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Validation of the Rossmax CF175 upper-arm blood pressure monitor for home blood pressure monitoring according to the European Society of Hypertension International Protocol revision 2010.

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OBJECTIVE: The present study aimed to evaluate the accuracy of the Rossmax CF175 upper-arm blood pressure monitor for home blood pressure monitoring according to the International Protocol of the European Society of Hypertension revision 2010.
METHOD: Systolic and diastolic blood pressures were sequentially measured in 33 adult Chinese (17 women, mean age 46 years) using a mercury sphygmomanometer (two observers) and the Rossmax CF175 device (one supervisor). A total of 99 pairs of comparisons were obtained from 33 participants for judgments in two parts with three grading phases.
RESULTS: All the blood pressure requirements were fulfilled. The Rossmax CF175 device achieved the targets in part 1 of the validation study. The number of absolute differences between the device and observers within 5, 10, and 15 mmHg was 78/99, 94/99, and 98/99, respectively, for systolic blood pressure, and 81/99, 96/99, and 97/99, respectively, for diastolic blood pressure. The device also achieved the criteria in part 2 of the validation study. Twenty-nine participants, for both of systolic and diastolic blood pressure, had at least two of the three device-observers differences within 5 mmHg (required ≥24). Only one participant for diastolic blood pressure had all three device-observers comparisons greater than 5 mmHg.
CONCLUSION: The Rossmax automated oscillometric upper-arm blood pressure monitor CF175 fulfilled the requirements of the International Protocol revision 2010, and hence can be recommended for blood pressure measurement in adults.

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