Reviewer's report

Title: Definition of a Prospective Payment Scheme to Reimburse Accident & Emergency Departments

Version: 2 Date: 5 June 2013

Reviewer: Christopher Baugh

Reviewer's report:

Major Compulsory Revisions
- The "Results" section needs to contain actual data from the analysis; as currently written this section more closely resembles the "Conclusions" section
- My biggest problem with this analysis is that the proposed payment system is still activity-based and not purely prospective. The more testing that is done, the higher the payment. If the intention of the new system is to incentivize lean processes and less unnecessary testing, testing should not factor into the payment at all. Inpatient prospective payment models are based on the diagnosis and a single bundled payment is given to the hospital. I think the value in this analysis is to show that the initial triage level alone is not a good enough tool to use to predict costs (which is not that surprising, since the criteria was designed to predict clinical resource utilization, not hospital costs). Did the authors attempt to look at how well the discharge diagnosis predicted costs? I would think that the first attempt of applying the prospective payment models that are currently used in the inpatient settings to the ED setting would be to use a very similar approach (i.e., diagnosis-based payment).

Minor Essential Revisions
- There are many places throughout the manuscript where there is an extra space inserted between words
- Please avoid using the term "admissions" when referring to Accident & Emergency visits. Many readers associate an "admission" with an inpatient hospitalization, which is not your intended meaning.
- The last paragraph in the Background section on page 3 (starts with "The analysis shows..." is out of place for this section. You should not be reporting the results of the analysis until the results section.
- The term "prescriptions" typically means medications, and less often medical equipment. I think the authors mean "diagnostics" and should use that word instead.
- Asking staff to self-report time devoted to patients introduces bias into the calculations; this needs to be recognized as a limitation of the study.
- The authors need to clarify the nature of the internal price list. Is this the charge amount? The cost? In the United States, hospital price lists (called "chargemasters"
have no relationship to actual costs, and actual charges vary by insurance contract).

- The authors make the statement that "a greater time spent inside A&ED implies higher resource consumption"; I think as a gross oversimplification this statement is generally true but one can easily find examples of patients with relatively short stays that consume a great deal of resources (i.e., a severely injured trauma patient) and others that stay a very long time but consume very few resources (i.e., a homeless patient sleeping in the hallway overnight).

Discretionary Revisions

- The authors use the passive voice very often throughout the manuscript; it would read better if this was changed (i.e., "cost variables were estimated")
- The term "social planner" may not be well understood by many readers. You should use something such as "health policy administrators"
- Some of your readers may be more familiar with the ESI triage system (emergency severity index), which is a 5-level triage system commonly used in the United States. It may be helpful to explain the major differences between the color-based system discussed in this study with the ESI system.
- Please avoid the use of the work "Schemes" - this has a negative connotation. Instead, it would be more constructive to use a word like "system" or "policy".
- Please indent new paragraphs

**Level of interest:** An article of limited interest

**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