COMMENTS ON 'EVALUATION OF A PULSE OXIMETER SENSOR TESTER' – AUTHORS' RESPONSE

*Iljaz Hodzovic, MD, FRCA and
Antony Robert Wilkes, PhD*

Hodzovic I, Wilkes AR. Comments on 'evaluation of a pulse oximeter sensor tester' – Authors' response.

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Dear Editor,

We would like to thank Drs Mathews and Hickson for their comments. They seem to suggest that the accuracy of our SpO₂ recordings was affected by the speed of change from one pulse oximeter probe to another during data collection process. Drs Mathews and Hickson suggest in their letter that the readings obtained on one SpO₂ probe were affected by the reading from the previous SpO₂ probe as the readings are averaged over the preceding period. They, however, did not specify the length of time 'the preceding period' refers too.

We stated in our paper that the readings were recorded 'when a stable plethysmograph waveform was obtained' [1]. We assume that each probe required between 30 and 60 s for the SpO₂ trace to stabilise before record of the SpO₂ reading was made. All of our patients were stable at the time of data collection, so there was no need to rush. We consider 30 s to be sufficient time for the pulse oximeter monitor to 'forget' the data from the preceding SpO₂ probe. It is, therefore, quite unlikely that there was contamination of data collected from one probe with the reading from the preceding probe.

We stand by the conclusion of our paper: 'the Lightman can detect faulty probes and predict reasonably accurately the direction of the probe's error. The Lightman may be considered as a useful tool to assess the accuracy of pulse oximeter probes'.

REFERENCE

1. Dugani S, Hodzovic I, Sindhakar S, Nadra A, Dunstan C, Wilkes AR, Mecklenburgh J. Evaluation of a pulse oximeter sensor tester. J Clin Monit Comput 2011; 25. doi:[10.1007/s10877-011-9283-3](https://doi.org/10.1007/s10877-011-9283-3).

For Letter, please refer doi:[10.1007/s10877-011-9295-z](https://doi.org/10.1007/s10877-011-9295-z).

From the Department of Anaesthetics, Intensive Care and Pain Medicine, Cardiff University, Cardiff CF14 4XN, UK.

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Address correspondence to I. Hodzovic, Department of Anaesthetics, Intensive Care and Pain Medicine, Cardiff University, Cardiff CF14 4XN, UK.

E-mail: Hodzovic@cardiff.ac.uk