Author's response to reviews

Title: Educational Outreach to General Practitioners Reduces Childrens Asthma Symptoms A Cluster Randomised Controlled Trial

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Version: 2 Date: 15 May 2007

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Dear Dr Mittman,

Thank you for your sympathetic hearing and the reviewer comments which you have made available to me. I will go through your letter to me in the same order in which you raised the suggestions.

Dr Homer suggests that we enlarge upon the validation of this measure. I have done so to the extent possible, pointing out only that the symptoms have high face validity and considerable salience. As he himself explicitly acknowledges, any problems with the symptom scoring instrument, or any problems with recall would have resulted in a bias towards the null, and our trial result is therefore an UNDER estimate of the effectiveness of the intervention. I have tried to say this more clearly using Dr Homers own wording, in the first paragraph of the discussion section, where we now say:

"The measure of outcome has not been formally validated. However, it is a simple set of symptoms, which are a commonly occurring feature of the disease, well known to parents, and thus has high face validity. In addition, when used in a randomised trial as here, error and poor recall would bias towards a null effect. The substantial effect on symptoms which we found is therefore likely to be an underestimate of the true effect of this intervention."

You or a reviewer point out that we make an unjustified claim regarding the community based survey, and the resulting increase in generalisability. We accept this as an overstatement and have removed the offending sentence. We have also generally replaced the term 'community based' survey with school based survey, which is more precise and reminds readers how we actually did the survey. We now say:

"Few other studies of educational outreach have measured health outcomes, few have been undertaken in private practice in a poor urban community, and none have measured outcomes using a school-based survey rather than medical records or administrative databases. These pragmatic characteristics of this trial increase its relevance in this setting, widen applicability and demonstrate that it is possible to conduct rigorous evaluations of behaviour change interventions in low and middle income settings."

Next, you raise as a primary concern that we report only clinical outcomes and thus do not answer the important questions on why or how the intervention succeeded. Unfortunately, we did not undertake an embedded process evaluation, and so have no way to give a deep quantitative answer on processes of change. We are stuck, quantitatively at any rate, with our black box. But perhaps all is not lost! We did undertake an in depth qualitative analysis of the perceptions of target physicians of the intervention, and have analysed this. In fact, it forms the main content of a doctoral thesis by Dr A Bheekie, a co-author. In the text of our current article I have now alluded to the qualitative evaluation of perceptions, and clarified the link to her thesis. But it raises the possibility that she might submit to your journal an article describing these findings. Could I encourage her to do so? Given that her base is in a developing country, she would certainly require a waiver of the fee for publishing. Here is how we have redrafted the discussion to build in
Alongside this study we explored physicians' perceptions of the outreach visits through qualitative means, described in reports available elsewhere [13]. Although it would have been too complicating in this trial to have used survey instruments to study the processes leading to behaviour change, other researchers may consider incorporating such embedded evaluations of these processes in future studies.

I have revised the abstract headings to BMC standards, removed and changed as needed the text you mention on pages 2-2, moved the figures into the text, and the survey instrument and consort statement out of the text and into separate files, put square brackets around references, and generally tried to adapt to BMC requirements. I hope I have not missed anything.

Yours,

With thanks for your work on our article,

Merrick Zwarenstein