



MANAGEMENT OF Asymptomatic Hypertension

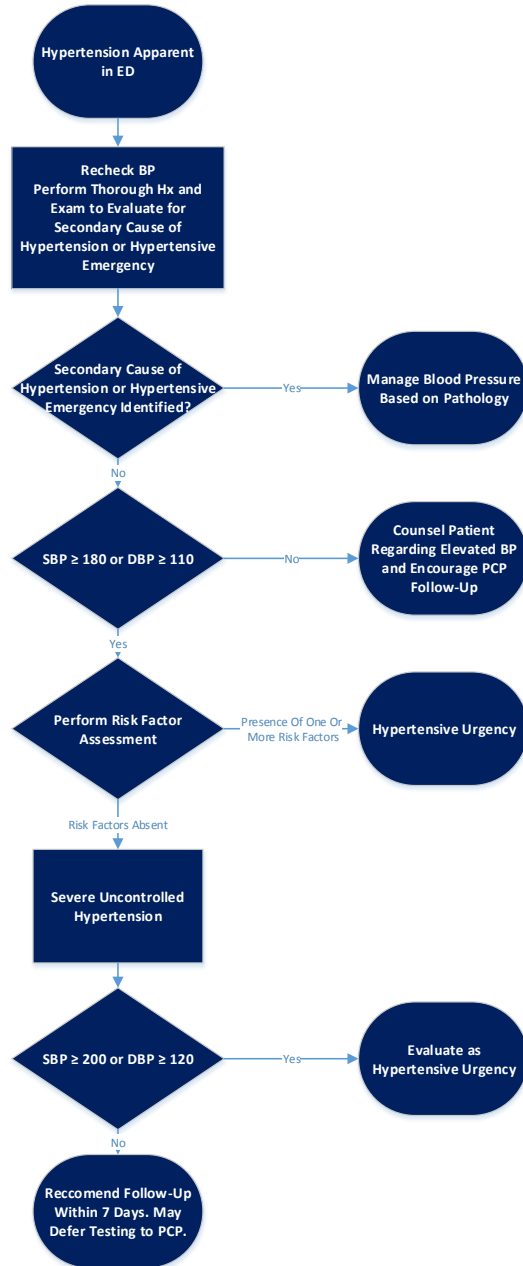
This EPPA Clinical Guideline is intended to guide most, but not all, encounters involving asymptomatic hypertension and should not replace clinical judgment; deviate from or adapt this guideline to meet the individual patient's needs.

- Risk Factors for End Organ Damage**
- Hx of Stroke
 - Hx of Cardiovascular Disease (CHF, LVH)
 - Hx of Renal Disease/ Renal Insufficiency
 - DM
 - Metabolic Syndrome
 - > 3 CV Risk Factors
 - Age > 55 Men
 - Age > 65 Women
 - Smoking
 - Dyslipidemia
 - Impaired Fasting Glucose
 - Obesity

- Secondary Causes of HTN**
- Intoxication
 - Alcohol Withdrawal
 - Thyrotoxicosis
 - Renal Artery Stenosis
 - OSA
 - Hyperaldosteronism
 - Cushing's Disease
 - Coarctation of the Aorta
 - Drug Side Effect
 - Renal Disease
 - Pregnancy
 - Sympathomimetic ingestion (cocaine, methamphetamine, etc.)

- Who Do You Test?**
- Consider testing those with BP \geq 180/110 and have risk factors for end organ damage
 - Patients with severe uncontrolled HTN (no risk factors) and sustained SBP > 200 or DBP > 120

- Who Do You Treat?**
- Only lower BP emergently if there is end organ dysfunction
 - Do not acutely lower asymptomatic HTN in the ED
 - Consider starting oral, outpatient medications if BP \geq 180/110





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References:

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- Varon, J and Elliot, W (2014). *Management of Severe asymptomatic hypertension (hypertensive urgencies) in adults*. [ONLINE] Available at: www.uptodate.com. [Last Accessed 3/20/2015].
- Wolf, S et al., (2013). Clinical Policy Critical Issues in the Evaluation and Management of Adult Patients in the Emergency Department with Asymptomatic Elevated Blood Pressure. *Annals of Emergency Medicine*. 62 (1), pp.59-67

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Hypertensive Urgency

- Defined as BP $\geq 180/110$ plus any risk factor for end organ damage
- Obtain Creatinine/BMP looking for renal dysfunction.
- Additional labs generally not indicated, but could be considered case-by-case (UA, CBC, EKG, CXR)
- If SBP ≥ 200 or DBP ≥ 120 , consider starting maintenance dose of oral antihypertensive medication at discharge
- Can consider starting antihypertensive if BP $\geq 180/110$ as well
- Follow up within 48 hours
- If follow up is uncertain and patient is high risk, consider hospitalization

Hypertensive Emergency

- Severely elevated BP resulting in end organ dysfunction (No specific number but generally occurs with BPs $\geq 160/\geq 100$)
 - Hemorrhagic stroke, ischemic stroke, hypertensive encephalopathy, acute CHF, ACS, aortic dissection, new/worsening renal insufficiency, autonomic dysfunction from neurologic source, withdrawal from antihypertensives
 - Includes patients with known untreated cerebral or aortic aneurysm
 - Does not include isolated headache without other symptoms
- Disease specific treatment (generally use IV meds to reduce BP by 25%). Hospital admission.

Severe Uncontrolled Hypertension

- If SBP ≥ 180 systolic or ≥ 110 diastolic but less than 200/120
- If no risk factors and able to follow up within 7 days, may defer labs and testing to PCP.
- If SBP ≥ 200 or DBP ≥ 120 , evaluate as hypertensive urgency as above

BP Management in the ED/UR

- Aside from Hypertensive Emergency, **Lowering BP in the ED/UR is not Required or Indicated**
- Rapid reduction can cause cerebral and cardiac ischemia due to impaired autoregulation
- DO NOT give fast acting oral meds (clonidine, SL nifedipine, nitro)
- DO NOT give IV antihypertensives

Treatment

- Discuss Lifestyle
- Emphasize follow up: Patient will likely require a series of appointments and medication adjustments to optimize BP control

Medications

- Start oral meds at d/c if SBP ≥ 200 or DBP ≥ 120 , Consider if SBP ≥ 180 or DBP ≥ 110
- Consider consulting by phone with PCP, or with nephrology if significant renal insufficiency
- For most patients, thiazide diuretic is good initial therapy, consider ACEI for diabetics and patients with renal insufficiency
- Check BMP prior to initiating new therapy
- Common first line medications and starting doses:
 - Lisinopril 5-10 mg daily
 - Treatment of choice in patients with chronic kidney disease or proteinuria
 - Can cause chronic cough or angioedema
 - Can cause hyperkalemia when used in combination with potassium sparing diuretics, NSAIDs, trimethoprim, digoxin
 - Losartan 25 mg daily
 - Consider in patients who are intolerant to ACEI
 - Can cause hyperkalemia when used in combination with potassium sparing diuretics, NSAIDs, trimethoprim, digoxin
 - Amlodipine 2.5-5mg daily
 - Can cause peripheral or pulmonary edema
 - Hydrochlorothiazide 12.5-25mg daily
 - Inexpensive
 - Avoid in gout