Author's response to reviews

Title: A Comparison of Two Methods for Estimating Prevalence Ratios

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Author's response to reviews:

Dear Dr. Bucceri,

Thank you for considering our revised manuscript "A Comparison of Two Methods for Estimating Prevalence Ratios" by Martin R. Petersen and James A. Deddens for publication in BMC Medical Research Methodology. We have double checked the formatting and have modified the manuscript taking into account the comment of reviewer 3. Our response is given below.

Reviewer 3: Christopher Leigh Blizzard

Minor Essential Revisions:

1. In response to my concern about the applicability of the COPY method to software packages other than SAS, the authors now state:

"For programming languages other than SAS, the COPY method may still have convergence problems. Stata is one commonly used language which may have problems. Blizzard and Hosmer[32], in response to a letter by Petersen and Deddens[33] suggest that the ML option in Stata may solve the convergence problems. This needs further testing to see how well it works." This statement requires modification in two respects:

(1) The "ML option" is not an option. It is a program (actually a suite of programs) that enables maximum likelihood estimation in much the same way that PROC NLIN in SAS can be used for optimization of a loss function (the user is required to specify the log likelihood, and to provide its first and second derivatives or accept the default of numerical approximation);

(2) The statement that "the ML option in Stata may solve the convergence problems" is overly optimistic. I checked whether estimation with Stata's ml program does solve the convergence problems for the neuralgia and death penalty datasets. It did for the neuralgia dataset, but not for the death penalty dataset. Therefore Blizzard and Hosmer would not suggest that the ML command in Stata may solve the convergence problems. It will in some circumstances, apparently, but not in others.
Response: The section was modified as follows: “For programming languages other than SAS, the COPY method may still have convergence problems. Additional research with other software would be valuable.” We also removed references [31] and [32] because they were not used elsewhere. This still addresses the reviewer’s original concern that a note on this limitation should be included.

Sincerely,

Martin R. Petersen

and

James A. Deddens