

Assessing Blood Pressure in Primary Care

Home Blood Pressure Monitoring (HBPM) and Ambulatory Blood Pressure Monitoring (ABPM)

Toolkit for Primary Care Health and Care Professionals in Greater Manchester



How to use this toolkit

Intended audience

This toolkit is for Primary Care health and care professionals in Greater Manchester

Intended aims & outcomes

Understand:

- Key principles of Home Blood Pressure Monitoring (HBPM)
- How to best support patients with HBPM
- How to leverage the benefits of HBPM for the practice
- How to implement registry
- Digital vs Non-Digital HBPM return readings
- Blood Pressure Monitors for patients

Icons



Background
information



'How to':
Practical
guidance












Further
resources

Access each section that is most relevant to you.

- The **tabs** at the top of each page will indicate where you are within the toolkit.
- Use the **contents page** to take you to a specific page.

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Benefits and considerations of Home Blood Pressure Monitoring



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Home Blood Pressure Monitoring describes patients self-taking blood pressure readings at home for the assessment, diagnosis or monitoring of high blood pressure and/or persistent hypertension.

These readings are collated and sent to their practitioner or practice either on paper (non-digital) or utilising digital means (such as AccuRx or other messaging services).

Literature shows that up to 40% of hypertensive patients already have a blood pressure monitor at home, with many others amenable to buying one.

HBPM has demonstrated its effectiveness in clinical trials and is a suitable alternative to ABPM*, however variations in how practices implement HBPM, and support patients and uncertainty over who has already got a monitor is leading to missed opportunities, errors in coding and prevents us from alleviating the efficiencies associated with HBPM on an ongoing basis.



Benefits for patients

- Can accurately measure their blood pressure while staying in the comfort of their home
- More responsibility for health / empowering to develop basic skills
- Lower blood pressure means less risk of heart attacks, strokes, peripheral vascular disease
- Live longer healthier lives
- Reduces requirement to visit practice for ongoing monitoring

Benefits for practice

- Free up nurse and HCA appointments
- Quickly be able to identify and batch message patients monitoring their BP at home
- If people use digital tools such as AccuRx then don't have to manually add up BP readings, saved into record with one click and accepted by QOF



Issues and considerations

- Supporting patients appropriately in starting to use HBPM
- Ensuring access to digital and non-digitally enabled patients
- Different Targets between home and clinic blood pressures
- Different coding for clinic and Average/Home readings



Key Principles of Home Blood Pressure Monitoring



In addition to advice on how to take readings, **patients need to be supported in how best to use their blood pressure monitor.**

Without support and guidance HBPM may cause anxiety and often leads to over-measuring, uncertainty, and confusion over readings, what they mean and how often to do them.

Explain the variability of blood pressure and the need for an ACCURATE assessment to ensure we are not treating a blood pressure which for e.g. may be “high” because the patient is in a healthcare setting (white coat hypertension).

We are most interested in the AVERAGE blood pressure of which an accurate assessment requires a minimum of 12 readings over a short period (e.g. 4 days).

If the blood pressure is high, then we can have a discussion of what we would like to do and after a change we repeat the assessment.

Once the blood pressure is normal and stable, we then don't have to repeat this assessment for another year.

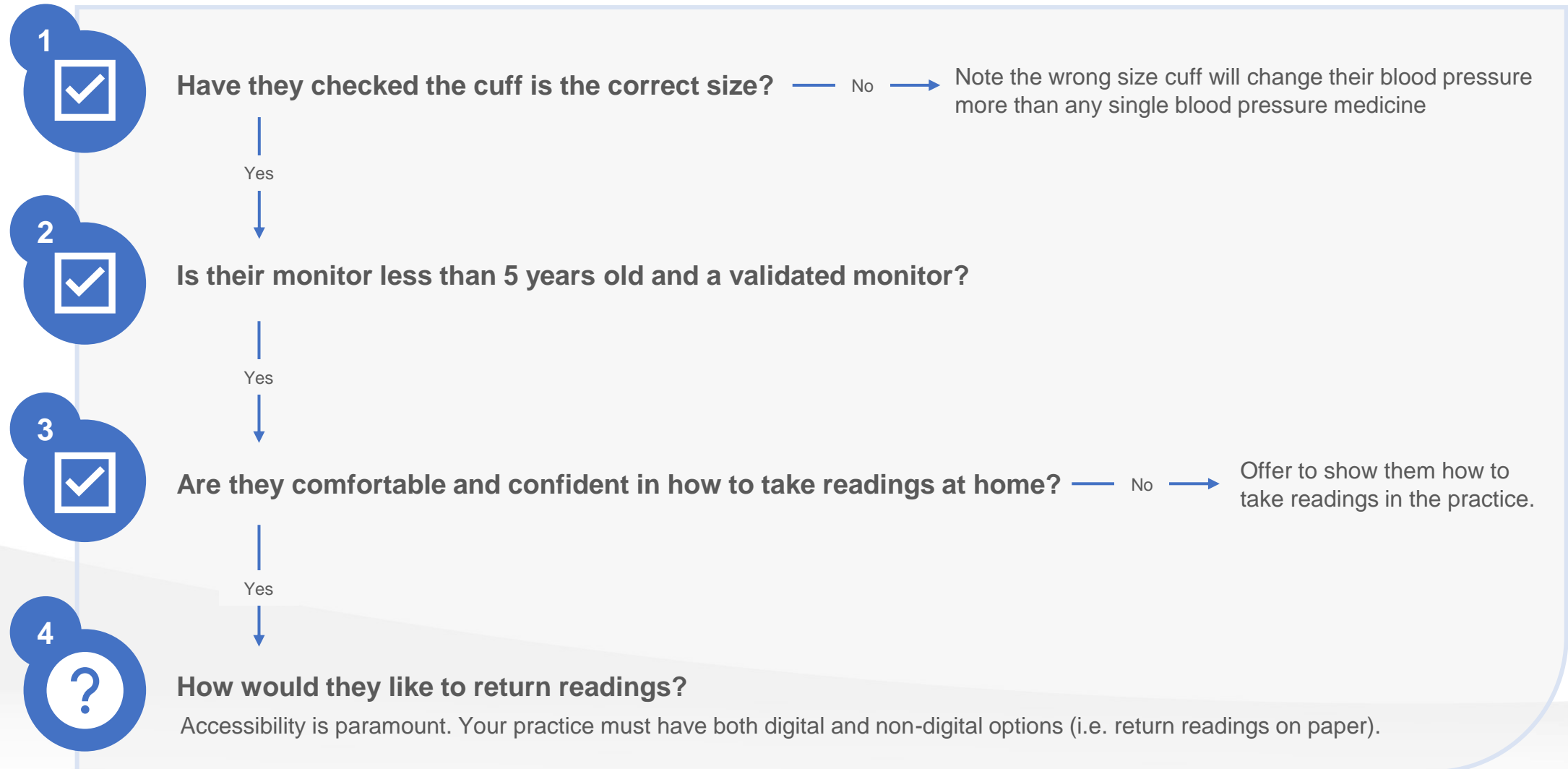
If patients understand why we feel HBPM is beneficial for them, **they are more likely to return readings and will be more ready to conduct and submit their blood pressure readings on request.**

You may also wish to discuss next steps to **alleviate the burden** from future appointments and support shared decision making.

This is important considering the asynchronous nature of HBPM, as someone else may action the return reading.



Patient checklist





Leveraging the benefits of HBPM for the practice



HBPM may reduce appointments required in the practice for BP checks. Furthermore, if we created registries for patients who we knew had BP monitors and were educated and comfortable conducting HBPM, further efficiencies can be gained.

We could batch message these patients on an annual basis, while improving the rate of returns; however this is only possible if we know who has a monitor and access to a smartphone and internet.

Creating registries for patients able to conduct HBPM would alleviate significant workload through the use of searches, digital tools and batch messaging.

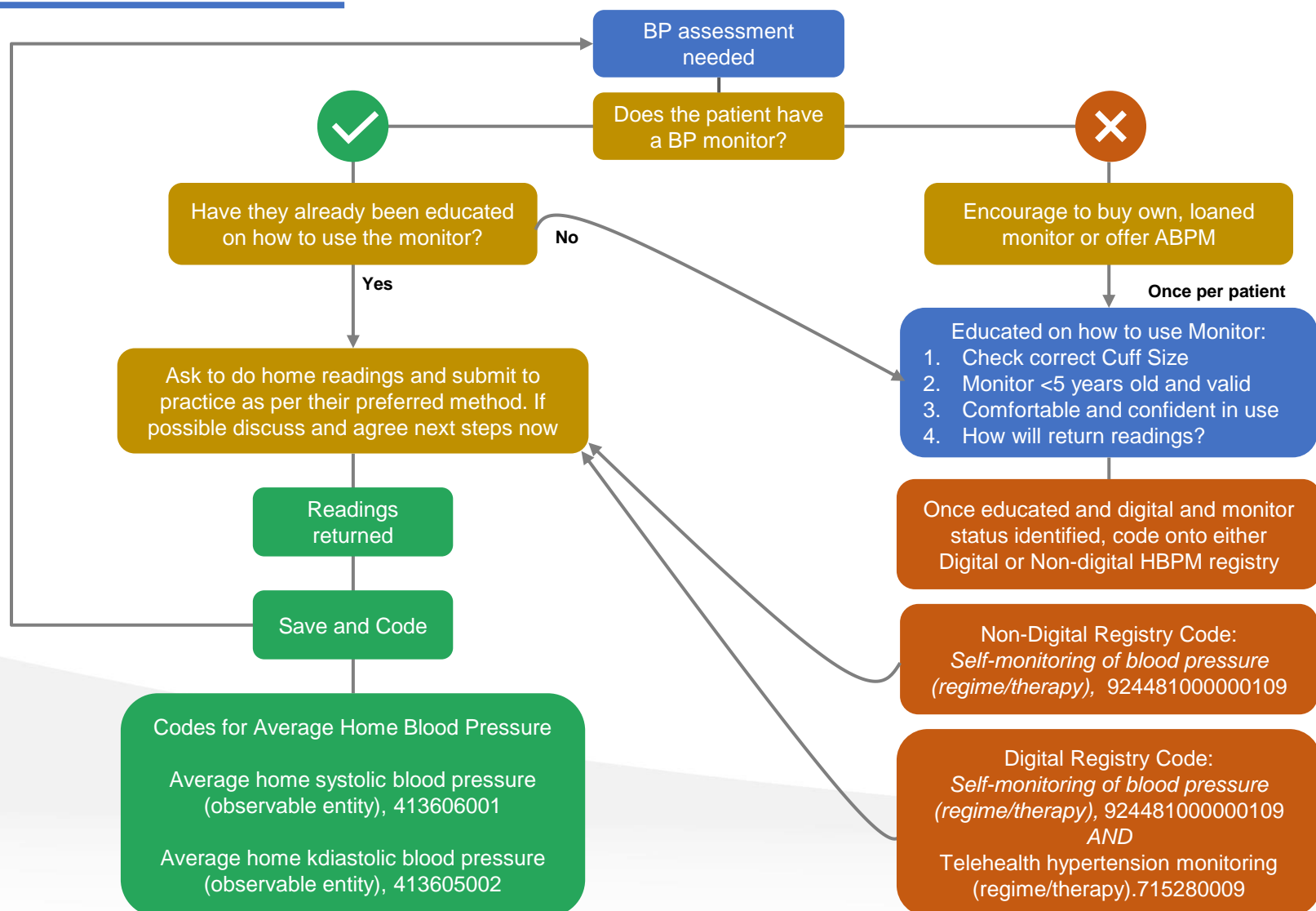
A note on accessibility: A patient needs a Smartphone and internet access to reply to an AccuRx text message or Florey. We would need to know if the person was able to return readings using their smartphone (for e.g. AccuRx) in order to effectively use such digital tools on mass.

Once the registries have been created, the practice may then utilise digital tools such as batch messaging to quickly obtain blood pressures from their digitally enabled patients on an ongoing basis, thus saving significant further workload.



NOTE: it is only possible to reply to an accuRx text if you have a smartphone and an active internet connection

Blood Pressure assessment flowchart



Note: The NHS GM DQT will be releasing EMIS F12 protocols and tools to simplify this coding process. Automated coding of people who respond to an AccuRx BP Florey could be added on request. If this would be useful please use the feedback link to submit your request for future iterations of these tools.



Example practice workflow for HBPM



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1

Digital vs Non-digital readings

Once patients have been educated and supported and the practice is happy and comfortable with their ability to take home readings, the patient should be placed onto a registry depending on how they would like to return readings, using their smartphone (Digital HBPM Registry) or on Paper (Non-Digital HBPM Registry).

2

Suggested Coding for HBPM Registries

(Note the selected codes have been chosen as they are not specifically QOF codes, however, do align and work synergistically with many digital tools such as AccuRx).

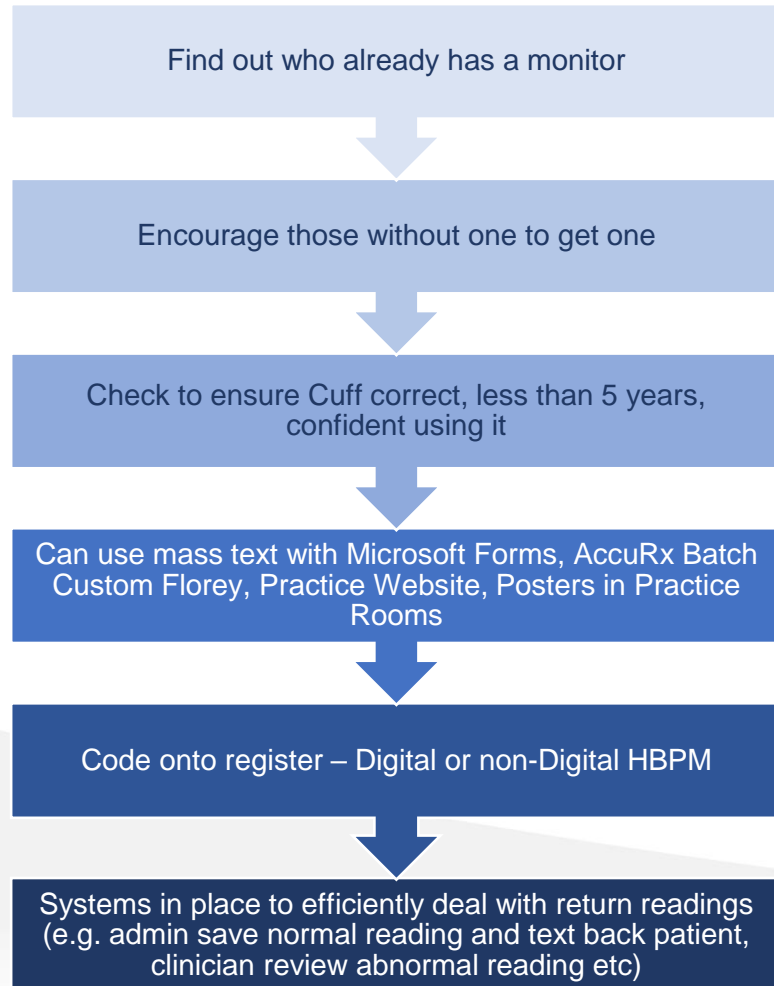
Once the registry is created then you can utilise searches and batch messaging on an ongoing basis for all those who have blood pressure monitors and are digitally enabled (E.g. QOF). This will save significant practice resources on an annual and ongoing basis.

The NHS GM (Data Quality Team) DQT has produced GP Computer tools to help facilitate easy coding of patients onto the digital and non-digital HBPM registry. These tools are free to use for all within GM, and make it easier to quickly and accurately code patients by utilising the above coding scheme using a F12 Protocol. There will also be a search to identify all people on the hypertension register and on the Digital HBPM Register who have not submitted a BP reading during this QOF year, allowing you to quickly and efficiently batch message these individuals.

Register	SNOMED Code Description	Code ID
Non-Digital (patient prefers to use paper)	Self-monitoring of blood pressure (regime/therapy)	924481000000109
Digital (patient happy to return readings using their smartphone e.g. AccuRx)	Self-monitoring of blood pressure (regime/therapy)	924481000000109
	AND Telehealth hypertension monitoring (regime/ therapy)	AND 715280009



Different ways to implement registry:



1

Many of your patients may already have a monitor. Thus, practices could utilise their websites or patient surveys to identify patients who may already have a monitor.

A custom AccuRx Florey has been created for this purpose for you to import and adapt by using this link: <https://web accurx.com/import/na4vq2c2s6>.

The accuRx Florey automatically codes people onto the respective non-digital and digital registers and is a great way to quickly canvas which hypertensives on your register already have a monitor at home.

2

Alternatively, practices may want to opportunistically code patients onto the digital/non-digital register during other appointments such as annual reviews, blood test appointments or GP appointments using the F12 protocol.



Return readings for Digital vs Non-Digital



Digital:

The most common digital tool in use across GM is currently AccuRx.

AccuRx Plus subscribers may utilise the “Blood Pressure Questionnaire - 4d Home Monitoring (Plus)” Florey

You can now also schedule a Florey for 4 weeks in the future to assess the effect of titrations.

Description of other digital tools is out of scope for this guide, however, please do get in touch with us and we will help support you to get the most out of whichever tools/software you do have.

See [Example Practice AccuRx Text Templates](#).



Non-Digital:

It is important to ensure access to non-digitally equipped patients. The practice should have paper sheets with instructions printed and ready to give to patients.

Practice Resources for non-digitally equipped patients:

Template Excel sheet for practices to use with non-digitally equipped patients:

Instructions for use:

1. Open the excel and replace sections with * with your practice name.
2. You can now save and send this to patients. The excel sheet will automatically calculate the average blood pressures for you.
3. Once you have edited the excel spreadsheet, go to file and then export and select export as PDF and then save this file in a suitable location such as your teams folder or shared drive.
4. You can now print the PDF and give to patients. This helps reduce scraps of paper and enables quick titrations.

**Access the
template excel
sheet here:**



BP Record
Sheet.xlsx



Efficiently dealing with return readings

Home and ambulatory BP have different targets to clinic blood pressures. QOF now recognises the different targets and different sets of codes. This means it is paramount that patients' blood pressures are coded correctly, to ensure correct QOF payments and attainment. There is also therefore no requirement to adjust home values to align with clinic targets as some have previously been doing. It is suggested that returned readings above 180/120 are alerted to duty clinician.



Digital readings:

The majority of digital services such as AccuRx, automatically calculate the average home BP readings and utilise the correct coding. Consider use of the wider practice team to streamline this process. For example, administrative staff could be used to save and respond to normal readings. Ensure at least one person in the practice (clinical or non-clinical) has responsibility and oversight over readings returned digitally.

Agree within the practice as to how to deal with high readings. They could be saved by the admin staff with the clinician who requested it tasked to respond, or they could be dealt with by a duty clinician or assigned clinician.



Non-Digital readings:

Readings returned on paper will need to be manually averaged and inputted onto the patient's clinical record.

It is critical to ensure appropriate codes are used as clinic and home average targets are different. QOF now respects the different targets making this an important issue.

Websites such as <https://www.ama-assn.org/node/27271> may be used to quickly calculate an average blood pressure from multiple submitted readings.

QOF active Codes for Home Blood Pressure Readings:

SNOMED Code Description	Code ID
Average home systolic blood pressure (observable entity)	413606001
Average home diastolic blood pressure (observable entity):	413605002

Different Targets:

Situation	Clinic Target (mmHg)	Home/Average Target (mmHg)
<80 years old	<140/90	<135/85
>80 years old	<150/90	<145/85
CKD and (ACR>70mg/mol) (1)	<130/80	<125/75
Stroke and TIA (2)	<130/80	<125/75

1. NICE CKS CKD Guidelines, 2. RCP Stroke Guidelines 2023

DO NOT USE THE "On examination - blood pressure reading (finding)" for home and average blood pressures – as this denotes a clinic blood pressure.

Note: NHS GM DQT has produced a GP Computer Template which includes the link to calculate average BP's and allows for easy data entry while ensuring correct coding.



Example Practice AccuRx Text Templates

Please copy the below text and use to make templates to send to patients. These templates employ behavioural messaging techniques designed to improve engagement and likelihood of return readings.



(BP Normal) Successful home readings received

Great job on consistently monitoring your blood pressure at home! Your dedication is paying off! We're thrilled to let you know that your readings are right on track and within the healthy range. By keeping up with this positive behavior, you're actively contributing to your own well-being. You don't need to repeat your monitoring for another year or if asked by one of the doctors. Well done, keep it up!



Failed BP Florey 1

🌟 Managing your BP is a step towards a healthier you! We've noticed that a few more readings are needed to get a clear picture of your health journey. 📅 Remember: Knowing your BP helps you to make the best decisions for your health. 🏆 Challenge: Can you take your BP readings for the next 3 days consecutively? Every reading is a win for your well-being! Your progress matters to us. Let's achieve this together! 🤝

SNOMED Code: Hypertension monitoring SMS first invitation (1066951000000101)



Failed BP Florey 2

We've noticed we're still missing a few crucial BP readings from you. 🌟 If there are any obstacles or concerns preventing you from submitting them, please let us know. We truly value your well-being and hope everything is alright. If there is a better time for you to do your 4 days please let us know and we will send the last link to you at this time www.tiny.one/bpmathome

SNOMED Code: Hypertension monitoring short message service text message second invitation (1066971000000105)



BP High - Make Appointment

Great job on completing your at-home blood pressure readings! We've noticed your average is higher than we would recommend, but don't worry—this is a proactive step towards better health. Could you book an appointment with us and we can explore effective strategies tailored for you. You can read more about Blood pressure on <https://tiny.one/bpmathome> Looking forward to guiding you on your health journey.



BP High - Medication Increase

Thanks for sending your BP readings. Your average levels are high, so we've adjusted your medication to better manage it. The good news? Many see improvements in just 4 weeks. We'll send another monitoring link then to track your progress. Once controlled just checking your blood pressure once a year will do! Your health is a team effort, and we're with you every step. Feel free to get in touch if you have any questions.



Types of Home Blood Pressure Monitors for patients



Patients should be actively encouraged to purchase their own BP monitor.

Validated monitors can be purchased for as little as £15 which many patients may recoup with saved visits to the practice. Practices may also choose to purchase monitors to loan to patients for a period of assessment.

Devices used for HBPM should be clinically validated for home use. An up to date list of such devices is available at www.bhsoc.org and www.bloodpressureuk.org. Where patients wish to purchase their own device, they should be specifically advised to purchase a monitor from this list and can discuss with their local pharmacy or pharmacist.

Checking the patients technique and monitor against a practice monitor may be helpful in ensuring the patients monitor is accurate.

Governance

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For any urgent issues or requests please contact:

- Catherine Cain
- Aseem Mishra

For feedback, issues or requests for more guidance please use feedback.gmcvd.com

We will be monitoring all feedback to help guide further iterations and inform future work.



Acknowledgements

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This toolkit is part of GM's effort to tackle CVD, health inequalities and improve the life of all who live and work in GM

