Reviewer's report

Title: Developing Algorithms for Healthcare Insurers to Systematically Monitor Surgical Site Infection Rates

Version: 1 Date: 18 March 2007

Reviewer: Nico Nagelkerke

Reviewer's report:

General
Review of Developing Algorithms for Healthcare Insurers to Systematically…Infection rates

This paper addresses the issue of the use of claims data to estimate SSI risks in hospitals. This groups has previously developed, tested and published methodology for this purpose but the use of this methodology was complicated the need to reveal sensitive patient data to analysts. In this paper they expand the use of their methodology by making specially developed SAS programs available to “payers” (e.g. health insurance companies).

This seems an excellent idea. Insurers have a strong financial interest in monitoring and lowering SSI rates in hospitals, and thus, ideally, making timely data analyses on these rates available to payers may ultimately be for the benefit of not only payers, but of hospitals and patients as well.

Unfortunately, the paper has a strong US focus despite the fact that the methodology should be of value to other countries as well.

As a statistician I have some misgivings about the ranking of hospitals based on very small numbers of procedures, but users of this methodology should be aware of this as well.

The paper is very clearly written. I see no obstacles to publishing as it is.

Admittedly, I did not have the time to test the SAS programs that came with the ms.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

None

Discretionary Revisions (which the author can choose to ignore)
Add some caveats about instability of rankings based on small numbers of procedures.Perhaps mention bayesian ranking methods.

What next?: Accept after discretionary revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests