Reviewer’s report

Title: Assessing Effectiveness of a Novel Mid-Upper Arm Circumference Z-score Tape in a Community Setting in Guatemala

Version: 0 Date: 19 Jul 2019

Reviewer: Ambrose Akinlo

Reviewer’s report:

This is a generally well-written piece and the findings contribute to available body of evidence on the usefulness of MUAC as a tool and also as an effective alternative to the weight and height tools for determining nutritional status.

I did a PubMed search on the topic and there are lots of studies (including some recent ones published in this journal - AOPH) and would have favored a systematic review and meta analysis to this article, as the findings are not drastically different from what has been reported in other similar publications, except that this is about the only study of this type (community-based MUAC) that turned up for Guatemala in my search (an important justification as this reports findings from a different setting/perspective). Another strength of the paper is that the volunteers used are non-medical personnel and the results still confirm that MUAC is as effective a measurement of nutritional status as the study did not find "significant disagreement between the nutritional status assigned by BMI Z-score and that assigned by MUAC Z-score tape" P11, lines 10-15. Finally, study confirms MUAC is easier to use than BMI Z-score, and used robust statistical methods to ascertain the validity/consistency of the findings.

I recommend acceptance of the paper as it presents further evidence on the efficiency of the MUAC as a cheap and easy alternative tool to assess malnutrition, from a different geographic and community perspective.

Miscellaneous:

Pg 12, line 28 - "the" should correctly read "they"

Pg 15, line 57 - "change" should correctly read "changed"

Table 3 header - "your" should change to "you"

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Acceptable

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