Reviewer's report

Title: Leveraging workflow control patterns in the domain of clinical practice guidelines

Version: 3  Date: 20 January 2015

Reviewer: Dionisio Acosta

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Essential Revision

In Answer to Reviewer 3 Comment 2 the authors state:

“Note that in our work the decision on the suitability of a pattern is only based on the identification of the pattern in the analysed CPG texts … Our search is driven by the CPG text and we do not consider activities at levels of granularity different from what the CPG text describes explicitly.”

As stated in the paper, lines 85-88, CPG are aimed at clinicians and assume large amounts of specialised background knowledge. Therefore it can be argued that the process described above depends on the knowledge engineer understanding of the CPG. Please see the following example: Breast cancer guidelines advise fine needle aspiration (FNA) in several scenarios to inform subsequent diagnostic and treatment recommendations. The FNA outcome is used as the maximum assessment for all lesions. The guideline presupposes that the audience understands it as a procedure ‘per lesion’ and the ‘maximum assessment’ or ‘worst case’ is selected for recommending, for instance, an MRI, hence none of this is explained in great detail. This assessment process can be clearly modelled as a multiple instance pattern, one instance per lesion. Another example is using multiple execution threads to model concurrent adjuvant chemotherapies as indicated in the guidelines. These examples show that patterns deemed as unsuitable in the paper, can clearly be used to model the guideline decision making and workflow knowledge content, depending on the interpretation of the guideline text and the knowledge engineer intention. The level of detail being a decision of the knowledge engineer and not a feature of the workflow pattern. The authors should carefully reflect about this in the text to contextualise their work and avoid the reader reaching misleading conclusions, such as rule out the alluded patterns for modelling clinical guidelines.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

Deontics Ltd. (minority shareholder < 1%)