Definition and classification of hypertension

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There are 4 accepted methods to measure BP: routine office BP (ROBP) measurement, automated office BP (AOBP) measurement, home BP measurement (HBPM), and ambulatory BP measurement (ABPM). The first 2 methods are performed in the clinic setting, while the latter 2 outside of clinics. ROBP was the most commonly performed, and a vast majority of CV outcome trials were based on ROBP to modify medications or treatment strategies. However, ROBP was less precise as only 1 or 2 BP measurements were obtained, and many factors affected the accuracy of readings. One of the major concern with ROBP is the alerting response which causes the white coat phenomena seen as white coat hypertension in non-hypertensives and white coat effect in known hypertensives. More importantly, the accuracy of ROBP is especially a great concern in the crowded clinics in most of the regions in Taiwan. AOBP improves some drawbacks of ROBP. Though AOBP is also performed in clinical setting, it requires automated oscillometric devices with multiple readings, an averaged reading that can be stored, and an attended or un-attended quiet space. The recent SPRINT trial used AOBP to enroll and follow up hypertensive patients, and used the readings of AOBP as BP targets. AOBP is difficult to apply to the clinical settings in Taiwan as most of hospitals and clinics cannot afford to have extra isolated spaces.

The 2022 TSOC HT guidelines use HBPM in our definition and classification of HT.

Table 1. Corresponding values of systolic BP/diastolic BP from HBPM, ROBP, AOBP, daytime ABPM, and nighttime ABPM

HBPM	ROBP	AOBP	Daytime ABPM	Nighttime ABPM
120/80	120/80	120/80	120/80	100/65
130/80	130/80	130/80	130/80	110/65
135/85	140/90	135/85	135/85	120/79
145/90	160/90	145/90	145/90	140/85

Table 2. Definition and grading of hypertension

BP category	SBP (mmHg)		DBP (mmHg)
Normal	< 120	and	< 80
Elevated	120-129	and	< 80
Hypertension			
Stage 1	130-139	or	80-89