Reviewer's report

Title: A Controlled Trial of Automated Classification of Negation from Clinical Notes

Version: 1 Date: 2 November 2004

Reviewer: Sam Heard

Reviewer's report:

1. Does the software address a novel task?

I believe so. This is not a new problem, but I know of no other team that are further advanced in a real clinical setting.

Alternatively, if there is already software available that performs this task, does the software outperform it in terms of speed, reliability, efficiency, or breadth of application?

There is no indication of speed, only reliability.

2. Is it easy to use?

N/A

3. Does it satisfactorily address the task or application the authors intend?

This study is an exploratory evaluation of a method used in natural language processing – it is of great interest.

4. Is the software freely available for non-commercial use (note that this is a condition of publication)? And is the availability of the software and any restrictions on use clearly stated in the manuscript?

Not as far as I know

5. Does the manuscript clearly describe the problem the software is designed to address?

Yes

6. Does the manuscript clearly describe how the software is implemented?

No – but it is not necessary

7. Does the manuscript clearly describe how the software performs and its advantages / limitations over existing applications?

It goes someway towards this – offering a reporting method for other tools.

8. Does the manuscript state the software's operating requirements?

No

9. Are the discussion and conclusions of the manuscript well balanced and adequately supported by the data?

The introduction has a lot of repetition – see below. The data is not well presented and in particular, there is no real analysis of the misallocation of negation – apart from the fact that SNOMED did not have the terms. It would be interesting to know what new forms of negation were discovered – and what changes to the ontology have been proposed to correct this.
10. Do the title and abstract of the manuscript accurately convey what has been found?
Yes

11. Is the writing acceptable?
The introduction is repetitious – and I have suggested some simple improvements in the data presentation (tables) could make a difference. More discussion of the ontological findings are warranted – and the conclusions about the effort required to improve further the sensitivity and specificity of tools.

Editorial comments:

Page 2
MER - Same sentence at the end of paragraph 1 and 2 on page 2 – different references.

MER – Para 4 – no closing quotes on “lymphangitis was present

Page 3
MER – tense in first sentence ‘which results’ -> resulted

MER – first sentence not helpful ‘negation is part of a larger system’

Page 4

MER – “We call this the automated negation assignment grammar. We divide the semantic types into those that represent Kernel concepts, Modifiers, Qualifiers or Negative Qualifiers. A rule base is then applied which organizes the Modifiers, Qualifiers and Negative Qualifiers around the Kernel concepts.” Repeated verbatim from the introduction – perhaps remove it from the intro.

Page 5
MER - Table needs redoing – no key and not clear. It would be better to make the axes Human and computer. Consequently there is a verbose explanation which could be removed. The other table on this page is also poorly layed out and explained.

Overall suggestion:
Needs more care and attention to detail – and scientific findings (if that is your journal’s focus). There is not a lot of detail about the software – seems appropriate.