Reviewer’s report

Title: Population Density and Maternal Health Coverage

Version: 1 Date: 10 September 2012

Reviewer: Stella Babalola

Reviewer’s report:

This is a well-written manuscript that addresses a topic that could have important programmatic implications if done at the national rather than cross-national level. I appreciate the details the authors provided on the methodology and the calculation of the key independent variables.

However, the interpretation that the authors gave to the coefficients associated with the log-transformed expenditure per capita is incorrect. The authors transformed the variable using log to the base of e (that is, 2.718…). In the case of the .129 coefficient and assuming that log to the base of e was used, the correct interpretation would be that a 2.7-fold increase in expenditure would produce 12.9% increase in coverage. You can also calculate the change that a 10% (or 20%, etc.) increase in expenditure would result in coverage by applying the formula: #*log(1.1) (or, #*log(1.2). Using this formula, the authors can calculate the change that would increase from a 100% increase in expenditure: #*log(2)

The greatest problem that I seem to have with the manuscript is the “so what?”. Why perform a cross-country analysis of the association of population density with coverage only for the authors to conclude on page 11 ‘As a practical matter, policy makers’ ability to manage a density score is constrained (if not nonexistent).” I completely agree with them. The programmatic and policy implications of the study are not clear.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

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