Reviewer’s report

Title: An ontology-aware integration of clinical models, terminologies and guidelines: an exploratory study of the Scale for the Assessment and Rating of Ataxia (SARA)

Version: 0 Date: 28 Jul 2017

Reviewer: Nicole Vasilevsky

Reviewer's report:

This paper describes a use case for integrating ontologies into clinical archetypes to enable inferencing of patient phenotypes. This study is very relevant and useful for promoting computational analysis of patient phenotypes.

Comments are below:

Introduction:

In the introduction, you start discussing the HPO on page 5, but you should properly introduce it first. There is a more recent paper for the HPO as well, please reference: https://www.ncbi.nlm.nih.gov/pubmed/27899602.

Page 6, line 28 - revise to "The main goal of our work is [to develop] an electronic rating scale..."

Page 6, line 31 - revise to "the EHR standards, and supporting automated inferencing of patient phenotypes by taking advantage of semantic web technologies." (advantages -> advantage)

Page 7, line 2 - 'inference' should be revised to 'inferencing'

Page 7, line 10 - 'specially' should be revised to 'specifically'

Page 7, line 13 - revise to "The goal of our project is [to integrate openEHR...]"

Page 8, line 13 - quantifying should be quantify

Page 8, line 18 - what is the different between date and day?

Section 1.6 has footnotes that do not lead anywhere.

Overall, the introduction is a bit repetitive, I suggest re-reading and revise it to make it more concise.
Methods:

Instead of using the word binding, I suggest using mapping.

A portion of an ontology are often referred to as a 'slim'.

Page 13- appropriated should be appropriate

If you need new human phenotype classes, you should make term request to the HPO: https://github.com/obophenotype/human-phenotype-ontology

Results:

How does one use the SMS, is the software available for download?

Figures:

The figure legends need to be more descriptive.

Figure 2 - metadata is one word

Figure 5 - Should make each panel A and B.

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:

Not suitable for publication unless extensively edited

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