Reviewer's report

**Title:** Changes in Glycemic Control from 1996 to 2006 among Adults with Type 2 Diabetes: A Longitudinal Cohort Study

**Version:** 2  **Date:** 8 April 2010

**Reviewer:** lawrence C Perlmutter

**Reviewer's report:**

The revised manuscript by Blumenthal et al. has been somewhat improved through responding to the critiques of the reviewers. They accepted some of the reviewers’ critiques except for what seems to be their interpretation of the issue of regression toward the mean, a topic that is constructively presented in a tutorial by Barnet et al. (2005) in the International Journal of Epidemiology.

Second, the reluctance of the authors to examine specific correlations among several dependent variables is a limitation in the data analyses. Most troublesome is their unwillingness to evaluate how changes in cholesterol might have contributed to HbA1c changes. This could have been accomplished in part through correlations followed by multiple linear regression with changes in cholesterol serving as a covariate.

Third, the data in Figure 2 is confusing. Do the data represented in the solid line include the data in the broken line? If so what’s the point of the double presentation?

Fourth, while the authors accepted the possibility that speaking English could be a proxy for Education level, they failed to treat this variable more comprehensively.

In summary, by adopting the use of correlations and a strategy utilizing moderator or mediator variables in linear multiple regression analyses, the authors could have possibly accounted for Hba1c changes rather than simply identifying decreases in HbA1c from 1996 -2006.

The manuscript opens the window to a much more “comprehensive” set of analyses and interpretations regarding long-term issues in glycemic control.

Minor Point: Figure 2#caption …("number of ....”

Dear Editor

The authors have selectively adopted several of the comments on the manuscript. However, I believe that the existing limitations in the manuscript should serve as red flags to serious readers.
Sincerely

Lawrence Perlmuter

Level of interest: An article of limited interest

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare no competing interests.