To Whom It May Concern:

Please find enclosed a new submission to *BMJ Quality and Safety*, entitled “Confidence and Certainty in Medical Diagnoses: A Systematic Scoping Review”, by Sriraj Aiyer, Helen Higham and Nick Yeung.

In this research, we present a systematic scoping review of empirical papers that have studied confidence and certainty during medical diagnoses in order to summarise the current research landscape. We used a systematic methodology that adheres to the PRIMSA-ScR Checklist for Scoping Reviews. After an initial search of multiple databases and citation tracking, we identified 79 articles for inclusion. Across these articles, we found that confidence was rarely calibrated to objective accuracy during diagnostic decisions. We also find that confidence is found to affect further patient testing, medication administration and referral rates, among other clinical actions. In our paper, we discuss the different clinician populations and methodologies within the included papers, outlining the broad relevance of confidence and its calibration across several medical subdisciplines. We also outline the study of diagnostic confidence as it relates to other factors, such as clinician experience and patient complexities. Based on our review of the literature, we present a conceptual model to summarise the factors that have been found to affect diagnostic confidence, which has implications for future cognitive and educational interventions. We also propose areas for future study based on related work from cognitive psychology that has yet to be applied within medical decisions.

We note that our submission is slightly above the word limit (excluding figure captions and boxes), as we felt it necessary to include extra details on research synthesis (particularly around our proposed conceptual model) and implications given its broad remit, though we attempted to keep the word count to a reasonable length.

This research is original and has not been published previously, nor is it under consideration for publication elsewhere. The manuscript is submitted as a Systematic Review article. We do not have any conflicts of interests that might be interpreted as influencing the research. We thank you very much in advance for your consideration of our work.

Sincerely,

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