Reviewer’s report

Title: A decision aid to rule-out pneumonia and reduce unnecessary prescriptions of antibiotics in primary care patients with cough and fever

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Reviewer: Carl Llor

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I find this paper very interesting for internists and primary care physicians since the diagnosis of pneumonia is very difficult without the use of a radiological study. However, I have one major concern that have to be addressed before they could publish these results.

MAJOR COMPULSORY REVISION

I’m greatly concerned about the high percentage of pneumonias observed by the authors. Considering patients over 18 with new or worsened cough and subjective or measured fever they observed that a bit more than 20% had actually radiologically-confirmed pneumonia. On the basis of previous studies, this percentage should have been 4-8%. In addition, we know that the correlation between patients’ subjective high temperatures with measured fever is not high and makes this finding even more unbelievable. Furthermore, they excluded patients with COPD/chronic bronchitis and immunocompromised subjects. Certainly, the authors state this finding as a limitation of the study but they write ‘The prevalence of pneumonia in our sample is somewhat higher than in other studies’. They have to clearly state the reasons why they observed this percentage of pneumonias. The fact that the mean length of symptoms before consultation was seven days is not sufficient. In my opinion, even though the physicians participating in this study were instructed to recruit consecutively all the patients with the inclusion criteria, they were more likely to include only those patients with a more severe lower respiratory tract infection perhaps. Since all the patients had to undergo a chest X-ray and a CRP rapid test, probably those with milder infections were not included. The question is… can we extrapolate the results achieved to all the cases with new or worsened cough with subjective fever? Probably no. Please, comment this.

MINOR ESSENTIAL REVISION

Another issue that authors have also commented is that a validation study should have been carried out. The discussion is right but some sentences included in the paper should be used with more caution. For instance, when they say in the abstract that ‘by applying this rule in clinical practice antibiotic prescription could be reduced by ..’ or ‘in primary care this tool could help to rule out pneumonia’ should be used more carefully. They can only say that if they had used a new cohort of lower respiratory tract infections and had validated this clinical tool. Authors should revise all the text and be aware of this limitation.
Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests