Reviewer’s report

Title: Diagnostic Test Accuracy of Diabetic Retinopathy Screening by Physician Graders Using a Hand-held Non-Mydriatic Retinal Camera at a Tertiary Level Medical Clinic

Version: 0 Date: 03 Jan 2019

Reviewer: Alvin Munsamy

Reviewer’s report:

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Response to Author:

In general the manuscript is well constructed and useful for public health eye care. I did find it difficult to follow after one read especially the multifaceted "results section" which is exhaustive and not easy to understand. Not sure if figures are possible instead of tables. Otherwise the hard work by the researchers needs an acknowledgement.

Abstract:

Line 80: rephrase "less evidence"

Line 81: rephrase to read "... screening utilising photographic studies by non-ophthalmologist personnel in low and …"

Line 82: "… first to assess the DTA…” Do you not feel this is definitive and in the event whilst you are in this review process someone else beats you to it, would you rather use less definitive language?

Line 94: "Their mean age…” does not read well rephrase to "The mean age of participants…."

Line 105: "nonmydriatic" should read "non-mydriatic" and re-word all further use in the body of the manuscript.

Line 106: "… following pupil dilation" this is not in line with the conclusion in the manuscript which suggests that only those with ungradable images be dilated see line 500/501.
Background:

Line 133/4: This statement is definitive; consider re-phrasing to say with the use of existing techs it is more possible…

Line 146: correct to "population-based"

Lines 148-150: Please provide evidence that these countries do not have clinics for diabetics who have eye screening as routine follow up. Or is this peculiar to Sri Lanka?

Line 155: support with a citation.

Line 157: correct to "Hand-held" and correct for whole manuscript

Line 159: "…which do not require pupil dilation…” is redundant.

Line 161: "…published data on this", what are you referring to?

Methods:

Line 169: Please clarify if you obtained gatekeeper consent from National Eye Hospital or ethical approval from both London school and the hospital and is reflect in text if this is not the case.

Line 179: the same retinologists trained and validated?

Line 188: n is participants or eyes?

Line 204: what was "n" for clinical reference test?

Line 205: only a single retinologist? What is "experienced"?

Line 231: "… different to referable criteria" please clarify what was different?

Line 232: "ophthalmologist's clinic" suggests the ophthalmologist is the owner, maybe say "eye clinic"

Results:

Line 239: instead of using "a third" just say 27.9% (195/700)"

Line 241: "11(1.6%)" instead say 1.6% (11) to align with preceding text for type 2.
Table 1: Fasting blood glucose and HbA1c do not have units in column 3; Age at diagnosis of hypertension- column 3 has "%" not years?

Line 264: "… are described in Table 2…" please elaborate in this paragraph what table 2 is communicating especially column 1 as this is not very easy to follow.

Line 311: resource not "resources"

Discussion:

Line 375: is the percentages quoted for detecting any DR or referable DR? effect in the sentence if the numbers are referring to which of the above.

Line 379: ">80%"; ">95%" doesn't read well

Line 382: "the requirement of refer those…” does not read well.

Line 384/386/7: By starting with the point that the "strain on the system" suggests that all pts who are diabetic are referred to the eye clinic (again "ophthalmologist's clinic" suggests ownership)? Is this an accurate statement? Furthermore I would think that "proposed imaging strategy" would allow for early detection and management of DR to mitigate preventable DR blindness?

Line 417-419: Please re-phrase as it is not clear what you are trying to convey.

Line 433: cross-section not "cross section"

Line 439/440: What do you mean?

Line 442-458: Comparisons are made to China; Israel; Singapore; Australia however the income status of these countries are not discussed. When comparing to these countries can you elude to the impact of your findings in a LMIC country vs HIC (Australia/China) especially if the findings are the same.

Conclusion: In light that this is an abbreviated conclusion, is it possible to write out the abbreviations in full. It is very difficult to follow throughout the manuscript, and I feel the gravity of the conclusion may be lost in translation with the numerous abbreviations especially STDR.

References: I cannot access ref#5- please provide.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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