Reviewer’s report

Title: Validation of Omron HBP-1300 Professional Blood Pressure Monitor based on Auscultation in Children and Adults

Version: 0 Date: 22 Sep 2015

Reviewer: Cornelia Deutsch

Reviewer's report:

This is a nicely prepared work. However, there are some revisions which should be done.

1. The validation protocol used should be defined exactly, e.g. "ANSI/AAMI/ISO81060-2:2013" and referenced.

2. Methods: Introduction of the AAMI standard: This section should be shortened. It is not necessary to give information about the requirements of the protocol.

3. Methods: Test device: It would be interesting how many cuff sizes are available for the device. According to the protocol "ANSI/AAMI/ISO81060-2:2013" all cuff sizes have to be tested in a defined number of participants depending on the number of cuff sizes.

4. Methods: Introduction of the AAMI standard: "The AAMI standard provides two methods for accuracy determination…". According to ISO 81060-2: 2013 both methods (criterion 1 and 2) have to be used.

5. Methods: Protocol: Results should not be mentioned in this section but in the results e.g. "All SBP or DBP values of the observers…" and "The data analysis documents that the device…."

6. Methods: BP measurements: Which method was used, same arm sequential? This should be mentioned.

7. Results: According to the description of the test device there are more cuff sizes available and each cuff size has to be tested in a certain number of participants, which depends on the number of different sizes. How many cuff sizes are available and how many participants have been tested in each size? This should be mentioned in detail.

8. Results: The mean ± SD of the difference between the two observers should be mentioned for SBP and DBP, respectively.
9. Results: Page 8, line 23: There is an error in the sentence "The initial DBP was \textless 60 mmHg, and 100-160 mmHg in 53 participants…". It should probably be "…, and \textgeq 85 mmHg in 53 participants…".

10. Limitations: According to ANSI/AAMI/ISO81060-2:2013 \textgeq 5% should have an initial SBP \textgt 160 mmHg.

11. Table 1: The number of patients tested with the cuff sizes available should be listed (see Revision 7)

12. Figures are missing in this pdf.

**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.

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