Reviewer's report

Title: A simple statistical model for prediction of acute coronary syndrome in chest pain patients in the emergency department

Version: 1 Date: 24 November 2005

Reviewer: John Ludbrook

Reviewer's report:

General

First, I congratulate you on your usage of English - much better than that of the majority of native English speakers. One spelling error: under Acknowledgment it should be 'diagnosis'.

You make out a persuasive case for the need for a simple statistical model, and in general you handle the data collection and subsequent logistic regression analysis well. However, you do not give the regression coefficients for the terms in the model (I shall say more about this later). However, in connection with this last point, I cannot see how I, in the ED, could predict the risk of ACS in an individual patient in a meaningful way.

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

1. It would help readers who are not cardiologists if you were to define acute coronary syndrome, and indicate to them its clinical significance (eg. treatment, prognosis etc).

2. What follows is somewhere between a compulsory and discretionary revision. As I said above, it is not clear to me how the ED physician can classify an individual patient in a meaningful way. What I do in these circumstances is use the routine that Hosmer & Lemeshaw (2000) describe on pp. 87-88. On the basis of the regression coefficients estimated for the model, it is easy to calculate the odds of ACS for the individual patient; and, more useful, the % risk of ACS. Would this not be more help to the clinician who must decide on a course of action?

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

1. Spelling of 'diagnosis' in Acknowledgement.


Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.