Reviewer's report

Title: A retrospective population based trend analysis on hospital admissions for lower respiratory illness among Swedish children from 1987 to 2000

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Reviewer: Job BM van Woensel

Level of interest: A paper of limited interest

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

In all the analyses the authors discriminate by gender. It is unclear why they do this. It does not provide any new information of what is already known from the literature, i.e. that the rate of hospitalisations for lower respiratory tract infections in higher in males than in females. Moreover, the authors do not further give any attention to this issue in terms of interpretation in the discussion section.

Page numbers are missing
No separate titles and legends of figures are given.
English language needs attention

Background (page 3-4)
The structure of the background section is a little confusing. It is unclear from why the authors also have explored trends of re-admissions, and in addition why they have done this 'by gender' (paragraph 2 line 5).
The authors formulate 3 questions, of which the first (i.e. further exploration of a previous reported trend on hospital admission in Swedish children) seems to be most important. For clarity reasons it would be better if the authors focus on 1 single question, and preserve the second 2 questions for the methods and results section, since they deal with possible explanations of what is found.

Methods (page 4-6)
Page 4
The methods section is quite long and should be shortened
It is unclear why the authors have chosen the age of 9 as an upper limit for inclusion.
The authors do not seem to make a distinction between bronchiolitis and bronchitis. This may have caused an overestimation of the real number bronchiolitis hospitalisations in infants.

Page 5 4th paragraph
It is unclear why the authors have chosen to report readmissions (written as 're admissions', 're-admissions' and 'readmissions' in the manuscript) per birth year. In addition the authors should clarify why they only included children with a first admission before 12 months of age and readmissions within 1 year from the date of discharge.
Page 6 1st paragraph
The second sentence of this paragraph doesn't give extra information and is unclear written.
It is unclear to me why the authors add a calculation of relative average annual change of first time admissions. A linear regression model with coefficients and r-square would be sufficient.

Page 6 3rd paragraph
It is unclear to me what is meant with 'number of days to first admission', (age at admission?)

Results (page 7-9)
Page 7
The first and second paragraph, figure 1 and table 1 contain principally the same information. The second paragraph and Table 1 might be omitted.

Hospital admissions before one year of age (page 7-8)
It would be more logic to place the graphs in the same order as they are referred to in the text: i.e. asthma pneumonia and bronchitis (text)

Discussion (page 9-12)
Although the authors give a summary of possible explanations of the observed increase in bronchiolitis hospitalisations, some of these are highly speculative and none of these seems to be satisfactory. Therefore the discussion itself is quite unsatisfactory.

In the discussion the limitations of the study (i.e. the retrospective character) do not get any attention.

Page 9, 4th paragraph.
The authors state that their survey demonstrates that children tend to be younger at first admission and have fewer re-admissions in peak years. This was already stated in the results section. What is their interpretation of these findings?

Page 10, 2nd paragraph
The authors state that their observations suggest that all forms of lower respiratory illness have to be included in trend assessments. They should argument why this is an important issue.

Competing interests:
None declared.