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UCLPartners Proactive Care Framework:

Managing Hypertension and Cardiovascular Risk

The Challenge:
COVID-19 disruption and historical lack of capacity in primary care

Historical challenge in long term condition care

- Late diagnosis, suboptimal treatment, unwarranted variation
- Lack of self-management support
- Holistic care not always provided

Real World Primary Care:

- Complexity, multimorbidity and time pressures
- Soaring demand and shifting priorities
- Winter pressures

Pandemic impact:

- Disruption of routine care in long term conditions
- Risk of poorer outcomes for patients and health inequalities
- An increase in health care demand

UCLPartners Proactive Care
Frameworks to address core challenges in primary care

Aim

Help people with long term conditions to stay well longer

Objectives

1. Mobilise data - Identify patients whose care needs optimising and prioritise those at highest risk
2. Harness wider workforce - standardise delivery of holistic proactive care by wider primary care team
3. Support GPs to safely manage workflow, improve care and outcomes by releasing capacity

Framework components

- ✓ Risk stratification & prioritisation tools
- ✓ Locally adaptable resources to support real world management
- ✓ Systematic use of wider primary care team (eg ARRS roles) to deliver structured support for education, self-management and behaviour change

Framework Development

- Led by primary care clinicians
- Based on NICE guidelines and clinical consensus
- Patient and public support

Cardiovascular Disease (CVD) Conditions – Stratification and Management

ARRS[$] roles/ other appropriately trained staff

Gather information e.g.	Up to date bloods, BP, weight, smoking status, run risk scores: QRISK*, CHA_2DS_2VASc, HASBLED.
Self management e.g.	Education (condition specific, CVD risk reduction), self care (eg red flags, BP measurement, foot checks), signpost shared decision making.
Behaviour change e.g.	Brief interventions and signposting e.g. smoking, weight, diet, exercise, alcohol.

Risk Stratification & Prioritisation

- **Atrial Fibrillation**
- **Blood Pressure**
- **Cholesterol**
- **Diabetes**

Prescribing Clinician

Optimise therapy and mitigate risk
Review blood results, risk scores & symptoms.
Initiate or optimise therapy.
Check adherence and adverse effects.
Review complications and co-morbidities.
CVD risk – BP, cholesterol, pre-diabetes, smoking, obesity.

*QRISK 3 score is recommended to assess CV risk for patients with Severe Mental Illness, Rheumatoid Arthritis , Systemic Lupus Erythematosus, those taking antipsychotics or oral steroids

[$]Additional Roles Reimbursement Scheme

Why the Focus on Hypertension and Cardiovascular Risk

- Hypertension is the leading risk factor causing death worldwide
- In England, there are:
  - An estimated 3.3 million people with undetected hypertension
  - 2.2 million adults under 80 years old with diagnosed hypertension who are not achieving the clinic BP treatment target <140/90mmHg
- Delaying intervention for more than 6 weeks for people with hypertension leads to an increased risk of cardiovascular events
- Lowering blood pressure and reducing cardiovascular risk (1^{o} and 2^{o} prevention) is very effective at preventing heart attacks and strokes and premature death.
- The UCLPartners Hypertension Framework supports remote monitoring and management of hypertension, including control of blood pressure and lipid management.

Adapting the UCLPartners Frameworks for local use

1. The UCLP Hypertension Framework supports practices and PCNs with search and stratification tools, pathways, resources and training:
    - To prioritise patients – who do we need to see now and who can we safely phase for later review?
    - To determine who has home BP monitors and support patients to buy valid monitors and submit accurate readings
    - To use the wider workforce to support patient education, self-management and lifestyle change

2. The UCLP Hypertension Framework will align with and support other local interventions for hypertension, e.g.:
    - Virtual group consultations to teach and check BP technique
    - Provision of free or loaned BP monitors to improve access
    - Targeting implementation to reduce health inequalities
    - Local quality improvement schemes for treatment optimisation

Stratification and Management of High Blood Pressure

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Hypertension: stratification and management

ARRS[$] roles/ other appropriately trained staff

Stratification & Prioritisation

Prescribing Clinician

Gather information e.g.	Up to date bloods, BP, weight, smoking status, run QRISK* score
Self management e.g.	Education (blood pressure, CVD risk), self care (e.g. BP measurement), sign post self care resources
Behaviour change e.g.	Brief interventions and signposting e.g. smoking, weight, diet, exercise, alcohol

Priority One	**Priority Two**	**Priority Three**	**Priority Four**
BP >180/120mmHg***	2a. BP >160/100mmHg*** 2b. BP >140/90mmHg*** if BAME AND CV risk factors or co-morbidities** 2c. No BP reading in last 18 months	3a. BP >140/90mmHg*** if BAME OR CV risk factors or comorbidities** 3b. BP >140/90mmHg*** or >150/90mmHg*** if ≥ 80 years	4a. BP <140/90mmHg*** under age 80 years 4b. BP <150/90mmHg*** aged ≥ 80 years

Optimise anti-hypertensive therapy and CVD risk reduction

1. Review: blood results, risk scores & symptoms
2. Check adherence and adverse effects
3. Review complications and co-morbidities
4. Initiate or optimise blood pressure medication
5. CVD risk – optimise lipid management and other risk factors

*QRISK 3 score is recommended to assess CV risk for patients with Severe Mental Illness, Rheumatoid Arthritis , Systemic Lupus Erythematosus, those taking antipsychotics or oral steroids; [$]ARRS = Additional Role Reimbursement Scheme

** / *** see slide 12

High Blood Pressure Stratification and Management – Notes

- ** Co-morbidities / risk factors

- Established CVD (prior stroke/TIA, heart disease, peripheral arterial disease)
- Diabetes
- CKD 3 or more
- Obesity with BMI > 35

- ***Clinic vs Home BP readings

Clinic BP reading	Equivalent Home BP
BP = 180/120mmHg	BP = 170/115mmHg
BP = 160/100mmHg	BP = 150/95mmHg
BP = 150/90mmHg	BP = 145/85mmHg
BP = 140/90mmHg	BP = 135/85mmHg

Lifestyle Modifications

Modification	Recommendation	Approximate Systolic Blood Pressure Reduction (mm Hg)**
Weight loss	Maintain normal body weight	5–20 per 10-kg weight loss
DASH-type diet*	Consume a diet rich in fruits, vegetables, and low-fat dairy products with reduced saturated and total fat	8–14
Reduced salt intake	Reduce daily dietary sodium intake	2–8
Physical activity	Regular aerobic physical activity (at least 30 min/day, most days of the week)	4–9
Moderation of alcohol intake	Limit consumption to 2 drinks/day in men and 1 drink/day in women and lighter-weight persons	2–4

*DASH, Dietary Approaches to Stop Hypertension. Effects of implementing these modifications are time and dose dependent and could be greater for some patients.

**Vooradi S, Mateti UV. A systemic review on lifestyle interventions to reduce blood pressure. J Health Res Rev [serial online] 2016 [cited 2021 Apr 27];3:1-5. Available from: https://www.jhrr.org/text.asp?2016/3/1/1/173558

In monotherapy, most drugs achieve systolic BP reductions of ~ 10 to 15 mmHg

https://journals.lww.com/md-journal/Fulltext/2016/07260/Treatment_efficacy_of_anti_hypertensive_drugs_in.16.aspx

NICE Hypertension Treatment Pathway (NG136)

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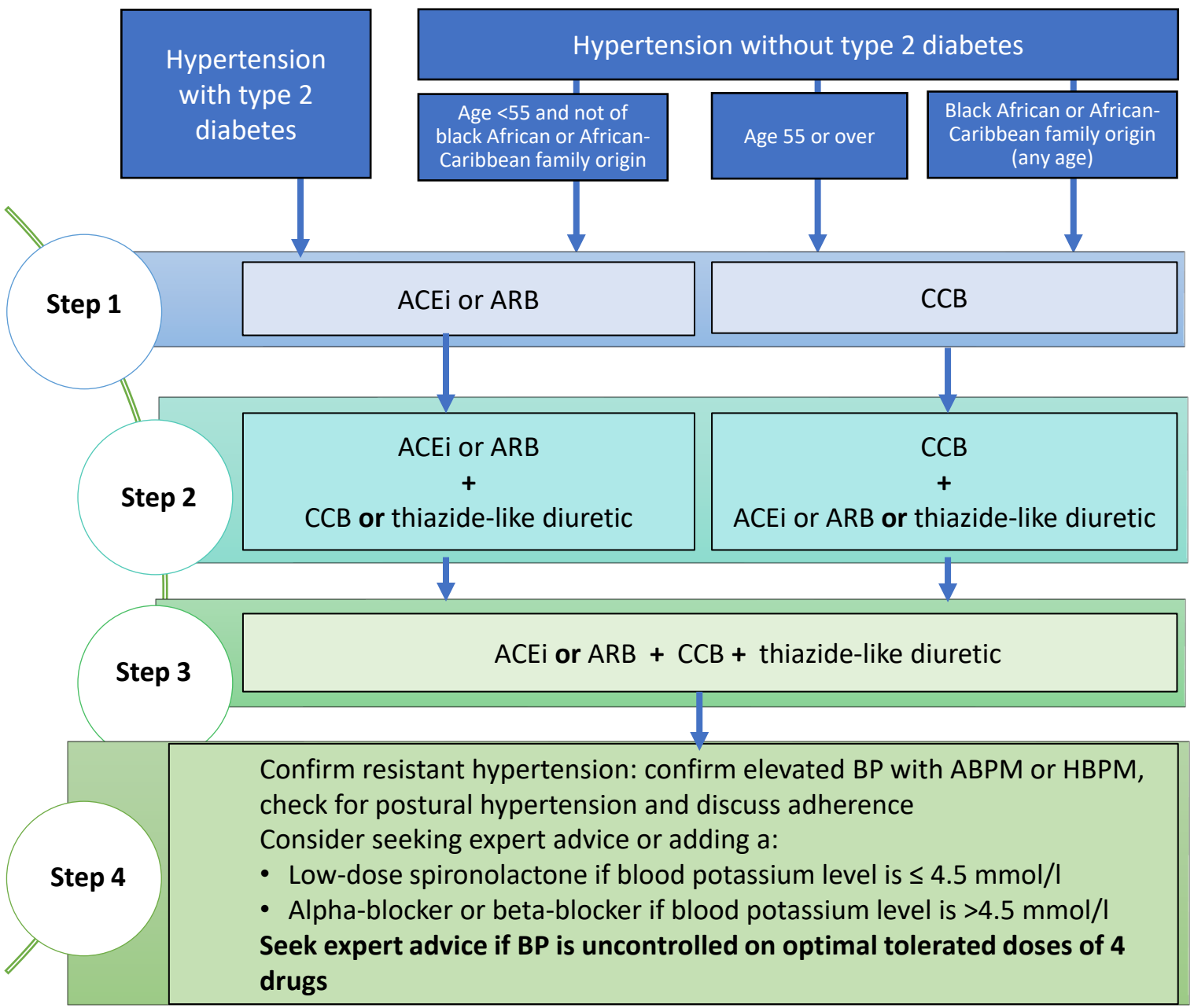


Use clinical judgement for people with frailty or multimorbidity

Offer lifestyle advice and continue to offer it periodically

Monitoring treatment

Use clinic BP to monitor treatment
Measure standing and sitting BP in people with:

- Type 2 diabetes or
- Symptoms of postural hypotension or
- Aged 80 and over

Advice people who want to self monitor to use HBPM. Provide training and advice

Consider AMPM or HBPM, in addition to clinic BP, for people with white-coat effect or masked hypertension

BP targets

Reduce and maintain BP to the following targets:

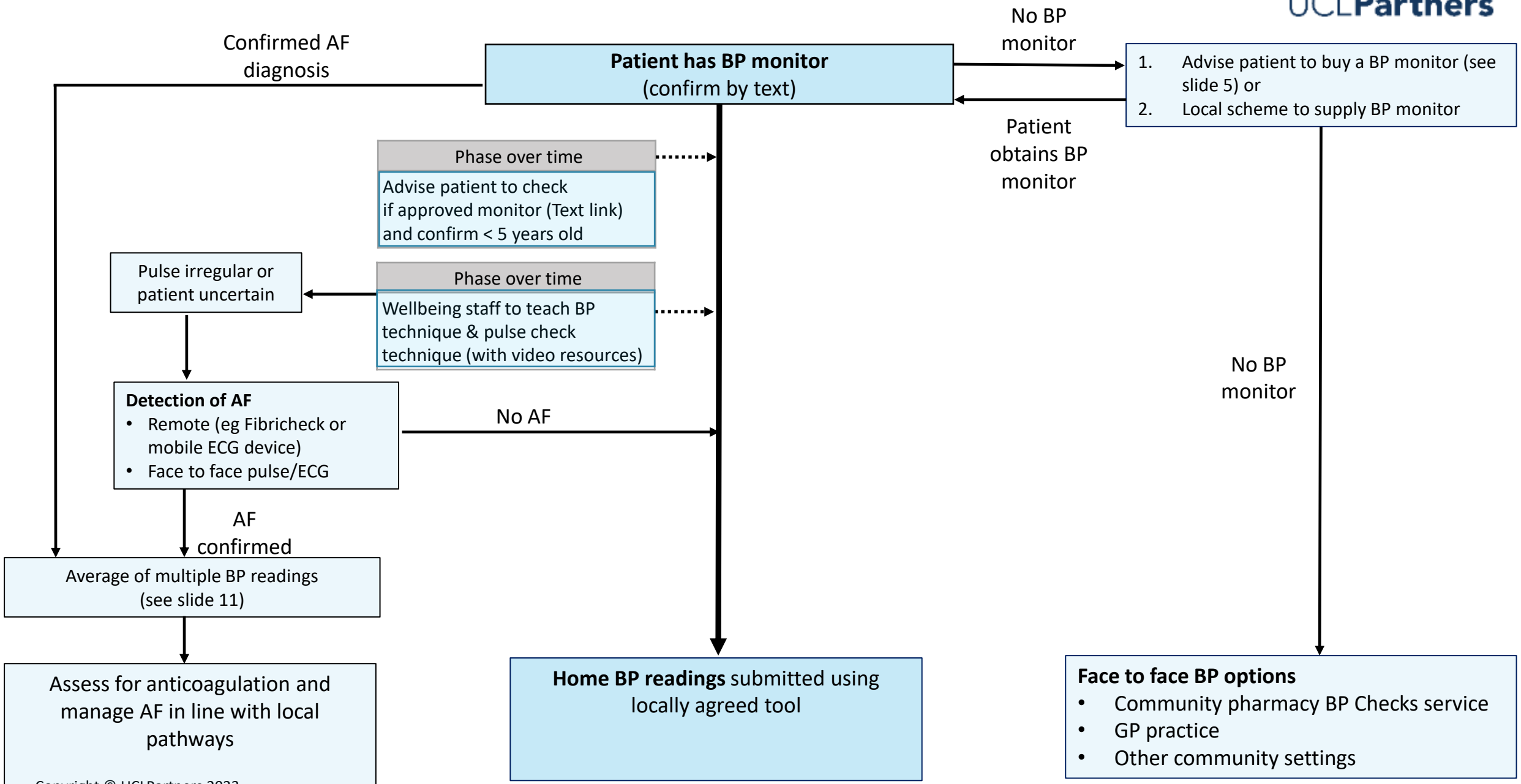
Age <80 years:
- Clinic BP <140/90 mmHg
- ABPM/HBPM <135/85mmHg

Postural hypotension:
- Base target on standing BP

Frailty or multimorbidity:
- Use clinical judgement

Pathway adapted from NICE Guidelines (NG136) Visual Summary
https://www.nice.org.uk/guidance/ng136/resources/visual-summary-pdf-6899919517
Abbreviations: ACEi: ACE inhibitor, ARB: Angiotensin II Receptor Blocker, CCB: Calcium Channel Blocker, ABPM: Ambulatory Blood Pressure Monitoring, HBPM: Home Blood Pressure Monitoring

Home Blood Pressure Monitoring Pathway



Management of Broader Cardiovascular Risk in Hypertension: Detecting Atrial Fibrillation (AF)

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Detection and Management of AF in Patients with Hypertension

- Palpate pulse and if irregular or patient uncertain:
  - Assess for AF using ECG or remote devices.

- If AF is confirmed, undertake stroke and bleeding risk assessment and anticoagulate as appropriate.

- Ensure following information is followed for an accurate blood pressure (BP) measurement:
  - Patients **without** AF:
    - Take 2 BP readings. If the values are more than 5mmHg a part, do a third BP reading and take an average of the lowest 2 BP readings.
  - Patients **with** AF:
    - Take blood pressure twice in the morning and twice in the evening for 4 consecutive days and then calculate an average of the values. (An average of 14 readings is required)

Please refer to UCLP AF pathway for detailed guidance:

https://uclpartners.com/our-priorities/cardiovascular/proactive-care/cvd-resources/

Resources for Remote Diagnostics and Monitoring

Newly identified irregular heart rhythm in people with high blood pressure

- Fibricheck (needs smartphone) www.fibricheck.com/ and ask patient to monitor morning and evening for 7 days
- Utilise mobile ECG technology, if available e.g.:
  - Kardia by AliveCor (needs smartphone): www.alivecor.co.uk/kardiamobile
  - MyDiagnostick: www.mydiagnostick.com/
  - Zenicor: https://zenicor.com/

ACR - home urine testing

- Healthy.io https://healthy.io/urinalysis-products/

Management of Broader Cardiovascular Risk in Hypertension: Cholesterol

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Managing High Cholesterol and Cardiovascular Risk in People with Hypertension

The following slides will help clinicians manage the broader cardiovascular risk in people with hypertension:

- **Pre-existing cardiovascular disease**
  - Optimise lifestyle
  - Use of high intensity statins at maximal appropriate dose
- **No pre-existing cardiovascular disease**
  - Optimise lifestyle and lipid lowering therapy as primary prevention in people with:
    - QRisk >10% in ten years
    - CKD 3-5
    - Type 1 Diabetes for >10 years or over age 40
- **All patients:**
  - Responding to possible statin intolerance
  - Managing muscle symptoms and abnormal LFTs in people taking statins
- **Please refer to UCLP lipid pathway for detailed guidance:**

  https://uclpartners.com/our-priorities/cardiovascular/proactive-care/cvd-resources/

Lipid Optimisation Pathway for Secondary Prevention[1]

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Is the patient on high dose, high intensity statin[3]?
(atorvastatin 80mg or equivalent)

No → **Initiate / increase to high dose high intensity statin[2,3,4] if possible** and re-enforce lifestyle and diet measures

Yes

Review within 2 to 3 months
Is LDL-chol ≤ 2mmol/L or non-HDL ≤ 2.6mmol/L?[1]

No → **Address any adherence issues and reinforce lifestyle measures[1]**
Consider intensifying therapy[4]

Yes

Consider adding ezetimibe[4] 10mg daily to maximum tolerated statin to reduce CV risk, even where the lpid target has been achieved.[1]

Consider ezetimibe 10mg daily. Reassess within three months.

Assess eligibility for injectable therapies:
- **Inclisiran** - if LDL-C ≥ 2.6mmol/L

OR
- **PCSK9i (mAB)[5]** if LDL-C > 4mmol/L (or > 3.5mmol/L if recurrent events)

If statin intolerant – offer ezetimibe. Reassess within 2 to 3 months and, if not achieving target, **consider bempedoic acid and injectable therapies** in line with eligibility criteria.[1]

Review annually, assessing treatment to target, adherence to drugs and offering support for diet and lifestyle measures

Check fasting triglyceride levels & manage according to national guidance.

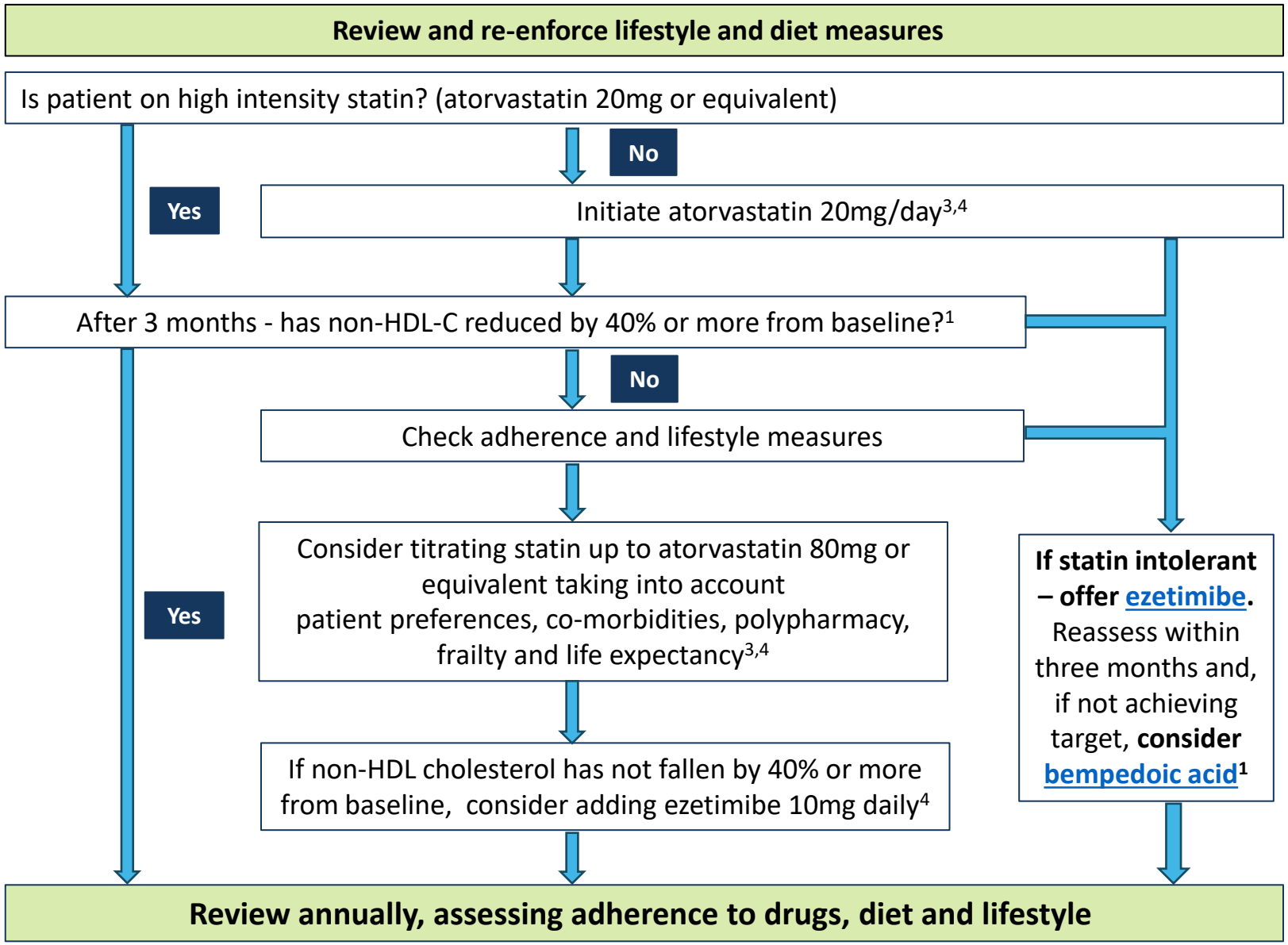
At any point consider iscosapent ethyl in addition to statins +/- other lipid lowering therapies **if fasting triglycerides ≥1.7 mmol/litre AND LDL > 1.04 mmol/litre and ≤2.6 mmol/litre**

Secondary prevention should be offered to all patients with established CVD[1]

High Intensity Statin for secondary prevention[3]	
Atorvastatin	80mg
Rosuvastatin	20mg

1. NICE NG238: Cardiovascular disease: risk assessment and reduction, including lipid modification
2. Dose may be limited, for example if:
   - CKD: eGFR<60ml/min – recommended starting dose - atorvastatin 20mg
   - Drug interactions
   - Drug intolerance
   - Older age / frailty
3. See statin intensity table.
4. Use shared-decision making and incorporate patient preference in treatment and care decisions.
5. NICE Guidance: Evolocumab, Alirocumab

Optimisation Pathway for Patients with High Cardiovascular Risk – Primary Prevention[1,2]



Primary prevention should be offered to all patients with a QRisk ≥ 10% after addressing lifestyle modification . (It may also be considered in individuals with QRIsk < 10%)[1]

Optimal High Intensity statin for Primary Prevention	
Atorvastatin	20mg
Rosuvastatin	10mg

1. NICE NG238: Cardiovascular disease: risk assessment and reduction, including lipid modification
2. High cardiovascular risk:
   - QRisk >10% in ten years
   - CKD 3-5
   - Type 1 Diabetes for >10 years or over age 40
3. See statin intensity table.
4. Use shared-decision making and incorporate patient preference in treatment and care decisions.

Statin Intolerance Pathway

Important considerations

- Most adverse events attributed to statins are no more common than placebo*
- Stopping statin therapy is associated with an increased risk of major CV events. It is important not to label patients as ‘statin intolerant’ without structured assessment
- If a person is not able to tolerate a high-intensity statin, aim to treat with the maximum tolerated dose
- A statin at any dose reduces CVD risk – consider annual review for patients not taking statins to review cardiovascular risk and interventions

A structured approach to reported adverse effects of statins

1. Stop for 4-6 weeks.
2. If symptoms persist, they are unlikely to be due to statin
3. Restart and consider lower initial dose
4. If symptoms recur, consider trial with alternative statin
5. If symptoms persist, consider ezetimibe +/- bempedoic acid

*(*Collins et al systematic review, Lancet 2016)*

Resources

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For Local Decision: Options for Purchasing Home BP Machines

Validated devices

- A list of validated devices for home use can be found at: https://giftshop.bhf.org.uk/health/blood-pressure-monitors. Validated devices for home use are accurate for up to 5 years after purchase

  (Hodgkinson JA et al. 2020 Accuracy of blood-pressure monitors owned by patients with hypertension (ACCU-RATE study): a cross-sectional, observational study in central England. BJGP 1 June 2020; bjgp20X710381. DOI: https://doi.org/10.3399/bjgp20X710381)

Considerations

- Upper arm blood pressure devices preferred
- Basic model (~£20) is suitable for most patients
- Ensure patient has the correct cuff size based on arm circumference
- Bluetooth connectivity allows automatic transfer of data into a patient held device. However few NHS services are able to interface with these data portals at this time and Bluetooth enabled devices are more expensive to purchase

Resources for Patients

Resources on high blood pressure and how to manage it:

- **British Heart Foundation** hub for managing blood pressure at home aimed at patients www.bhf.org.uk/bloodpressureathome
- **Stroke Association**: www.stroke.org.uk/what-is-stroke/are-you-at-risk-of-stroke/high-blood-pressure

Monitoring your blood pressure at home:

- How to check your blood pressure using a blood pressure machine (video)
- Home Blood Pressure Monitoring Explained
- Step by step guide for patients on how to take BP
- Home monitoring diary for patients
- Validated BP monitors for home use
- How to choose a BP monitor
- Remote Blood Pressure Monitoring Video for Patients (English)
- Remote Blood Pressure Monitoring Video for Patients (Other languages)

Resources for Patients

How to assess pulse rhythm at home

British Heart Foundation: How to take your pulse video

Heart Rhythm Alliance: Know Your Pulse Factsheet, What is an Arrhythmia?

Diet

Heart UK: Blood fats explained

Providing information on healthy eating from the NHS website

Advice and guidance on losing weight including useful apps and healthy recipes on the Better Health website

NHS advice on lowering cholesterol levels

Smoking cessation

NHS support, stop smoking aids, tools and practical tips

Exercise

Getting active around the home: tips, advice and guidance on how to keep or get active in and around the home from Sport England

Dance to health: Online dance programme especially tailored to people over 55 years old

Alcohol

Heart UK alcohol guidance & NHS Drink Less guidance

Implementation Support

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Proactive Care Frameworks: Implementation & Support Package

Implementation Support is critical to enable sustainable and consistent spread. UCLPartners has developed a support package for the Integrated Care Systems within our geography covering the following components. The resources below can be accessed via the UCLP website: Proactive care frameworks – UCLPartners.

UCLPartners is one of 15 Health Innovation Networks (HINs) across England and all 15 have a priority around CVD. Please reach out to you local HIN to understand what support they might be able to provide. Please note each varies in its approach and offer.

Search and stratify	**Comprehensive search tools** for EMIS and SystmOne to stratify patients • Pre-recorded webinar as to how to use the searches. • Online FAQs to troubleshoot challenges with delivery of the search tools.
Workforce training and support	**Training tailored to each staff grouping (e.g. some ARRS* roles) and level of experience** • **Delivery:** Scripts provided as well as training on how to use these underpinned with motivational interviewing/ health coaching training to enable adult-to-adult conversations. • **Practical support**: Recommended training e.g. correct inhaler technique; correct BP technique, Very Brief Advice for smoking cessation, physical activity etc. • **Digital implementation** support: how to get patients set up with appropriate digital. • **Education** sessions on conditions. • **Communities of Practice.**
Digital support tools	**Digital resources** to support remote management and self-management in each condition. **Implementation** toolkits available where required, e.g. MyCOPD. Support available from UCLP's commercial and innovation team for implementation.

*Additional Roles Reimbursement Scheme

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Thank you

For more information please contact:

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Version tracker

Version	Edition	Changes Made	Date amended	Review due
2	2.0	• Incorporated lipid management content for patients with multi-morbidity • Added lifestyle interventions for patient self-management • Added statin intensity table for reference		
3	3.0	• Added option of bempedoic acid • Amended slide on managing high cholesterol • Amended slide on managing/detecting AF	August 2021	February 2022
4	4.0	• Included Inclisiran into lipid management pathway • Updated priority groups • Updated web links for resources	July 2022	July 2023
5	5.0	• Introduction slides updated • HCA roles amended to ARRS roles • Lipid pathway treatment targets updated to align with NICE and AAC guidance	December 2022	December 2023
5	5.1	• Updated cholesterol pathway slides • Amended introduction slides • Added link for home BP monitoring video in other languages	September 2023	September 2024
6	6.0	• Updated cholesterol pathway slides to align with NICE • Updated implementation slide	January 2024	January 2025