

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Empirical evidence that disease prevalence may affect the performance of diagnostic tests with an implicit threshold: a cross-sectional study
AUTHORS	Brian Willis

This paper was submitted to the BMJ but declined for publication following peer review. The authors addressed the reviewer's comments and submitted the revised paper to BMJ Open. The paper was subsequently internally reviewed at BMJ Open with the previous BMJ reviews in mind.

VERSION 1 - REVIEW

REVIEWER	Mattijs E Numans MD PhD, senior researcher, professor innovation & quality of primary care at VU University, Amsterdam
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GENERAL COMMENTS	<p>This is a very interesting study on the hypothesis that sensitivity and specificity change with prevalence of the target disease, illustrated in an example with implicit thresholds for deciding on a diagnosis. Though complicated in its presentation, this is a study in empirical data from real-life clinic and it clearly shows what happens during the diagnostic process in populations when the prevalence changes. I agree with the authors that this should get a broad readers audience. I also agree with them that further detailing, as suggested in some methodological comments, might alienate the reader from the core messages of this manuscript.</p> <p>The manuscript has been extensively reviewed by other experts and the authors have acted on the comments they got adequately in my opinion. I have no major methodological concerns. Tables and Figures illustrate the text, are concise and fit with the subjects they illustrate. I can imagine that some editorial input might improve the manuscripts focus, but I am not a native speaker.</p>
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VERSION 1 – AUTHOR RESPONSE

This is a very interesting study on the hypothesis that sensitivity and specificity change with prevalence of the target disease....

Response

Thank you for the comments and I have extended the description of the model and its results in the main text to add clarity to the analysis.

The manuscript was also reviewed at length by someone else, but they did not give permission for their comments to be published. This other review, along with the authors' response to it was also taken into account by the editor of BMJ Open.