Reviewer’s report

Title: Self-detection of atrial fibrillation in an aged population: three-year follow-up of the LietoAF intervention study

Version: 0 Date: 06 Jul 2017

Reviewer: Lis Neubeck

Reviewer’s report:

This is a well-conducted study that addresses an interesting question. Namely, if adults can be taught to pulse palpate, can they detect atrial fibrillation and take appropriate action to ensure treatment? This is of particular note, given that many public awareness campaigns focus on knowing your own pulse. Disappointingly, even with a highly motivated group, persistence and appropriate action were not sufficient to ensure any change in AF management.

Minor comments:

Abstract- you conclude that strategies to promote persistence of regular pulse palpation and appropriate patient reactions to detected regularities are crucial. However, it is hard to imagine what else could be realistically done to increase persistence. Perhaps, it is time to recommend new technologies, eg patient held ECG, photoplethysmography, or automated blood pressure monitors?

Main paper- Please provide a flow diagram which includes recruitment and variations in treatment, e.g. how many patients were additionally provided with an automatic blood pressure monitor?

Page 7, para 2- Please provide details of the automatic blood pressure monitor. What was the sensitivity and specificity to detect AF?

Page 8, para 3- Please report the sensitivity and specificity of the Beat2Phone. 10-minutes seems a long time to record an ECG for? Can you please confirm?

Page 8, para 1- it would be good to have more details about the motivation and capability assessment within this paper (I realise there is more detail on this in the protocol)to aid reader understanding

Discussion-

Page 16, para 3- Our team conducted an additional study (Lowres, et al 'Self-monitoring for atrial fibrillation recurrence in the discharge period post-cardiac surgery using an iPhone

**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.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I have received research grants and honoraria from companies with interest in AF management (Pfizer BMS, Boehringer Ingelheim, Bayer).

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