Classification: Official

Publications approval reference: DRAFT

[VOLUME NUMBER, DATE]

Standard operating procedure

Blood Pressure Monitoring @home for people with diagnosed hypertension

This guidance is correct at the time of publishing. However, as it is subject to updates, please use the hyperlinks to confirm the information you are disseminating to the public is accurate.

Contents

1.1 Requirement

It is recommended that all CCGs support PCNs to implement blood pressure monitoring @home (BPM@h) for patients with a diagnosis of hypertension to allow treatment to be optimised where necessary.

1.2 Background

In England, there are over eight million people diagnosed with hypertension (Quality and Outcomes Framework, 2019-20). During the COVID-19 pandemic, it is possible that patients with cardiovascular risk factors may not be receiving their usual review and treatment adjustment in primary care for their hypertension.

Evidence supports the use of self- and telemonitoring of blood pressure (BP) vs normal care in primary care as it is cost effective (McManus et al., 2018); saves GP time (Hammersley et al., 2020) by shifting care from GPs to other members of the multidisciplinary team; and reduces incidence of clinical events such as death, heart attack or stroke, over five years (Margolis et al., 2020).

It is estimated that 30-40% of people with a diagnosis of hypertension have access to a home blood pressure monitors (Baral-Grant S et al., 2012; Hodgkinson et al., 2020).

1.3 Governance and oversight

By accepting delivery of BP Monitors from NHS England and NHS Improvement, clinical commissioning groups (CCGs) will be accepting transfer of ownership in order to use the devices for healthcare purposes for their local population including supporting primary healthcare services.

Legal responsibility, including ensuring appropriate clinical governance, remains with the relevant (CCG). Each CCG should have a named person responsible for the establishment of the service in their area. Clinical, governance and administrative responsibilities included in the pathway can be provided by any appropriately trained person and best use of resources should be made, for example NHS Volunteer Responders delivering BP monitors to patients' homes, and the use of standardised scripts to enable non-clinical staff (e.g. health care assistants, care navigators or volunteers) to undertake appropriate activities.

1.4 Patient pathway

The pathway will be implemented in general practice to support the routine management of at-risk patients with diagnosed hypertension.

See Appendix 1 for the flowchart version.

1.4.1 Identification of target patient populations

Practices should identify the following target patient populations via a 'search' on their GP systems:

- **Group 1:** Patients who are clinically extremely vulnerable (previously shielded population) with a last recorded blood pressure (BP) of systolic BP > 150mmHg and / or diastolic BP > 90mmHg *and are not in group 2*
- **Group 2:** Patients who are clinically extremely vulnerable who have had a prior stroke or transient ischaemic attack (TIA) and last recorded blood pressure of systolic BP > 150mmHg and / or diastolic BP > 90mmHg *and do not already have a diagnosis of atrial fibrillation (AF)*
- **Group 3**: Patients whose last recorded blood pressure of systolic BP > 150mmHg and / or diastolic BP > 90mmHg *and are not in groups 1 and 2*

1.4.2 Identification of patients with blood pressure monitors

Practices should contact patients in the identified groups, for example using an MJOG survey, to identify those with access to a BP monitor.

1.4.3 Patients without access to a BP monitor

- Group 1 should be provided with basic BP monitors with an appropriately sized cuff from BPM@h programme
- Group 2 should be provided with BP monitors that detect AF with an appropriately sized cuff from BPM@h programme

  Prioritisation should be based on social deprivation, black, Asian and minority ethnic (BAME) demographics and those aged 65 years and over
- Group 3 should be encouraged to buy a validated BP monitor

If local systems wish to extend the service beyond these defined groups, they will need to resource this locally, including provision of additional BP monitors.

If the patient declines participating in BPM@h, alternative ways of regularly measuring their BP face to face should be pursued.

1.4.4 Patients with access to a BP monitor

Suitability

Patients considered for blood pressure monitoring @home should be assessed with shared decision making by the appropriate clinician prior to being entered onto the pathway, including a discussion of any support requirements for patients and / or carers. Once patient suitability is established, consent should be confirmed for blood pressure monitoring @home.

The practice should ensure that the patient's BP monitor is:

a. validated for home use (see list on the British and Irish Hypertension Society website: https://bihsoc.org/bp-monitors/for-home-use/) and;
b. less than 5 years old

Education

The patient and / or carer should be educated on how to use the BP monitor, how to submit BP readings and given supporting information (see 1.8)

- **Taking BP measurements:** Patients should be advised to take two blood pressure readings each morning and evening for at ideally 4 consecutive days every month, recording each of the BP readings.
- **Submitting BP measurements:** All readings should submitted to the GP practice using a locally agreed digital remote monitoring platform (see 1.6) or manual based method (text, email or paper copy diary, see Appendix 2) as agreed with the patient.

Coding

SNOMED codes specific to home blood pressure monitoring should be used to code BP readings received from patients.

Home BP multiple readings averaged

- 314446007 |Average day interval systolic blood pressure
- 314461008 |Average day interval diastolic blood pressure

Follow up

The average of the submitted readings should be calculated. Patients who report a:

- Raised BP (BP ≥ 135/85mmHg if less than 80 years or ≥ 145/85mmHg if 80 years or over) should be followed up with an appointment with a prescribing clinician to agree next steps in treatment with lifestyle modifications and / or medicines in line with NICE guideline NG136. Patients should be asked to

submit BP readings again in one month to assess the effectiveness of any intervention.
    - Patients should be advised to submit BP readings monthly until their BP is adequately controlled and then ideally in 6 months, but at least annually, thereafter.
- Normal BP (BP < 135/85mmHg if less than 80 years or < 145/85mmHg if 80 years or over) should be reassured by text or telephone and reminded to submit BP reading again, ideally in 6 months, but at least annually.
- Irregular pulse should be followed up with an appointment with a prescribing clinician to undertake investigations to confirm AF diagnosis in line with NICE guideline CG180.

1.5 Care homes

People living in care homes should receive the same standard of care as someone in their own home. Access to BP monitoring for patients in care home settings should be facilitated by care home staff and other supporting services. Any support required in setting up the pathway within the care home can be provided through the care home's named clinical lead in the first instance.

1.6 Remote monitoring digital platforms

Digital platforms have created electronic pathways for patients that enable messaging, reviewing results and patient submitted outcome measures rather than traditional GP appointments.

NHSX is working in partnership with the seven NHS Regions to support the scaling up of remote monitoring.

As such remote monitoring platforms may be available locally to use so patients can record their blood pressure readings. This means that patients can upload their results at home (including care homes) and these will be available to review via the patient record.

There are several remote monitoring digital platforms available in each region and practices should use the platform which has been endorsed by their local CCG.

Several remote monitoring options can be seen in the UCL Partners Hypertension pathway.

1.7 Data requirements

All relevant information should be recorded in the patient record, including if a patient decline participating in BPM@h.

CCGs will be requested to provide routine information on utilisation of BP monitors provided by the BPM@h Programme. The model will be subject to ongoing evaluation and adaptation.

1.8 Further support

Primary care team resources

- UCL Partners: Hypertension Pathway
- British and Irish Hypertension Society (BIHS): Implementing Home Blood Pressure Monitoring In Your Practice - A Practical Guide and HBPM Protocol
- Champs Public Health Collaborative: High Blood Pressure
- NHS Volunteers Responders: Information for referrers

British Heart Foundation resources and support

The BHF have a wide range of tools, information and support available. The most relevant resources for this project have been listed below, all of which can be accessed via the 'Manage your blood pressure at home hub' a new hub created to help measure and manage blood pressure at home during the pandemic. All patients should be signposted to the hub in any communications sent out as part of the project.

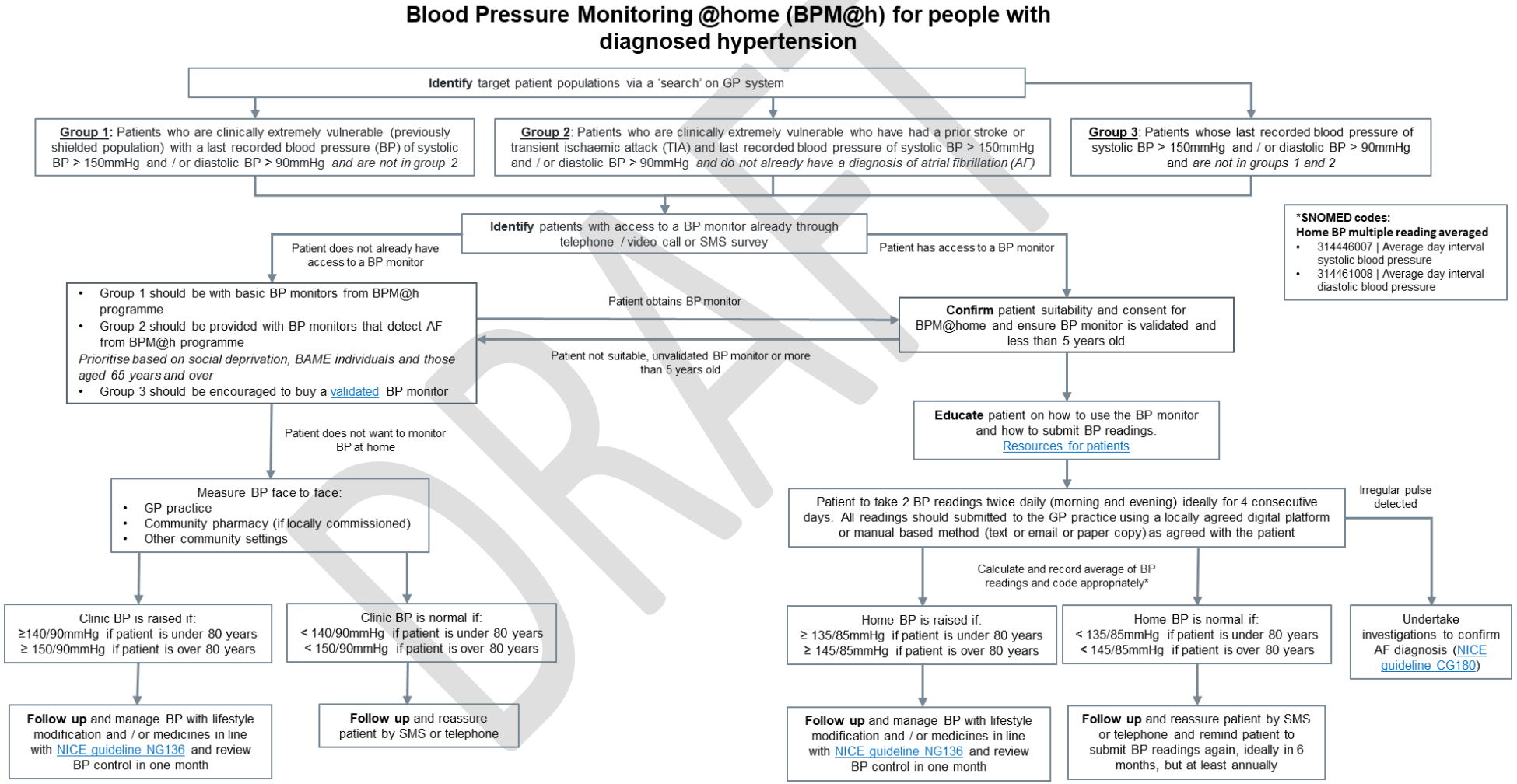
Tool or resource	Description	Format
How to measure blood pressure at home - video	Video demonstration on with a BHF Senior Cardiac Nurse, demonstrating to patients how to measure blood pressure at home.	Online video
High Blood Pressure and Coronavirus	BHF medical experts answer questions about how the Covid-19 coronavirus can affect people with heart disease, including hypertension.	Webpage
6 tips for reducing blood pressure	Tips to help reduce your blood pressure, or control it following a diagnosis of high blood pressure.	Webpage
Understanding blood pressure booklet.	Booklet for people with high blood pressure to help them understand the condition. Including information on what high blood pressure is, and how to reduce it.	These are available to download or to order in print.
Manage your blood pressure at home hub	Central hub for all resources for high blood pressure.	Webpage

Healthcare professional hub	A central hub of clinical tools and practical resources specific to healthcare professionals	Webpage

Additional patient resources

- Blood pressure monitoring template diary (Appendix 2)
- Blood Pressure UK: Home page
- Stroke Association: Risks of high blood pressure
- Bradford Healthy Hearts: Home page

Appendix 1



Appendix 2

Home BP readings

Name **Tom Test-Test Patient**

Date of Birth **03 May 1977**

NHS No.

Date	Time	Top Number (Systolic)	Bottom Number (Diastolic)	Pulse
e.g.	8am	130	78	70
	9pm	145	86	82
	am			
	pm			
	am			
	pm			
	am			
	pm			
	am			
	pm			