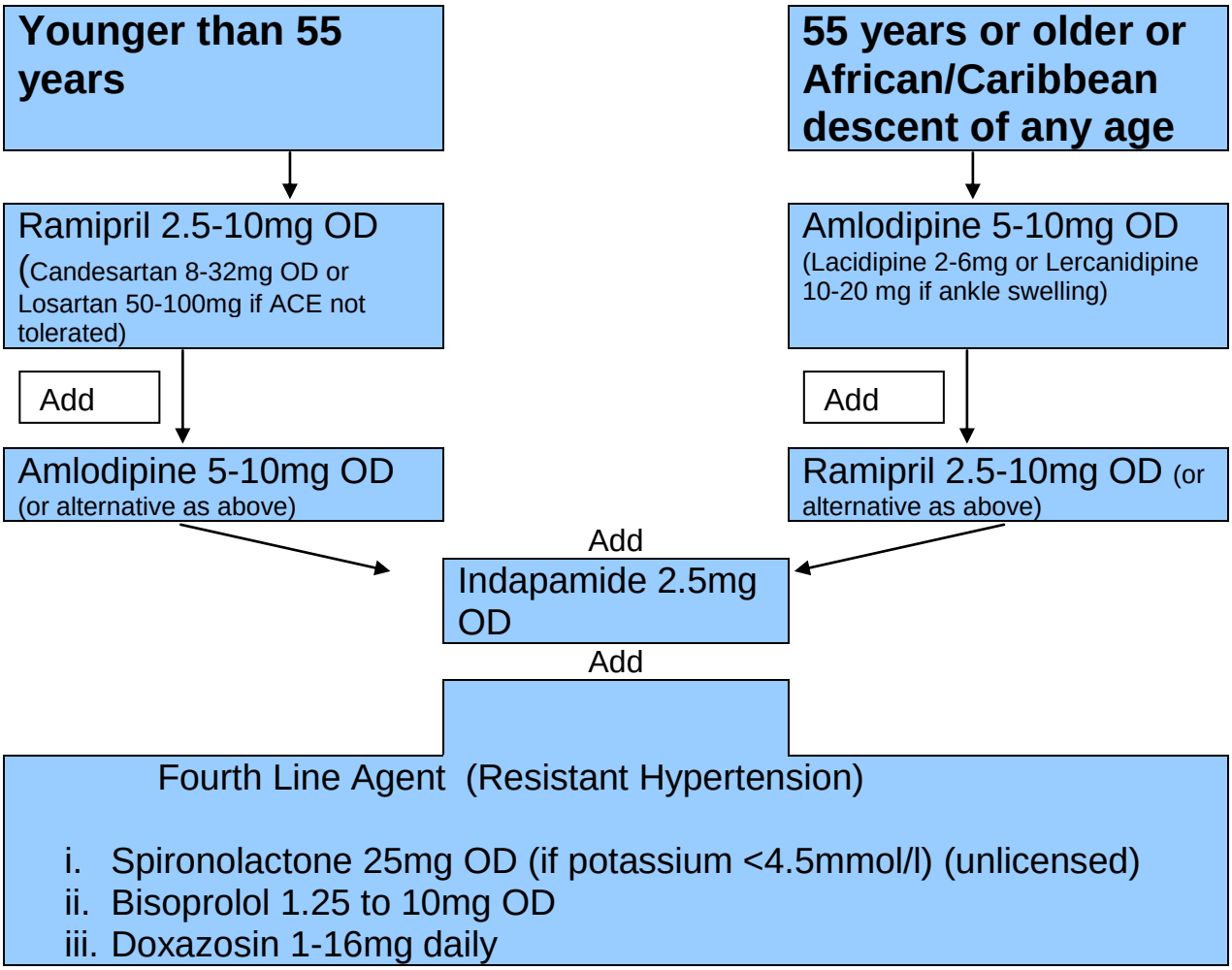
NHS Rotherham

Hypertension Guidelines

Overview

Aim to reduce Blood Pressure to 140/90 or less (140/80 for diabetics), adding drugs as needed until further treatment is inappropriate or declined. N.B. patients do not need to be swapped immediately onto this pathway if stable on previous pathways



Consider an ACE Inhibitor first-line for patients with Diabetes or Impaired Glucose Intolerance.

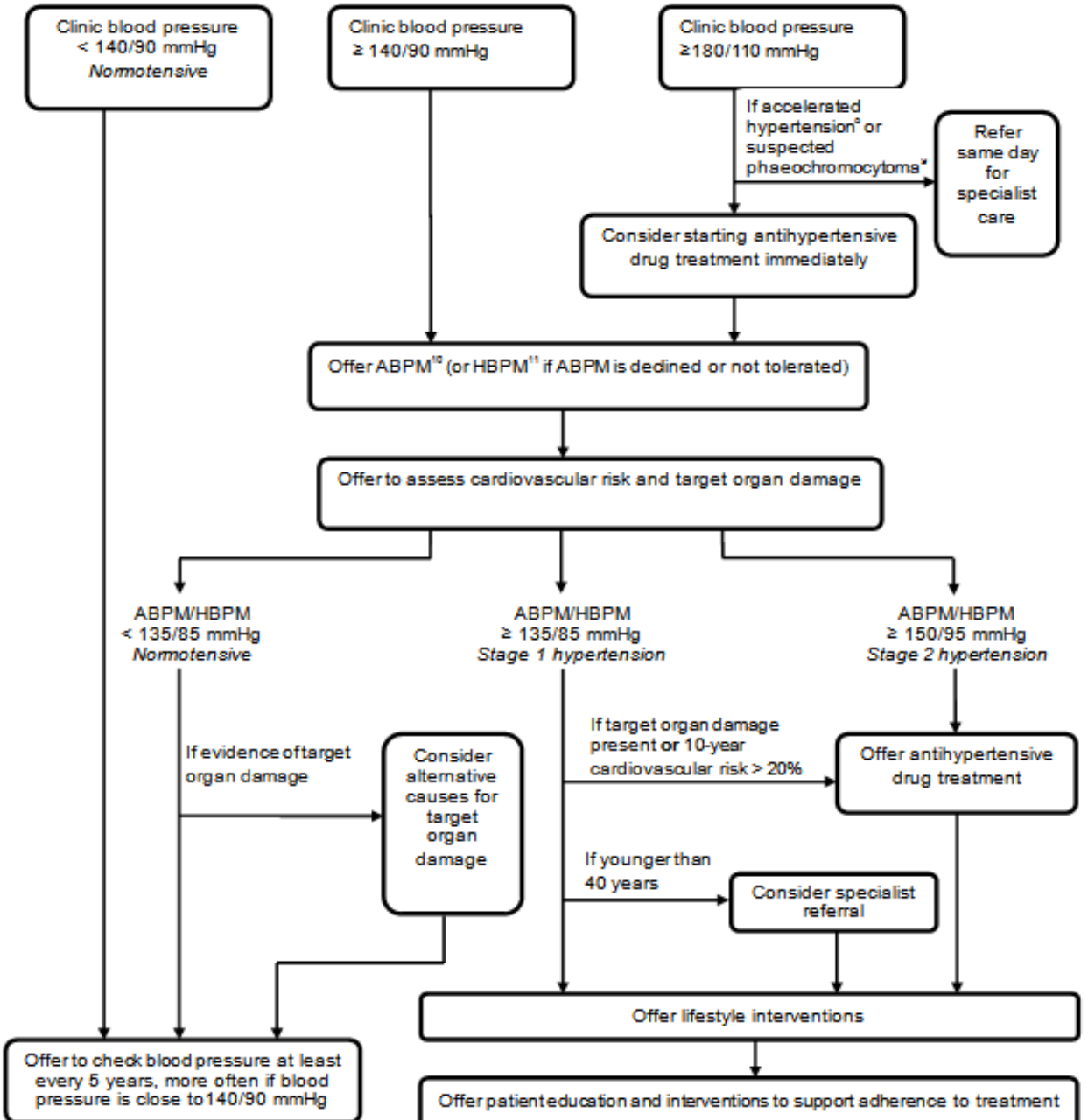
NB; Lisinopril could be used instead of Ramipril if practices prefer

Appendix C: The algorithms

Care pathway for hypertension

BHS

NHS National Institute for Health and Clinical Excellence



[8] Signs of papilloedema or retinal haemorrhage.
[9] Labile or postural hypotension, headache, palpitations, pallor and diaphoresis.
[10] Ambulatory blood pressure monitoring.
[11] Home blood pressure monitoring.

General Principles

1. Clinic BP >140/90 leads to Ambulatory Blood Pressure Monitoring (ABPM)
2. ABPM uses average of at least 14 readings taken during waking hours
3. Offer antihypertensive drug to all under 80 with Stage 1 hypertension with:
    - Target organ damage (high albumin:creatinine ratio, haematuria, raised creatinine, low eGFR, hypertensive retinopathy, LVH)
    - Established cardiovascular disease
    - Renal disease
    - Diabetes
    - 10 year Cardiovascular risk >20%
4. Offer antihypertensive drug to all with stage 2 hypertension
5. Same medications for over 80s
6. Consider specialist evaluation in people with hypertension under 40 as 10 year cardio-vascular risk score underestimates risk
7. All patients should be given lifestyle advice at every opportunity. The following are average reductions in blood pressure seen in trials:

✓ Diet (healthy low calorie)	5-6mmHG
✓ Exercise (aerobic 30-60min 3-5x/wk)	2-3mmHg
✓ Relaxation therapy (structured)	3-4mmHg
✓ Alcohol reduction (structured)	3-4mmHg
✓ Salt reduction (<6g.day)	2-3mmHg

8. Treatment should be started with lowest recommended dose and titrated up (except indapamide and spironolactone) until control achieved, treatment not tolerated or maximum dose reached.
9. Add next drug in, if target not reached – do not stop existing treatment unless side effects cannot be tolerated or there has been no response after 4 weeks (3 months thiazide-like diuretics)
10. Allow at least 4 weeks to observe the full response
11. 60% of patients will require more than 1 drug to control blood pressure
12. Check compliance to treatment if little or no benefit seen

BP Target = less than 140/90mmHg (NICE)
BP Target = less than 140/80mmHg if diabetic (NICE)
BP Target = less than 135/75mmHg if diabetic + microalbuminuria or proteinuria present (NICE)
QoF BP Target = 150/90mmHg
QoF BP Target in diabetes 145/85mmHg

Hypertension continuing treatment

- A bi-annual review of BP should occur.
- Patients motivated to make lifestyle changes and who want to stop using antihypertensives, if CVD risk is low and BP well controlled should be offered a trial reduction or withdrawal of therapy and a regular review.
- Annual U+Es, cholesterol, LFTs (if on statin), glucose

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Hypertension Treatment Information

ACE inhibitor= Ramipril 2.5mg Once Daily (1.25mg in elderly/frail)

Titrate up to a maximum of 10mg once daily or until BP controlled

U+E needed before treatment. BP and U+E needed 2 weeks after starting or increasing dose

If the patient is unable to tolerate an ACE inhibitor due to coughing; (clinical trials demonstrate that 1 patient in every 15-20 is unable to tolerate an ACE due to cough) Candesartan can be used as an alternative 8mg Once daily initially (lower doses in renal/hepatic failure). U+E needed before treatment. BP and U+E needed 2 weeks after starting or increasing dose. Titrate up to max tolerated dose if control not achieved (max 32mg once daily. Losartan 50mg with increase to 100mg is an alternative)

Common Contraindications: Aortic stenosis, Renovascular disease, Serum creatinine above 150mmol/l – caution – GP, Lithium therapy, Known hypersensitivity

Points to consider:

- Watch potassium if amiloride/spironolactone co-prescribed
- First dose hypotension especially if frail/elderly – give at night
- Postural hypotension – dizziness on standing
- Caution required if patient is receiving high-dose diuretic therapy more than 80mg fruosemide daily or its equivalent.
- Caution required in peripheral vascular disease or generalised atherosclerosis owing to risk of clinically silent renovascular disease.

Calcium Channel Blocker = Amlodipine maleate 5mg Once daily

Start 5mg once daily Max daily dose 10mg once daily

Common Contraindications:Unstable angina, Aortic Stenosis

Points to consider:

- May cause ankle oedema which will not respond fully to diuretics.
- Different classes of calcium channel blocker have different indications/contra-indications.
- If not prescribing amlodipine, check BNF

Thiazide-like diuretic = Indapamide 2.5mg Once daily

No titration

If a patient is already on a beta-blocker for another condition move to the next step to avoid the increasing the risk of developing diabetes with the thiazide-like/beta-blocker combination

Common Contraindications:Severe renal/hepatic disease, Hypokalaemia, Hyponatraemia, Hypercalaemia, Recent history of Gout, Lithium therapy

Points to consider:

- Immobile patients may find it problematic visiting the toilet more frequently
- Caution if loop diuretic is co-prescribed (Furosemide, Bumetanide)

Fourth Line Agents

Spironolactone 25mg od if potassium <4.5 mmol/l

Common Contraindications: hyperkalaemia, hyponatraemia, Addison's Disease

Points to consider:

- unlicensed preparation so patient needs to be informed
- caution with low eGFR due to higher risk of hyperkalaemia

Bisoprolol 1.25-10mg od

Common Contraindications: asthma, heart block, uncontrolled heart failure, severe peripheral artery disease

Points to consider:

- Avoid in combination with Thiazide- like diuretic in people at higher risk of Diabetes (obese, family history etc)

Doxazosin 1-16mg daily

Poor evidence for reduction in events