Reviewer's report

Title: Triage vital signs predict in-hospital mortality among emergency department patients with acute poisoning

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Reviewer: Tzeng Jih LIn

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1. On line 3, paragraph 3, session of results:
The most lethal agent associated with high in-hospital mortality was paraquat (OR 20.8, 95% CI,11.7-37.0), followed by carbamate (OR 9, 95% CI 1.5-55.1), amphetamine (OR 6.8 95% CI, 1.2-37.7), and digoxin (OR4.7 95% CI, 8-12.3). Why did the poison agents of data with “OR” represent the in-hospital mortality but not the fatalities do in Table 2?

2. Excluding the paraquat changes the variation of “Triage vital signs” in Table 1. Excluding different characters of poison agents may also change the variation of “Triage vital signs”. Some poison agents have characters of bradycardia such as calcium channel blocker, beta blocker and cholinergic drugs. The other poison agents have characters of tachycardia such as amphetamine, cocain and TCA. The comparison of HR between fatalities and survivors in Table 1, Table 3, Figure 2 and Figure 3 may be influenced by the numbers of the different characters of the poison agents. There are the same points in blood pressure, temperature and respiratory rate. The bias should be considered.

3. The authors should show the percentage of mixed drugs in this article in Figure 1. The reader can understand the validity of the study. In the table 2 and table 3, the cases with mixed poison agents should be deleted. Otherwise the results can not be represented for the poison agents.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'