

Appendix 3 (as supplied by the authors): Full Survey – Small treatment effects

Standardized introduction to survey participants

We would like to take 10 minutes of your time to administer a questionnaire about different presentations of continuous data from meta-analyses (i.e. pain intensity on an 11-point Numeric Rating Scale).

We are interested in your understanding of 6 approaches to presenting pooled data of continuous outcomes, and how useful you find them.

In each question, you will find example summary estimates from hypothetical meta-analyses comparing active interventions (e.g. A, B, C) to placebo for chronic non-cancer pain.

With the information provided, please choose the answer you think is most accurate or best reflects your impression. We would like you to focus exclusively on the magnitude of the summary of effect estimate and not issues around potential adverse events, cost, systematic error (bias), random error (imprecision), or any other issues.

Data from this short survey will be used for research purposes. Filling out this survey will be considered informed consent. You are however free to decline participation. The collection and storage of data will abide by the provisions set forth by the McMaster Research Ethics Board.

Background questions

1. Gender:

male female

2. Specialty:

Internal medicine Family medicine

3. Please indicate your professional status:

- Resident (internal or family medicine)
- Attending/staff physician (internal or family medicine)
- Clinical fellow (internal or family medicine)
- Medical student
- Resident, staff, fellow from another specialty, specify: _____
- Other, specify: _____

4. Please indicate the year you graduated from medical school. Please print clearly.

Year: _____

Not applicable (medical student)

5. In terms of training in health research methodology, you have:

- Never completed a formal course in health research methodology or epidemiology
- Completed one or more formal courses in health research methodology or epidemiology, but do not have a masters or a PhD degree
- A masters or PhD degree in health research methodology or epidemiology

Understanding: The following represent the results of hypothetical meta-analyses of randomized trials of a variety of interventions in patients with chronic non-cancer pain. In each case trials had low risk of bias and estimates were precise (narrow confidence intervals, very low p-values). Therefore, we are confident that the intervention reduces pain. The question remains, however, about the size of the effect (trivial to large). For each summary estimate, we would like you to tell us your impression of the magnitude and importance of the treatment effect.

6. In units of the pooled standard deviation of all the pain scores in the experimental and control groups, expressed as a standardized mean difference, a meta-analysis finds the effect of intervention A vs placebo control for patient-reported pain is 0.20 standard deviation units in favor of intervention A. The magnitude of this difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

7. For your response above, please circle the number that best reflects how confident are you in your answer.

1	2	3	4	5	6	7
Not at all confident						Extremely confident

8. In minimal important difference (MID) units where 1.0 unit represents the smallest difference in pain that patients, on average, perceive as important, a meta-analysis finds the effect of intervention B vs placebo control for patient-reported pain to be 0.60 MID units in favor of intervention B. The magnitude of this difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

9. For your response above, please circle the number that best reflects how confident are you in your answer.

1	2	3	4	5	6	7
Not at all confident						Extremely confident

10. In units of the pain scale, where 0 represents no pain and 10 represents the worst pain ever on numeric rating scale, a meta-analysis finds the effect of intervention C vs placebo control for patient-reported pain to be 0.60 in favor of intervention C. The magnitude of difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

11. For your response above, please circle the number that best reflects how confident are you in your answer?

1	2	3	4	5	6	7
Not at all confident						Extremely confident

12. As a relative risk (or risk ratio), where the risk of the event occurring in the treatment group is divided by the risk in the placebo control group, a meta-analysis finds the effect of intervention D vs placebo control for patient-reported pain to be 0.80 (80%) in favor of intervention D, representing a relative risk reduction of 20% (relative to the control group, 20% fewer patients experience moderate to severe pain). The magnitude of difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

13. For your response above, please circle the number that best reflects how confident are you in your answer?

1	2	3	4	5	6	7
Not at all confident						Extremely confident

14. As a risk difference, where the risk of in the treatment group is subtracted from the risk in the placebo control group, a meta-analysis finds the effect of intervention E vs placebo control for patient-reported pain to be 0.04 (4%) in favor of intervention E, representing 4 fewer patients per 100 experiencing moderate to severe pain (which means that one would have to treat 25 patients so that one patient who would otherwise experience moderate to severe pain would not – the NNT). The magnitude of difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

15. For your response above, please circle the number that best reflects how confident are you in your answer?

1	2	3	4	5	6	7
Not at all confident						Extremely confident

16. As a ratio of means, where the mean in the treatment group is divided by the mean in the placebo control group, a meta-analysis finds the effect of intervention F vs placebo control for patient-reported pain to be 0.92, representing an 8% reduction in the mean pain score in favor of intervention F. The magnitude of difference is:

- trivial difference, probably not important
- small difference, but probably important
- moderate difference, surely important
- large difference, very important

17. For your response above, please circle the number that best reflects how confident are you in your answer?

1	2	3	4	5	6	7
Not at all confident						Extremely confident

Usefulness: We will now ask you about how useful you find the six approaches in helping you understand the magnitude (size) of the effect of treatment on patients' experience of pain (1=not useful to 7=extremely useful). Please circle the number that best reflects the degree of usefulness. Again, these represent hypothetical meta-analysis and in each case trials were of low risk of bias and estimates were precise (narrow confidence intervals, very low p-values).

18. In pooled standard deviation units of all pain scores in the treatment and control groups, a meta-analysis finds the effect of intervention A vs placebo control for patient-reported pain to be 0.20 standard deviation units in favor of intervention A. Please clearly indicate whether this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect

19. In minimal important difference (MID) units where 1.0 unit represents the smallest difference in pain that patients, on average, perceive an important, a meta-analysis finds the effect of intervention B vs placebo control for patient-reported pain to be 0.60 MID units in favor of intervention B. Please clearly indicate to what extent this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect

20. In units of the pain scale, where 0 represents no pain and 10 represents the worst pain ever on numeric rating scale, a meta-analysis finds the effect of intervention C vs placebo control for patient-reported pain to be 0.6 in favor of intervention C. Please clearly indicate to what extent this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect

21. As a relative risk (or risk ratio), where the risk of the event occurring in the treatment group is divided by the risk in the placebo control group, a meta-analysis finds the effect of intervention D vs placebo control for patient-reported pain to be 0.80 (80%) in favor of intervention D, representing a relative risk reduction of 20% (relative to the control group, 20% fewer patients experience moderate to severe pain). Please clearly indicate to what extent this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect

22. As a risk difference, where the risk in the treatment group is subtracted from the risk in the placebo control group, a meta-analysis of the effect of intervention E vs placebo control for patient-reported pain to be 0.04 (4%) in favor of intervention E, representing 4 fewer patients per 100 experiencing moderate to severe pain (which means that one would have to treat 25 patients so that one patient who would otherwise experience moderate to severe pain would not - the NNT). Please clearly indicate to what extent this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect

23. As a ratio of means, where the mean in the treatment group is divided by the mean in the placebo control group, a meta-analysis finds the effect of intervention F vs placebo control for patient-reported pain to be 0.92, representing, on average, an 8% reduction in the mean pain score in favor of intervention F. Please clearly indicate to what extent this presentation approach is useful:

1	2	3	4	5	6	7
Not useful in understanding size and importance of the effect						Extremely useful in understanding the size and importance of the effect