Reviewer’s report

Title: Why Acute Ischemic Stroke Patients in the United States Use or Do Not Use Emergency Medical Services Transport? Findings of an Inpatient Survey

Version: 0 Date: 30 Sep 2019

Reviewer: Gerard Fitzgerald

Reviewer's report:

Thank you for asking me to review this paper. It is a relatively straightforward survey seeking to identify the factors that appear to influence EMS use by patients with acute ischaemic stroke. The survey respondents were patients who had been diagnosed with an AIS and was conducted 2-7 days after admission to hospital.

The methods and analytical techniques are clearly outlined, and the findings expressed clearly.

My only significant observation is that the calls ot action are predicated largely on these patients being described as having chronic disease. This may well be true. However, AIS may be the first presentation of atherosclerotic vascular disease and thus recommendations focussed on the primary care advice to patients with chronic disease may be limited. It may be more useful to include patients with adverse risk factors (smoking, hypertension, Diabetes etc).

May I make a number of relatively minor observations for consideration by the authors:

1. Financial concerns are often lowly cited as a significant factor in emergency medicine even in jurisdictions that do not have universal (fee free) access. However, this should be treated with caution. At the macro systems level there is mixed evidence. ED utilisation rates are higher in the US than in jurisdictions such as the UK and Australia that provide free (at the point of delivery) ED access. Other evidence suggests that bystanders and family members may influence such decisions; in either direction. Perhaps a brief discussion on the US context may be helpful for an international readership.

2. Was the survey pilot tested prior to its use?

3. On page 9 you mention the survey was self-administered. Please include here how (by touchscreen mentioned in the abstract)

4. The survey included less than 10% of the patient population. I realise comparisons between the survey population and the patient population were done to test representativeness but it may be worth commenting a little more on this relatively low response rate for a survey administered
by research staff. Additionally, comparisons between the sample and population include do show substantial differences in age gender, race and stroke severity. In particular, stroke severity would appear to be a major factor in determining EMS use. It would be worth discussing how the findings of this survey may inform the management of the other 90% who did not respond.

5. The recommendations include public awareness of stroke and the value of EMS use. The authors may be aware that there is considerable concern for increasing EMS demand in publicly funded jurisdictions and so balanced messages are important for an international readership. The design of those messages however, could be informed by the findings of research such as this. Messages may need to deal with the perceptions of severity, costs and remoteness.

6. The paper did identify a group of patients who contacted their physician's office to be told not to call EMS. The authors may consider additional research to find out why this is so and to recommend more strongly including this element into the professional awareness programs.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

No conflicts

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal