Reviewer’s report

Title: Cardiovascular Health and the Modifiable Burden of Incident Myocardial Infarction. The Tromso Study

Version: 2 Date: 10 October 2014

Reviewer: Joshua Willey

Reviewer’s report:

Major compulsory:
- the authors aim to describe the population impact of life’s simple 7 from the AHA on MI risk. The topic is well known from other cohorts and the benefits in this one would be the longitudinal assessment of the comprehensive measures using time varying covariates.

- please comment on why the GIF was used as opposed to population attributable risk which may be more familiar to many in the audience. Also could the “clinical interpratibility” of the time varying covariate method be included versus a single measure? Did the single measure explain the outcome better than the time-varying measure?

- is the AHA index a truly linear scale? Could this be tested?

- generalizability of their results should be discussed given the unorthodox definition of their AHA index

- AF is included in page 7 – what does this stand for. Please introduce all abbreviations throughout the manuscript before using them.

- The GIF may not be familiar to many in the readership and should be expanded upon

- in the results stratified models by age and sex are included but I did not see a mention of a statistical interaction (ie AHA_index*gender, AHA_index*age). Given that the terms may have multiple levels it may well be difficult to detect a statistically significant result. Without that no conclusion can be drawn on differences by age or between men and women.

- please put subheadings in the results to help orient the reader as to what the results are pointing to

- the discussion section, particularly on limitations of their manuscript should include more details

- there were a large number analyses included in the supplementary files, it is likely that some of the results were due to chance

Minor essential
-if it can fit, please include definitions of MI in the abstract

-please reformat the 3rd sentence in the introduction, it is too long and hard to follow

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.