Reviewer's report

Title: A family of random-effects models for repeated ordinal responses: application to neonatal hypothermia data.

Version: 2 Date: 14 February 2005

Reviewer: Erik Pulkstenis

Reviewer's report:

General

This is a well written article that addresses a focused and important question regarding choice of link function in modeling repeated categorical data.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The authors should address the fact that their results indicate that neither the logistic nor complementary log-log link function fits the data as evidenced by lambda differing statistically from both 0 and 1. They should give suggestions as to how to make inference in this case. A decision rule as to which model to choose based on lambda and its associated standard error would be helpful to practitioners.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The authors should provide some literature review with respect to goodness-of-fit in the longitudinal ordinal response setting and if an appropriate comparator can be identified, should compare the power their approach with the existing approach with respect to detecting a misspecified link function.

The authors may wish to evaluate the operating characteristics of their procedure (power and type 1 error) through the use of simulations to see how often deviation in lambda can be detected or when it is 'detected' erroneously.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

I declare that I have no competing interests