Reviewer's report

Title: A flexible Bayesian hierarchical model of preterm birth risk among US Hispanic subgroups in relation to maternal nativity and education

Version: 2 Date: 26 January 2011

Reviewer: Russell Kirby

Reviewer's report:

The authors present results of an analysis of NYC birth certificate data for 1995-2003, estimating the risk of preterm birth (PTB) as a function of maternal education, nativity and Hispanic subgroup using flexible Bayesian random-effects logistic regression. The manuscript is clear and easy to follow, and most of the comments here provide opportunities to strengthen the report.

Major Compulsory Revisions:
The authors use maternal education in years as the primary analysis variable. This reviewer is concerned about the quality of this variable as an interval level measure, especially for foreign born women who's education may have been received outside of the US and who had less than an elementary education. The authors should discuss this issue, or consider grouping women with <8 years together similarly to how they have done at the opposite end of the spectrum with 17+ year.

The authors should justify the use of data for 1995-2003 for this analysis. Since it is now 2011, and vital statistics through 2008 at least should be available for NYC, why these years? If it has to do with changes in the standard birth certificate form, discuss this and the implications for study replicability in NYC or other jurisdictions.

Minor Revisions

While the colors in the graphs are pleasing, they are difficult to differentiate when the graphs are printed as multiples on a portion of the typeset page this will be even more problematical. It might be better to make Figure 1 into two figures so that each graph will be printed at a larger size. Also make sure the colors differentiate properly if printed in black and white.

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'