

# **CrossOver Healthcare Ministry High Blood Pressure Diagnosis & Treatment Guidelines**

## **Diagnosis (requires systolic or diastolic elevations on 2 separate occasions)**

Age <60 > or = to 140/90

Age > or = 60 > or = to 150/90

### **Initial Work-up**

CBC, CMP, Lipids, TSH

EKG

Consider further studies for secondary causes of HTN

### **Secondary Causes of HTN**

Primary Aldosteronism

↗ Pheochromocytoma

Renal Vascular Disease

↘ Renal Parenchymal Disease

Parathyroid Disorders

Thyroid Disease

Coarctation of the Aorta

Obstructive Sleep Apnea

Cushing's Syndrome

## **Treatment**

*Lifestyle Changes- DASH Diet (<2.4gm Na per day), Weight Loss, Smoking cessation, Less caffeine & alcohol*

*Medical Therapy-*

### **1. Does a compelling indication exist?**

#### **Compelling Indications**

CHF	ACE/ARB, B-Blocker, Diuretic
Post-MI	ACE, B-Blocker
Diabetes	ACE or ARB
CKD	ACE or ARB
Post-CVA	ACE, Thiazide diuretic
African-American	Thiazides, CCB more effective

### **2. Decide on Initial Therapy**

#### **BP Less than 160/100**

Thiazide (i.e. HCTZ 12.5mg)  
 ACE Inhibitor (i.e. Lisinopril)  
 ARB (i.e. Atacand at Crossover Pharm)  
 Calcium Ch Blocker (i.e. Amlodipine)

#### **BP Greater than 160/100**

ACE + Thiazide [i.e. Lisinopril/HCTZ 10/12.5mg daily (\$4 retail)]  
 ARB + Thiazide (i.e. Atacand-HCT at crossover pharmacy)  
 Calc Ch Blocker + Thiazide [i.e. Amlodipine + HCTZ]  
 Calc Ch Blocker + ARB [i.e. Exforge at crossover pharmacy]



3. Goal is <140/90 for those under 60yrs old; <150/90 for those 60yrs old and up

4. Schedule follow-up for 4-8 weeks

5. Optimize dose or add other agents until at goal. Add or titrate Thiazides, CCB, and ACE or ARB (but not both together) prior to considering other classes.

6. Once at goal, follow-up every 6 to 12 months

## Hypertension

### Ace Inhibitors

Lisinopril	2.5, 5, 10, 20mg	\$4retail
Benazepril	5, 10, 20, 40mg	\$4retail
Enalapril	2.5, 5, 10, 20mg	\$4retail

### ARBs

Diovan	40, 80, 160, 320mg	CrossOver
Atacand	4, 8, 16, 32mg	CrossOver

### Beta Blockers

Atenolol	25, 50, 100mg	\$4retail
Carvedilol	3.125, 6.25, 12.5, 25mg	\$4retail
Coreg CR	10, 20, 40, 80mg	CrossOver
Innopran XL	80mg	CrossOver
Metoprolol	25, 50, 100mg	\$4retail
Propranolol	10, 20, 40, 80mg	\$4retail
Sotalol	80mg	\$4retail
Toprol XL	25, 50, 100, 200mg	CrossOver

### Calcium Channel Blockers

#### *Dihydropyridines*

Amlodipine	5, 10mg	\$5Kmart, CrossOver
------------	---------	---------------------

#### *NonDihydropyridines*

Cardizem LA	120, 180, 240, 300, 360mg	CrossOver
Procardia	30, 60, 90mg	CrossOver

Verapamil	80mg,120mg	\$4retail
-----------	------------	-----------

**Diuretics**

Bumetanide	0.5, 1mg	\$4retail
Furosemide	20, 40, 80mg	\$4retail, CrossOver (40mg)
HCTZ	12.5, 25, 50mg	\$4retail
Indapamide	1.25, 2.5mg	\$4retail
Spironolactone	25mg	\$4retail, CrossOver

**Other**

Clonidine	0.1, 0.2mg	\$4retail
Hydralazine	10, 25mg	\$4retail
Methyldopa	250mg	\$4retail
Lanoxin	125mcg	CrossOver
Rythmol SR	225,325mg	CrossOver
Tekturna	150mg	CrossOver

**Combinations**

Accuretic	10/12.5, 20/12.5, 20/25mg	
Atacand HCT	16/12.5, 32/12.5, 32/25mg	CrossOver
Exforge	5/160, 5/320, 10/160mg	CrossOver
Exforge/HCT	5/160/12.5, 5/160/25, 10/320/25	CrossOver
Teveten/HCT	600/12.5mg	CrossOver
Tekturna HCT	150/12.5mg	CrossOver

## **References**

1. **In the Clinic: Hypertension**, *Annals of Internal Medicine*, December 2, 2008 149:ITC6-1
2. **JNC 8: Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.**