Author’s response to reviews

Title: Ambulance use is not associated with patient acuity after road traffic collisions: a cross-sectional study from Addis Ababa, Ethiopia

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Version: 1 Date: 09 Jan 2018

Author’s response to reviews:

January 9, 2018

Paul Jennings, PhD
Associate Editor
BMC Emergency Medicine

Dear Dr. Jennings,

Thank you for reviewing our manuscript “Ambulance use is not associated with patient acuity after road traffic collisions: a cross-sectional study from Addis Ababa, Ethiopia” (MS: EMMD-D-17-00105). We appreciate the reviewers’ constructive feedback regarding our work, and have addressed each of their comments in the itemized response on the following pages.

Our manuscript carries important and timely implications for prehospital and emergency health system planners in resource-limited settings like Ethiopia. We show that, despite intensive investments in the emergency medical response system in Addis Ababa, ambulance transport to the city’s largest trauma hospital is not associated with patient acuity. Rather, our data suggests that low-acuity inter-facility transfers instead occupy most ambulance capacity. Accordingly, we
argue that investments in prehospital transport systems should be paired with thorough evaluation and evidence-based utilization protocols.

All authors have reviewed the revised manuscript, and all agree to the final submission. We agree to the terms for submitting this revision as described in the Editorial Policies of BMC Emergency Medicine, and hope you will consider this piece for publication in your journal.

Sincerely,

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REVIEWER 1 (Miklosh Bala, M.D.)

COMMENT: The article is important in promotion of injury prevention from RTA and highlighted the importance of prehospital trauma system. The article focused mostly on demographic data and not specific injuries. This is probably due to insufficient trauma registry and communication. The authors very well described the current situation in Addis Ababa and proposed steps to improvement. It is probably important to other African countries. I would ask the Editor to accept this paper without further revision.

AUTHORS’ RESPONSE: We thank Dr. Bala for his kind words regarding our work.

REVIEWER 2 (David Peran)

Abstract:

COMMENT: Page 2 - line 10 - "road traffic accident" These days this term was replaced by the "road traffic collision" (definitely in UK) - because these accidents are not always classified as accident. (If decide to change it from RTA to RTC, then in whole manuscript).
AUTHORS’ RESPONSE: We thank Dr. Peran for his insight regarding the evolving nomenclature for road traffic collisions. In accordance with his recommendation, we replaced the term “Road Traffic Accident (RTA)” with “Road Traffic Collision” throughout the entire manuscript, including the title.

COMMENT: Page 2 - line 12/13 - The sentence "The primary outcome was ambulance arrival." seems not to be in context. The "outcome" means "result", but here it is more in the meaning of information source or data for analysis.

AUTHORS’ RESPONSE: We appreciate the reviewer’s concerns regarding the use of the term “primary outcome.” Here, we refer to the “outcome” to mean the clinical (prehospital) endpoint against which patients were analyzed. We feel this is important information to include in the Methods portion of the abstract, in order to provide our readers an understanding regarding the structure and focus of our analysis. However, to make this phrase clearer, we have changed it from “primary outcome” to “outcome of interest.”

Background

COMMENT: Page 4 - line 22 - What does "lower-resource approaches" mean in the environment of LMIC. I can imagine the ambulance services in the meaning of prehospital emergency care or patient transport ambulances. Maybe this part might be more described for those out of Africa.

AUTHORS’ RESPONSE: As discussed in greater detail in our Reference 6 (Kobusingye OC, et al.), in some settings where access to formal ambulances is severely lacking, alternative lower-cost means have arisen. We have added an example of one of these (modified motorcycles), in order to provide clarity for readers not familiar with the sub-Saharan African context. Other examples include bicycle ambulance and modified taxis.

Methods

COMMENT: Page 6 - line 4/5 - August 22nd¬, March 9th

AUTHORS’ RESPONSE:

We have corrected the text as suggested by the reviewer, such that it now reads: “August 22nd 2015 to March 9th 2016”.
COMMENT: Page 7 - line 10/11 - You are describing that the triage acuity scores was grouped into three categories, but later on (especially in the Table 1) you are working with the original 5 terms (but grouped according to the categories - I know). I will suggest to unify the terms used across whole text for better understandability of the results.

AUTHORS’ RESPONSE:

We thank the reviewer for this astute observation. To improve consistency, we modified all Tables so that triage is now presented in three categories (low, moderate and high acuity). To provide increased granularity for interested readers, we have decomposed “high acuity” into its three components (“very urgent,” “emergent”, “dead on arrival”) in the footnote of Table 1.

Results

COMMENT: Page 8 - line 14 - "Most RTA patients (65.9%)" according to the Table 1 it is 66% (42.5 + 20.4 + 3.1).

AUTHORS’ RESPONSE:

Once again, we thank Dr. Peran for his close review of our manuscript and tables. In the text, we stated that 65.9% of patients were referred to AaBET Hospital from other institutions, but in Table 1 the sum of different referral sources added to 66.0% (42.5% from government hospitals, 20.4% from health centers, and 3.1% from private institutions). In Table 1, the proportion of patients from health centers should have read 20.3%, bringing the total percent of patients referred in Table 1 to 65.9% (same as text). We have made this change in Table 1.

COMMENT: Page 9 - there is no reference to the Table 3 in the text - I suppose that the reference might be in the chapter Inter-facility communication.

AUTHORS’ RESPONSE:

We have added reference to Table 3 on page 9 (line15).

COMMENT: The references to tables across text are bold. Sometimes not…

AUTHORS’ RESPONSE: We have reviewed all references to Tables and Supplemental Tables and ensured all are bolded in the revised version.
List of Abbreviations

COMMENT: Page 17 - not all of them are listed here.

AUTHORS’ RESPONSE: The following abbreviations were added, to ensure all abbreviations used in the text or tables are now defined in the List of Abbreviations.

- aOR – Adjusted Odds Ratio (page 17 - line 13)
- CI – Confidence Interval (page 17 – line 14)
- ICU – Intensive Care Unit (page 17 – line 16)
- SDGs – Sustainable Development Goals (page 17 – line 20)
- SPSS – Statistical Package for the Social Sciences (page 17 – line 22)

Review Summary

COMMENT: Overall, this manuscript is well-written and can be used as a good start for the changes in the system of care in Ethiopia. The methodology is well described. Some minor changes (maybe even essential for better understandability of the results) needed before accepting.

AUTHORS’ RESPONSE: Once again, we thank the reviewer for his very close review of our manuscript, and for his many constructive comments that have helped improve the quality of our piece.