Reviewer’s report

Title: The effect of motorcycle helmet type, components and fixation status on facial injury in Klang Valley, Malaysia: a case control study

Version: 2 Date: 12 March 2014

Reviewer: Mike Bambach

Reviewer’s report:

The goal of the paper to evaluate the effectiveness of helmets and helmet type and fixation on facial injury is a worthy objective. A good quality dataset has been collected for these purposes. The results will fill a knowledge gap and be of interest to the field.

I note a few issues with the statistical analyses that I suggest be corrected/clarified prior to publication:

1. On pg 13 it is noted that the studies whose results are in tables 3 and 4 are based on “the sub-set of the sample who sustained a facial injury”. However, also shown in these tables are results for the outcome of any facial injury. It may be that these tables contain information both from the case-control analysis (outcome = facial injury) and the case-only analysis (outcome = location of facial injury) – please clarify.

2. For the analyses of associations with locations of facial injuries (upper, middle, lower), please detail how multiple injuries to different locations were dealt with.

3. Further in Tables 3 and 4, the “no helmet” group is shown for the type of helmet variable, however does not appear for helmet fixation, type of visor and visor damage – please clarify how these data were dealt with.

4. Engine capacity, posted speed and pre-crash speed were all highly significant in the univariable model, however are not mentioned in the multivariable models, please clarify.

Level of interest: An article of importance in its field

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