TOP TEN THINGS TO KNOW
Ambulatory Blood Pressure Monitoring in Children and Adolescents

1. The global obesity epidemic is leading to a shift in the blood pressure (BP) distribution towards increasing levels in children and adolescents, and hypertension in youth is being diagnosed with increasing frequency.

2. As defined by the 4th Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents, hypertension in childhood is an average systolic BP and/or diastolic BP that is greater than or equal to the 95th percentile for gender, age, and height on 3 or more occasions. BP between the 90th and 95th percentile in childhood is designated as prehypertension.

3. ABPM is accomplished with the child wearing a lightweight monitor with appropriate cuff size for a 24 hour period. Monitors should be programmable to record every 15-20 minutes throughout the 24 hours.

4. Ambulatory blood pressure monitoring (ABPM) is useful in the evaluation of hypertension in children: This statement summarizes the current research and clinical applications of ABPM in children and adolescents and offers recommendations on implementation of ABPM in practice and interpretation of results.

5. ABPM is superior to self-measurement of BP.

6. Ambulatory BP readings may be useful in differentiating primary (essential) hypertension (underlying cause cannot be found) hypertension from secondary hypertension (underlying cause is identifiable).

7. White coat hypertension (a clinical condition in which the patient has BP levels that are greater than the 95th percentile when measured in a physician’s office or clinic, whereas the patient’s average BP is less than the 90th percentile outside of a clinical setting) is another clinical condition in which ABPM data are critical.

8. ABPM may be particularly useful in children with office BP within 20% of the 95th percentile to help stratify risk for target organ damage since even with normal average ABPM values, increased BP variability is associated with target organ damage in adults.

9. Because the routine use of ABPM in children is relatively new, further research is needed to develop standardized protocols for validation of monitors used in children.

10. ABPM should only be performed by personnel with specific training in the application of the device and interpretation of ABPM data in pediatric patients.