Author’s response to reviews

Title: The Emergency Medical System (EMS) response to Iraqi pilgrims’ bus crash in Iran: A case report

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Author’s response to reviews:

Dear reviewers:

Thank you for your great attention and care in reading and commenting on our manuscript. We did our best to modify our article based on your valuable comments. Please kindly see the following answers we have provided for your notes/comments and follow the changes made in the manuscript.

Thank you again,

Reviewer 1, Dr. Emilie Calvello-Hynes:

1- Major grammatical errors and difficulty in understanding the content due to sentence structure.

- Thanks for your valuable consideration. The article has been translated by the English editor. However, please let us know if you have any problem with understanding the edited content of the manuscript.

2- RTA is no longer the preferred term; please use road traffic injuries (RTI).

- RTA has been replaced by RTI.

3- Some of the quotes are difficult to understand, calling into the question the quality of translation from Farsi to English.
- It has been done.

4- This study would be strengthened but a much larger N with inclusion of different mass casualty incidents participants. As the authors state, this occurs with some frequency and thus should not be difficult to obtain.

Line 43 - reference how many number of

Should include a paragraph on what the current state is of the emergency care system is in Iran.

Line 40 - how do ambulance busses and ambulances differ?

Setting should be moved likely to background.

Explanation need inclusion of why the various responders listed under "setting" headings were not included in interviews.

- Based on the reviewers’ comments, the article format has been changed into case report and many sections of the previous format of the qualitative study has been removed in the new format of case report.

5- Explanation required for page 3 line 18 "hearses without a 3 digit-number.

- This part has been deleted due to changing the previous format into case report

6- Description of setting should include how far the hospital was, whether all casualties were transported to the same hospital, how far away the hospital was from the scene (assume Malayer city?)

- Please see the table 1 and 2 in which the characteristics of time intervals, distances, EMS response to the incident and Injury type of victims have been illustrated

7- No mention was made of type of software used for analysis or inter-relator reliability.

Field observation should not be used as a term for an EMT who was part of the response. Observation suggests prospective data collection, not recollection of an event the researcher was participatory in.

Do not require the sentence under data analysis that states that word-processing software was used.
Trustworthiness - I do not believe this is standard. If this was the framework used then further explanation is required regarding definitions. Sentence 40 is problematic ("personal interest of the researchers? and unclear.

Ethical considerations: did any participants leave prematurely? If so, how was their data handled?

Suggest different organization as multiple overlapping themes; Human Resources could include: management, training, psychological burden, compensation.

ICS should be included under coordination as separate and distinct from national disaster management structure.

Cultural challenges: Not enough information was given to convince the reader this was "cultural". More specific examples of behavior are required. It was unclear what "impolite calls" meant.

I would consider this public education and not rooted in cultural applicability.

EMS Management: initial paragraph not required. Please be specific regarding what "relief station" means.

Human Resource management: please see comment above. The term "scientific" is inaccurate. Consider formalized training or evidence based practice.

Facility Management: insufficient information here to describe issues with the facility.

Issue with consumable items? non-consumable?, ambulances, the dispatch buildings themselves. Unclear whether these are always house in hospital. P6 quote appears to be a fragment. If only about the hospital, was EMS personnel used at the facility upon arrival?

Corpse management (note spelling): More information required regarding "legal support" required. The quote regarding confirmation of death is an important one.

Functional skills: can be included in newly proposed Human Resource section and included under training.

Incident management by police: More information required.

Coordination: No mention was made previously about NGO response. Needs clarification of when and where they responded. Need more overall clarity about how EMS and the hospital are connected.

Management of Education: should be under human resource category. ICS should not be included here unless making a point about educating to an ICS.
Flow diagram should not be employed here as construct: Essentially this should be a list with headers and different subtopics. Some of the subtopics are redundant.

Limitations are very notable with this report and should be listed as such: lack of inclusion of police and crane operators, lack of inclusion of community, translation issues, number of participants etc.

- According to the reviewers’ comments, the article format has been changed into case report and many sections of the previous format of the qualitative study have been removed in the new format of case report.

8- I would recommend a table of conclusions and recommendations.

- The lessons learned in this case have been mentioned at the end of the discussion section.

Reviewer 2, Dr. Fabian Kooij:

1- The authors report on the monodisciplinary evaluation (only EMS) of a multi casualty incident with 46 victims treated by 10 EMTs in 5 ambulances. The authors did a commendable effort to structure their evaluation using a structuring process introduced by Graneheim and Lundman in 2004. Obviously a lot of effort and work went in to this.

Also, I think a word of respect to the EMTs involved is in order. They had to triage, treat and transport 4 to 5 patients per person (or 9-10 per two person team) in difficult circumstances and undoubtedly did the very best they could.

Interesting as the manuscript may be, in my opinion this is not original research. The authors actually did a very thorough evaluation of one particular incident. In my country, such an evaluation (albeit probably not exactly as structured) would be standard practice after any major incident. To me, the manuscript would probably be more suited as a case report, showcasing a very structured way of evaluating a major incident.

Viewed as an original research article, it has a number of major problems. It lacks scientific novelty, there is no scientific question posed and most of the conclusions are not supported by the data presented.

The content presented show a fairly thorough (albeit one-sided) analysis of what came to pass during the handling of a particular motor vehicle accident with 45 victims. The manuscript would probably significantly gain in nuance when the same structured process would also include the firefighters, police officers and crane technicians that were apparently also present at the scene. Such a more complete evaluation would also increase the relevance to anyone not involved in prehospital EMS in Iran.
Each paragraph of the results section is written along a structure that boils down to making a number of statements and then supporting this statement with a quote from one of the EMTs interviewed. In itself this is not a problem. However, the boldness and strength of some of the statements is way too much for the level of evidence provided by an interview. At the very least, the statements should include something along the line of "the EMTs interviewed seem to think that …" instead of "Based on data ….

As an example, I will take paragraph 2-3. To support the statement that insufficient dispatching operators are employed, one could expect numbers on the waiting time before a call is answered, how many missions are waiting to be dispatched or average waiting time between the call and the first attempt to dispatch. For the statement that insufficient EMTs are on call, numbers on the waiting time between the first attempt to dispatch an ambulance and the actual dispatch of an ambulance could be an example.

The absence or presence of physicians on scene is something the international EMS community will probably never finish discussing and the evidence for it is ambiguous at best.

In the manuscript, all of these statements are presented as facts and then supported by a quote from one of the EMTs interviewed. Even if all 10 of the EMTs said something along this same line, it would still be insufficient scientific evidence for such strong statements. This is a major issue and permeates throughout the manuscript.

From the interviews, it is simply impossible to reach any firm conclusions regarding these subjects.

- Based on your valuable comments, the article format has been changed into the case report.

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2- Summarized in one sentence: please rewrite the entire manuscript so that the certainty and strength of the conclusions and statements are in agreement with the actual data presented.

- Since the article format has been changed into case report, would you please consider the edited one?

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3- The general tone of the article comes across to me as fairly reproachful. This does not invite the reader (or at least: it didn't invite me) to accept the conclusions or even to read on. I would suggest rephrasing the entire article in more neutral wording. Words like insufficient, inadequate, unsuitable and inappropriate seem quite strong for some of the issues addressed. Multiple such words are in each paragraph. Paragraph 4 and 5 come across as an accusation to the police officers and firefighters that were on scene.

- it has been modified based on your comment as much as we could
4- Had I been one of them I would for sure not be happy reading that. This comes back to including the firefighters and police officers in the evaluation.

- We aimed to report Iraqi pilgrims’ bus which rolled over and the response of emergency medical services to this incident. Although, the functions of the police and firefighters as collaborative organizations interrupted the EMS functions at the scene, the firefighters and police have been excluded in the new format of the case report.

5- The English language used in the manuscript would probably benefit from a native English speaker revising it. There are numerous grammar and wording issues. Possibly, even the reproachful tone I perceive is the consequence of incorrect wording or grammar.

- Thanks for your valuable consideration. The article has been translated by the English editor. However, please let us know if you have any problem with understanding the edited content of the manuscript.