Reviewer's report

Title: NHS Health Checks through general practice: randomised trial of population cardiovascular risk reduction

Version: 1 Date: 29 August 2012

Reviewer: Iris F Groeneveld

Reviewer's report:

An interesting study and of high relevance. Still, I have several comments.

Major Compulsory

Introduction

1. The research questions do not reflect your study. You did not evaluate the implementation (i.e. the uptake, reach, dose delivered, etc).

Methods

2. Provide more detail about the lifestyle intervention as it is an important topic in the study. What was it based on/ how was it developed? How many sessions? Did it involve individual counselling or provision of information only?

   (even though you published the methods elsewhere, this info is vital for interpretation of your results. As you do provide extensive information on sample size, recruitment etc, I presume it would be no problem to add more on the actual intervention methods as well)

Discussion

   adjust the last sentence of § 1 and/or discuss the statements:

3. ‘uptake was low’: how did you measure that?

4. ‘apparent lack of effectiveness of lifestyle modification’. It is important to discuss why that would be. Mention that the lack of beneficial effect of the intervention could be due to the fact that the implementation of the intervention was suboptimal (e.g. lack of referral, lifestyle coach was inadequate), OR the participants attended only few sessions (they could choose whatever they desired, according to the methods). Apparently you did not have the resources to monitor every treatment. How would you handle this in the future? Could you possibly ask the lifestyle coaches to monitor the sessions that were chosen by the participants?

5. ‘Population readiness to make changes’: according to the reduction in risk profile: they did make changes, didn’t they?

6. ‘cost-effective’ I wouldn’t use this term if you did not evaluate cost-effectiveness.

Minor essential
Introduction
1. §1: ‘the global burden of vascular diseases…’ Provide examples of vascular diseases.
2. § 1-3 vs. § 4: Clarify whether you aim at ‘vascular diseases’ or ‘cardiovascular diseases’.
3. § 3: ‘Framingham equations for estimating cardiovascular risk’. Clarify what the Framingham risk equation actually measures: morbidity or mortality? CVD or CHD?

Methods:
4. §3; In the intro you advocated a multifactorial approach including medication as a means of CVD prevention. Why is the intervention only aimed at lifestyle/ is medication still part of the multifactorial approach?
5. §4: Can you give any details about what the diet and physical activity categories were based on, or provide an example of e.g. poor diet or good diet?
6. § 5: What do you mean by ‘target 46 of 55’?
7. §6: check whether the variables you mention in the first sentence are the ones necessary for the Framingham risk equation. I think that the variables diastolic BP and diabetes (y/n) are missing. Further, check whether Framingham calculates the risk of a ‘CVD event’ or ‘mortality due to coronary heart disease’.

Results:
8. § 3 Variables included in the equation # replace to methods section (in fact, you mentioned them there already).
9. § 3 Why did you not correct for BMI (and pulse); sign different between groups at baseline?

Discussion
10. §4 ‘what is already known’ and § 5: ‘what this study adds’: Check whether the text in these sections are in line with the headings. For example, in §5 you discuss limitations

Discretionary

Introduction
1. § 4: is the first national programme to attempt to develop….’ . I would change it into: ‘is the first national programme aimed at/ consisting of….’

Methods
2. If possible, shorten the § about randomisation, recruitment and blinding and add it to the § ‘setting and participants’.
3. §6. ‘Researcher who was responsible for stat analysis was blinded to…’ Replace sentence to § Blinding.

Discussion

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare I have no competing interests.