Reviewer's report

Title: Road traffic injury surveillance in a low income country: translating numbers into action

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Reviewer: Rakhi Dandona

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Setting up road traffic injury (RTI) surveillance in developing country setting is not easy. The effort made by the authors in setting one up in Pakistan is indeed commendable. Sharing of this experience with colleagues in other developing countries is important and necessary, however, this manuscript falls short in detailing practical steps for the others to either follow or adapt. Specific comments are detailed below.

Minor essential revision

1. Replace “low-income” country with “developing” country.

2. Page 4 (statement with references 5 and 6) – What kind of data are being indicated here?

3. Introduction - Some data on the current road traffic injury mortality or morbidity in Karachi could be added to give context to the readers.

Major compulsory revision

Methods

4. Page 5, needs assessment

a. It is mentioned that Karachi is managed so far without an approved mass transport policy. This statement is not clear. Does it mean that there is a policy which is awaiting approval or there is no policy at all? Also, is transport covered under other policies such as urban infrastructure?

b. Only road length and numbers of hospitals which deal with trauma are mentioned. There is no mention of the “actual need” based on which RTIRP was put in place. It will be useful to know how functional or dysfunctional is the current surveillance system in Karachi because it is likely that police and emergency departments will be generating some data which may be inadequate or of poor quality.

c. How was the needs assessment carried out?

5. Page 6, strategic planning – More information is needed to provide context and practical information for the readers who may wish to attempt similar project in their country.
a. How the participants for the above were identified?
b. How long did it take for the first meeting to materialize?
c. What steps were taken to seek funding from the corporate sector? Were other sectors also explored? What are the possible do’s and don’ts that would be useful for others to keep in mind while attempting the same?

6. Page 6, data collection
a. How many staff were recruited for data collection round the clock in the 5 hospitals?
b. What is meant by on-site data collection?
c. Was the usual patient flow studied in these hospitals to ensure that majority of them were captured in the surveillance? For example – patients post crash could report/be brought to the emergency department directly; could be taken directly to the mortuary if brought dead; or could report to the out-patient department if seen elsewhere for the injury before. It is important to know what were the data collection points and how these were identified to ensure maximum data capture. If not all possible data collection points were utilized, justification for the same should be provided.
d. Since data adequacy and quality are the two major concerns in developing country setting, how were these ensured in RTIRP?
e. Since the staff for data collection was available round-the-clock, in which situations was data sought from hospital or police records?
f. Appendix 1 –
i. Vehicle involvement – Does this variable cover both the patient who reported to the hospital (victim) and the other party? What is recorded when “there is no other vehicle” other than that of the patient (for example – scooter hit a tree)?
ii. Patient was – Why details of patient vehicles are not recorded (such as motorcycle, car etc)?
iii. Helmet – It is quite common in India for drivers of two-wheeled vehicles to put the helmet on but not strap it, which is as good as not wearing one. If such phenomenon occurs in Pakistan, it will be useful to differentiate it to plan more effective helmet promotion campaigns.
iv. Type of collision – If a crash was as a result of skidding of vehicle (for example – motorbike skidded due to sand/oil/water on road), how is it captured in this form as there is no collision involved?
v. Was alcohol consumption at the time of crash is not documented?
vi. Who completed the clinical part of this form?

7. Page 7, geographical and root cause analysis
a. How was high frequency of crashes defined for a site?
b. How many crash sites were identified, and in how many was it possible to
carry out the road safety audit?

c. How necessary is the GIS when the resources are limited? In your experience, would only proper documentation of the site have sufficed for action?

8. Page 7, dissemination of information – Please cite specific government and non-government organizations (sectors and not names) to which these data were disseminated. It is neither possible nor necessary to inform all government and non-government organizations of these data.

Results

9. How was RTI defined? Ws any injury resulting from a road crash considered as RTI irrespective of severity of injury?

10. It should be specified that the RTI incidence is based on the injuries reporting to these hospitals, and not population-based incidence. For surveillance, this is reasonable but should be clearly mentioned.

11. Were the data post establishment of RTIRP very different from those that are available in routine from hospital or police records (despite inadequacy or quality)? What extra or better information is RTIRP able to provide?

12. It is quite likely that there would be data gaps in the data collection form. Can some idea be given about what kind of gaps the authors had to deal with?

13. Page 8, paragraphs 2 and 3 - Though in the previous paragraph on this page it is mentioned that the aim of this manuscript is to present impact of setting up RTIRP, almost no data are presented on it. These paragraphs are generic statements of interventions or strategies put in place but do not suggest or highlight that these were as a result of RTIRP. More information is needed.

In addition, it is important for the readers to know how where these changes materialized. How much time did it take for a suggestion to be implemented in real time, and how the various officials were persuaded to do so? Such an understanding is imperative for those who plan to attempt this elsewhere.

14. Setting up of the central ambulance system and of the RTI prevention centre are indeed very important and desirable outcomes of this project. Therefore, it is important that this experience is shared in a manner that can be of more use to the others.

15. Cost of surveillance – More specific data are needed on these costs. Even though the time by many was volunteered and the space provided by an institution, some costing of it needs to be taken into account to get complete picture. Cost can be presented as a break-up for the various components – planning, data collection, central monitoring cell, data dissemination etc.

Discussion

16. This section is quite generic including the challenges encountered. Please add some specificity based on the comments above.
17. It is not clear whether RTIRP is a standalone project or there is reasonable ownership of it by the government or other relevant stakeholders?

18. In terms of the impact of RTIRP, has it resulted in improvement of RTI documentation in hospitals where the project was implemented?

19. Again, was it possible to improve data capture in police and hospital records to achieve similar outcome rather than setting up RTIRP in a setting with poor resources? Also highlight specifically the issues related to sustainability of this project.

**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