Reviewer's report

**Title:** Establishing a follow-up of the Swiss MONICA participants (1984-1993): Record linkage with census and mortality data

**Version:** 1  **Date:** 29 June 2010

**Reviewer:** Christa Scheidt-Nave

**Reviewer's report:**

Major compulsory revisions

(1) Abstract
a. Results: The abstract include some information that linkage success did not differ according to any key study characteristics, and that the results of survival analyses were robust to linkage step or certainty of a correct link.
b. Conclusions: The conclusion that there is 'negligible potential for selection bias' appears too strong, because MONICA survival curves / mortality rates do differ from those of the Swiss general population, particularly in men. Instead, focus should be put on the feasibility and robustness of the data linkage procedure. In addition, the results regarding mortality patterns seem plausible but do reflect 'healthy participant' selection.

(2) Methods
a. Linkage section, end of paragraph 1: how exactly was information on deaths which occurred before the 1990 census obtained?
b. Linkage section, paragraph 3/List of succeeding steps, point 8: what exactly does 'manual control and optimizing' refer to?
c. Survival analysis section, paragraph 2, last sentence: 'This procedure was also used…' Does this sentence refer to the sensitivity analyses mentioned later on (conclusions, end of paragraph 1)?

(3) Results
a. Record linkage, end of paragraph 3: what procedures did 'manual search' imply?
b. Cox regression: This paragraph should include the results of sensitivity analyses (survival by linkage step, certainty of a correct link), as these
are referred to in the conclusions.

c. Age-standardized mortality rates (Table 3): this comparison seems of limited use. Since region as well as cohort (MONICA wave) appear to affect survival considerably (Table 2), excluding MONICA Ticino participants would be expected to increase the difference between observed and expected rates. Would it be possible to examine the effect of MONICA wave on age-standardized mortality rates and ratios by repeating the analysis with MONICA wave 1 individuals with the longest follow-up?

(4) Discussion, end of paragraph 4: are there any alternate explanations for the observation that MONICA men but not women showed significantly lower mortality in 2000-2008 compared to the Swiss general population? Do the authors see any need/perspectives for further research of this sex difference?

(5) Conclusions, last two sentences: Uncovering hidden potential for public health intervention by analyses of representativeness of population studies in terms of survival - this is an interesting thought, however, it needs to be acknowledged that this would require additional information for comparison (health-related behavior, environmental data etc.).

Minor essential revisions

(1) Table 1, second to last row 'start of examination' – TI is missing

(2) Figure 1 lost to follow-up 2000-2008: does 'NA' stand for not assessed? The abbreviation needs reference in a footnote to the table.

(3) Table 2: If the hazard ratio represents the adjusted ratio this should be denoted; covariates included and additional adjustments made need to be referenced in a footnote to the table.

Discretionary revisions

(1) The authors could make the results section easier to read by changing the sequence of tables and figures and by adapting the text accordingly. Table 1 is not referred to in the text so far. Table 1 should be followed by Figure 1, Table 2, Figures 2 and 3. Table 3 might be omitted (see point 3c).

(2) Results, Record linkage, end of paragraph 4: it might help to clarify that linkage success did not significantly differ according to any of the key study characteristics.
Level of interest: An article whose findings are important to those with closely related research interests

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 that I have no competing interests.