Reviewer’s report

Title: Evidence-based rules from family practice to inform family practice; the learning healthcare system case study on urinary tract infections

Version: 2 Date: 11 February 2015

Reviewer: Emma Thomas-Jones

Reviewer’s report:

A nice piece of work is presented here of the use of electronic data sources in the prediction of diagnostic evidence for use in primary care using UTI and pyelonephritis as examples. This is a growing area where further research could be expanded to further investigate the diagnostic value of such evidence. I would like to see how these data compare with UK clinical presentation, and explore any differences between countries. Population wide datasets maybe required for such work, which will lend further evidence as to whether clinically meaningful diagnostic evidence can be gained from such an approach.

Strengths and weaknesses of the research have been considered carefully.

Minor essential revisions:
line 316 Mata - replace with Malta

Discretionary Revisions:
The authors should consider a consistent approach in the use of abbreviations. I would recommend the text be used in full in the abstract, or at a minimum the first time a term is used in the introduction (e.g line 32 FM is used without reference to Family Medicine, and line 42 RfEs are used without reference to Reason for Encounter).

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests