Reviewer's report

Title: Systematic reporting to improve the emergency medical response to major incidents: a pilot study

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Reviewer: Scott Goldberg

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I commend the authors of the manuscript Systematic reporting to improve the emergency medical response to major incidents: a pilot study on their efforts to highlight a real concern in emergency medical response. Objective reporting of major incident metrics and lessons learned is a valuable resource, and the authors strive to highlight one potential avenue for such reporting. However, there are substantial concerns with the manuscript as it is currently written. With some reworking, it may be acceptable for publication, but as it stands currently I have some reservations.

The background is well written and highlights the scope of the issue and the need for a database for objective reporting of major incidents. I was slightly confused as to why climate related disasters were called out specifically, however the background is otherwise well written.

The methods section is lacking important details. The manuscript revolves around an evaluation of a database housed at www.majorincidentreporting.net. Additional information pertaining to this database are essential. Who inputs data into the database? Who maintains the database? What are the authors' affiliations with the database? How is the database funded? Is there any conflict of interest? How is data validity and integrity assessed? When was the database created? How much of the data is publically accessible? A more robust description of the database is necessary for an informed analysis of the following sections of the manuscript.

The authors state that "quantitative data on a set of key variables" was collected. What variables are present in the database, and what percentage of these variables were analyzed? Further, the
database evaluates data from "major incidents." However, "major incident" is not defined. This is a critical piece of information necessary for establishing external validity.

The discussion section of the manuscript highlights some important points. Specifically, the authors note "this study shows how results could be analysed to develop and later test hypotheses." This is an excellent point and I might suggest this be the main focus of the manuscript. This database has the potential to guide emergency response to major incidents and could be a valuable resource. However, the authors evaluate eight very different major incidents occurring in very different geographic regions with vastly different emergency response systems. It might be more useful to highlight the lessons learned from each of these incidents as opposed to comparing these incidents to one another. This manuscript would be improved by focusing on a descriptive analysis of the database and its potential impact on emergency response as opposed to focusing on a limited statistical analysis of this small data set.

The authors might seek to address some of these concerns in the limitations section. This section does note that the "number of reports analysed is small and heterogeneous" and there is the potential for bias. However, highlighting the vastly different emergency response systems, training of providers, incident type and duration, etc. is also important in recognizing the substantial limitations of this data set.

The conclusions are well written and I agree with the authors that "the findings of this study highlight the importance of systematic reporting in major incidents and the potential advances that could be made." Overall, I think this database has potential utility and I applaud the authors for sharing this with the broader medical community. However, overall, this manuscript would be better suited to a descriptive analysis of this database and a discussion of its potential utility, as opposed to the current statistical analysis of a very small, heterogeneous data set of questionable validity.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.
No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
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