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:** Kai-Hakon Carlsen

**Level of interest:** not specified

**Advice on publication:** Other (see below)

The present manuscript concerns an important topic, admissions and readmissions due to lower respiratory tract infections in children, including asthma, bronchitis, bronchiolitis and pneumonia. The manuscript is well written and interesting to read. The main findings are confirming previously published reports, including reports from Sweden. However, previously published reports have only covered special regions of Sweden, not the entire country.

Several points in the manuscript need addressing:

- The main drawback in design of the present study is the retrospective design, and the results are based upon register results only, with no other source of the data. This limits the conclusions to be drawn from the study, and the authors ought to underline this in the discussion.
- The authors do not cite two other important publications from Sweden within this area, namely:
- The discussion about why readmissions are decreasing. I miss the topic of treatment. During the first years of the present study, a major shift in treatment policy of asthma occurred, namely the increasing use of inhaled steroids. This has most probably helped decrease the readmission rate for asthma. Several of the studies cited, and also the studies mentioned above, discuss this important aspect. The understanding of the present study would be greatly helped by including these matters in the discussion. Perhaps the authors could obtain data from the Swedish Drug authorities on the annual prescriptions of the major asthma drugs over the same time period.
- The authors state at the end of the Discussion, that adrenaline and steroids help for the treatment of croup, but not for bronchiolitis. The basis for this is given by to citations. This statement is rather dubious, as several studies published do not agree with this statement. The authors ought to modify
this statement and look up the literature.
. The authors do not state that the study has been approved by a medical ethical committee. I
suppose that this has been done, and that not mentioning it is merely an omission. This should be
stated.

Minor point:
. In the abstract a precise statement of the primary and secondary objectives of the study has not
been mentioned; the authors have merely stated what they have done in the study. This should be
reformulated. In the Background the authors have stated their objectives by giving several questions.
A more precise statement would have been better for the reader.
. Table 1 id not easily read and could be simplified.

In conclusion: The present manuscript takes up an interesting and important topic. The paper is well
written, but revision is needed on several aspects.

**Competing interests:**

None declared.