Reviewer’s report

Title: Community Paramedic Point of Care Testing: Validity and Usability of Two Commercially Available Devices

Version: 0 Date: 06 Dec 2018

Reviewer: Ian Russell

Reviewer's report:

Thanks for useful paper, which will help National Heath Service in United Kingdom (UK), the home of BMC Journals. To enhance rigour & readability, please address these issues (* denotes methodological):

(1) Line 164: in the UK we say "took blood" rather than "had a blood draw".

(2) Line 167 & several other places: Shakespeare used "compare A to B" to mean "liken A to B" & "compare A with B" to mean "contrast A with B". British books advising on English usage support this useful distinction. Please consider adopting it.

(3) Lines 173 & 174: rather than "fewer field blood analysis device-logged errors occurred in i-STAT compared to epoc", I offer "fewer errors in analysing blood in the field occurred with i-STAT than with epoc".

(4*) Lines 174 & 175 & several other places: in comparing i-STAT with epoc, it will help readers to follow the "Consolidated Standards Of Reporting Trials (ConSORT)" by reporting a confidence interval (CI) for the difference in error rates that includes zero rather than leave them to combine separate CIs for the 2 rates.

(5) Lines 176 & 177: as these Conclusions will attract most readers, they need to be more friendly to them.

(6) Line 221 & other places: please avoid using the forward slash as an all-purpose conjunction & say "patients or results".

(7) Line 238: please omit ", in terms of validity," which confuses this otherwise clear sentence.

(8) Line 261 & 264 & other places: please use "program" for computer programs & "programme" for programmes of work.

(9) Line 264: does "using six non-transport capable CP units" mean "using six vehicles that cannot convey patients"?

(10) Line 277: please substitute "On scene" for "While on-scene", thus avoiding both attaching that phrase to "a portion of blood" & the superfluous hyphen.
(11) Lines 315, 332 and other places: please remove more superfluous hyphens.

(12) Lines 316 to 320: please rewrite this indigestible sentence.

(13*) Lines 340 to 342: please elaborate these condensed methods.

(14*) Lines 345 to 347: British version of Good Clinical Practice strongly recommends avoiding Excel in randomised trials (which includes this study) as it generates no audit trail. Nevertheless I should be willing to publish this useful paper provided the authors advise readers to avoid this methodological weakness in Limitations.

(15*) Lines 349 & 350: as the Normal distribution is robust to small departures, it would be more usual to say "medians & inter-quartile ranges for data that clearly diverge from normality".

(16*) Line 430: in accordance with ConSORT (also mentioned in comment 4) please add confidence interval.

(17) Lines 469 & 470: this sentence reports a Result rather than a point for Discussion.

(18) Line 482: what is "cold-chain" please?

(19) Line 572 to 574: not many readers will understand this sentence.

(20) Line 593: please write "calculation verification" in full throughout!

(21) Line 630: please use BMC reference style, which does not include issue number, throughout.

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.

Yes

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 am able to assess the statistics

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

Needs some language corrections before being published

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