Reviewer's report

Title: Study of Recent and Future Trends in Place of Death in Belgium Using Death Certificate Data: a Shift from Hospitals to Care Homes

Version: 1 Date: 10 November 2010

Reviewer: Barbara Gomes

Reviewer's report:

I strongly support the publication of this paper, which approaches an increasingly important topic for public health, in an innovative and rigorous manner. It has the potential to inform policies and service planning in the country in question (Belgium) and it holds important transferable lessons to other countries debating how best to care for an ageing population in the future. I advise the authors to include a statement regarding whether or not ethical approval was needed/granted.

Minor essential revisions

page 9 - please state the year of publication of the projections of the Belgian National Planning Bureau and say a bit more about the quality of the data, assumptions and geographical level – is it national or Flanders and Brussels region? It is important that the geographical level is the same as the past mortality data.

page 9 - please clarify to which category of place of death you applied the percentage point change - please note that if percentage point changes are applied to all categories of place of death, the total numbers of deaths do not necessarily add up to the total projected deaths, with potential to underestimate or overestimate the latter.

page 13 - please reflect on a limitation of the work derived from the fact that multivariate analysis included both individual level and area level variables, and an ecological fallacy may apply (statisticians may see multilevel modelling as appropriate)

Table 3 and related text - this table is very important in relation to one of the main points of your paper, where you propose that trends in place of death are related to changes in care levels in care homes (i.e. increased availability of skilled nursing home beds). This leads to your very important consideration that increased beds need to be available to sustain future increases in care home deaths.

I therefore feel you should include the ORs for the other factors included in the regression - age, sex, educational attainment, etc, but particularly for available residential beds and skilled nursing beds. This will substantiate your proposed explanation which at the moment lacks data in the paper. However, please reflect
on the fact that there are other factors that contribute to the trend of increasing deaths in care homes - note that the year effect is still significant despite adjustment for availability of beds.

Discretionary revisions

Abstract: date needs correction - should be 1998 rather than 1997

page 6 - could you specify further your inclusion criteria in terms of non-sudden one or more chronic life-limiting conditions? which conditions did you include and exclude?

page 7 - could you specify where you got the data on availability of skilled nursing beds and residential beds in care homes, hospital beds and the timeframe it relates to (i.e. beds available in which year)?

methods section - could you state and justify the accepted significance level p=0.05 or 0.01? For example, do you consider p=0.03 in table 1 on higher education significant? Consider a conservative approach (e.g. the level at 0.01) attending to the fact that you are working with a very large dataset and running multiple tests.

In several parts of the manuscript, you refer to data not shown, presumably due to lack of space. In some instances, I feel there is no need to provide the data. In others, where confirmation may be recommended, I advise either to leave them out if you feel you can't provide the data, or to include a brief summary and figures in the text.

Advise caution when making statements such as "care homes will become the main locus of end-of-life care in the future." Although this is likely, projections are not deterministic and have a degree of uncertainty.

Level of interest: An article of outstanding merit and interest 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