

CLINICAL EVALUATION OF AN OSCILLOMETRIC NIBP TECHNOLOGY DURING HEMODIALYSIS ACCORDING TO THE BRITISH HYPERTENSION SOCIETY PROTOCOL

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Existing concerns over the accuracy of automated blood pressure measurement on hemodialysis patients illustrates a need for a proven non-invasive blood pressure (NIBP) technology for monitoring during hemodialysis. We investigated an oscillometric blood pressure technology from SunTech Medical designed for end-stage renal disease (ESRD) patients during hemodialysis using a modified British Hypertension Society (BHS) protocol.

Evaluation of the AdvantageTM HDM NIBP monitoring technology from SunTech Medical was performed against manual auscultatory observer readings using the grading criteria of the British Hypertension Society protocol. 85 subjects were included in the study giving a total of 255 data pairs for comparison. Readings were made using simultaneous same-arm measurement with observers using a dual-head stethoscope and a calibrated mercury sphygmomanometer as a reference to the *Advantage HDM* technology.

The mean differences and standard deviations were exceptionally close with -0.03 ± 5.4 and 0.44 ± 5.0 for systolic and diastolic blood pressure respectively. With 71% of all systolic blood pressure reference vs. technology differences equal to or less than 5mmHg, and 72% of all similar differences for diastolic pressure equal to or less than 5mmHg, the *Advantage HDM* technology met the requirements for an A grade for both systolic and diastolic blood pressure measurement per the BHS grading criteria.

The *Advantage HDM* technology achieved an A/A grade for accurate assessment of systolic and diastolic blood pressure measurement. As the population for this evaluation was exclusively ESRD patients during hemodialysis treatment, the *Advantage HDM* non-invasive blood pressure monitoring technology can be recommended for clinical use during hemodialysis.