Author’s response to reviews

Title: The best treatment option(s) for adult and elderly patients with chronic primary musculoskeletal pain: A protocol for a systematic review and network meta-analysis

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Version: 1 Date: 19 Jul 2019

Author’s response to reviews:

Reviewer #1:

The research question is interesting. The manuscript is well written and clearly outline the method.

We thank the reviewer for this positive feedback.

Reviewer #2:

Please also include timeline of the literature search in the method section.

Thank you for pointing this out. We have included the timeline on page 13, lines 300-301.

Who will be two independent investigators?

We added the two independent investigators, Dr. Cosima Locher and Dr. Helen Koechlin, on page 14, line 330.

Search terms in Medline and Embase are different. Please attach syntax used in each database as supplementary.

We have attached the syntax used in each database as supplementary materials.
It will be better to show kappa for the selection and data extraction. Please also plan to show the data of kappa of agreement during the systematic searches.

Thank you for pointing this important aspect out to us. However, we decided to do the study selection and extraction in double, including consensus meetings. To start with we might expect some differences, but these are then discussed and resolved, so that there is agreement in the final set of selected articles. This discussion will be ongoing during the review so that we expect to see better agreement as the review goes on when most important issues have been identified, discussed and resolved. These important issues will be protocolized. However, we on the basis of these arguments we decided against a kappa of agreement.

How disagreements were solved during the systematic search among two independent reviewers?

Any disagreement will be solved in the weekly consensus meetings, see now also page 14, lines 325-326.

Random or Fixed effect will be used, needs to be specified.

This is an important remark, thank you. We suspect that random-effects models will be most appropriate for this review. Accordingly, we added two sentences on page 18, lines 442-445.

In the last years, the tools most used are Cochrane ROB and ROBINS. Why are not authors using the Cochrane ROB ROBINS tools? I recommend change the scales for the evaluation of quality of articles.

We agree with the reviewer and have therefore added the revised Cochrane Risk of Bias Assessment tool on page 16, lines 388-389. As we will only include randomized-controlled trials, we will not use ROBIN-I, which is for non-randomized trials only.

The authors should also address publication with both a funnel plot and Egger test result. Please also plan to perform Egger test.

We thank the reviewer for this comment. This is challenging to do for network meta-analyses unless all studies share a common “control” arm. If that is the case, then we can produce a comparison-adjusted funnel plot. We can however perform a meta-regression with a measure of
study precision as a covariate, which allows us to explore if there are issues with small study effects. An according sentence has been added: page 20, lines 498-500.

It is not professional to use "don't" in academic writing; "NSAIDS" should be "NSAIDs"; "database" should be "database"; "best treatment option(s)" should be "the best treatment option(s)"

We thank the reviewer for the careful reading and pointing out of these mistakes. We have changed it throughout the manuscript according to the reviewer’s corrections.