Reviewer's report

**Title:** Modeling Factors Influencing the Demand for Emergency Department Services in Ontario: A Comparison of Methods

**Version:** 1  **Date:** 4 April 2011

**Reviewer:** Raynald Pineault

**Reviewer's report:**

**Major Compulsory Revisions**

None

**Minor Essential Revisions**

There are two major substantive findings that increase our knowledge about emergency department utilization. For less severe cases, (triage 4-5), having a regular physician reduces, but living in a rural area decreases the likelihood of using emergency department. These effects fail to show for more severe cases (triage 1-3). Incidentally, I did not see any reference in the text to table 5 that presents the data for triage 4-5. These two major findings add to what is currently known. Although authors control for ACG and stratify on triage scale, they don’t show what the correlation is between the two scales. Obviously, these scales don’t exactly measure the same phenomena. But it would be interesting to show the correlation. All the other determinants are in fact confounding factors. Although authors clearly show these results about the two major findings, perhaps they should give them more importance in this discussion, because of their obvious policy implication.

For example, they conclude that having a primary care physician would reduce more than 40 percent of less urgent ER visits. In Ontario, more than 90 percent of the population have a regular primary care physician. This percentage is much lower in some other Canadian provinces and consequently, the impact would be much greater.

- **Discretionary Revisions**

Presentation and labelling of Tables 2, 3 and 5 could be improved.

**Statistical review**

I do not feel adequately qualified to assess the statistics of the manuscript. Since it relies heavily on statistical modeling, the assessment by a qualified statistician is necessary.

**Quality of written English:** Acceptable
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

No conflict of interest.