NHS
North Yorkshire
Clinical Commissioning Group

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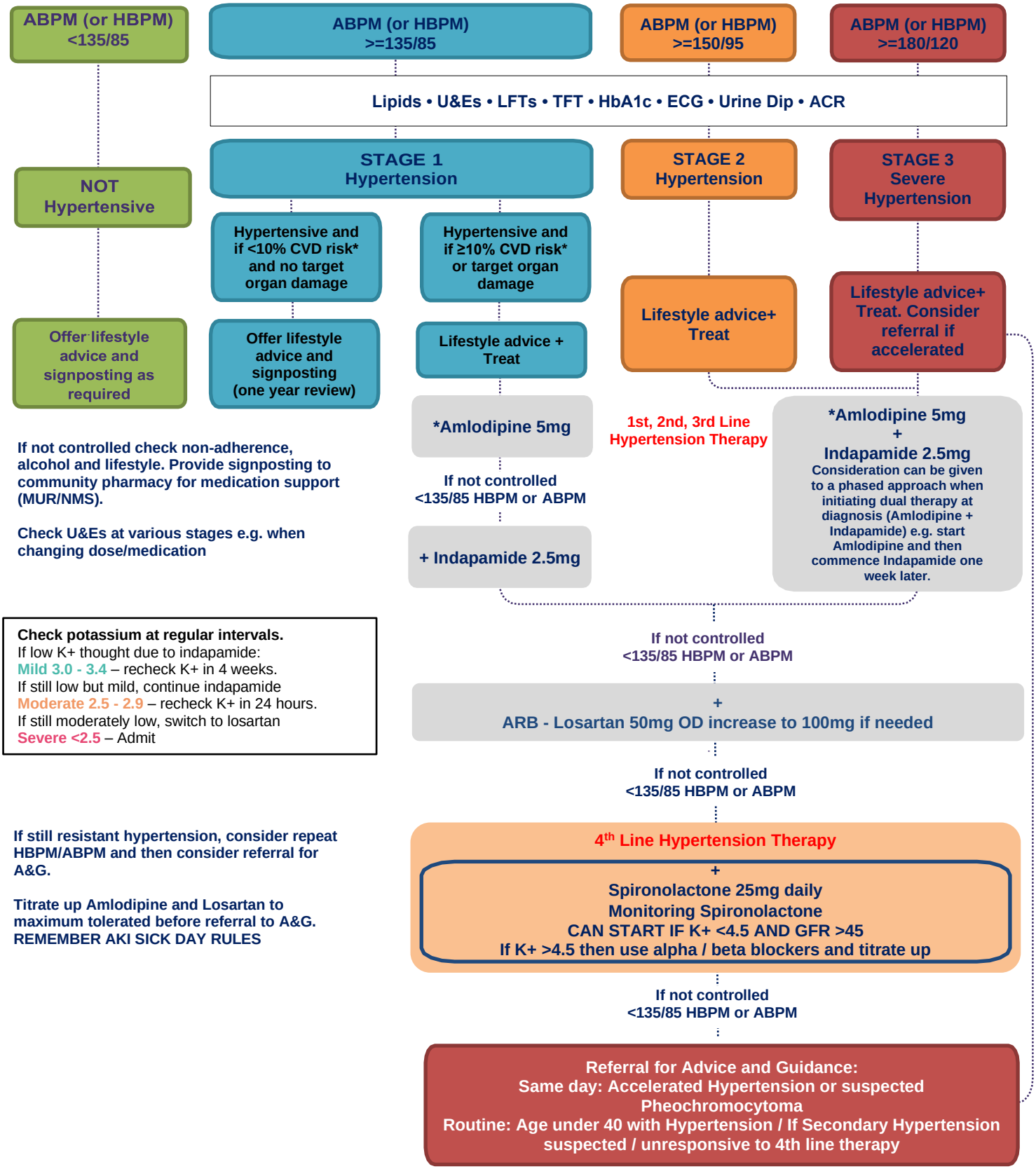
Vale of York
Clinical Commissioning Group

Treatment Guidance
Uncomplicated
Hypertension

(Under 80yrs - exc.DM/CKD 3B+/IHD/MI/CVA/PAD)

Recommend use of ABPM for diagnosis (HBPM if not available/tolerated).
If Clinic BP >=140/90 confirm diagnosis with ABPM/HBPM.
If Clinic BP >=180/120 consider immediate treatment.



If not controlled check non-adherence, alcohol and lifestyle. Provide signposting to community pharmacy for medication support (MUR/NMS).

Check U&Es at various stages e.g. when changing dose/medication

Check potassium at regular intervals.
If low K+ thought due to indapamide:
Mild 3.0 - 3.4 – recheck K+ in 4 weeks.
If still low but mild, continue indapamide
Moderate 2.5 - 2.9 – recheck K+ in 24 hours.
If still moderately low, switch to losartan
Severe <2.5 – Admit

If still resistant hypertension, consider repeat HBPM/ABPM and then consider referral for A&G.

Titrate up Amlodipine and Losartan to maximum tolerated before referral to A&G.
REMEMBER AKI SICK DAY RULES

AKI SICK DAY RULES
When unwell with any of the following: Vomiting, diarrhoea, or general dehydration due to intercurrent illness, then STOP taking the medicines listed below (restart after feeling well/after 24-48hrs of eating and drinking normally):
• ACE Inhibitors, ARBs, NSAIDs, Diuretics, Metformin, Sulfonylureas, SGLT2 inhibitors (e.g. Empagliflozin)
For further details, see: www.nice.org.uk/advice/KTT17/chapter/Evidence-context

*Supporting Clinical Information

This treatment guidance is for uncomplicated hypertension (in patients under 80 years of age) and is not applicable to patients over 80 years OR patients with Diabetes / CKD 3B+ / Heart Failure / IHD / CVA/PAD.

The guidance is also not suitable for the treatment of hypertension in pregnancy.

The following NICE guidelines provide clinical guidance on the management of hypertension for patients outside of this local guidance.

- Hypertension in Adults [NG136] www.nice.org.uk/guidance/ng136
- Hypertension in Pregnancy [NG133] www.nice.org.uk/guidance/ng133

When assessing CVD risk use QRISK 3 where available www.qrisk.org/three

Check U&Es, if indicated, as per usual practice e.g. when starting or up-titrating ACEi / ARB or diuretics.

If a patient has an ADR then consider another drug from the same group e.g. patient suffering from ankle oedema with Amlodipine can be switched to Lercanidipine.

Benefits of phased dual therapy - Reduces risk of side effects e.g. sudden symptomatic drop in BP and allows identification of any agent specific side effects.

When patients commence 4th line Spironolactone, the recommended potassium checks are at 2 week, 6 week and then 6 monthly long-term.

Preferred first line drugs if other comorbidities:
- Diabetes / Heart Failure / Previous MI = ACEI or ARB
- Symptomatic Angina = Betablocker
- CKD with Proteinuria = ACEI or ARB

Management of Hypokalaemia

Mild (3.0 - 3.4 mmol/l)

When to repeat
- Compare with previous results. If no change in medication, may be one-off. Change in K+ <0.5 mmol/L can be just standard lab variation from sample to sample (i.e. “lab error”)
- Continue indapamide and Repeat U&Es routinely (e.g. 4 weeks) then reassess

Management
- If potassium still newly low on repeat and timeline fits with indapamide, can usually continue indapamide. Encourage bananas and tomatoes. Recheck U&Es periodically
- If due to D&V, use sick day rules: temporarily stop indapamide and restart when better
- If unrelated to indapamide and is chronic, assess for reversible causes including check magnesium. Low magnesium will make the hypokalaemia resistant to treatment. Correct any magnesium deficiency** which may sometimes correct potassium. If on digoxin, give potassium supplements and aim for K+ ≥ 4.5 long term since lower K+ levels increase the risk of digitoxicity (even at normal serum digoxin levels)
- If no reversible causes and no concerning underlying cause, advise dietary supplementation (e.g. bananas, tomatoes, avocados, potatoes)
- Recheck U&Es periodically

Moderate (2.5 - 2.9 mmol/l)

When to repeat
- Compare with previous results - if new change, repeat U&Es within 24 hours.

Management
- If persistent on recheck and due to starting indapamide/thiazide, switch to ARB instead (e.g. losartan 50mg OD [25mg in elderly]).
- If due to D&V, use sick day rules: temporarily stop indapamide and restart when better
- If no reversible causes, advise dietary supplementation (e.g bananas, tomatoes, avocados, potatoes) AND oral supplements (e.g. SandoK one TDS).
- Recheck U&Es in 1 week

Severe (<2.5 mmol/l)

When to repeat
- Admit

Management
- Admit

****How to correct low magnesium**
Oral Supplementation
1. First Line: Magnesium aspartate dehydrate – Magnaspartate®. 1-2 sachets daily (= 10-20mmol Mg) for 3 days
2. Second Line: Magnesium glycerophosphate – YourMag®. 2 x 4mmol tablet three times a day (= 24mmol Mg) for 3 days
Recheck Magnesium blood levels after 1-2 weeks. Repeat 3 day course if still low.

Shared Decision Making & Lifestyle

Treatment and care should take into account people's needs and preferences. People with hypertension should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals.

Shared decision making with patients and lifestyle advice should be considered at every stage of the treatment protocol. Encourage as many patients as possible to use self BP monitoring at home.

Signpost to website for further advice on where to purchase Home BP monitors and how to use guides.

Medication adherence should be considered at every stage of the treatment protocol.

There is lots of helpful information including a 'looking after your heart' resource booklet to help support conversations with patients. You can find these on the website

https://www.humbercoastandvalehealthyhearts.co.uk/

Patients should be encouraged to use community pharmacy services, such as: www.nhs.uk/live-well/healthy-body/how-your-pharmacist-can-help

Patients and clinicians are encouraged to utilise Me and My Medicines resource; a campaign led by patients and supported by clinical staff to help people raise concerns and use their medicines better. www.meandmymedicines.org.uk

Further supporting information

The guidance provides a framework for Primary Care clinicians to offer evidence based treatment for hypertension. It is not intended to be a comprehensive document and further guidance/training for some health professionals may be required.

Acknowledgement: Acknowledgement: Reproduced with permission from West Yorkshire and Harrogate Healthy Hearts Project. More details on the guidance can be obtained by visiting the West Yorkshire and Harrogate Healthy Hearts website www.westyorkshireandharrogatehealthyhearts.co.uk

Abbreviations

ABPM	Ambulatory Blood Pressure Monitor (24hr)
ACEI	Angiotensin Converting-Enzyme Inhibitor (Ace Inhibitor)
ACR	Urine Albumin to Creatinine Ratio
ADR	Adverse Drug Reaction
ARB	Angiotensin II Receptor Blocker
BP	Blood Pressure
CKD	Chronic Kidney Disease
CVA	Cerebrovascular Disease
DM	Diabetes Mellitus
ECG	Electrocardiogram
GFR	Glomerular Filtration Rate
HF	Heart Failure
HD	Ischemic Heart Disease
HBA1C	Glycated Haemoglobin
HBPM	Home Blood Pressure Monitor
K+	Potassium
LFT	Liver Function Test
MI	Myocardial Infarction
MUR	Medicine Use Review
NMS	New Medicine Service
PAD	Peripheral Arterial Disease
TC:HDL	Total Cholesterol to HDL Ratio
TFT	Thyroid Function Test
U&Es	Urea And Electrolytes