Reviewer’s report

Title: Repeatedly measured predictors: a comparison of methods for prediction modelling

Version: 0 Date: 28 Nov 2017

Reviewer: Romana Pylypchuk

Reviewer’s report:

The authors have presented several approaches to utilizing repeatedly measured predictors in prognostic models with binary and continuous outcomes. Using a real-life example based on routinely collected data from child health care services, the authors show that the choice of method depends on a number of practical and theoretical considerations, and therefore can vary in different situations. The main strength of this study is that it presents an important prognostic modelling issue in a systematic and clear manner, and using an easily understandable example.

A few minor points to consider:

1. The authors applied the broken stick method to deal with the irregular time intervals of the predictor measurements, a common issue in a lot of health-related datasets. Would it be possible to add some more information about the broken stick method: its advantages, limitations etc. - to help readers gain understanding of when this method is most suitable?

2. Lines 121-122: The authors mentioned using the LMS-method to convert BMI into BMI-SDS. Would it be possible to briefly explain what the LMS method is about, as reference 9 is not an English language document?

3. Line 402, Table 3: I was not sure what the distinction was between "characteristic of the method" and "strong characteristic of the method", would it be possible to clarify?

Level of interest
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An article of importance in its field

Quality of written English
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