Author's response to reviews

Title: Investigating preferences for support with life after stroke: a discrete choice experiment.

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Author's response to reviews: see over
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The Editor
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Re: MS: 1931509631978989
Investigating preferences for support with life after stroke: a discrete choice experiment.

We are pleased to be able to submit this manuscript, revised in light of reviewers’ recommendations.

We would like to thank both reviewers for their helpful comments in developing this manuscript. Our responses are detailed in italics below.

Reviewer: Anne Spencer

The paper describes a Discrete Choice Experiment (DCE) that was used to infer the relative weights applied to community services post stroke. The paper is generally well written but more information is needed on the DCE design and analysis.

We thank the reviewer for her positive comments and we have provided more information on the DCE design and analysis in the revised manuscript.

Major/compulsory revisions

1) More information needed on design and analysis The authors cite the recent review paper of DCEs in health which classifies papers by the methods and analysis used (de Bekker-Grob 2012) but does not then give enough detail to allow their own work to be classified. I would strongly recommend that more detail is given in the paper to allow the paper to be appropriately classified in future reviews.

We have added further details on the methods and analysis that would allow this study to be classified in a review such as de Bekker-Grob (2012).

We have ensured the revised manuscript provides details on all fields extracted by de Bekker-Grob (2012): number of attributes, attributes covered, number of choices per respondent,
administration of survey, design type, design source, method to create choice sets, estimation procedure, validity tests, use of qualitative methods, and study objectives.

No information is given on the optimal design used, and the way the choice sets were constructed. Was the full factorial given? How was the optimal design spread amongst the sample of respondents? Were dominated choices excluded? How many questions did people have to complete? It may be helpful to link the paper back to the approaches recommended by the recent review of optimal DCE designs (Reed et al 2013).

We thank the reviewer for drawing our attention to this and apologise for the omission of these details. We have added a section on ‘experimental design’ in the revised manuscript which provides clear and transparent methodology.

I think that it would be also useful to see an example of the set of questions that people were asked. I think this is particularly important here, as the sample of patients is quite old (mean age 70), so I have concerned about how easy some of the questions might have been for people. Did they collect any information of ease of completion?

We have inserted an example of our ‘aphasia friendly’ DCE question in figure 4. The basic structure of the DCE questions was tested out with our workshop participants before the survey proper.

2) More information needed on analysis
More information again would be useful. What proportion of your sample were on-traders and had lexicographic preferences?

We have inserted details of the proportion of sample that were non-traders and the mean response to the choice tasks for patients and carers. We have also added the detail that none of the patients or carers who completed more than one choice task had lexicographic preferences.

What proportion of your sample failed consistency checks and so were removed from the analysis?

We did not insert consistency checks into the DCE. Respondents who completed at least one choice task were included in the analysis.

More information is needed on the type of analysis performed and what is meant by ‘restricted base case model’. It is not clear if this restricted base case model adds covariates for age, gender etc.; reruns the model on these subgroups or uses a latent class approach.

Subgroups were analysed using split sample analysis. The restricted base case model included the complete sample of patients or carers (Table 2a). The unrestricted model consisted of two split samples models defined by the median of subgroups e.g. age, gender, distance, time since stroke, EQ5D, and Barthel score.

Median splits were used to create two subgroups in the unrestricted model. Log likelihood ratio test of the base case model (Table 2a) was compared to the sum of the LL log likelihood ratio test for the unrestricted model (i.e. random-effects logit regression of sample EQSD<0.69 and random-effects logit regression of sample EQSD≥0.69).
The random-effects logit regression only included attributes as covariates. We did not add demographic or clinical data to the models.

The details of these analyses have been improved in the revised manuscript.

In table 3 they report statistically different preferences for those with health related quality of lives greater or less than 0.69, but I am not clear how this was modelled.

See above. Further details have also been provided in the revised manuscript.

Overall the paper needs to better link to the methods currently recommended for this type of analysis, and the authors need to clearly discuss any limitations in their own analysis (like assumptions of constant error variance).

We appreciate the advice on the additional details to be included in the manuscript and we have revised the methods section accordingly.

Discretionary revisions

Attribute selection
The paper focuses a lot on stroke service provision and tries to show how this study will inform policy. The paper then sets out the research used to develop the attributes and levels (following a paper by Jo Coast). Most of these attributes seem appropriate, but preferences towards service providers (i.e. voluntary or stroke team etc.) surely depends upon prior exposure, and there may be less exposure to ‘voluntary organisations’. As the discussion points out they did not collect information on people use of these services so we are not able to check if usage changes people’s views of these providers. However, it would be good to see more discussion about how they might go about adding in such an attribute in future.

The Additional Material provides a full account of the analysis of workshop data. However the revised paper includes specific reference to findings that informed the selection of attributes. One of the strengths of using stated preference methods is that they allow the respondents to trade on hypothetical scenarios that they may not have encountered. Whilst we acknowledge that the limitation that we did not collect data on the use of voluntary organisations we feel it was appropriate to include this level given the stated potential for these organisations to provide such care. We agree that experience of access to services is a limitation of the DCE, and have made this more explicit in the discussion section.

Response to reviewer’s report
Reviewer: Astrid Adams

Discretionary revisions-

1) the first part of this study was looking at which areas to allow stroke patients and their carers to comment on for the second part of the trial. I found it unclear how these were chosen and what restrictions were put onto these choices.

We have included more detail about how the findings from the workshops with service users informed the selection of attributes for the DCE.
2) I also feel some of the choices, such as 'social and leisure' activities are very broad, making it difficult to know what it is that patients and carers really want.

The purpose of this study was to investigate patient and family carer preferences for stroke support services. A balance was required between the provision of specific services and a sense of what type of services people require. The provision of social and leisure activities is an interesting concept as it encompasses both activities and time away from carer – add details. The strength of this attribute is that it is open for interpretation – the aphasia friendly graphic used (see new figure 4) also provides more information.

3) I am unsure how to interpret journey times- what does it mean that someone would travel 40 mins longer? For a patient with severe disability or pain such a journey may be more unpleasant then for another- how does an average really represent patient / carer wishes?

The Discrete Choice Experiment results enable us to compare of the attributes using a common value – in this case time to plan and make the journey. We make the assumption that the longer people are willing to travel the more likely they are to want this attribute / level (as the respondent is indicating a willingness to give up their time and resources). Subgroup analysis showed no significant differences in preferences for people with high or low Barthel score. There were however significant differences between the base case model (table 2a) and the model that accounted for health utility (table 3). This suggests people with high quality of life will make different trade-offs between willingness to plan and make a journey (give up time and resources) than those with lower quality of life. Table 3 shows that people with low EQ5D had much stronger preferences for one-to-one services, and despite their lower quality of life, they would sacrifice an additional 2 hours of travel to access these (197.06 minutes – 75.52 minutes).

Please do not hesitate to contact us if any further information is required.

Yours sincerely

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