Reviewer’s report

Title: The medical diagnosis as a linguistic game

Version: 1 Date: 31 Dec 2016

Reviewer: Joaquim Felipe

Reviewer's report:

The paper describes the implementation of a computer system, designed to automatically generate diagnosis from clinical annotation, based on semantic relationship between diseases and related attributes, such as symptoms, medical events and clinical data.

In my opinion, this is a relevant work, but I have some objections:

1) The text in general is too succinct. Giving more details on the proposed method and its implementation could improve the paper readability.

2) Related work should be described and compared with the proposed work, leaving clear its contribution to the state of the art.

3) The authors say that their system differs from others previously proposed, by using only linguistic elements, in contrast to probabilistic or Bayesian approaches. But they should compare their results with the results obtained with those approaches, in order to prove its effectiveness. Could, for example, the combination of linguistic information with statistical methods produce better and more reliable results?

4) I think that the participation of doctors in the process of evaluating the results is important. Considered as gold standard, they could qualify and validate the results.
5) To what extent the success rate obtained (about 47%) can be considered good or acceptable in a diagnostic context? This should be discussed.

6) Why is not there a prototype of the system available? It would be an important tool for us to assess the system.

**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.

No

**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.

Not relevant to this manuscript

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

Needs some language corrections before being published
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