Reviewer's report

Title: Cancer mortality differences among urban and rural residents in Lithuania

Version: 1 Date: 23 August 2007

Reviewer: Harry Comber

Reviewer's report:

General

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

1. The use of a simple log-linear measure of trend (APC) should be justified for each cancer site, sex and population. In some cases the trend does not appear to be linear, but to change in direction. In this case a "significant" trend may be deceptive. JoinPoint, or a similar method, should be used to demonstrate that there was no significant change in trend during the period studied.

2. The language, while comprehensible, has a very large number of grammatical errors, many due to the absence or misuse of the definite and indefinite article. These were far too many to enumerate.

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

Methods

1. How were rural and urban populations defined? What were the sizes of the populations of each?
2. Has there been significant migration of populations between rural and urban areas which could have affected the results?
3. How were the sites of cancer determined for each death? Who coded these and to what system? What quality control was applied?
4. Do the data refer only to deaths where cancer was the main cause?
5. What population data were used? Were these available for every year and if not how were estimates made? How reliable are population figures for rural and urban populations?
6. It is not clear how the Mantel-Haenzel test was applied. What grouping of data was used? Was data aggregated over the entire period?

Results

7. The figure for APC for all cancers in females is given as -0.94 in the text and -0.98 in the figure for both urban and rural.
Discussion

8. If incidence trends are available for the same period, these should be used to illustrate the contribution of changing incidence and survival to mortality trends, for the population overall if they are not available for urban and rural populations.

Discretionary Revisions (which the author can choose to ignore)

1. A summary table of trends by site, sex and urban/rural would be useful.

2. Unless rates are very different, male and female graphs could be combined to reduce space.

3. The sentence in the Discussion beginning "The mortality rates are influenced by changes..." is very difficult to follow.

4. The following statements should be supported by some evidence, either a reference or local data.
   "this knowledge has not been used adequately"
   "Nor have improvements...been transferred to the entire population"
   "rural hospitals are closing at an alarming rate"
   "Treatment improvements [for breast cancer] mostly contributed to mortality reduction" - what were the corresponding incidence trends?

5. It would be useful to put the mortality rates in the context of rates in neighbouring countries, or the EU as a whole.

6. A legend should be given for the figures; the points plotted should correspond to the tickmarks on the scale plotted and not fall between them.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:

I declare that I have no competing interests.