Reviewer's report

Title: Changing epidemiology patterns of deliberate self poisoning in rural Sri Lanka

Version: 2 Date: 13 January 2012

Reviewer: Ruchi Bhandari

Reviewer's report:

Major compulsory revision

1. Methods: Biases and confounders have neither been identified nor controlled for in the paper.

Results:

2. Page 6: “The annual population incidence for the adult population (above age 15 years) in this area was 447/100,000 while the population incidence for females was slightly higher than males (458 Vs 430/100,000).” Is this the incidence for all ages above 15 years or the age group of 15-19 years? Figure 1 on page 19 shows that the incidence for females in age-group 15-19 is 1226 per 100,000. That should bring the overall incidence for females much higher than 458.

3. Table 4: What is “Mortality (95% CI)”? Mortality data are actual data from the hospital patients from the entire hospital patient population in Anuradhapura district. Since the 95% CI has been provided for these mortality rates, authors should specify what larger population they are referring to in this estimation.

Minor essential revision

4. Title: Since the study does not cover the whole rural Sri Lanka, but only a district in Sri Lanka, the title may read: Changing epidemiologic patterns of deliberate self poisoning in a rural district of Sri Lanka

5. Methods: Page 4: “The data collection from all consecutive poisoned patients admitted into the study hospitals was started on September 2008 and continued up to January 2010.” What is the rationale for choosing this period? Since the study period was 17 months and not a whole year (1, 2 or 3), seasonal influences may affect the incidence and mortality rates.

Results

6. Page 6: “For the age group of 10 – 14 years, the estimated annual incidence was 60.9/100,000 for males and 147.7/100,000 for females.” Since data were not available for 10 and 11 year old children, how was the incidence estimated for them?

7. Page 6: “There were 21 patient records found without age and excluded from
age related comparisons.” Were these 21 patients similar to or different from the rest of the patients in other characteristics?

8. Table 1 gives \( n = 1849 + 1943 = 3792 \)
Table 3 gives \( n = 704 + 77 + 783 + 785 + 392 + 1050 = 3791 \)
So, there is discrepancy of 1 person.

9. There is also a discrepancy in the numbers in Tables 2 and 3. Table 2 has \( n \) for pesticides as 1560 but Table 3 has \( n \) for pesticides as 1564 (=704+77+783).

Discretionary revision

10. Background: Page 2: Since the aim of this paper is to “identify the changing patterns and epidemiology of poisoning” in rural Sri Lankan district, it might help to show these patterns for the rest of Sri Lanka (as a country, what is the poisoning trend for the last few years?). If data are not available for Sri Lanka, you may wish to include these patterns for other developing countries.

11. Methods: Page 3: “This study was conducted as a part of a cluster randomised controlled trial (ISRCTN73983810) of a brief educational intervention in all peripheral hospitals.” The paper does not give any information about the intervention and its impact. The intervention may have changed the incidence and mortality rate. It would help to know briefly about the intervention and how it may have impacted the results.

Results

12. The only demographic data available are age and gender. Since this is part of a randomized control trial, would there be data available on SES (e.g., education, income, or employment)?

13. It would be useful to know what was the average length of time for a patient to be in the hospital (maybe separately for peripheral and secondary hospitals, and also separately for the different poison categories).

14. It would help to know the data for sale of medicines (especially, paracetamol) and pesticides in the area (Anuradhapura district)?

Discussion

15. Page 9: Mostly all comparisons of the results are with developed countries. It would help to compare with other developing countries.

16. It is difficult to assess the generalizability of the study results – within the country and in other countries.

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

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.