Reviewer’s report

Title: Tea, talk and technology: patient and public involvement to improve connected health 'wearables' research in dementia.

Version: 0 Date: 15 Feb 2017

Reviewer: Colin Capper

Reviewer’s report:

Is the rationale for what the author(s) have done clearly demonstrated?

The background is written clearly, but I am not sure that it completely fits with the aims of the paper. The aim of the authors is to involve members of the public in discussions to inform the development of the device pool, platform, and written guidance on support within Dementia Platforms UK, but the numbers of people involved, particularly those with dementia or MCI make confident conclusions more difficult to reach. Had the aim been to conduct a feasibility study to understand effective engagement the rationale would be clearer. I’m unclear whether the focus here is PPI or technology and if both, whether the balance is right. The study itself seems to focus on a discussion of the methods for involving people affected by dementia in testing the feasibility of technology, but does not show the impact of that involvement on the outcomes.

Have all methods been described in sufficient detail to allow others to evaluate and/or reproduce the work in similar circumstances?

The methods used, such as workshops and home testing are well described. I would welcome more information regarding safeguarding and how participants were prepared for the activities. I.e. the information they were given beforehand. It would be interesting to see the recruitment posters, or see more discussion around the recruitment strategy. Part of the rationale for this study was to address concerns or questions that people can have over the use of technology. I imagine the recruitment strategy would either have a significant role in addressing concerns, or would attract those who are more open to it.

Is it clear exactly what was done, at what stage and what the outcome was? If anything is not clear, please provide feedback as to what needs clarifying.

The discussion is very detailed, in terms of the themes that they have identified. However, am not sure how novel the findings are - there are references missing regarding the benefits of involvement, attitudes to technology and challenges of home testing. A clearer case for what is added to the discussion could be made. This might be helped by providing a clearer sense of how many people with dementia, carers and people without dementia were involved. Any limitations to the approach taken should be addressed, particularly the impact that the low numbers of people they recruited have on their findings. How far might different numbers of people in each group affect how much comments can be compared. The decision to allow
participants to self-select for home testing makes sense, but there does need to be some acknowledgment of the potential bias this creates. How representative is this sample of people affected by dementia? Considering the differences between those who were digitally excluded and those included would be of interest and impact results.

Has sufficient attention been given to ethical considerations and how these were managed?

In my view, a more detailed explanation should be given of the decision not to seek ethics approval, including any guidance the authors received. The INVOLVE/NRES guidance does say that involvement activities do not require approval as they just ask people to give examples from their experience. It is not clear that this is what happened in practice. People were invited to test devices at home, and the language used in reporting this, makes this sound more like a feasibility study. A section explaining the steps they took to make sure that ethical issues, e.g., around data security, were managed and explained to people taking part should be included. This is discussed as a discussion point within the workshops, but is not addressed for the study itself.

More detail on guidance that states ethical approval was not needed for this work and detail of the interpretation of guidelines would be valuable for future studies.

Can the writing, organization, tables or images be improved?

Some of the tables and figures are missing from the main text - it would be helpful to see them within the discussion, rather than in an appendix.

Are the included additional files (supplementary materials) appropriate?

See above

Are there any ethical or competing interests issues you would like to raise?

Other than the issues raised above, no.

**Level of interest**

Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

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