Reviewer’s report

Title: The ecology of pediatric emergency care from 2000 to 2009 in Taiwan

Version: 1  Date: 20 December 2013

Reviewer: Joseph Zickafoose

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Major compulsory revisions:

1. Background: I would encourage the authors to discuss in the background more on how the information their study seeks to generate could be used for practical purposes, such as targeted public health, medical, or policy interventions. The last sentence of the background should be in the methods, or if redundant, deleted.

2. Methods: It would be helpful to explain why the data sets are from such a small sample of ambulatory (0.2%) and inpatient (5%) encounters. Particularly for ambulatory care, the small proportion of visits that are sampled might make it more prone to some systematic bias. It would be helpful to reference any published rationale for this sampling frame. The authors need to clarify whether emergency department visits would be captured in the ambulatory or inpatient claims.

The authors state that “findings were multiplied by 25 to represent the complete population because the data only covered 5 percent of the population.” This didn’t make any sense to me. Most commonly, the sample would be used to estimate population based rates of utilization and diagnoses. These rates with their associated errors could then be extrapolated to the total population. Alternatively, raw counts which the authors seem to be describing would presumably be multiplied by 20 for a 5% sample.

The authors do not describe any statistical analysis or testing of their results.

3. Results: It is unclear to me why the authors present results from 2000-2009 and from 2004-2009. They do not describe any rationale or added value for these different time breakdowns.

Presenting absolute counts is not very helpful. I would encourage the authors to focus their results on population-based rates.

They describe an increase in the rates of emergency department visits over time, but there is no information presented to assess the statistical significance of these results.

I would encourage the authors to organize the results with topic headings or lead sentences that can lead the reader through the results. As currently written, the results are not well organized to help the reader understand where to look for specific results or why the authors are presenting specific results.
4. Tables: I found the listing of diagnostic codes in Tables 3 and 4 unhelpful. Please put the name of the diagnosis in the table.

The use of the “5%” label on all the various findings was redundant and unnecessary. If the authors describe the sampling frame well in the methods, they do not need to label every result with an indication of the sample.

5. Discussion: The discussion should focus on the unique findings from the study and key implications for medical practice, public health, and policy in Taiwan. Currently the discussion contains too much repetition of results.

Level of interest: An article of importance in its field

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

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