Reviewer’s report

Title: Effective population management practices in diabetes care - an observational study

Version: 1 Date: 1 June 2010

Reviewer: Dexter Canoy

Reviewer’s report:

Summary:

This study investigates differences in the implementation of glycemic and lipid screening across different medical centers representing different management practices, and the factors that contribute to these variations. The authors observed that higher performance, as defined by the proportion of diabetic patients who underwent glycemic and lipid screening, was associated with provider alerts but associations were weaker for other factors suggested to contribute to improving diabetic care in practices. There were also patient-related characteristics (age, sex and co-morbidity) which were shown to be related to higher proportions of screening for glycemia and lipid levels. This is an interesting study as it highlights the importance of management practices in influencing care management for diabetic patients. This manuscript highlighted some of the issues of providing evidence to support care practices (and their implementation) including contextualising and operationalizing some of these principles of evidence-based care.

Major compulsory revision

This paper is generally well-written and analysed their data appropriately by taking into account various covariates. However, I suggest that the authors take into account clustering of the medical centers in their multivariate models to further strengthen their findings. I am not familiar about how this will be implemented in R but it is certainly straightforward to implement in other statistical software packages. By adding an option for clustering (by management practice or whatever variable that the authors regard as the factor that contributes to this clustering) in the regression model, they will be able to obtain less biased error estimates.

Minor essential revision

‘Rates’ may not be an appropriate word to use as there is no element of time in the denominator. The ‘rates’ seem to simply indicate proportion or percentage of screening for all patients seen in the study.

Table 3 is quite difficult to follow. I suggest that the authors modify this and present results as follows:

Table 3 – Show estimates only for ‘provider alert’ and ‘guideline distribution’
(adjusting for all the other parameters in the model).
Table 4 – Show estimates relevant for highlighting the importance of age and sex (and their relevant interactions).
Table 5 – As table 4 but focusing on age, sex and relevant co-morbidity (and their interactions).

**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.