PRACTICAL PEARL: HYPERTENSION

INTRODUCTION

- Elevated blood pressure in childhood and adolescence is associated with hypertension in early adulthood, and poses a risk for premature atherosclerotic disease.
- Children with higher risk include those with chronic kidney disease, diabetes, transplantation of a solid organ, obstructive sleep apnea, repaired coarctation of the aorta, certain genetic syndromes, and a history of prematurity.
- New guidelines for screening for hypertension include updated reference tables based on children of normal weight [http://pediatrics.aappublications.org/content/early/2017/08/21/peds.2017-1904](http://pediatrics.aappublications.org/content/early/2017/08/21/peds.2017-1904)

INITIAL EVALUATION AND MANAGEMENT BY PRIMARY CARE

- BP should be measured at each well child encounter starting at 3 years of age. If a child has one of the higher risk conditions mention above BP should be checked at every health care encounter.
- Trained health care professionals in the office setting should make a diagnosis of HTN if a child or adolescent has auscultatory BP readings ≥95th percentile at 3 different visits.
- Updated Definitions of BP Categories and Stages

<table>
<thead>
<tr>
<th>For Children Aged 1–13 y</th>
<th>For Children Aged ≥13 y</th>
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</thead>
<tbody>
<tr>
<td>Normal BP: &lt;90th percentile</td>
<td>Normal BP: &lt;120/&lt;80 mm Hg</td>
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<tr>
<td>Elevated BP: ≥90th percentile to &lt;95th percentile or 120/80 mm Hg to &lt;95th percentile (whichever is lower)</td>
<td>Elevated BP: 120/&lt;80 to 129/&lt;80 mm Hg</td>
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<tr>
<td>Stage 1 HTN: ≥95th percentile to &lt;95th percentile + 12 mmHg, or 130/80 to 139/89 mm Hg (whichever is lower)</td>
<td>Stage 1 HTN: 130/80 to 139/89 mm Hg</td>
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<tr>
<td>Stage 2 HTN: ≥95th percentile + 12 mm Hg, or ≥140/90 mm Hg (whichever is lower)</td>
<td>Stage 2 HTN: ≥140/90 mm Hg</td>
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</table>

- For elevated BP or stage 1 hypertension in low risk populations, lifestyle modifications should be implemented. Repeat BP measurement should be performed in the office. If still elevated, a right arm and lower extremity BP should be performed.
- Children and adolescents ≥6 years of age do not require an extensive evaluation for secondary causes of HTN if they have a positive family history of HTN, are overweight or obese, and/or do not have history or physical examination findings suggestive of a secondary cause of HTN

WHEN TO REFER

- When a patient has had BP measurements by the auscultatory method >95th percentile at 3 different visits.
- When elevated BP measurements have been obtained for over 1 year, or in high risk populations as above
- Stage 2 hypertension

HOW TO REFER

- (413) 794-KIDS Pediatric Cardiology

WHAT TO EXPECT FROM BAYSTATE CHILDREN’S HOSPITAL VISIT

- Appropriate evaluation and workup of hypertension which will include echocardiography for the assessment of LVH
- Management of hypertension with lifestyle modification in combination with medical therapy
- We will follow your patient until the BP is <90th percentile or <130/80 in adolescents > 13 years of age and then return to you for ongoing care.

Author: Yvonne Paris, MD
Pediatric Cardiology
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Contact: Baystatechildren’shospital@baystatehealth.org