Reviewer’s report

Title: The gap in injury mortality rates between urban and rural residents of Hubei Province, China

Version: 1 Date: 1 September 2011

Reviewer: Rebecca Ivers

Reviewer’s report:

This paper is a well written paper examining injury rates in Hubei Province in China. Understanding patterns of injury mortality is, as the authors explain, crucial to inform development of appropriate prevention programs.

Abstract: second sentence – does this sentence refer to China or injury in general?

MAJOR COMPULSORY REVISIONS

Methods: In general there is insufficient information given about the methods used to collect mortality data and its likely validity.

1. Detail is required for the population sampling – how it was determined, sample size, what proportion of population covered in both rural and urban areas.

2. Detail needed on the classification of urban versus rural areas – how was health and economic data used for such classification, and what was the reference point?

3. More detail about the non-hospital deaths is required – what proportion of households are sampled, how often, and how is cause of death ascertained (via verbal autopsy? Code collects and codes the data? How accurate is it? Detail is also required about what proportion of deaths are captured using this method.

4. There is no detail on the population denominator – what has been used and how current is it?

The authors should also comment on the possibility of differential reporting, particularly by urban/rural areas (and what impact might the different sampling structure have on this?), by external cause of injury (they have commented on that for suicide and drowning deaths, but what about misclassification of other deaths eg falls in the elderly – often misclassified as other causes due to co-morbidities), and also by deaths recorded in hospital and at home. It is not clear what proportion of deaths would be expected in hospital, whether this differs by urban/rural areas and what impact that may have on findings.

The rates of injury are surprising too. The rates for RTI are relatively low by international comparisons, and the rapid increase in old age very unusual – would expect to see the rates for RTI peak in middle age. Likewise, more of a peak in childhood drowning and falls would be expected. These results require explanation.
There is also no comparison of actual rates against those reported in similar settings internationally (rather than just highlighting the relative difference between urban and rural areas) – this would go some way to strengthening the case for validity of these data.

Figures – these should be adjusted in some way so that the scale is appropriate to show peaks at younger ages – perhaps show with external causes of injury in young ages, then another for older ages.

In general, the paper is well written with a thoughtful explanation of the findings – but the lack of information on the methods leads me to wonder how much bias is inherent in the data collection system, and whether that explains the findings.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests