Reviewer's report

Title: Deprived Children or Deprived Neighbourhoods? A public health approach to the investigation of links between deprivation and injury risk with specific reference to child road safety.

Version: 1 Date: 3 December 2003

Reviewer: Marjan Drukker

Reviewer's report:

General
First, I am not an expert on Poisson analyses or Generalised Linear Mixed Models and, therefore, I cannot decide if analyses and interpretation of the tables were correct. Neither can I decide whether statistical methods are described sufficiently to replicate analyses, but I have some doubts.

Major problems
- The authors argue that the incidence of causalities is not associated with road safety, because children crossing more crowded roads are not allowed to walk to school by themselves. This makes the results of the paper of minor interest. In addition, this can confound the results in favour of the SES of the ward the child lives in instead of the SES of the ward where the accident took place.

- In addition, the authors doubt if Devon is a good place to study traffic accidents in children, because the "scarcity of child pedestrian collisions".

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
- The paper is not well written, structure is lacking.
  (1) The abstract is very similar to the introduction, with one sentence at the end on the results. On the contrary, the abstract should be a summary of the whole paper including objectives, methods, data, results, and conclusion.
  (2) The introduction should end with an objective. Why did the authors think that they could add something to the described problem with what data?
  (3) Some sentences of the results belong to the methods. A method section should include all information on data and models. In the manuscript some of the information is given in the results section, but not in the methods. The results section should be limited to results only.
  (4) Some other sentences of the results belong to the introduction. The authors should not repeat the explanation of the introduction, but should keep themselves to the description of their own results.
  (5) Explanation of the results in relation to the literature should be discussed in the discussion, which is missing. The authors can either rename the conclusion section "discussion and conclusion" or add an extra section "discussion". In this section the authors can discuss their own findings and previous research and why there are differences, etc.
  (6) §5.2 does not include an interpretation of the table. Persons not familiar with this type of analyses (like me) are not able to interpret the tables. These persons find out about the results of the second analyses only in the conclusion. While this is the main objective of results sections.
  (7) Why do the headings have numbers (starting with "1 abstract")?

- The two deprivation indices that were used were not described at all.

- Figure 1 shows an outlier (one in each of the figures) who theoretically can have an enormous impact on the results. Did the authors repeat analyses excluding this outlier?
Many abbreviations are not familiar to me, and neither to the future readers. E.g. 'Stats 19', "IPPR", "DETR", "AIC", "BIC"

Discretionary Revisions (which the author can choose to ignore)
- The information given in §5.1.1 §5.1.2 §5.2.1 and §5.2.2 can better be given in the respective tables. In addition, the two decimal places is sufficient

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
- Textual errors:
  - 3rd line of the abstract (page 1) should be "…, where it appears in ……"
  - Last sentence of the 1st section of the introduction (page 2) includes the phrase 'it was possible" twice.
  - The first sentence of §5.1 basically says that there was a strong association between deprivation of the ward in which the collision took place and deprivation of that ward. So, deprivation was associated with itself.

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

Declaration of competing interests:

none