

GRADE for appraising the quality of evidence and strength of recommendations

A summary of

Guyatt, G.H., Oxman, A.D., Vist, G.E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., et al. (2008). GRADE: An emerging consensus on rating quality of evidence and strength of recommendations. *BMJ*, 336(26), 924-926.



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Categories:

Tool, Appraise, Synthesize, Implement, Consensus building, Policy development

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Tool

Relevance For Public Health

The GRADE approach is useful when answering questions about interventions and when evidence-informed decision making is needed and recommendations are being produced. Originally developed for clinical interventions, the GRADE approach is designed to assess the quality of evidence for both randomized controlled trials and observational studies.

Description

The GRADE framework (Grading of Recommendations Assessment, Development and Evaluation) applies a rating of quality (synonyms: confidence, certainty) of evidence and a grading of strength of recommendations for systematic reviews and clinical practice guidelines. For the quality of evidence, randomized trials start as high quality, and observational studies as low (in the high, moderate, low, very low classification). Quality can be rated down for risk of bias, inconsistency, indirectness, imprecision and publication bias or rated up, most frequently for large or very large effect. Knowing the quality of evidence can help formulate conclusions, and recommendations are then graded as strong or weak. The GRADE system recognizes that the relationship between evidence and recommendations is influenced by other factors beyond the evidence, including patient values and preferences and the balance of desirable and undesirable effects.

Implementing the Tool

Who is Involved?

The GRADE system of rating the quality of evidence and recommendation formulation depends on the staff conducting the systematic review or meta-analysis, which could also include a librarian, managers, senior leaders, panels of experts or clinicians, and community representatives or patients.

Steps for Using Tool

The GRADE system classifies the quality of evidence and gives an overall rating of very low quality of evidence, low quality of evidence, moderate quality of evidence or high quality of evidence.

The quality of evidence rating depends on a summary of different factors, one of which is **risk of bias**. A standard appraisal tool can be used to determine the risk of bias present in individual studies gathered from a systematic review. However, it is important to note that GRADE addresses rating the quality of a body of evidence rather than individual studies.

Factors in the assessment of the quality of evidence include the following:

- Risk of bias/study limitations

These summaries are written by the NCCMT to condense and to provide an overview of the resources listed in the [Registry of Methods and Tools](#) and to give suggestions for their use in a public health context. For more information on individual methods and tools included in the review, please consult the authors/developers of the original resources.

- Inconsistency of results
- Indirectness of evidence
- Imprecision
- Reporting bias
- Magnitude of effect
- Dose-response gradient
- Direction of plausible biases

When making recommendations based on a systematic review, additional issues beyond the quality of evidence should also be considered. This includes the balance of desirable effects (e.g., increased “health”) and undesirable effects (e.g., reduced quality of life), along with patient preferences and values (e.g., would all patients choose the intervention?). When the desirable/undesirable effects are clearly “black and white,” that is, one substantially outweighs the other, then a strong recommendation can be made. When there is a close balance between the two (desirable/undesirable effects) or when low quality of evidence forms the basis, then weak recommendations are usually made.

Factors that affect the strength of recommendation include the following:

- Quality of evidence
- Uncertainty on balance between desirable and undesirable effects
- Uncertainty or variability in patient values and preferences
- Uncertainty about the use of resources

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Evaluation and Measurement Characteristics

Evaluation



Has been evaluated.

Has advantages over other rating systems including its transparency, explicitness, comprehensiveness and usefulness.

Validity

Not applicable

Reliability

Not applicable

Methodological Rating



Not applicable

Tool Development

Developers

The GRADE working group, including the following:

G Guyatt
 Andrew Oxman
 Gunn Vist
 Regina Kunz
 Yngve Falck-Ytter
 Pablo Alonso-Coello
 Holger Schunemann

Method of Development

The GRADE system was developed by a widely representative group of international guideline developers.

Release Date

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Contact Person

G Guyatt
 CLARITY Research Group
 McMaster University
 1200 Main St West
 Hamilton, ON L8N 3Z5
 Email: guyatt@mcmaster.ca

Resources

Title of Primary Resource	GRADE: An emerging consensus on rating quality of evidence and strength of recommendations
File Attachment	None
Web-link	http://www.bmj.com/content/bmj/336/7650/924.full.pdf
Reference	Guyatt, G.H., Oxman, A.D., Vist, G.E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., et al. (2008). GRADE: An emerging consensus on rating quality of evidence and strength of recommendations. <i>BMJ</i> , 336(26), 924-926.
Type of Material	Journal article
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Cost to Access	None.
Language	English
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Title of Supplementary Resource	GRADE: What is “quality of evidence” and why is it important to clinicians?
File Attachment	None
Web-link	http://www.bmj.com/content/bmj/336/7651/995.full.pdf
Reference	Guyatt, G.H., Oxman, A.D., Vist, G.E., Kunz, R., Falck-Ytter, Y., Schunemann, H.J. (2008). GRADE: What is “quality of evidence” and why is it important to clinicians? <i>BMJ</i> , 336(3), 995-998.
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