Reviewer’s report

Title: Time-trend and variations in the proportion of second-eye cataract surgery

Version: 1 Date: 11 February 2007

Reviewer: Jonathon Ng

Reviewer’s report:

General
This is a well thought out and written manuscript, in which the authors describe the overall and regional time trends for second-eye cataract surgery in the Catalonia, Spain. The study used linked administrative data from the Catalonia Minimum Data Set, and although it was restricted to operations in the public health system, this was unlikely to materially affect the overall findings given that only around 10% of operations were performed privately. I was particularly impressed with the approach that was used to define second-eye cataract surgery and I agree with the authors that whilst their approach may result in a small amount of misclassification, in the context of their large number population-based cohort, any misclassification will not affect the study’s findings.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Some attempt should be made to further discuss and explain the regional variations. Are the regions with lower rates of surgery and proportions of second-eye surgery predominantly rural with geographical, financial or other barriers to access? These issues may have been covered in an earlier paper that was cited (reference 21) but because it was in Spanish I was not able to read it and I suspect this will also be the case for most readers of the current paper.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. I think that whenever “95%CI” is mentioned, that it looks better with an additional space (ie. “95% CI”).
2. In the Abstract, there is probably no real need to include the value R2 in the first line of the Results because the increasing trend described does not directly relate to the total squared error explained by the model.
3. Abstract, Results section, line 6. I would suggest omitting “one” or substituting with “proportion”.
4. Abstract, Results section, last line. I suggest changing the sentence to “Variation between regions decreased over time because regions with the lowest initial proportions of second-eye surgery (approximately 17%) showed a greater increase over the study period.
5. Page 4, second last line, should read as “inhabitants” and not “habitants”.
6. Page 6, paragraph 2. Use of the term “register” may lead to confusion and misunderstanding. I think it would be better to phrase it as “The information for each procedure included…”. 
7. Page 6, paragraph 3. I suggest rewording the first two sentences along the lines of “The Minimum Data Set does not record whether a cataract procedure was a first- or second-eye operation. For the 154,215 public sector cataract surgeries included in the study, surgeries in the same patient…”. 
8. Page 7, last sentence. I think the sentence would read better as “The age and gender standardised rates in each region were calculated for both first- and second-eye surgery by direct standardisation to the 2001 population.”
9. Page 8. It would be better to state that a model was “developed” rather than “adjusted”. Instead of response and explanatory variables, consideration should be given to using the more widely used terms dependent and independent variables. Past tense should be used in the last paragraph (ie. “One assessed differences in the proportion…gender, and the other assessed differences…”).
10. Results section. This section could be improved by placing the results related to differences between regions in the rates of surgery and the proportion of second-eye surgery in consecutive paragraphs.
11. Page 13, paragraph 2, lines 6/7/8/9. I did not fully understand what was meant by this sentence. Am I correct in interpreting that because the benefit after second-eye surgery is less than after first-eye surgery, the decision to have second-eye surgery is more influenced by factors other than patient preference? I think this could be described better. Also, by “NHS” are the authors referring to the public health system of Spain or the UK?
12. Page 14, paragraph 2, last sentence. “Thus” would probably be more appropriate than “Then”.

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13. Tables 2 and 3. Although footnotes are included for “Intercept” and “Coefficient”, I feel that this is still unnecessarily technical. Would it not be better to just label the “Intercept” as the “Proportion of second-eye surgery”. I do not think that including the “Coefficients” is necessary but if the authors can justify its inclusion then more effort should be made to explain and interpret the values for the reader.

14. Table 3, and Figures 4 and 5. I think it would be better if the region names were written in full as shown in Table 1.

Discretionary Revisions (which the author can choose to ignore)

1. Whilst private operations were excluded, I think it would be interesting to examine where these were performed and whether the proportion of second-eye surgery is substantially higher. Perhaps this is an issue the authors could consider in future work.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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