Reviewer’s report

Title: Stroke prevalence in Spanish elderly from screening surveys

Version: 2  Date: 10 May 2006

Reviewer: Mauricio Avendano

Reviewer’s report:

General

This is an interesting paper focused on the prevalence of stroke in Spain, which assesses variations by region, gender and age, and further compares the prevalence of stroke in Spain with that for other European populations. The paper addresses an important issue, and provides a generally good description of stroke prevalence in the Spanish populations included. Despite these strengths, the paper does have some problems that need to be addressed, and which makes it difficult to understand both its methodology and implications. I have four major comments:

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

1. Although the logic of the paper is relatively well constructed, the writing of the paper can be considerably improved. There are numerous errors and writing mistakes in the text, which make it difficult to understand the ideas expressed. This occurs in most sections of the paper from the abstract, methods, to discussion. I suggest authors revise the paper carefully and let it be reviewed by an English editor. This can improve considerably the clarity of the paper, which at the moment has sections that are difficult to understand.

2. The methods section of the paper is not complete, several sections are unclear, and overall it is difficult to get an impression of what was actually done in some cases. Examples include:
   a. Page 6, last paragraph starting â€œA panel of expertsâ€™: It is unclear what this paragraph is about. It is not clear about which panel of experts authors are referring to; authors refer to ADL, data-collection in Pamplona due to â€œpersonal reasonsâ€™, â€œ: This paragraph seems not to fit in the paper.
   b. Page 7, First paragraph starting â€œPopulation and methodologicalâ€™: It is not clear why demographic characteristics were obtained from the National Institute of Statistics, since individuals were actually interviewed. Is this referring to the sampling procedure? This is unclear.
   c. Are surveys representative samples of the regions? How were in general individuals selected, and what was the response rate of these surveys? Some of this information could be included, for instance in Table 1.

3. The paper is relatively limited in terms of what the meaning or implications of the results are. In particular, the discussion section of the paper is not strong enough, as it is mostly focused on biases that could explain the results. Although this is important, authors do not make an attempt to explore what the possible causes of the geographical pattern could be, as well as the age and gender variations in stroke prevalence as observed. In order for this paper to be of interest to an international audience, authors will need to make a serious attempt to discuss what is behind the pattern that they observe, as well as how this compares to the pattern in other countries or previous studies. This has not been systematically done. Furthermore, some issues regarding the interpretation of results needs to be further developed, as explained in the points below.

4. Authors need to define more clearly in the text as well as in the tables what is meant by â€œsuburbanâ€™. Further discussion on why â€œsuburbanâ€™ populations have a higher prevalence of stroke is necessary.

General remarks:

5. Authors claim that there is three-fold variation in the prevalence of stroke in Spain. However, a careful analysis of the tables shows that the prevalence of stroke is relatively similar across several Spanish populations, with â€œEl prat de Llobregatâ€™ being the clearest exception, as prevalence rates are considerably higher in this population. I suggest authors comment on these similarities in the interpretation of results, and try to identify the possible causes (further to higher precision in measurement), which could explain both similarities and differences.
6. Further to point 4, the paper could benefit considerably from further considering the possible causes of the pattern in Spain, particularly regarding the risk factor distribution across the populations involved. As prevalence is a combination of incidence and case-fatality, it would be good to comment on the potential pathways in regard to these two outcomes, which could explain the pattern.

7. Differences between men and women in the age-patterning of stroke prevalence is probably due to a generalized pattern of women developing stroke at later ages than men. Furthermore, authors comment that the higher proportion of women than men might reflect a better survival prospect among the former. However, this is simply a generalized pattern observed even for the general population (higher proportion of women than men), and it is simply related to higher life expectancy among women than men. I suggest authors re-interpret these patterns.

8. The prevalence of stroke seemed to decrease at very old ages. This is likely to be due to selective survival (also called mortality selection). I suggest authors comment on the potential role of this explanation.

9. The way authors describe percentages and refer to “significant differences” in the text is confusing and can be improved. For instance, authors state in the abstract “Prevalence was significantly, 21%, lower in women OR 0.79 95% CI 0.68–0.93™. It is not clear what the 21% is referring to (probably the odds ratio difference indication). Please re-write these texts so that the paper reads more smoothly all throughout.

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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)

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Discretionary Revisions (which the author can choose to ignore)

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

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

Quality of written English: Needs some language corrections before being published

Statistical review: No