Reviewer’s report

Title: Development of an education campaign to reduce delays in pre-hospital response to stroke

Version: 0 Date: 10 Feb 2017

Reviewer: Anne Hickey

Reviewer's report:

This is a very well written paper on an important topic relating to recognition and appropriate response to symptoms of stroke. The paper is interesting and describes three studies - a population survey of 202 civilian respondents exploring their readiness to respond to stroke; an in-hospital survey of 393 patients (or proxy respondents, where relevant) exploring response to the onset of stroke symptoms and time to presentation at hospital; and the development of a theory-based educational intervention to reduce pre-hospital delay.

The population and patient surveys are well described and the results well presented. Interesting comparisons are made between patients who attended hospital within two hours of symptom onset and those who attended more than two hours later. However, the authors do not make clear why they chose two hours as the cut-off - as patients are eligible for acute interventions such as thrombolysis for up to 4.5 hours after symptom onset, the cut-off more commonly used for patient comparison purposes is 3.5 or 4.5 hours. In addition, the authors do not report the numbers in their in-patient population who received thrombolysis, and whether there were any differences in stroke response between those eligible for and who received thrombolysis, and those who were not eligible for or did not receive this intervention. The results of the surveys in Phase 1 are nicely presented, although Figure 1 is very difficult to read. The statistical analyses seem appropriate.

Phase 2 of this research involves the development of an educational intervention to increase population awareness of the appropriate response to stroke. The authors describe very clearly the theoretical basis they used for development of the intervention. The data gathered in Phase 1 surveys is nicely integrated into the development of the intervention. Given the importance of making the campaign accessible to members of the public, it was not clear the extent to which patient and public involvement (PPI) was integrated into the development of the campaign from the beginning. It seems that focus groups were utilised only after the steering committee had decided on and devised the campaign. Some additional commentary from the authors on the rationale for this approach to involvement of patients and members of the public would be useful.

The discussion is well written, with the concluding section focused exclusively on the educational campaign.
The description of Phase 2 of this research that is presented in this paper details development of the educational intervention, described in the results section of the paper. However, this section of the results reads more like the methods section of a different paper, with no results relating to the use of the intervention available as yet. A suggestion is that the authors present the findings of the surveys in this paper, and submit Phase 2 of the research involving intervention development when the campaign has been used and there is evaluation data available. At the moment, while the intervention has been developed, there is no evidence that it is effective.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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Yes

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