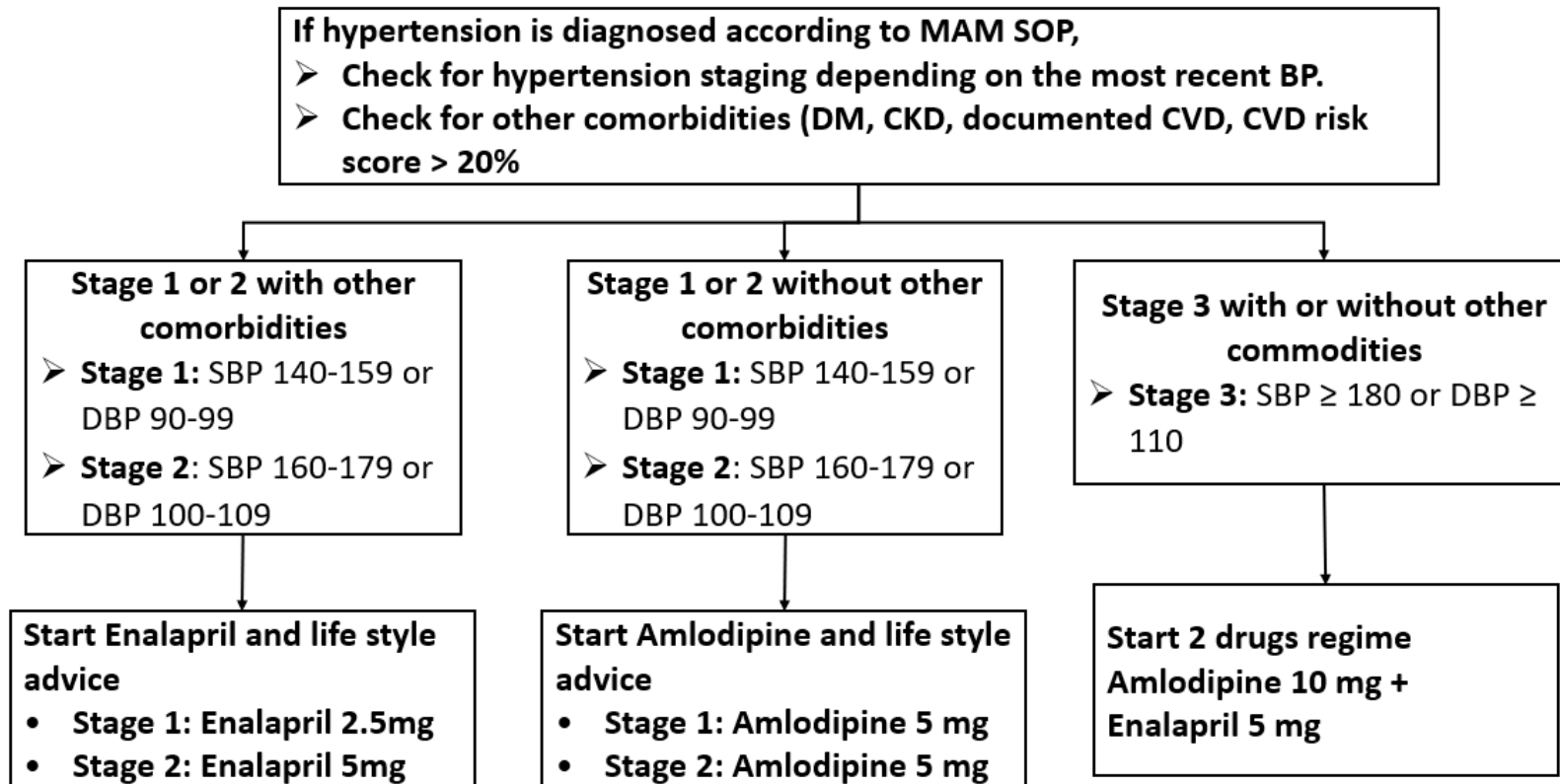


Treatment of Hypertension



- Ensuring that medication is increased at each visit (**monthly**) if BP is not at the target
 - Monthly follow up for intensive initial treatment until BP is controlled
 - 3-monthly follow up if controlled
- Blood Pressure Targets is <140/90 mmHg.

- All patients with diagnosed hypertension should receive the following investigations. These should be done BEFORE starting antihypertensive treatment, as they will determine which treatment is appropriate:

Urine dipstick	: Baseline and annually (for protein, blood, glucose)
Creatinine Clearance	: Baseline, annually, and if needed
Blood sugar	: Baseline if not performed within the last 6 months and annually
Total cholesterol	: Baseline if not performed within the last 6 months and annually
An electrocardiogram (ECG) is only performed if a specific cardiac condition is suspected	

	Stage 1 with DM/CKD/CVD/ high CVD risk	Stage 1 without DM/CKD/CVD/ high CVD risk
Step 1	Enalapril 2.5 mg	Amlodipine 5 mg
Step 2	Enalapril 5 mg	Amlodipine 10 mg
Step 3	Enalapril 7.5 mg	Amlodipine 10 mg plus Enalapril 2.5 mg
Step 4	Enalapril 10 mg	Amlodipine 10 mg plus Enalapril 5 mg
Step 5	Enalapril 10 mg plus Amlodipine 5 mg	Amlodipine 10 mg plus Enalapril 7.5 mg
Step 6	Enalapril 10 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 10 mg
Step 7	Enalapril 15 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 15 mg
Step 8	Enalapril 20 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 20 mg
Step 9	Enalapril 25 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 25 mg
Step 10	Enalapril 30 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 30 mg
Step 11	Enalapril 35 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 35 mg
Step 12	Enalapril 40 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 40 mg
Step 13	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 12.5 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 12.5 mg
Step 14	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 25 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 25 mg
Step 15	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 50 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 50 mg

	Stage 2 with DM/CKD/CVD/ high CVD risk	Stage 2 without DM/CKD/CVD/ high CVD risk
Step 1	Enalapril 5 mg	Amlodipine 10 mg
Step 2	Enalapril 7.5 mg	Amlodipine 10 mg plus Enalapril 2.5 mg
Step 3	Enalapril 10 mg	Amlodipine 10 mg plus Enalapril 5 mg
Step 4	Enalapril 10 mg plus Amlodipine 5 mg	Amlodipine 10 mg plus Enalapril 7.5 mg
Step 5	Enalapril 10 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 10 mg
Step 6	Enalapril 15 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 15 mg
Step 7	Enalapril 20 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 20 mg
Step 8	Enalapril 25 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 25 mg
Step 9	Enalapril 30 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 30 mg
Step 10	Enalapril 35 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 35 mg
Step 11	Enalapril 40 mg plus Amlodipine 10 mg	Amlodipine 10 mg plus Enalapril 40 mg
Step 12	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 12.5 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 12.5 mg
Step 13	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 25 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 25 mg
Step 14	Enalapril 40 mg plus Amlodipine 10 mg plus hydrochlorothiazide 50 mg	Amlodipine 10 mg plus Enalapril 40 mg plus hydrochlorothiazide 50 mg

Stage 3 with or without DM, CKD, CVD or high CVD risk			
Step 1	Amlodipine 10mg	plus Enalapril 5 mg	
Step 2	Amlodipine 10mg	plus Enalapril 7.5 mg	
Step 3	Amlodipine 10mg	plus Enalapril 10 mg	
Step 4	Amlodipine 10mg	plus Enalapril 15 mg	
Step 5	Amlodipine 10mg	plus Enalapril 20 mg	
Step 6	Amlodipine 10 mg	plus Enalapril 25 mg	
Step 7	Amlodipine 10 mg	plus Enalapril 30 mg	
Step 8	Amlodipine 10 mg	plus Enalapril 35 mg	
Step 9	Amlodipine 10 mg	plus Enalapril 40 mg	
Step 10	Amlodipine 10 mg	plus Enalapril 40 mg	<u>plus</u> hydrochlorothiazide 12.5 mg
Step 11	Amlodipine 10 mg	plus Enalapril 40 mg	<u>plus</u> hydrochlorothiazide 25 mg
Step 12	Amlodipine 10 mg	plus Enalapril 40 mg	<u>plus</u> hydrochlorothiazide 50 mg

- Before prescribing drugs, you should note the following contraindications and side effects

Contraindications to antihypertensive drugs		
	Absolute	Relative
HCTZ	- Gout - Creatinine Clearance <30ml/min (Furosemide may be used instead) - Pregnancy	- Hypokalemia - Glucose intolerance

Amlodipine		• Pregnancy • Heart failure • Tachyarrhythmia • Severe leg oedema
Enalapril	• Creatinine Clearance <30ml/min • Pregnancy • Previous angioneurotic oedema • Hyperkalemia (potassium >5.5 mmol/L) • Bilateral renal artery stenosis	

Dosage and common side effects of antihypertensive drugs				
Drug	Start dose	Max dose	Frequency	Common side-effects
Hydrochlorothiazide	12.5mg	50mg	Once a day	Postural hypotension, low K, low Na, Gout, Glucose intolerance
Amlodipine	5mg	10mg	At night	Peripheral oedema, nausea, abdominal pain, flushing
Enalapril	2.5mg	40mg	At night	Dry cough, Angioedema, Renal failure, Hyperkalemia