Reviewer's report

Title: Impact of C-reactive protein test results on evidence-based decision-making in cases of bacterial infection

Version: 1 Date: 8 July 2012

Reviewer: Andrew James

Reviewer's report:

A pragmatic, retrospective, cohort study of the use of CRP together with its impact on evidence-based decision-making about the use of antibiotics in children in a single institution. This study makes an important contribution to our current knowledge as it identifies the incomplete, suboptimal and/or inappropriate use of the CRP in evidence-based decision-making about the use of antibiotics. The conclusions should be generalisable to other institutions. I agree that paediatricians need to be more cognisant of these results and that more research is desirable.

Although this is a retrospective study, its focus is a clearly defined, clinically important question. The rationale for the study is clearly stated and discussed within the context of contemporary clinical care. The literature review is comprehensive, focused and very informative. Two well-defined paediatric populations have been studied over the course of one calendar year. The assessment of the evidential basis for the use of the CRP together with the interpretation of the physician's is acceptable. The assessment of costs may be too simplistic as it does not consider "hidden" costs and therefore, is likely to be an underestimate of the costs but this underestimation should not affect the conclusions. The statistical analysis is appropriate. The data is presented appropriately although Table 2 is perhaps too complex as it contains three distinct types of information: demographic, outcomes and costs. Separating the information into demographic (Table 2) and outcomes and costs (Table 3) might enhance the presentation of the data. The strengths and weaknesses of this retrospective, cohort study and their implications for the "truth" of the results have been acknowledged and discussed.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.