

ORIGINAL ARTICLE

Clinical decision-making in hypertension using an automated (BpTRU™) measurement device

JW Graves, C Nash, K Burger, K Bailey and SG Sheps
Mayo Clinic and Mayo Foundation, Rochester, MN, USA

Mercury sphygmomanometers are being removed from clinical practice in the United States due to environmental concerns about mercury toxicity. Accurate pressure measurement is central to high-quality hyper-tension management. In this study of 106 patients, the BpTRU™ device was compared to nurse blood pressure measurements that complied with all the JNC VII/American Heart Association guidelines in evaluation of a random casual blood pressure. The intermethod difference in systolic blood pressure was $+ 1.8 \pm 5.1$ mmHg, and for diastolic blood pressure it was 4.8 ± 5.1 mmHg (both $P < 0.001$). For the primary study end point of clinical decision-making, there was 92% (97/106) agreement between the hypertension nurse specialist and the BpTRU™ (kappa 0.8280, 95% confidence interval, 0.721–0.9350). The oscillometric blood pressure measurement with the BpTRU™ is recommended as a replacement for poorly performed auscultatory blood pressure measurement in clinical practice. *Journal of Human Hypertension (2003) 17, 823–827. doi:10.1038/sj.jhh.1001626*