please visit the [AAPD Evidence-Based Dentistry website](https://www.aapd.org/research/evidence-based-dentistry/).