Reviewer’s report

Title: Gender differences in the utilisation of health-care services among the older adult population of Spain

Version: 3 Date: 1 May 2006

Reviewer: Alistair W Stewart

Reviewer’s report:

General

The authors have, wisely, reduced the dependence of their paper on the PCECOR, in particular by the removal of a Figure. However, the measure is still an important part of the paper.

As requested in my previous review the authors have referenced this measure. However, the source (Szklo and Nieto) makes only a brief mention of the statistic with an example and no justification and no indication of its performance. This reference is not adequate given the extent to which the statistic is being used and the dependence of the results in this paper on the measure.

In the very special circumstances used in Szklo and Nieto the measure gives a reasonable indication of effect but when this is extended, as is done in this manuscript, the statistic shows unfortunate behaviour. Even the example in Szklo and Nieto fails when their example is viewed by taking the inverse of the measures. There should be symmetry when recoding the exposure x as â€”x and the covariate z as â€”z (Maldonado & Greenland). In the manuscript under review if the ORâ€™s used women instead of men as the reference group then all the PCECOR values would be different â€” an unacceptable behaviour.

My recommendation to the authors is that they remove all reference to PCECOR, report the crude and adjusted ORâ€™s (as has been done) and then use the test of significance of the estimate difference (collapsibility test) they have introduced. As reported in the reference for this test (Maldonado & Greenland), its derivation comes from log-linear models and not logistic models and so its applicability is not clear.

Some of the PCECOR values given in the text do not agree with those in the table and those in the table should not be reported with decimal places as this gives an implied accuracy that isnâ€™t justifiable. Care must be exercised when making changes.

-------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The PCECOR measure is flawed and should not be used. To be acceptable this manuscript must describe the influence of potential adjustments in some other way.

-------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

-------------------------------------------------------------------------------

Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because scientifically unsound

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests