Reviewer’s report

Title: Methodological standards for the development and evaluation of clinical prediction rules: A review of the literature

Version: 1 Date: 20 Feb 2019

Reviewer: Maarten van Smeden

Reviewer's report:

I thank the authors for thoroughly revising their document according to the requests made by the reviewers and editor. In my view, this paper has improved and will be an important paper for the literature. I have only a few more remarks on this paper.

L130: it is unclear who is proposing this this new criterion. I'm definitely not in support of it (which is okay). I'm fine with the authors proposing this but the authors should make clear this is their own opinion. For instance, they may include: we take the position that…

L383: I disagree strongly with this new section. The authors propose a new 1 in 10 rule for the use of penalized regression. The reference given (Pavlou,BMJ) also provides no evidence to support such a rule. Moreover, such a new rule is contradicted by my own work (van Smeden, SMMR, 2018) and that of others. In fact, the benefit of penalization is often far beyond 1 in 10, but dependents not only on EPV, but also on the number of predictors, the events fraction, the total sample size, the distribution of and correlation between predictors, the sparsity of predictor variables, the presence of missing values and the size of the coefficients. Please avoid such rules of thumb as they do more harm than good. In general, I don't see any reason to avoid penalization regardless of sample size.

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An article of importance in its field

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

Acceptable

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