Top Ten Things To Know
Ambulatory Blood Pressure Monitoring in Children and Adolescents

1. Pediatric blood pressure (BP) is increasing, which is particularly concerning due to studies that have linked higher BP levels and atherosclerosis in the young.

2. Studies have found a correlation between higher pediatric ambulatory BP readings and increased left ventricular mass (LVM), carotid intima-media thickness (cIMT), and ambulatory arterial stiffness index (AASI).

3. Ambulatory BP monitoring (ABPM) is recommended for the confirmation of hypertension diagnoses in patients who may have white coat hypertension, evaluation for masked hypertension, BP assessment in high-risk patients, and evaluation of antihypertensive drug therapy.

4. High-risk patients for whom ABPM may be especially helpful include those with conditions such as secondary hypertension, chronic kidney disease, diabetes, obesity, sleep apnea, and genetic syndromes.

5. A standardized protocol should be used, and should be performed by specially-trained healthcare providers with an appropriately-sized, validated ABPM device programmed to collect BP readings every 15-20 minutes during waking hours and every 20-30 minutes during sleep.

6. Clinicians should instruct patients to record sleep and wake times, activities that may affect BP readings (eg, stressful situations, physical activity, timing of any antihypertensive medications), and symptoms such as dizziness.

7. For a study to be considered adequate, a minimum of 1 reading per hour – including during sleep – is recommended, with at least 40-50 measurements for 24-hour reports or 65% to 75% of all possible readings for partial day reports.

8. Comparing ABPM readings to normative casual (office) BP levels may cause patients to be misclassified because of differences in the values obtained by each technique.

9. New recommendations for the interpretation of APBM data include a revised definition of prehypertension as well as the inclusion of diastolic and nocturnal hypertension.

10. There is a great need for more robust normative data for pediatric ABPM, especially with regards to ambulatory diastolic BP and diverse populations.