A day with... GRADEing Methods Group

GRADE

Latest GRADE guidance about communicating the findings of systematic reviews

Nancy Santesso, RD, PhD
Assistant Professor, Department of Health Research Methods, Evidence, and Impact
Deputy Director, Cochrane Canada
McMaster University, Canada

Results from review

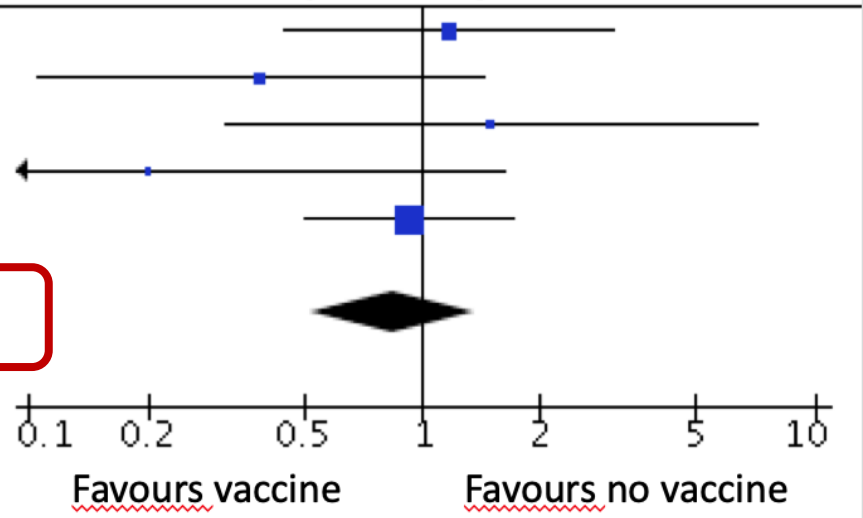
PART ONE

Number of people with pneumonia

Study or Subgroup	Vaccine Events	Vaccine Total	No vaccine Events	No vaccine Total	Weight	Risk Ratio M-H, Random, 95% CI
Cameron 2001	8	86	7	88	22.5%	1.17 [0.44, 3.08]
Chan 2000	3	40	6	31	12.9%	0.39 [0.11, 1.43]
Hubacher 2001	7	384	2	164	9.1%	1.49 [0.31, 7.12]
Jantti 1996	1	36	5	36	5.1%	0.20 [0.02, 1.63]
Van Schoor 2003	18	276	20	285	50.5%	0.93 [0.50, 1.72]
Total (95% CI)		**822**		**604**	**100.0%**	**0.84 [0.52, 1.36]**
Total events	37		40			

Heterogeneity: $Tau^2 = 0.02$; $Chi^2 = 4.24$, df = 4 (P = 0.38); $I^2 = 6\%$

Test for overall effect: Z = 0.69 (P = 0.49)



It means out of 100 people,
1 less person with pneumonia (from 3 fewer to 2 more) when receiving vaccine

GRADE the evidence

PART TWO

- Serious concern with risk of bias (due to randomisation and selective reporting)
- No concern with inconsistency
- No concern with indirectness
- Some concern with imprecision (due to few events)
- No concern with publication bias

LOW certainty evidence in effect

Low certainty evidence in RR 0.84 (95% CI, 0.52 – 1.36), or 1 less person out of 100 (from 3 fewer to 2 more) when receiving vaccine

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Can we write this in another way in our
conclusions?
plain language summary?
discussion?

Narrative descriptions…not so good examples

The evidence for outcome X shows, at best, a non-statistically significant trend in favour of the treatment.

(confusing)

We found that the treatment is not associated with outcome X.

(cause and effect – should not use associated)

There was no evidence of effect on outcome.

(no evidence of effect or evidence of no effect?)

Narrative descriptions…not so good examples

Treatment reduces mortality

(making this conclusion when the evidence is low certainty)

GRADE provides guidance about how to write these statements

System to write statements

	HIGH Certainty of the evidence
Large effect	X results in a large reduction/increase in outcome
Moderate effect	X reduces/increases outcome X results in a reduction/increase in outcome
Small important effect	X reduces/increases outcome slightly X results in a slight reduction/increase in outcome
Trivial, small unimportant effect or no effect	X results in little to no difference in outcome X does not reduce/increase outcome

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VERY LOW Certainty of the evidence	
Any effect	The evidence is very uncertain about the effect of X on outcome X may reduce/increase/have little to no effect on outcome but the evidence is very uncertain

How did we develop these statements?

2010 and 2014: Published work

- since 2003
- developing and testing narrative statements to communicate results in plain language summaries
- Focus groups and user testing in 34 consumers in Canada, Norway, Australia and Argentina
- RCT – use of statements when comparing different plain language summaries – Canada, Norway, Italy, Spain and Argentina

Glenton C, Santesso N, Rosenbaum S, Nilsen ES, Rader T, Ciapponi A, Dilkes H. Presenting the results of Cochrane Systematic Reviews to a consumer audience: a qualitative study. Med Decis Making. 2010 Sep-Oct;30(5):566-77.

Santesso N, Rader T, Nilsen ES, Glenton C, Rosenbaum S, Ciapponi A, Moja L, Pardo JP, Zhou Q, Schünemann HJ. A summary to communicate evidence from systematic reviews to the public improved understanding and accessibility of information: a randomized controlled trial. J Clin Epidemiol. 2015 Feb;68(2):182-90.

Proposed statements from 2014

- X will improve/reduce outcome
- X probaby improves/reduces outcome
- X may improve/reduce outcome
- We are uncertain that X improves/reduces outcome

- Small effects – add ‘slightly’

Years of use and informal feedback

- Statements could become monotonous
- Needed more options
- Some people were not comfortable with some words

Preliminary list needed more development

- Revised list of statements with more options for wording
- 3 workshops with 20-40 people at GRADE meetings: epidemiologists, guideline developers, systematic reviewers
- survey with ~110 respondents who are informed users of systematic reviews, and developers of guidelines and systematic reviews

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Indicators for size of effect

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What was your threshold for a trivial, small, moderate or large effect?

Difference of 5 people was cut off for trivial effect

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Vaccines may result in little to no difference in pneumonia

Used to communicate findings…

- Systematic reviews - conclusions, abstracts, results, discussion
- Guidelines – summary of the evidence
- Summaries of reviews and guidelines – patients, policy makers, clinicians
- Intervention reviews – more on network meta-analyses, prognosis, test accuracy, reviews of qualitative research…

Summary of Findings Table: GRADEpro semi-automated

Relative effect (95% CI)	Anticipated absolute effects (95% CI)			Certainty	What happens
	Without hip protectors	With hip protectors	Difference		
R 0.84 0.52 to 1.36)	**Low**				
	2.0% [a]				
	High				
	6.0%				
R 0.92 0.30 to 2.80)	**Low**				
	0.2%				
	High				
	1.4%		(0.4 to 3.9)	(1 fewer to 2.5 more)	

Automatic narrative

Size of effect

Small effect (important)

Narrative statements

None

Insert

None

Hip protectors may reduce hip fractures at 1 year slightly.

Hip pr

The ev

What happens

NOT meant to be automated without thought

Cancel

Apply

Key points

- You need to assess the certainty of the evidence

- You have to decide on the size of the effect using the best estimate (the point estimate)
- You need to consider your thresholds for large, moderate, small, or trivial effect when assessing imprecision and when deciding on the size of the effect

- You can't do one without the other

- Use the grid to determine your statement

- Write your informative conclusions!