**Reviewer’s report**

**Title:** Examining trends in cardiovascular disease mortality across Europe. How does the introduction of a new European standard population affect the description of the relative burden of cardiovascular disease?

**Version:** 0 **Date:** 14 Jul 2018

**Reviewer:** Rodney Jackson

**Reviewer's report:**

This paper documents the substantial differences in calculated ASMRs based on the old (1976) and new (2013) European Standard Populations and is an important contribution to the literature.

I have a few suggestions that I believe would improve the paper, plus some minor editorial errors.

Suggestions that would improve the paper:

1. I would delete all the content relating to life expectancy as it is not relevant to the main goal of the paper which is to document differences in ASMRs based on using different standard populations. The connection made between life expectancy and ASMRs is very indirect and there is already a lot of analyses in this paper. In my opinion it is an unnecessary distraction.

2. I am a great fan of short Discussion sections but this is one of the few times I have ever suggested lengthening a Discussion. There are several substantial tables describing the joinpoint analyses but as far as I can find, only one indirect comment on this in the Discussion. It would be helpful to add at least one or two sentences on these analyses.

Minor points/errors:

1. On the title page there are four author addresses but only 1, 2 and 3 are attributed to the authors. Nick Townsend has Oxford and Moscow as addresses, yet his email is in Bath and in the companion paper his addresses are Oxford and Bath.

2. In Methods, page 5, line 34 (the lines on my version may not be the same as on the original) - several codes (104, 103 and 101) are mentioned in relation to ICD-10, but no specific codes are mentioned in relation to ICD-9, -8, or -7. I don't know that level of detail of ICD codes. Does this make sense or is it a mistake?
3. In Table 1, the French female total population is incorrect. I didn't check every value in detail but this stood out.

4. In the Results section, p 10, lines about 29-32??, 'Western Asia' is mentioned twice. I assume the first was meant to be Western Europe and the second was meant to be Central Asia.

5. Table S2 is superfluous. There is so little in this Table it would be preferable to add to the text.

6. Immediately under Table S2, is a sentence beginning 'The largest changes in ranking was found amongst Kazakhstan in males .....'' Please correct the grammar, perhaps change 'amongst' to 'for'

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