Reviewer’s report

Title: Effects of individualized follow-up with a smartphone-application after cardiac rehabilitation: protocol of a randomized controlled trial.

Version: 0 Date: 25 Sep 2019

Reviewer: JA Snoek

Reviewer's report:

The paper describes a relevant problem in CV disease. Consolidating lifestyle habits requires continued attention and appropriate guidance. Long-term CR programmes can assist patients with CV disease to implement long-lasting lifestyle changes.

Concern: according to the trial registration the inclusion of the study already ended. This makes it more difficult to write an unprejudiced design paper.

Comments

Page 2

line 35-41 The Telerehab III study and TeleCaRe study evaluated also the effect of a long term individualised follow-up programme after CR. However the follow-up programme was less than 12 monts.

Page 3

line 18-20 The sentence "The benefit... patients directly" is not specific enough. What does the app do more than other direct contact? (face to face or telephone) Or is it meant directly after training? Please explain.

line 27-28 as pointed as needed? Or pointed out....

line 29-33 The Telecare study (designpaper published in BMC cardiovascular disease) evaluated individualised follow-up after CR with an app on a smartphone for 6 months.

line 46-50 multiple references to 1 article in three sentences seems excessive

Page 5

line 2 fixed or variable blocks?
The participant will decide when and how often reminders of the tasks should appear on their smartphone. What would be the minimum amount of reminders?

Page 7

paragraph with peak oxygen uptake:

Will the test and re-test have the same protocol? It's not mentioned.

Will the absolute (ml/min) or relative (ml/min/kg) oxygen uptake be used?

Endurance capacity is, as described on page 7, a surrogate for peak oxygen uptake. Time to exhaustion, inclination and speed are directly related to oxygen uptake. Time to exhaustion at a submaximal level may say something about endurance capacity. Suggest to change.

Page 8

line 36 "The same weight will be used at both measurement times' It's not clear for me what is meant. The same scale at both times? Or actually the weight of the first measurement during the second visit? This would not make sense to me.

line 38 weighted or weighed?

paragraph blood pressure

This is quite brief. How many minutes did the patient sit before measurement was started? How many measurements? Both or one arm? Which protocol is used? ESC? Norwegian?

Page 9

sample size. The additional effect size in increase in VO2peak after CR is lower than during CR. Between group differences will probably be lower than expected. A sample size of 47 seems to be too low to detect differences between both groups.

Page 10

line 5-7 The sentence "According to our knowledge, there are no studies that evaluate the effect of long-term individualized follow-up through an app after completed CR on patient centered outcomes like the described study." seems to be a iteration of the first sentence of the discussion.

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.

Unable to assess

**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 recommend additional statistical review

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Needs some language corrections before being published

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