

Guideline panelers tilgang til og brug af metaanalyser: Introduktion til GRADE

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The Famous "Oxford System"...

Table 1 Categories of evidence⁹

Category	Evidence
1A	From analysis of...
1B	From...
2A	From...
2B	
3	Strong...
4	A...
	Category I evidence...
C	Category II evidence...
D	Category IV evidence...

EBM v. 1.0 is out – We now communicate evidence in the form of confidence in the estimates ("GRADE")



OPEN ACCESS

10.1136/ebmed-2016-110401

Rochester, Minnesota, USA

New evidence pyramid

M Hassan Murad, Noor Asi, Mouaz Alsawas, Fares Alahdab

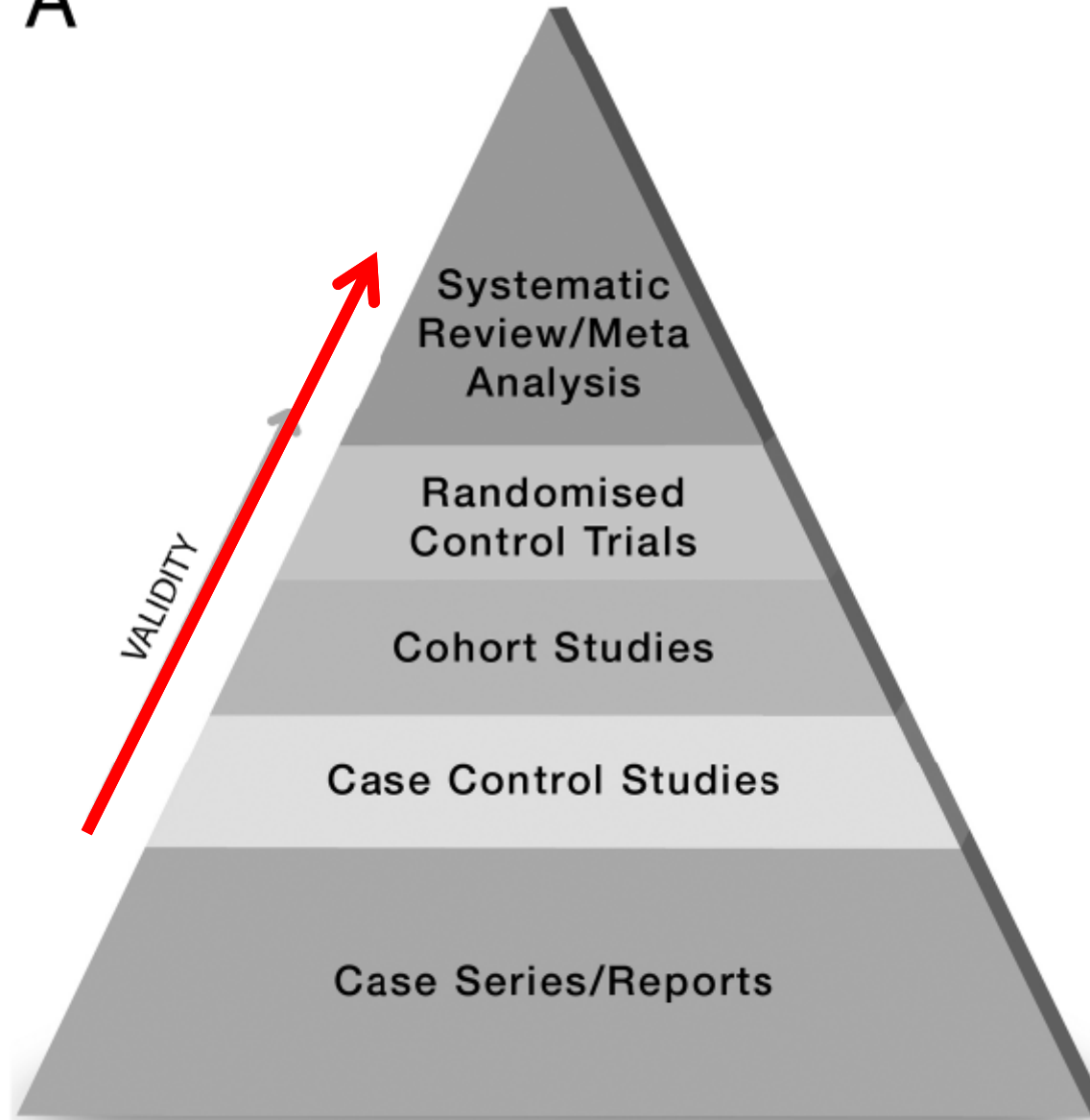
Abstract

A pyramid has expressed the idea of hierarchy of medical evidence for so long, that not all evidence is the same. Systematic reviews and meta-analyses have been placed at the top of this pyramid for several good

heterogeneity (clinical, methodological or statistical) is an inherent limitation of meta-analyses that can be minimised or explained but never eliminated.⁶ The methodological intricacies and dilemmas of systematic reviews could potentially result in uncertainty and

- Systematic reviews and meta-analyses (of RCTs) have been placed at the top of the evidence pyramid; i.e., causation
- There are several counterarguments to this placement.
- Another way of looking at the pyramid:
Systematic reviews and meta-analyses are tools for consuming/interpreting the existing evidence (i.e., *“Not evidence on its own”*)

A



B



C



What is “GRADE”?

#1: It is an ACRONYM (G-R-A-D-E)

#2: Supports and captures previous “evidence initiatives”

#3: Replaces the previous ‘Evidence-Based Medicine’ (EBM) paradigm

#4: GRADE is EBM v. 2.0

#5: GRADE is “*The new shit*”

Progress in evidence-based medicine: a quarter century on

Benjamin Djulbegovic, Gordon H Guyatt

2017

THE LANCET

...the limitations of existing evidence hierarchies, the importance of processed evidence for ensuring evidence-based practice, and the related potential for practice guidelines to improve practice and outcomes—led to the development of a new approach to rating evidence quality and the grading strength of recommendations, termed the Grades of Recommendation Assessment, Development, and Evaluation (GRADE) system, which was first published in 2004.

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<http://www.gradeworkinggroup.org/>

Grading of Recommendations Assessment, Development, and Evaluation (GRADE)

- Began in the year 2000 as an informal collaboration of people with an interest in addressing the shortcomings of present grading systems in health care
- A transparent and structured process for developing and presenting summaries of evidence
- GRADE provides guideline developers with a comprehensive and transparent framework for carrying out the steps

Gordon Guyatt



Dr. Gordon Guyatt

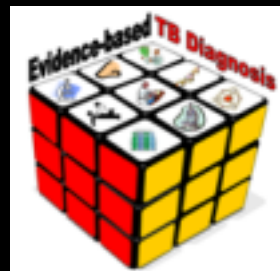
Holger Schünemann



and, many more....



(some) Organizations that endorse the use of





Fine with me.
But I still prefer the
"Oxford System"...

Yes, but be aware,
the Oxford folks use
GRADE !!!



$\mu_0 = 4\pi \times 10^{-7} \text{ (T} \cdot \text{m/A)}$
 $\Delta t = \gamma \Delta t_0$
 $\frac{dQ}{dt} = k$
 $i = \frac{dq}{dt}$
 $F = G \frac{m_1 m_2}{r^2}$
 $V = IR$
 $pVA = \text{constant}$
 $p = \rho$
 $U = \frac{1}{2} CV^2$
 $x = x_0 + V_0 t + \frac{1}{2} a t^2$

GRADE makes a clear separation between:

**Quality of the
Evidence**

**Strength of
Recommendation**





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Grading of Recommendations Assessment, Development, and Evaluation (GRADE)

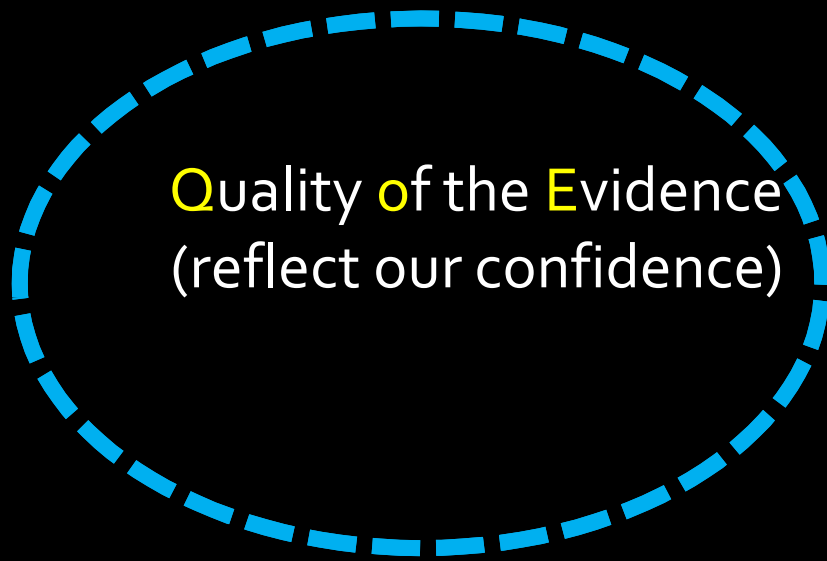
GRADE Motive and Outline:

Guidelines should inform clinicians what

*The quality of the underlying evidence is (#1)

and whether

*Recommendations are strong or conditional (#2)



Strength of Recommendation
(Conditional/Strong –
For/Against)

Conceptualize statistics and certainty.....

*"I figure
there's a 40%
chance of
showers,*



*and a 10%
chance we know
what we're
talking
about"!*

GRADE

GRADE

Evidence Synthesis (eg. Meta-Analysis) from:

Randomized Controlled Trial(s) - - - - - High Quality

Observational studies - - - - - Low Quality

GRADE

Evidence Synthesis (eg. Meta-Analysis)



Randomized Controlled Trial(s) - - - - -

High Quality

Moderate Quality

Observational studies - - - - -

Low Quality

Very Low Quality

0%



GRADE

Health Care Question (PICO)

- Deciding on important outcomes (≤ 7 major outcomes)
- Systematic review (PICO) (RCTs & Observational)
- Scrutiny of eligible literature
- Evidence synthesis and/or Meta-analysis
- Generate an estimate (95%CI) for each outcome

Rating the quality of evidence

- ↓ • Study limitations (RoB)
- ↓ • Imprecision (95% CI)
- ↓ • Inconsistency of results (I^2)
- ↓ • Indirectness of evidence (PICO)
- ↓ • Publication bias likely (Funnel plot)

- ↑ • Large magnitude of effect
- ↑ • Dose response
- ↑ • Confounders likely minimize the effect

RCTs: High Quality Evidence

- Moderate QE

Observational studies: Low QE

- Very-Low QE

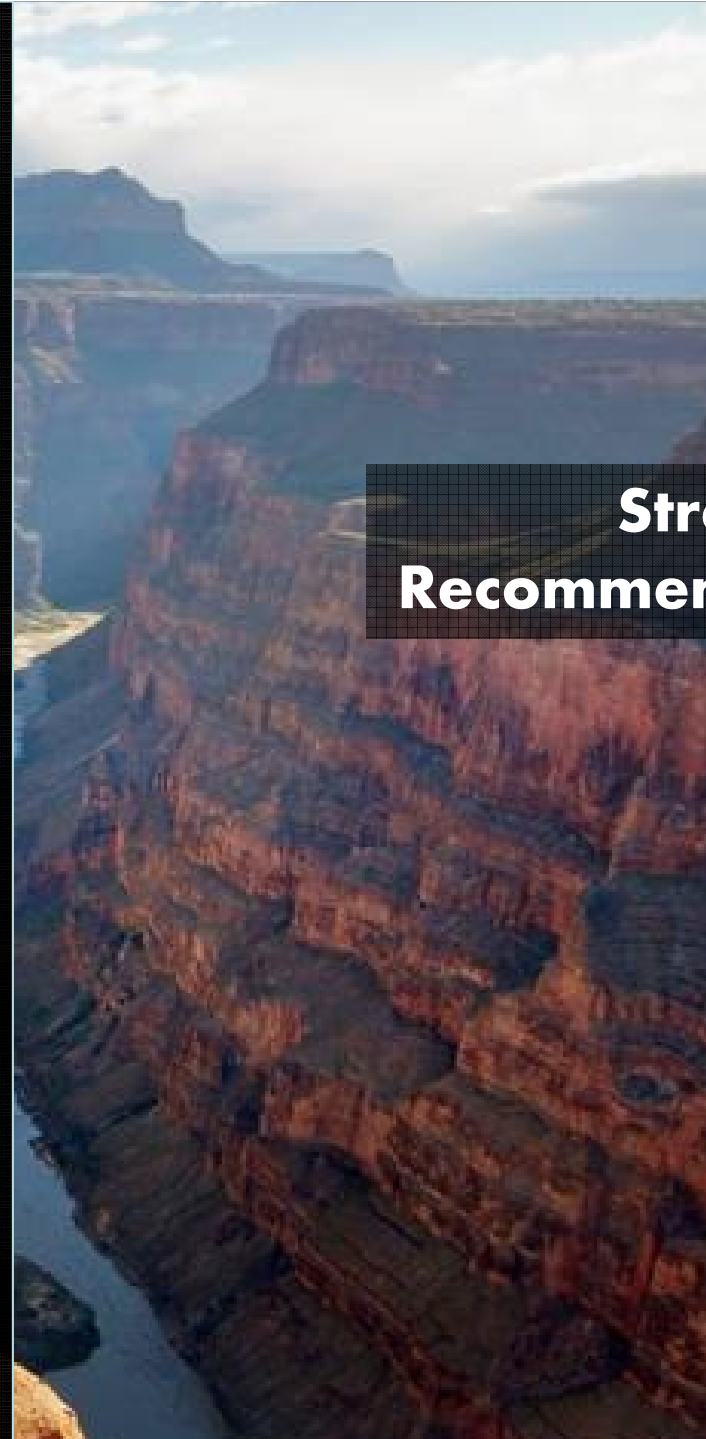
GRADE


Clear definition of different grades of quality of evidence – *reflecting our confidence*

- **High quality:** Further research is very unlikely to change our confidence in the estimate of effect
- **Moderate quality:** Further research could have an impact on our confidence in the estimate of effect and may change the estimate
- **Low quality:** 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
- **Very Low quality:** Any estimate of effect is very uncertain

Quality of the
Evidence

**Strength of
Recommendation?**



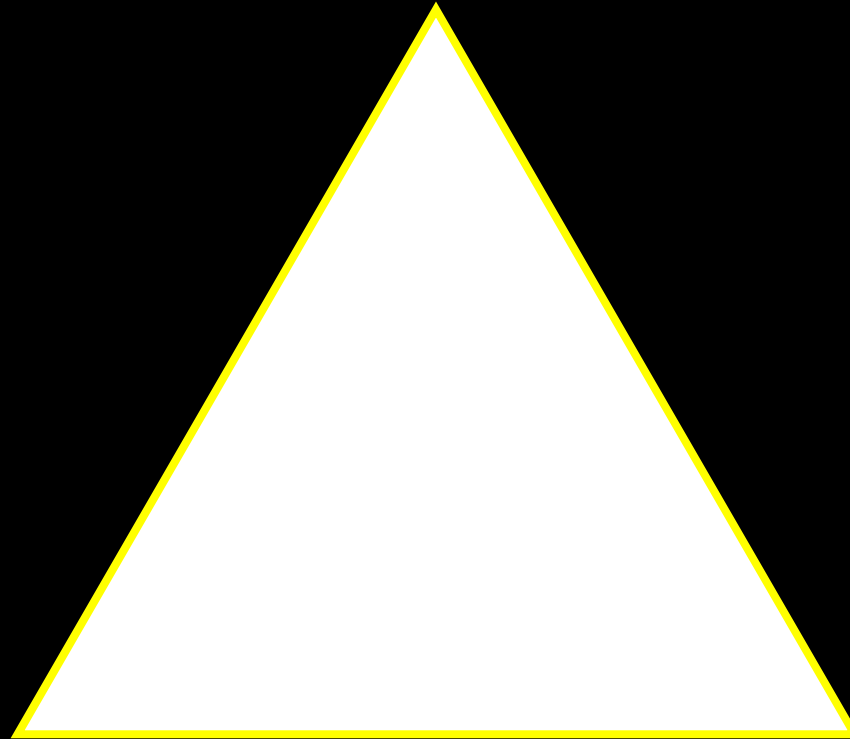


**Strong or
conditional
recommendation
for/against use?**

Chairman facilitating consensus

Absolute: Benefit & Harm!

Burden (incl. cost)

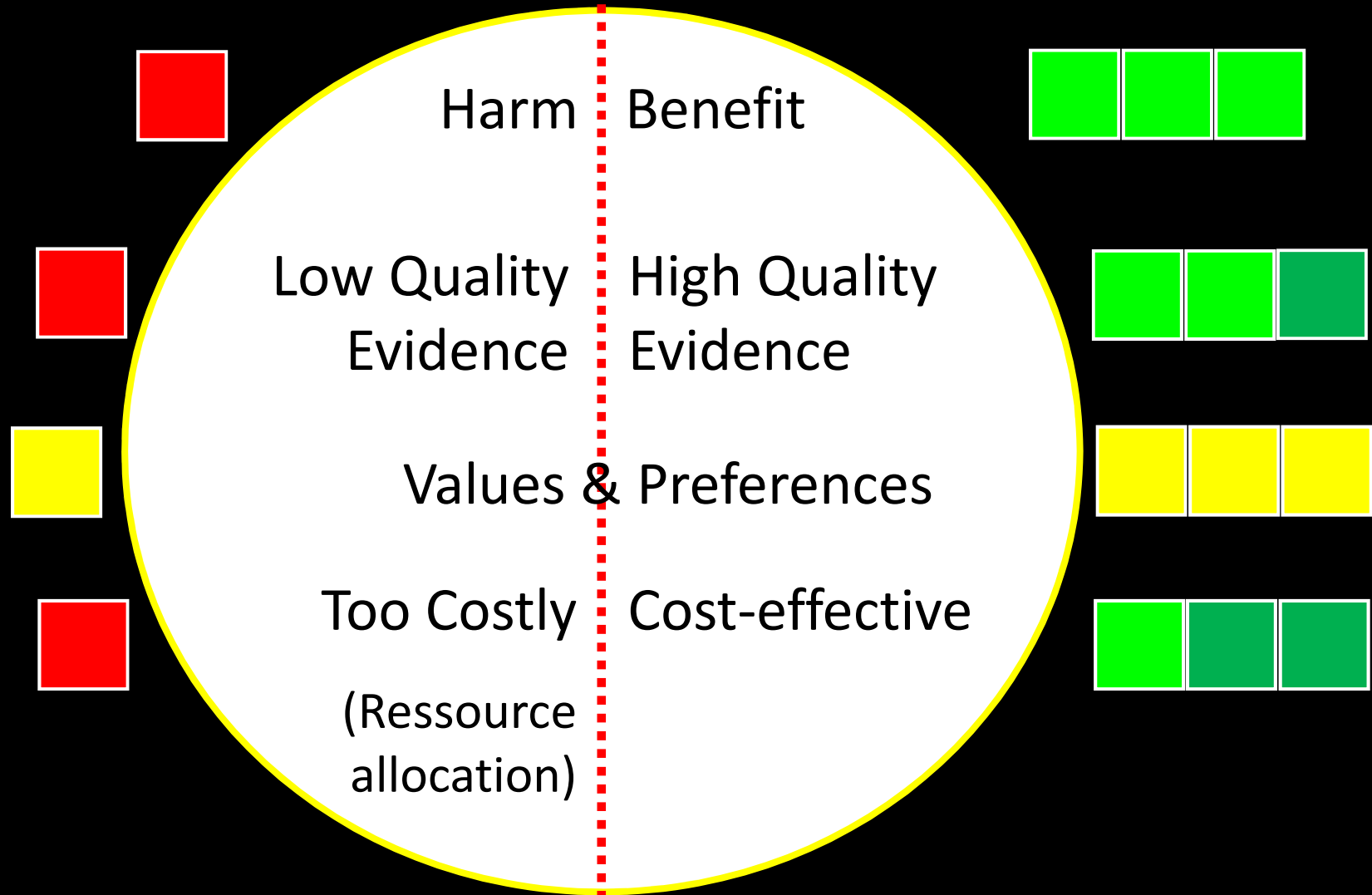


Benefit

Harm

Consensus on grading recommendations:

A judgement call !



GRADE: Strength of Recommendation

Strong recommendations most patients would choose the recommended management

- clinicians can structure their interactions with patients accordingly

Weak recommendations patients' choices will vary according to their values and preferences

- clinicians must ensure that patients' care is in keeping with their values and preferences

I wish you all a
GRADE day,
and a good



Thank you for your attention.