Grading quality of evidence and strength of recommendations in clinical practice guidelines

An overview of the GRADE approach and grading quality

of evidence about interventions

GRADE Working Group

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Agenda

- Introduce Practice Guidelines
- Discuss GRADE (Grades of Recommendation, Assessment, Development, and Evaluation) approach for grading quality of evidence
- Discuss ways quality of evidence can be increased or decreased

Clinical Practice Guidelines

- Provide recommendations for clinicians on diagnosis and treatment of patients
- Generally drafted by a working group or panel
- Include systematic reviews of the existing evidence on clinical questions addressed in the guideline
- Evidence in these systematic reviews may be ranked or graded (e.g. high, moderate, low or very low) and contribute accordingly to development of the guideline recommendations

GRADE (Grades of Recommendation, Assessment, Development, and Evaluation)

- Used to assess quality of evidence in clinical guidelines
- Multi-step process for guideline development
- Focus here is on grading evidence from systematic reviews intended to address clinical questions

Quality of Evidence categories

Rank	Explanation	Examples
High	Further research is very unlikely to change our confidence in the estimate of effect	Randomized trials without serious limitations Well-performed observational studies with very large effects (or other qualifying factors)
Moderate	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate	Randomized trials with serious limitations Well-performed observational studies yielding large effects
Low	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate	Randomized trials with very serious limitations Observational studies without special strengths or important limitations
Very Low	Any estimate of effect is very uncertain	Randomized trials with very serious limitations and inconsistent results Observational studies with serious limitations Unsystematic clinical observations (e.g. case series or case reports)

Brozek et al. Table 3

Factors decreasing evidence quality

- Study design (observational vs. experimental)
- Limitations in study design and/or execution
- Inconsistency of results
- Indirectness of evidence
- Imprecision of results
- Publication bias

Brozek et al. Table 4

Factors increasing evidence quality

- Study design (experimental vs. observational)
- Large magnitude of effect
- All plausible confounding may be working to reduce the demonstrated effect or increase the effect if no effect was observed
- Dose-response gradient

Brozek et al. Table 4

Thank You!

Reference

Brozek JL, Akl EA, Alonso-Coello P, Lang D, Jaeschke R, Williams JW, Phillips B, Lelgemann M, Lethaby A, Bousquet J, Guyatt GH, Schnemann HJ for the GRADE Working Group. Grading quality of evidence and strength of recommendations in clinical practice guidelines. Part 1 of 3: An overview of the GRADE approach and grading quality of evidence about interventions. Allergy 2009: 64: 669–677.