Author’s response to reviews

Title: Unsatisfactory risk factor control and high rate of new cardiovascular events in patients with myocardial infarction and prior coronary artery disease

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Author’s response to reviews:

The Editor
BMC Cardiovascular Disorders

Thank you for important and constructive comments to our manuscript "Unsatisfactory risk factor control and high rate of new cardiovascular events in patients with myocardial infarction and prior coronary artery disease”.

We have revised the manuscript in accordance with the comments from the Editor and suggestions from the reviewers, and our response is delineated in the following.

We hope you find our comments and revisions satisfactory, and thank you for considering our revised manuscript again.

The paper has not been published before and is not considered for publication in any other journal.

Yours Sincerely,
Response letter

Response to the Editor

1) The “Introduction” is replaced by “Background”
2) The colours are removed from the tables
3) The figure titles embedded within the figures have been removed and the figures are uploaded separately
4) The “Legends” is renamed “Figure Legends” and the section moved to after the references.

Response to Reviewer 1

The only concern regards the lack of novelty.
Thank you for your comment. The novelty of this paper is the nationwide and unselected patient population included, with an almost complete follow-up. In previous studies, the risk of selection bias and low response rates were matters of concern and limited the validity of the findings. In this paper, we show in a nationwide study in a rich country like Norway, that the risk factor control was still far from optimal, and thus highlights the need for improved secondary prevention. We have tried to make this clearer in the background section (page 4)

Response to Reviewer 2

The authors reviewed the epidemiologic data of Norwegian people diagnosed with myocardial infarction. The authors surveyed the patient’s compliance to medical treatment and lifestyle modification after myocardial infarction. Even in a higher socio-economic perspective of Norway, patient compliance is not satisfactory. Only 1% of the patient achieved all targets. The sample size is enough for the generalization of the results. I think, this study would enrich the current medical literature and would emphasize the importance of secondary prevention once again

Thank you very much for your comments.

Response to Reviewer 3

1. In the group with no prior CAD, the prognostic value of variables measured during hospitalization is examined; however, one could imagine that secondary prevention efforts were mainly developed after hospitalization; one should give the primary care physician sufficient time to develop secondary prevention strategies on an ambulatory basis. Did these patients attend cardiac rehabilitation programs? Why was cardiac rehab not included as a secondary prevention target?
Reply: Unfortunately, the Norwegian Myocardial Infarction Register (NORMI) does not register information about patients after the primary hospital stay. Consequently, we had no data regarding cardiac rehabilitation programs, and could therefore not include cardiac rehab as a secondary prevention target.

2. When comparing the outcome between those with and those without prior CAD, it is also not surprising to find a worse outcome in those with prior CAD. The latter demonstrates that the underlying pathology (atherosclerosis) is more advanced and this by itself worsens the prognosis. What if only CVD mortality and/or new MI was used as outcome?

Reply: We fully agree that it would have been useful to look at CVD mortality. However, the causes of death were not registered in the NORMI.

3. It is surprising that 26% of the patients with prior CAD were not on a statin prior to hospital admission. This is a very high proportion for a study during 2013-16.

Reply: We agree with your concern about the low proportion who used statins prior to hospital admission. However, this is consistent with previous findings in Norway and demonstrates the importance of this type of studies.

4. Why was revascularization not included in the multivariate analysis comparing both groups?

Reply: The number of patients examined by coronary angiography was included in the multivariate model 2 analysis.

5. Any info on the use of DAPT?

Reply: Thank you for this comment. Information on the use of dual antiplatelet therapy has now been included in Table 2 and included in the multivariate model 2 analysis.