Reviewer’s report

Title: Effectiveness of stop smoking interventions among adults: protocol for an overview of systematic reviews and an updated systematic review

Version: 0 Date: 17 Sep 2018

Reviewer: Jamie Hartmann-Boyce

Reviewer’s report:

This is a well-written and thorough protocol covering planned reviews for the update of Canadian guidelines. All of my comments are minor and are suggestions rather than 'must-haves'. They are listed below (in the order in which they come up in the manuscript).

Line 145 - may also be useful to say how many of these quit attempts were successful, if those data are available

Line 224 - I think it is a bit unusual to badge exercise as an 'alternative therapy' - and it seems in some places you do and in some you don't. I don't necessarily have a problem with this approach but the authors should confirm they are happy to categorise it in this way as that may not be the way most people in the field would categorise exercise therapy.

Lines 292-297 - I know further on you define which 'benefits and harms' you are interested in but I wonder if it's worth specifically referring to them in your key questions? Without this it sounds vague.

Line 347 - of note, a new Cochrane handbook chapter on overviews of reviews should be out any day now

Paragraph starting line 356 - I'm confused about how grey literature, particularly reports of ongoing and completed studies, would fit into an overview of reviews. Do you mean ongoing and unpublished systematic reviews as opposed to studies?

Line 396 (and throughout) - I would be a bit careful with the terminology you use to describe behaviour change techniques. I think most people reading this would assume you were referring to Michie's 93 item taxonomy which has superseded the smoking specific taxonomy, but it sounds to me like you are planning on using the smoking specific taxonomy. I think this is sensible but would re-word to make this very clear - otherwise people who see "behaviour change techniques" are going to assume you mean the 93-item taxonomy

Line 404 - Are you going to go back to the individual studies to code behaviour change techniques? If not, I think it is highly unlikely you are going to get this granular info at the study level from many, if any, systematic reviews, especially because different author teams will use different classification systems for characterising behavioural content
Line 417 - can you really call this independent, as the second reviewer will know that the first has excluded all of the title/abstracts they are looking at?

Line 421 - Instead of excluding where it's unclear if something should be included after duplicate review, why not refer to a third reviewer?

Paragraph starting line 441 - Different systematic reviews including the exact same studies can come up with totally different conclusions. So I'm unconvinced by this approach - I think if at all possible you need to be more comprehensive or select based on methodological quality, or at a minimum compare conclusions across reviews that look at the same thing.

Paragraph starting line 459 - I'm not clear what the value of completing this exercise is - an extra sentence to explain might be useful

Line 483 - "Eligible reviews will be included in the overview irrespective of methodological quality" - that's not strictly true if you are excluding overlapping reviews on the basis of methodological quality

Line 499 - for any meta-analysis I would also collect the number of included studies and number of participants, as well as way in which authors dealt with missing data

Line 522 - may also be important to look at baseline level of nicotine dependence (either using a scale like the FTND or cigarettes per day as a proxy)

Line 558 - "…Subgroup analyses within reviews will provide direct evidence for effect modification." Consider rewording as any evidence from subgroup analyses will by its very nature be indirect evidence.

Paragraph starting line 569 - I'm not sure how this discussion of discordance aligns with your plans to exclude overlapping reviews

Paragraph starting line 598 - Just a note that I would exercise caution comparing GRADE across reviews as GRADE is inherently subjective, so I wouldn't treat it like a consistent measure across reviews

Line 629 - Why not just prefer biochemically validated data and only extract self-report where validated is not available?

Line 635 - Will you be assessing risk of bias for all studies (incl. previously included ones) or for new studies only? If the latter, use the methods of the candidate review for easier comparison?

Line 670 - you may also want to look at cigarettes per day at baseline, motivation to quit, and in prospective cohort studies in particular previous use of EC

Tables - comparator - may need to be careful as what some studies call "usual care" others would call an intervention
Tables - outcomes - I am not clear on the rationale for including reduction in tobacco smoking as an outcome. There is no evidence to suggest reduction without quitting improves health outcomes.

Tables - outcomes - you specify that you are only going to look at adverse events due to treatment as defined in a given review. This might be a bit risky and if possible I would recommend looking at adverse events overall, as well, as with things like EC there is no consensus on what AEs are caused by treatment and what ones aren't, and the definitions may vary substantially based on the allegiances of the original study/review authors.

Table 2 - intervention - why are you not including interventions to promote gradual cessation? I don't necessarily disagree with this approach but think you need to justify it.

Figure 1 - again question including smoking reduction as an outcome

Figure 1 - again question only looking at AEs due to treatment

On a last note, if the review you choose to update for electronic cigarettes ends up being a Cochrane update, please do feel free to be in touch with us at the Cochrane Tobacco Addiction Group (you can email me directly on Jamie.hartmann-boyce@phc.ox.ac.uk) as we were considering an update of this review to start in the new year, and there may be efficiency savings that could be made.

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