



# UCLPartners Proactive Care Framework:

## Hypertension

February 2021

- COVID-19 has placed unprecedented pressure on our health system. This brings an added risk to people with long term conditions who need ongoing proactive care to stay well and avoid deterioration. Disruption to routine care may worsen outcomes for patients, increase their COVID risk and result in exacerbations that further increase pressure on the NHS – driving demand for unscheduled care in GP practices and hospitals.
- As primary care transforms its models of care in response to the pandemic, UCLPartners has developed real world frameworks to support proactive care in long term conditions. The frameworks include pathways for remote care, support for virtual consultations and more personalised care, and optimal use of the wider primary care team, e.g., healthcare assistants (HCA), link workers and pharmacists.
- Additionally, the frameworks include a selection of appraised digital tools, training and other resources to support patient activation and self-management in the home setting.
- This work has been led by primary care clinicians and informed by patient and public feedback.
- The UCLPartners frameworks and support package will help Primary Care Networks and practices to prioritise in this challenging time and to focus resources on optimising care in patients at highest risk. It will support use of the wider workforce to deliver high quality proactive care and improved support for personalised care. And it will help release GP time in this period of unprecedented demand.

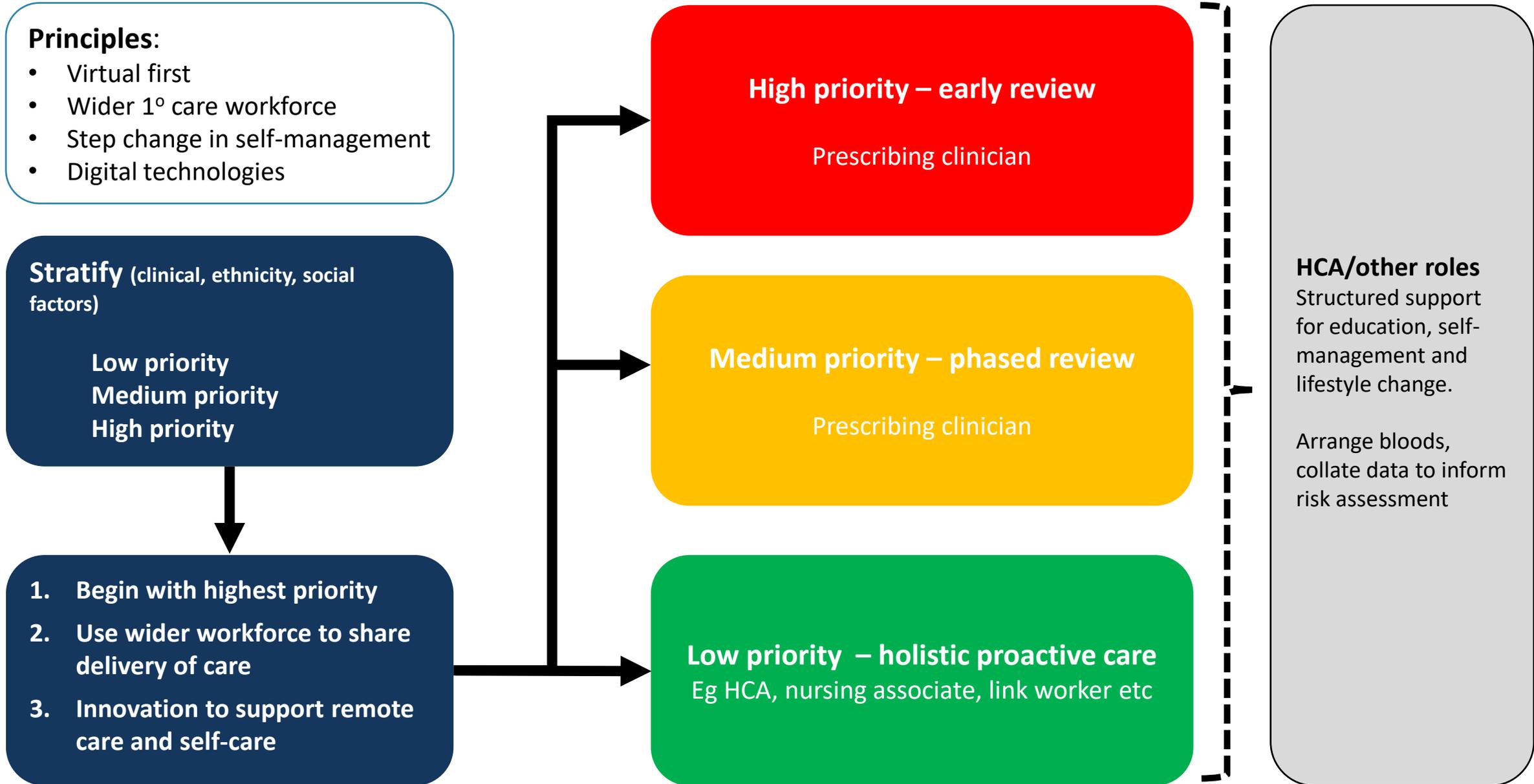
UCLPartners has developed [a series of frameworks](#) for local adaptation to support proactive management of long-term conditions in post-COVID primary care.

- Led by clinical team of GPs and pharmacists
- Supported by patient and public insight
- Working with local clinicians and training hubs to adapt and deliver

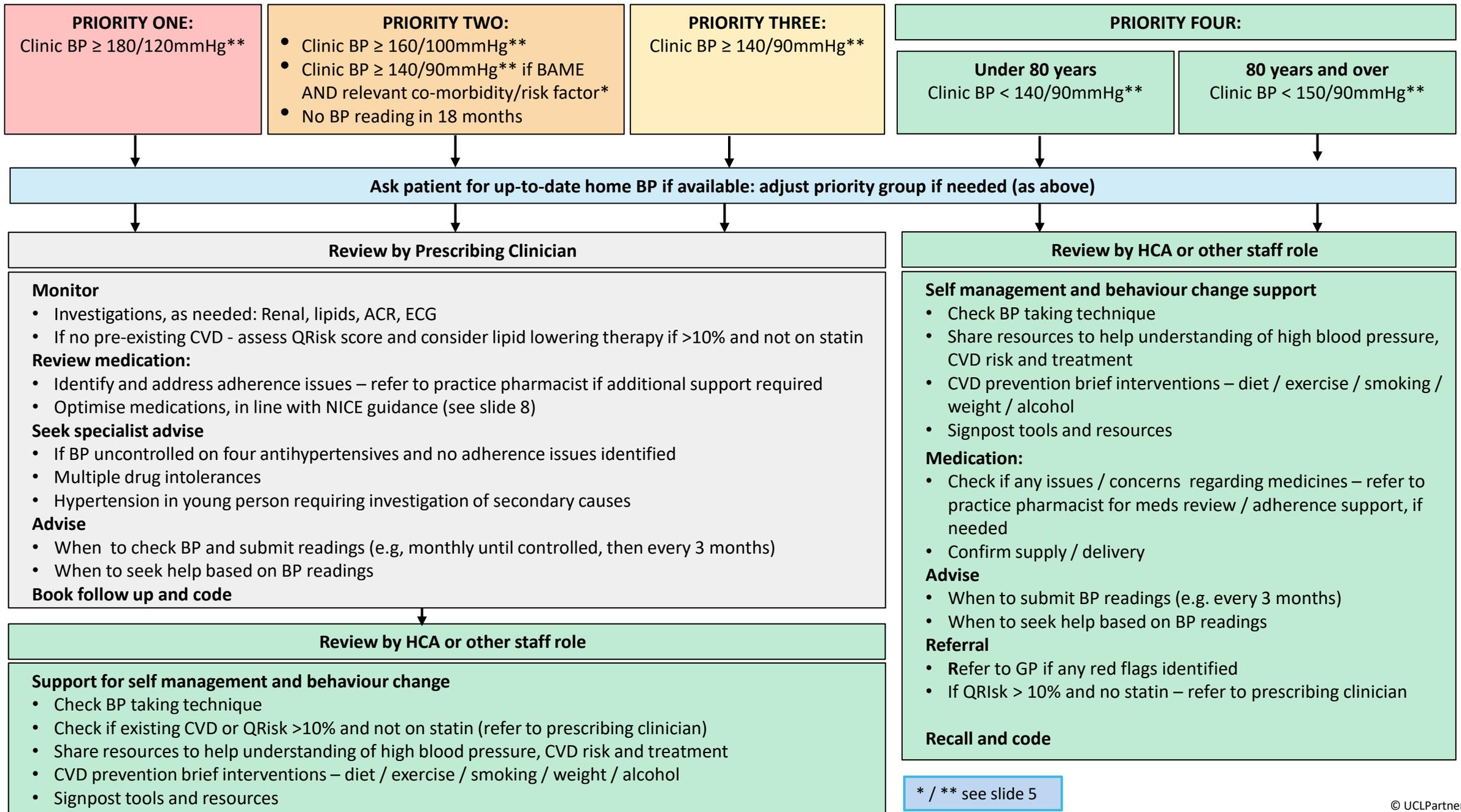
Core principles:

1. Virtual by default
2. Mobilising and supporting the wider workforce (including pharmacists, HCAs, other clinical and non-clinical staff)
3. Step change in support for self-management
4. Digital innovation including apps for self-management and technology for remote monitoring





- 1 Hypertension is the leading risk factor causing death worldwide
- 2 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 BP treatment target <140/90mmHg
- 3 Delaying intervention for more than 6 weeks for people with hypertension leads to an increased risk of Cardiovascular Disease
- 4 The UCLPartners framework is designed to support remote monitoring and management of high blood pressure

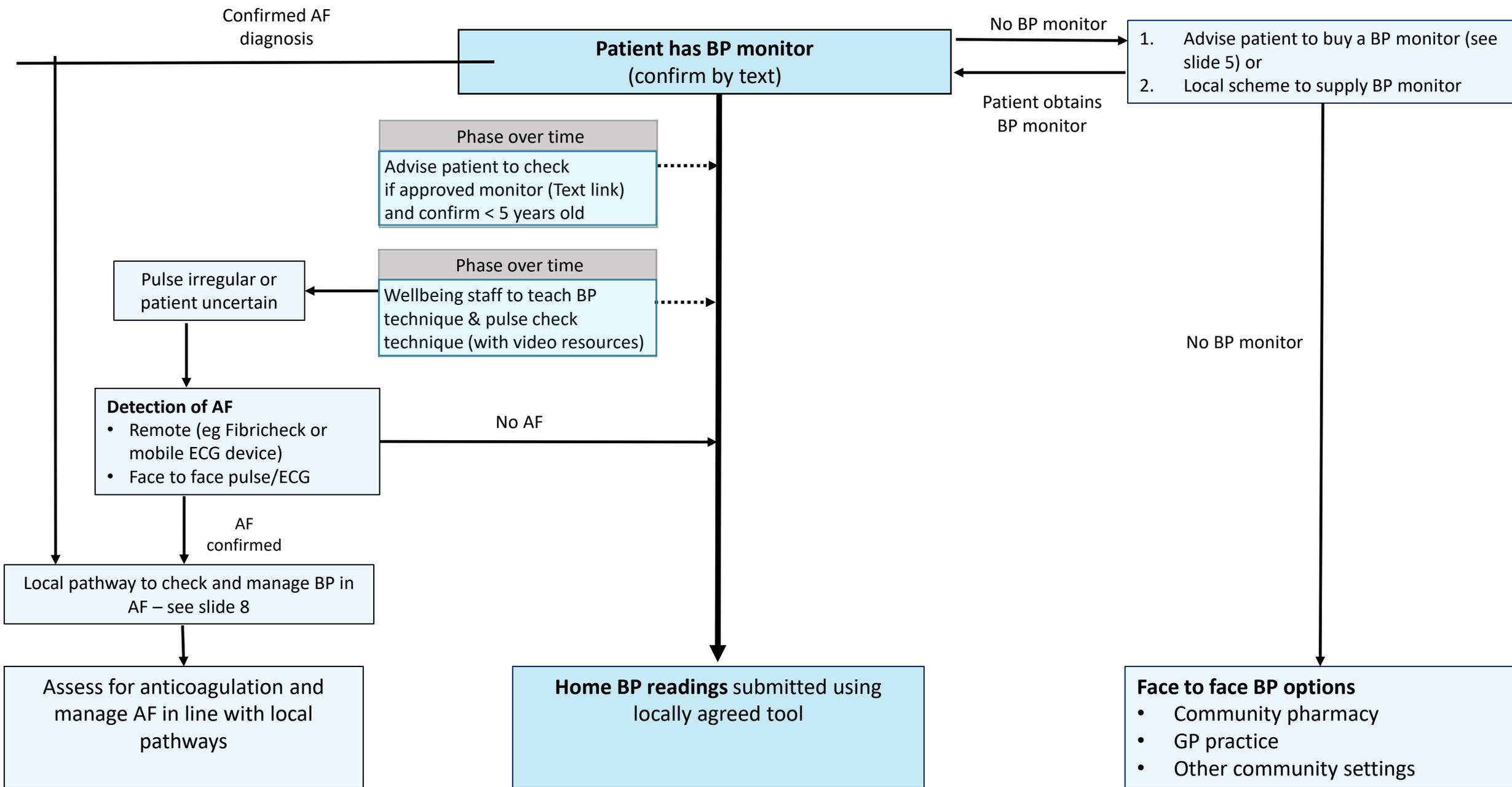


- \* Co-morbidities / risk factors

- 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





## 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

### Newly identified irregular heart rhythm

- Practice / community or open access ECG
- Teach patient to use Fibrichck (needs smartphone) [www.fibrichck.com/](http://www.fibrichck.com/) & ask them 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](http://www.alivecor.co.uk/kardiamobile)
  - MyDiagnostick: [www.mydiagnostick.com/](http://www.mydiagnostick.com/)
  - Zenicor: <https://zenicor.com/>

### Measuring BP in people AF (NB: automated BP machines are not reliable in people with AF)

- AF detection BP monitors are not validated for assessing BP accurately in people with AF
- Options are:
  - Two BP readings taken each morning and evening over 4 days and averaged
  - Face to face manual BP check

# Resources

## Considerations:

- Patient facing end
- Integration with existing GP systems, e.g. EMIS
- Ability to flag high-risk results
- Ability to batch message patients to request home BP result

All systems highlighted are:

- GDPR compliant
- CE marked
- Currently only available in English

## Comparison of providers (not exhaustive)

	Accurx	E-consult	Omron Connect	Omron HTN +	Primary Care Pathways
<b>Does it integrate with primary care clinical systems, e.g. EMIS?</b>	Pending( 1-2months ?) but will be integrated. Need to input BP to be coded	No- a pdf is provided which is incorporated into EMIS and SystemOne. Manually input BP into notes to be coded	No - clinician has separate dashboard & log in	Yes – separate dashboard but does integrate	Yes ( EMIS, system one and vision)
<b>Cost</b>	Accurx basic free Florey may cost additional	Free temporarily	Free (not Hypertension+)	Cost TBC- pilot at present	£200 per year for basic package
<b>BP monitors</b>	Patient needs own BP monitor	Patient needs own BP monitor	Bluetooth enabled but can input BP manually	Bluetooth enabled but can input BP manually	Patient needs own monitor
<b>Ease of use for patient</b>	Yes	Yes	Yes- but patient must download app	Yes – patient needs to download app	Simple online form
<b>How many readings</b>	Minimum one reading but can add additional if GP requests	Minimum of 3	Minimum of 3	Variable – clinical can adjust	Review of specific readings options given
<b>Safety netting/ red flags</b>	Safety message at the end of entering data via text	Patient directed to emergency care if any red flags whilst inputting answers	None – higher readings appear at top of dashboard	Alerts with readings – with ownership on patient to contact Health care professional	Disclaimer alert to patient prior to completing form.



- Heart Rhythm - PPG technology
  - Fibricheck (needs smartphone) [www.fibricheck.com/](http://www.fibricheck.com/)
- Mobile ECG
  - Kardia by AliveCor (needs smartphone): [www.alivecor.co.uk/kardiamobile](http://www.alivecor.co.uk/kardiamobile)
  - MyDiagnostick: [www.mydiagnostick.com/](http://www.mydiagnostick.com/)
  - Zenicor: <https://zenicor.com>
- ACR - home urine testing
  - Healthyio <https://healthy.io/urinalysis-products/>



### Resources on high blood pressure and how to manage it:

- British Heart Foundation hub for managing blood pressure at home so patients can feel confident checking and managing their blood pressure at home. [www.bhf.org.uk/bloodpressureathome](http://www.bhf.org.uk/bloodpressureathome)
- Stroke Association: [www.stroke.org.uk/what-is-stroke/are-you-at-risk-of-stroke/high-blood-pressure](http://www.stroke.org.uk/what-is-stroke/are-you-at-risk-of-stroke/high-blood-pressure)

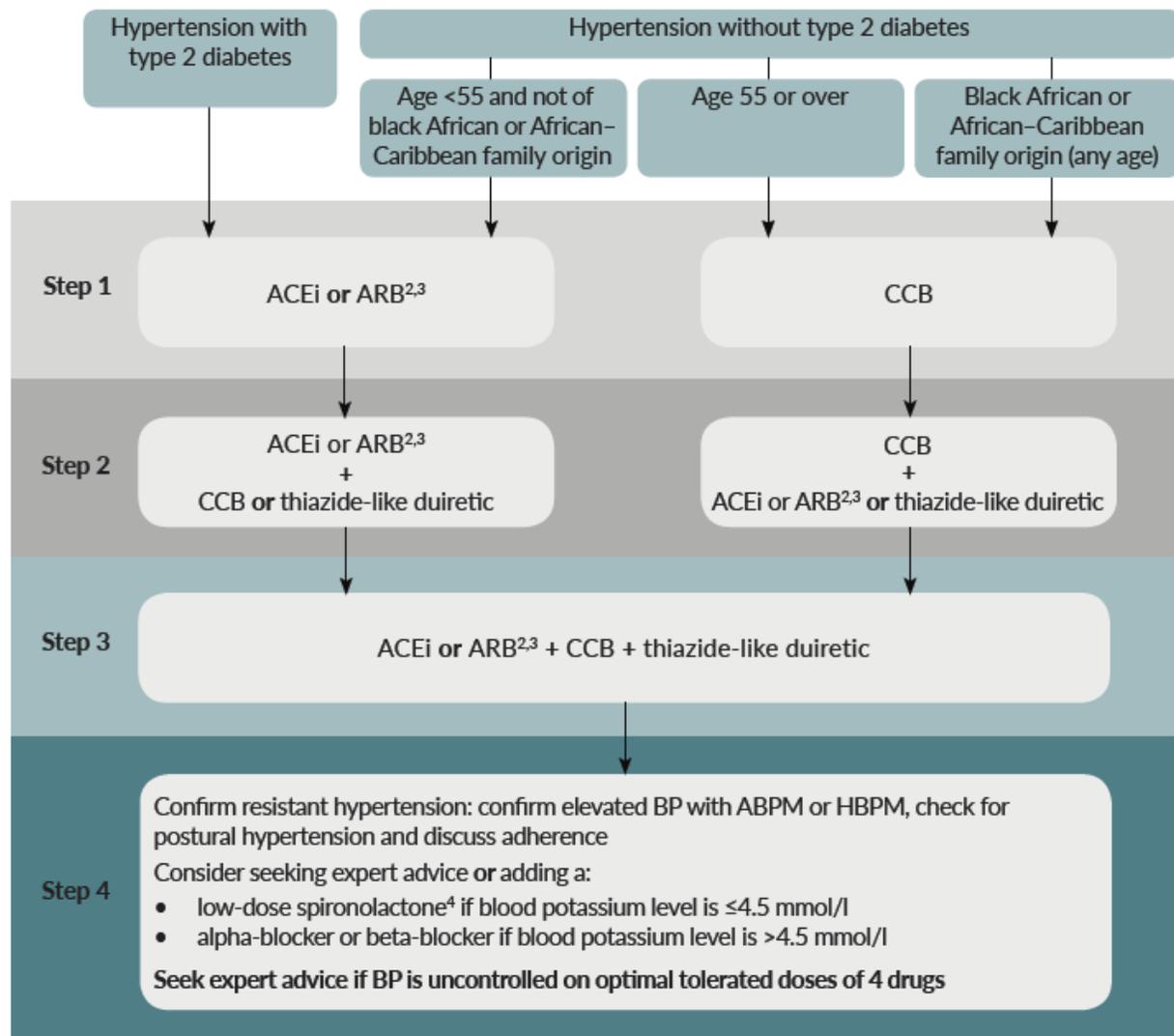
### Monitoring your blood pressure at home:

- How to check your blood pressure using a blood pressure machine (video) [www.bhf.org.uk/information-support/heart-matters-magazine/medical/tests/blood-pressure-measuring-at-home](http://www.bhf.org.uk/information-support/heart-matters-magazine/medical/tests/blood-pressure-measuring-at-home)
- How to measure your BP leaflet/poster: <https://bihsoc.org/wp-content/uploads/2017/11/BP-Measurement-Poster-Automated-2017.pdf>
- Step by step guide for patients on how to take BP: [https://bihsoc.org/wp-content/uploads/2017/09/How to instructional leaflet.pdf](https://bihsoc.org/wp-content/uploads/2017/09/How_to_instructional_leaflet.pdf)
- Home monitoring diary for patients: [https://bihsoc.org/wp-content/uploads/2017/09/Home\\_blood\\_pressure\\_diary.pdf](https://bihsoc.org/wp-content/uploads/2017/09/Home_blood_pressure_diary.pdf)
- Validated BP monitors for home use: <https://bihsoc.org/bp-monitors/for-home-use/>
- How to choose a BP monitor [www.bloodpressureuk.org/BloodPressureandyou/Homemonitoring/Choosingyourmonitor](http://www.bloodpressureuk.org/BloodPressureandyou/Homemonitoring/Choosingyourmonitor)

### How to assess pulse rhythm at home

- How to take your pulse video: [www.bhf.org.uk/information-support/tests/checking-your-pulse](http://www.bhf.org.uk/information-support/tests/checking-your-pulse)
- Know Your Pulse Factsheet [www.heartrhythmalliance.org/resources/view/389/pdf](http://www.heartrhythmalliance.org/resources/view/389/pdf)
- What is an Arrhythmia? <http://heartrhythmalliance.org/resources/view/522/pdf>

## Choice of antihypertensive drug<sup>1</sup>, monitoring treatment and BP targets



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.

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

Consider ABPM 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  $< 135/85$  mmHg

**Age  $\geq 80$  years:**

- Clinic BP  $< 150/90$  mmHg
- ABPM/HBPM  $< 145/85$  mmHg

**Postural hypotension:**

- Base target on standing BP

**Frailty or multimorbidity:**

- Use clinical judgement

<sup>1</sup>For women considering pregnancy or who are pregnant or breastfeeding, see NICE's guideline on [hypertension in pregnancy](#). For people with chronic kidney disease, see NICE's guideline on [chronic kidney disease](#). For people with heart failure, see NICE's guideline on [chronic heart failure](#)

<sup>2</sup>See MHRA drug safety updates on [ACE inhibitors and angiotensin-II receptor antagonists: not for use in pregnancy](#), which states 'Use in women who are planning pregnancy should be avoided unless absolutely necessary, in which case the potential risks and benefits should be discussed', [ACE inhibitors and angiotensin II receptor antagonists: use during breastfeeding](#) and [clarification: ACE inhibitors and angiotensin II receptor antagonists](#). See also NICE's guideline on [hypertension in pregnancy](#).

<sup>3</sup>Consider an ARB, in preference to an ACE inhibitor in adults of African and Caribbean family origin.

<sup>4</sup>At the time of publication (August 2019), not all preparations of spironolactone have a UK marketing authorisation for this indication.

# Implementation & Support

Implementation Support is critical to enable sustainable and consistent spread.  
UCLPartners has developed a support package covering the following components:

## Search and stratify

**Comprehensive search tools** for EMIS and SystmOne to stratify patients

- Pre-recorded webinar as to how to use the searches
- Online Q&A to troubleshoot challenges with delivery of the search tools

## Workforce training and support

**Training tailored to each staff grouping (e.g. HCA/ pharmacist etc) and level of experience**

- **Delivery:** Protocols and scripts provided/ training on how to use these underpinned with motivational interviewing/ health coaching training to enable adult-to-adult conversations
- **Practical support:** 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

Thank you

For more information please contact:

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[@uclpartners](#)