Reviewer's report

Title: A randomised controlled trial of three or one breathing technique training sessions for breathlessness in people with malignant lung disease.

Version: 3
Date: 30 June 2015

Reviewer: Steffen T Simon

Reviewer's report:

COI: I know two of the authors from different research projects.

Many thanks for the opportunity to review the paper “A randomised controlled trial of three or one breathing technique training sessions for breathlessness in people with malignant lung disease.” by Johnson et al. This is a very well-written paper with a highly relevant and important topic about the comparison of three sessions versus one session of breathing techniques for the relief of breathlessness in patients with thoracic malignancies. There is a clear research question which is evaluated by an appropriate and feasible study design as a pragmatic randomized controlled trial. The results seem valid and are well presented. The discussion is balanced and covers relevant aspects including limitations and strengths.

I think the main strengths are the robust design and the fact that the results are really relevant for day-to-day care for patients with thoracic malignancy and breathlessness because a one hour-session of described breathing techniques can be delivered by nearly every therapist. There is a growing evidence (cited by the authors) of the effectiveness of breathlessness intervention services as a complex intervention including pharmacological and non-pharmacological treatment strategies – however, these services are rarely available in the UK and in other countries yet. It is very helpful for all clinicians to have evidence by this study about the effectiveness and cost-effectiveness of a one hour-session of breathing techniques.

Therefore, I can recommend accepting this paper as it is relevant and important for the readers of BMC Medicine.

I have only minor/discretionary revisions:

Page 5, end of first paragraph: At what time did the re-calculation happen: June and/or July 2013?

Page 8, sensitivity analysis: did the sensitivity analysis include the impact of different places of delivery (at home, in hospital) or which profession delivered the session?

Fig 1 (page 21 – the heading is placed on page 18): I am struggling with this figure because of a few points:

- 528 patients were not enrolled because the patients declined (they were asked
but said no?)? Or was it a question of eligibility (did not full-filled inclusion criteria)?

- Analysed group 3session: n=43: although only 39 patients got the intervention (box above). Does this mean that 4 patients were included in analysis without getting the intervention?

- Allocation group 3session: 39+11=50 – but n=52. What about the last two patients?

Table 1: What does “preference” mean – preference for what? Preference for study allocation is mentioned later at the end of the table.

Reference 24: please check again: is “kind p” the author (because it is written in lower cases)?

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

COI: I know two of the authors from different research projects.

No other COI.