Reviewer’s report

Title: The national burden of road traffic injuries in Thailand

Version: 1 Date: 13 July 2010

Reviewer: Farshad Pourmalek

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Major Compulsory Revisions

1. Methods section, first paragraph under subtitle ‘Fatal RTI victims’: “Future health was discounted at a rate of 3% per year, and we decided not to use the GBD age weighting function.” -- What was the basis for decision not to use the GBD age weighting function?

2. Methods section, paragraph under subtitle ‘Uncertainty in the number of deaths from RTI’: “The sampling uncertainty of the redistributed causes of death was quantified using Monte Carlo simulation.” -- How the non-sampling uncertainty (like the uncertainty originating from redistribution of ill-defined injury causes of death) was treated.

3. Methods section, first paragraph under subtitle ‘Disability weights and proportions with long-term disability’: “To calculate long-term YLD, we used average proportions of long-term disability across all nature of injury categories and a long-term disability weight (DW) of 0.57 from our Thai study (Ditsuwan, 2010).” -- Describe the rationale for calculating the ‘average proportions of long-term disability across all nature of injury categories’.

4. Methods section, paragraph under subtitle ‘Years Lost due to Disability’: “We distinguished two types of long-term disabilities. Firstly, the duration of long-term disabilities that we assumed not to carry a risk of dying from complications, such as amputated limbs, was obtained directly from Thai life tables [14].” -- Was differentiation between the two types of long-term disabilities i.e. without and with increased risk of mortality based on empirical evidence or clinical judgment?

5. Methods section, paragraph under subtitle ‘Years Lost due to Disability’: “Secondly, the duration of other long-term disabilities associated with an increased risk of death due to complications (including skull fracture, spinal cord injury, femur fracture, intracranial injury, burns, and injured nerves [20]) was calculated by multiplying mortality risks in the Thai life table by relative risks of mortality as used in previous burden of disease studies [11, 16].” -- This means assuming that relative risks of mortality associated with conditions in this latter group of disabilities in Thailand 2004 were equal to those in Thailand 2005 and Australia 2003 [11,16]. The former reference seems to appear to give no information about increased relative risk of mortality associated with long-term disabilities, and the latter refers to sources of empirical evidence relevant to certain neuropsychiatric conditions plus Inflammatory Bowel Disease. How was
the sensitivity of current study’s results to this assumption assessed?

6. Methods section, paragraph under subtitle ‘Disability weights and proportions with long-term disability’ -- Mention the method used for calculation of disability weights for coincident injuries.

7. Results section, paragraph under subtitle ‘Number of road traffic injuries in Thailand’ -- Provide uncertainty limits for crude RTI death rate (male, female, total) and point and interval estimate for age-adjusted RTI death rates (male, female, total).

Minor Essential Revisions

1. Abstract, Conclusions: “The use of local data on the long-term consequences of RTI enabled a more valid estimate of this burden and its uncertainty.” -- How the conclusion was drawn that the estimates based local data are more valid? While conceptual and methodological reasoning - recapitulated in Discussion section of the manuscript - do stand in favor of validity enhancement, which explicit quantitative evidence clearly indicate such increased validity?

2. Methods section, first paragraph under subtitle ‘Non-fatal RTI cases not admitted to hospital’: “The total number of non-fatal non-admitted RTI victims was obtained by applying a ratio of admitted injury victims to non-admitted RTI victims from emergency department data.” -- While such ratio surviving injury victims not referring to hospitals are not captured. Whereas this method assumes that injuries treated outside the hospital system do not result in significant disability, this assumption incepts another assumption of reasonable access and potential utilization of hospital services if needed. Even though the disability burden of this group of patients constitutes a basically small proportion of the total YLD, failure to capture it tends to underestimate the total YLD due to injuries.

3. Results section, paragraph under subtitle ‘Number of road traffic injuries in Thailand’: -- Describe the reason for not providing population rates for DALYs.

Discretionary Revisions

1. Results section, paragraph under subtitle ‘Number of road traffic injuries in Thailand’: -- Describe the reason for not providing population rates for DALYs. -- Table 3: Provide age and sex specific death rates as well.

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.