Author's response to reviews

Title: Geography, private costs and uptake of screening for abdominal aortic aneurysm in a remote rural area

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Author's response to reviews: see over
Dear Editor,

MS: 1570183130773572 - Private costs and uptake of screening for abdominal aortic aneurysm in a remote rural area

We have now extensively revised this manuscript in the light of the reviewers’ comments, including further analysis to address their key question about missing information on non-attendees to the screening programme.

A point-by-point response to the reviewers’ comments follows.

We hope that the manuscript may now be acceptable for publication.

Yours sincerely

David J Godden
Reviewer's report
Private costs and uptake of screening for abdominal aortic aneurysm in a remote rural area

Title:
1 21 November 2005 Version: Date:
Hilary Ashton Reviewer:
Reviewer's report:
General
1. Question posed was interesting and relevant.
2. Results did not specifically link uptake and private costs.

General response: We are grateful to the reviewer for helpful comments, on the basis of which we have substantially revised the paper to include data on non-attendees, for whom we have been able to determine age, deprivation scores, and geographical access deprivation scores, allowing a direct comparison of attendees and non-attendees. We have also now included data on NHS costs of screening in the various locations.

Compulsory changes

Abstract
1. The methods paragraph made no mention of collecting information about travel costs although this was collected
   This has been addressed
2. The results section was not specific enough and did not link uptake with private costs. The results section would benefit from including more detail.
   More results have been added
Methods
1. Para 1 The use “etc” should not be included. Exclusion criteria should be stated in full or reference to where these are found
   We have now made the exclusion criteria specific
2. Some reference should be made about non-attendees. Information is available on age. How far they would need to travel could be calculated based on address postcodes.
   Methods for characterizing non attendees are now described – paragraph 6.
Results / Tables
1. Table 2 should include numbers and %. No cell should be blank. Add “0” or “not applicable”.
   Numbers have been added
2. Mode of transport. Why is distance limited to car users? This needs to be justified as potential distance using postcode can be calculated for those walking or using public transport and may provide some additional useful data.
   References to distance traveled have been removed, to avoid confusion. Time traveled is reported for all subjects irrespective of mode of travel.
3. Has any attempt been made to address confounding factors on uptake e.g. age, coming from a deprived district, time/season of appointment? If not, I think this should be stated.
   Effects of age, deprivation and geography have now been explored and are reported
4. In the discussion Para 1, differences between settlement types and costs are referred to but statistical comparisons are not included in the results section. They also conclude that that the impact of geographical location was reduced by the outreach approach. I congratulate them on their high uptake, but it would have been interesting to see the actual statistical relationship between cost and distance traveled.
   This issue has now been explored as discussed above, using the geographic access to services domain of the Scottish Indices of Deprivation

Discussion
1. Para 4 Sentence says “… as indicated by the wider confidence limit for this group” I agree with the principle but IQRs are quoted, not confidence intervals.
This sentence has been removed
2. The authors need to discuss the whether their findings can be applied to other rural areas and what the limitations are likely to be.

Limitations are discussed in the final paragraph

Conclusion
Needs to be reworded to link remoteness, high uptake and costs. Despite the remoteness… high levels of uptake were achieved and costs were minimised”.

Conclusion has been re-worded in the light of additional analysis

Minor essential changes
1. Background Para 2 Hyphenation of “out-of-pocket” Corrected
2. Discussion Para 1 Need % for Denmark (?typo) Corrected
3. Table 3 “Total” is not meaningful. Replace it with “All areas” or similar. Changed to “all settlements”

Discretionary revisions

Background
1. Para 1 Overall mortality rate for ruptured AAA is usually estimated at 80-90%. Are death rates from breast and cancer really comparable to this? Sentence removed
2. Para 2 Is “opportunity cost of time” a well-known expression amongst those who would read this article? Expression now clarified
3. Para 5 The authors quote a Swedish paper that shows “uptake is typically lower in rural areas”. I think this is questionable for the UK as uptake for health interventions in inner cities is often lower because of a mobile population, minority ethnic groups, deprivation etc. I suggest that the statement needs clarification. We agree with this view, but in order to discuss, we would have to further broaden the reference list.

Methods
Para 5 Is “opportunity foregone cost” a well-known expression amongst those who would read this article? This has been clarified

Results
1. 1. Para 2 “Men in remote areas were most likely to travel by car” Strictly, Chi square does not confirm direction of statistical difference, only group differences. Perhaps using Chi Square for trends would be more appropriate. Having indicated that there is a group difference, the text is simply to illustrate the group that had the greatest proportion travelling by car. We have modified accordingly.

Discussion
1. Para 5 The authors mention another paper’s results about non-attendees. However, as no analysis was done on this group I think this is irrelevant to this paper. This has now been addressed with additional analysis
2. Para 6 Sounds like a literature review without relating to current study! Altered in light of further analysis

Suggest some revisions.

References
35 seem excessive for this type/length of paper. Can they be reduced and more focussed? References have been reduced to 31.

Unable to decide on acceptance or rejection until the authors have responded to the What next?:

major compulsory revisions

An article whose findings are important to those with closely related research Level of interest:

Acceptable Quality of written English:

No Statistical review:

Declaration of competing interests:
I declare that I have no competing interest in this paper.
Reviewer's report
Private costs and uptake of screening for abdominal aortic aneurysm in a remote rural area

Title:
1 31 October 2005 Version: Date:
Jes Lindholt Reviewer:
Reviewer's report:
General
The paper considers a relevant topic, especially in the UK where comments are concerning whether the acceptable outcomes in the MASS trial can be generalised to the whole of UK. The paper reports a high uptake throughout the area with limited costs and time consumption of the attenders. However efforts were taken to achieve this by having 50 screening locations with consequently less than 200 attenders per location in average. Consequently, the direct costs must be higher than usual, and this ought to be addressed in the paper. Data, analyses, and findings could be more interesting by limited extra efforts. The choice for non parametric statistical tests could be reasonable, but removes the opportunity to perform more informative multivariate analyses.

General response: We are grateful to the reviewer for helpful comments, on the basis of which we have substantially revised the paper to include data on non-attendees, for whom we have been able to determine age, deprivation scores, and geographical access deprivation scores, allowing a direct comparison of attendees and non-attendees. We have also now included data on NHS costs of screening in the various locations.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. A serious lack is the missing data concerning non-attenders, which seriously reduces the potential of interesting findings. For instance, the authors must have their age and home addresses and could estimate the travel distance and settlement category, if the took the time for it. The consequence is that the paper adds very limited news.
   *This has been addressed in revised version with additional analysis.*
2. This in combination with the choice of non-parametric statistics makes interesting multivariate analysis impossible. For instance, the mixed recruitment strategy offers an opportunity to analyses whether GP based screening produces better uptakes than hospital based screening if travel distance, settlement area and age is similar.
   *Since the recruitment procedure was identical for all subjects, i.e. done through the hospital service, but only the location of screening varied, with few hospital sites, we have not explored this question further.*
3. Some results are earlier published in the BJS but completely omission of these results from the present paper makes it much less interesting. Most readers would probably like to hear the prevalence of positive findings, but more seriously is the lack of reporting the direct costs.
   *This study was not specifically designed to examine cost effectiveness, which we believe would be more appropriately addressed by a long term follow up study.* However, we have
now included data on NHS provider costs across the various screening locations, and have discussed our findings in relation to the MASS trial data.

4. Finally, it can not be concluded that the impact of the programme were reduced travel distance and costs, because the study was not designed for detecting reductions and made no analyses to support this conclusion. Actually, the statistical analyses showed that uptake, travel time, and travel distance differed between settlement types (but the differences were small).

We have addressed this in revised discussion

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

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Introduction: Would benefit of a substantial reduction

Results: I do not understand these chi square values when testing continuous variables with the kruskal wallis test? *Quoting output from SPSS analysis*

Discussion, page 10, line 3-4. It must be Viborg in Denmark – not Aarhus, and the attendance rate must also be wrong (I guess “5” should have been a “%”) *This has been corrected*

Discussion: A discussion about the largest indirect costs and its acceptability could be interesting.

Tables: Range could be informative.

Unable to decide on acceptance or rejection until the authors have responded to the What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests