Reviewer’s report

Title: Does managed care make a difference? Physicians’ length of stay decisions under managed and non-managed care

Version: 1 Date: 14 January 2004

Reviewer: Alastair H Leyland

Reviewer’s report:

General
This is a very interesting paper with an excellent research design. A comprehensive list of hypotheses relating to the behaviours influencing managed care are tested and the implications of the research are discussed in detail.

Discretionary revisions (which the author can choose to ignore):
Some of the hypotheses appear can be considered to be related. If LOS is shorter for managed care patients then it might be expected that the variation in LOS would also be shorter (you might expect more variation about a mean of 10 days than a mean of 1 day). Rather than using the variance, a more appropriate measure of variation might therefore be the coefficient of variation.
Tables 2-4 would benefit from the inclusion of DRG name as well as number (to save the reader having to refer back to table 1). Also main text p9 para 3.
There are potentially five levels in the model: patients are nested within the three years, with years nested within physician, hospitals and counties. How was year treated? Were separate models fitted for each year? Was a cross-classified model used to cope with the fact that physicians could work in several hospitals?
It would help if the authors made clear what the covariances that are being tested under hypotheses 4-8 are. Are these simple (crude) measures of correlation between e.g. (hypothesis 4) the proportion of HMO patients that a physician has and the variance in LOS of HMO patients for the same physicians? Why was this method preferred to modelling the variance as a linear function of the variable of interest (x_j) e.g.
Variance between HMO patients = sigma_0^2 + x_j*sigma_1^2

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct):
P6 para 1: the section in parentheses “(I have assumed…)” appears to be a private note between authors and should be deleted.
Somewhere the authors should state that the measure of variation used throughout the paper is the variance.
P41 para 1: “Regression” should read “Ordinary least squares regression”.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached):
None.

What next?: Accept after discretionary revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No

Declaration of competing interests:
None