

Validation of the Microlife WatchBP Home device for self home blood pressure measurement according to the International Protocol

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Objective Current guidelines recommend that self monitoring of blood pressure at home should only be performed using validated devices. This study assessed the accuracy of the Microlife WatchBP Home device for self home blood pressure measurement according to the European Society of Hypertension International Protocol.

Methods Thirty-three participants were included (15 in phase 1 and an additional 18 in phase 2). Simultaneous blood pressure measurements were taken by two observers (Y-tube-connected mercury sphygmomanometers) four times sequentially, with three measurements taken using the tested device. Absolute differences between observer and device measurements were classified into three zones (within 5, 10 and 15 mmHg). The number of measurements with a difference within 5 mmHg was calculated for each individual.

Results In phase 1, the device produced 38, 43 and 43 measurements within 5, 10 and 15 mmHg, respectively, for systolic blood pressure and 35, 45 and 45 for diastolic blood pressure. In phase 2.1, the device produced 75, 91 and 97 measurements within 5, 10 and 15 mmHg for systolic, and 74, 93 and 99 for diastolic blood pressure. In phase 2.2, 30 participants had at least two of their differences within 5 mmHg and two participants had no

differences within 5 mmHg for systolic blood pressure, whereas for diastolic blood pressure the number of participants were 27 and three, respectively. Mean difference for systolic blood pressure was -0.3 ± 5.6 mmHg and for diastolic -2.4 ± 4.8 mmHg.

Conclusions The Microlife WatchBP Home device for self home blood pressure measurement fulfills all the validation criteria of the International Protocol and can, therefore, be recommended for clinical use in the adult population. *Blood Press Monit* 12:185–188 © 2007 Lippincott Williams & Wilkins.

Blood Pressure Monitoring 2007, 12:185–188

Keywords: accuracy, European Society of Hypertension, home blood pressure, International Protocol, Microlife, self-measurement, validation

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Received 31 July 2006 Revised 25 August 2006
Accepted 28 August 2006