Author’s response to reviews

Title: Randomised controlled trial to improve health and reduce substance use in established psychosis (IMPaCT): Cost-effectiveness of integrated psychosocial health promotion

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Comment: I have only one small suggestion. There already exists a widely known and recognized mental health intervention called IMPACT (JAMA. 2002;288(22):2836-45). Maybe you want to reconsider the name of your intervention. The name of a intervention should be unique.

Response: Unfortunately, it is not possible to change the name of the intervention at this stage due to the trial protocol already being published.

Comment: Abstract - In the results section a short description of the sample should be added containing at least the sample size analysed.

Response: Added.

Comment: Abstract - The terms cost-effectiveness and cost-utility are used unhyphenated in the abstract and abbreviations, which should be corrected.

Response: Corrected.

Comment: Methods - Regarding the study design the intensive health promotion intervention is conducted for 9 months and it is hypothesised that a positive effect on quality of life and health will be present at month 12 (3 months after the end of the intervention) and sustain for further 3
months. A statement on the rationale behind this hypothesis should be included as well as a discussion of possible effects of the lack of information on outcomes immediately at the end of the intervention. Possibly effects on health and quality of life are largest at 9 months and wear off over time.

Response: We have added the following to the methods:

“Although the intervention was conducted for 9 months, cost-effective analyses were conducted on the 12-15 month data. This was done for two reasons. Firstly, to allow a broad enough time window to conduct outcome assessments, which was necessary due to the data collection approach needed here. Secondly, a 9-month assessment could misrepresent cost-effectiveness of the intervention if any outcome improvements or cost savings were subsequently not sustained even for 3 months.”

We have added the following to the discussion:

“Although the intervention was conducted for 9 months, cost-effective analyses were conducted on the 12-15 month data. There could have been larger cost and outcome differences at nine months (the end of intervention) which reduced over time thus no significant differences were seen at 12 and 15 months. However, this ensures the cost-effectiveness of the intervention could not be misrepresented if any outcome improvements or cost savings were subsequently not sustained even for 3 months.”

Comment: Methods - Additional information should be given on the regression used to adjust for baseline differences between intervention and control group including the type of regression (OLS or other), a statement on normalisation if applied and a statement on handling of outliers.

Response: Added.

Comment: Methods - The choice of the human capital approach over the friction cost method in valuing productivity loss is not assessed in sensitivity analysis. This should either be done or at least the possible impact of this choice should be explained within the discussion section.
Response: Added to the discussion: "We used the human capital approach to valuing productivity loss rather than the friction cost method. While the human capital approach may over-estimate absolute values for lost productivity, such over-estimation will only impact the findings of the economic evaluation if productivity outcomes are different between the control and intervention groups, which does not appear to be the case here. Further, results from a societal perspective, which includes productivity losses, is consistent with results from a health and social care perspective."

Comment: Results - The extensive and valuable information on the resource consumption is displayed in very large tables 1 and 2. Splitting each table into community based professionals and the other sectors of resource consumption will improve clarity of arrangement. Also the lines of services not used by any patient could be omitted.

Response: We have omitted the unused services from the table as advised. We would be further happy to split these tables but this would bring us over the table limit so we are happy to take editorial advice on this.

Comment: Results - The quality of figure 1 is rather poor and does not provide satisfactory legibility.

Response: This has been corrected.

Comment: Discussion - Explanations for the lack of effectiveness of the intervention have been discussed in a different paper which points out that the unsuccessful implementation of the intervention is a major factor. These possible explanations should be briefly described and the reasons for the lack of successful implementation of the IMPaCT Therapy should be described more extensively.
Response: We have added: “Briefly, they include policy and practice steps towards greater parity between mental and physical health care which took place during the study may have improved the health of both groups, staff turn-over meant a sizable proportion of participants did not receive the intervention, and care co-ordinators implementing the intervention struggled to deliver the minimum dose.”