

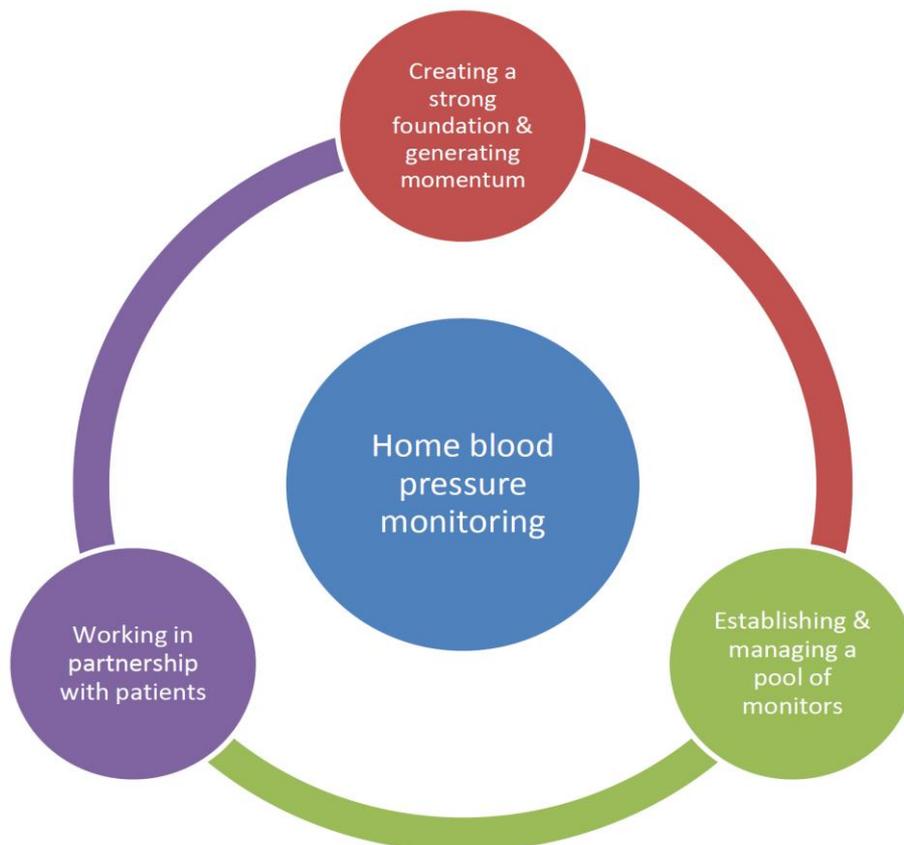
## Implementing Home Blood Pressure Monitoring In Your Practice

### A Practical Guide

Home blood pressure monitoring offers a useful tool for the management of blood pressure, for both patients and healthcare professionals. However, implementing and integrating home blood pressure monitoring into daily clinical practice can be a challenging task for any healthcare team.

This practical guide draws together the learning and experiences of several teams who have already implemented home blood pressure monitoring in routine clinical practice as part of the 'Blood pressure self-monitoring: helping patients achieve better blood pressure control' project led by the NIHR CLAHRC for Greater Manchester. It outlines three key building blocks needed to support the effective implementation and evidence-based use of home blood pressure monitoring and offers practical guidance and advice in relation to each of these.

The three key building blocks are:



## CREATING A STRONG FOUNDATION AND GENERATING MOMENTUM

For home blood pressure monitoring to be successfully implemented in practice, it is important to invest time, particularly early on, in creating a strong foundation for home blood pressure monitoring within the practice. While this can, at first, appear a time-consuming process, time invested at this stage can really pay off in the long term.



Creating a  
strong  
foundation &  
generating  
momentum

### ▪ Ensuring clinical practice is evidence-based

Although home blood pressure monitoring is viewed, by many, as a simple tool for the management of blood pressure, to realise its full potential, it is important that home blood pressure monitoring is used in a way that is consistent with the latest evidence base. All clinical staff in the practice should, for example, be aware of when it is appropriate to use home blood pressure monitoring, what information and advice they should be offering patients and how they should interpret patients' home blood pressure readings.

Putting a clear **protocol** in place is one of the first steps that can help to ensure that everyone in the practice is working in the same evidence-based way. This makes sure that *all* patients are receiving the best available care. The protocol should be easy for everyone to find. There are ready-made protocols for home monitoring available, but clinical teams may wish to work together to add further practice-specific details to these, such as the roles and responsibilities of different members of staff and the date on which the protocol will be reviewed and updated. Finally, it is important to be clear about how the protocol for home monitoring links and relates to other practice protocols, such as those for hypertension, hypotension and chronic diseases such as diabetes and chronic kidney disease.

A recent survey of UK GPs found that the majority were unaware of the need to use different diagnostic thresholds and treatment targets when using home blood pressure readings instead of those obtained in the clinic/surgery (McManus, 2013). This lack of awareness could result in hypertension being systematically under diagnosed and under treated.

Placing a small poster in each clinic room displaying clinic and adjusted home blood pressure treatment targets for different clinical conditions is a great way to raise awareness of the key difference between in home and clinic readings.

*In our practice, a lot of the team were initially confused about the difference between ambulatory and home blood pressure monitoring and how to select which one to use. As we were working through the home monitoring protocol we were able to discuss and answer these questions, ensuring that everyone now knows the relationship between the two different types of monitoring and when each of them should be used.*

*Practice Nurse*

While having a protocol in place represents an important first step, it is important that this is followed up and supported by **education and discussions** in the practice to ensure that everyone is aware of, and understands, the content of the protocol and that any issues or questions can be addressed early on. Education and discussions can really bring the protocol to life and can help to avoid it becoming 'just another document' that is put in a file and left to go dusty on a shelf. It can also help to get all members of staff engaged and interested in home blood pressure monitoring. Practice meetings or regular education and learning times can provide an ideal place to have these discussions.

- **Putting clear and simple processes in place**

While standard protocols can provide teams with high-quality clinical guidance about home blood pressure monitoring, they offer very little information in relation to how the protocol should be put into practice. This is because decisions, such as how patients' home readings will be added to their clinical records and who is going to show patients how to monitor their blood pressure, need to be made at an individual practice level to reflect the local context (*or what some people would commonly refer to as 'the way things are done around here'*).

Teams will need to work together to **decide upon, and establish, a process that is smooth and streamline for both practice staff and patients**. Some elements of this process will need to be flexible to take into account the different needs and preferences of individual patients, while others may be more static and applicable to all patients. The checklist below has been developed to provide an idea of the type of questions practices may wish to consider when designing their home blood pressure monitoring process.



- Will you establish a pool of monitors to loan to patients? (see 'establishing & managing a pool of monitors')
- Who will provide education for patients about home monitoring?
- What information resources are going to be used? Where will these be kept?
- Can home monitoring be discussed and introduced within an appointment/review or will a separate specific appointment be required?
- How will you going to indicate on the patient's record that they are monitoring their own blood pressure at home?
- How will patients record their blood pressure readings? Paper-based diary? Electronic spreadsheet?
- Who will patients contact for any additional information or support they require?
- How will patients communicate their home readings back to the practice? Will patients send/ hand their readings in at reception or will they routinely be asked to book an appointment to discuss their readings or to bring their readings to their next appointment?
- If patients hands/sends in their readings, will a member of the team contact them to discuss their readings and talk to them about any implications they may have for future management?
- How will home blood pressure readings be recorded in the patients' clinical records?
- How could home blood pressure monitoring be used to support and inform patients' regular reviews? Before a routine hypertension review, for example, could patients be asked to monitor their blood pressure at home for a short period of time and bring their home readings to the practice with them?

It is important to note that the process initially put in place for home blood pressure monitoring is likely to need refining and developing over time as staff are able to reflect on what has worked well and what, perhaps, did not go according to plan and could therefore be improved upon. Comments received from patients should also, importantly, be fed back into this process.

- **Establishing roles and responsibilities**

Each member of the practice team, from the administrative staff to the doctors and nurses, has an important role to play in home blood pressure monitoring. For example, practice administrators may be tasked with keeping track of monitors loaned to patients, while healthcare assistants may be given responsibility for providing education and support for patients who are going to monitor their own blood pressure at home. Dividing tasks up appropriately between team members and **assigning clear roles and responsibilities** for different parts of the process from the very beginning ensures that the time and skills of different members of the practice team are used to best effect.



For some practices, it may also be helpful to investigate the role the local pharmacy could play in supporting patients who monitor their own blood pressure. After all, many patients who decide to purchase their own blood pressure monitor will buy it from their local pharmacy. Working in partnership with pharmacies could help to ensure that patients are advised to only purchase monitors that are clinically validated (as many pharmacies still have monitors for sale that have not gone through or passed the validation process) and many may also be willing to provide simple education about home monitoring for patients, such as teaching them how to use their monitor to get accurate readings.

- **Sharing successes and driving improvements**

In some practices, home blood pressure monitoring can unfortunately remain the sole preserve of one or two enthusiastic members of the clinical team, with others failing to engage in the process of using home monitoring with their patients. In a similar way, some clinicians tend to use home monitoring for just one purpose, such as for the diagnosis of hypertension or to monitor treatment response in patients with white coat hypertension, and forget, or choose not, to engage with other uses of home monitoring, such as employing it as a technique to promote medication adherence and encourage lifestyle changes.

*In the initial stages of the project most of the patients who were asked to monitor their blood pressure at home were identified by myself and the practice nurse. However, we knew the GPs in the practice were also seeing patients who would benefit from home monitoring. We therefore decided to use one of the slots at our practice meeting to present and discuss a couple of patient cases where we'd used home monitoring and it had been really useful for both us and the patient. In the weeks following the meeting we found that more and more of the GPs were talking about and directing patients to us for home blood pressure monitoring. Just this simple process of discussing a couple of cases with them really made them start to think more about the potential benefits of self-monitoring.*

*Healthcare Assistant*

To encourage and drive the appropriate use of home blood pressure monitoring by all clinical staff, many teams have found it useful to get together and **discuss specific clinical cases** related to patients monitoring their own blood pressure at home. Such discussions not only provided a great chance for the clinical team to hear real-life examples of where home monitoring has had a positive impact on patients' management, but also provide a useful opportunity for the team to work together to identify and address any areas of the process that may require improvement.

## ESTABLISHING AND MANAGING A 'POOL' OF MONITORS

While some patients may choose to buy their own blood pressure monitor to use at home, many practices also choose to invest in and purchase their own set of blood pressure monitors that can then be loaned to patients. Establishing such a 'pool' of monitors ensures that practices are able to offer home monitoring to all patients who may benefit from the intervention, not just those who are able to, or wish to, purchase a monitor themselves.



Establishing &  
managing a  
pool of  
monitors

- **Purchasing a 'pool' of monitors**



The number of home blood pressure monitors purchased by each practice will need to be decided at a local level and will be determined by factors such as the amount of money available to purchase the monitors, the availability of space to store them and the list size of the practice. It is important to seek a balance between, on one hand, having enough monitors to ensure that one is almost always available when needed, but, on the other hand, not having too many monitors as this can make it hard to keep track of their whereabouts.

For a medium-sized practice (e.g. 6,000-8,000 patient list size), anywhere between eight and 12 blood pressure monitors would, from previous work, appear to be an appropriate and manageable number. Remember, all monitors purchased should be simple, easy to use and clinically-validated for home use. If the monitors do not come with blood pressure cuffs, these will also need to be purchased. Remember to buy cuffs in a variety of different sizes.

- **Keeping track of blood pressure monitors**

Having purchased a 'pool' of home blood pressure monitors, it is important that a robust process is put in place to enable the practice to keep track of where each blood pressure monitor is at any one time. In addition to determining who is responsible for giving out the monitors and collecting them back in, there are two key steps in this process:

1. *Number each monitor:* Each blood pressure monitor should be allocated a number (i.e. if there are 10 monitors, each monitor should be given a number from one to 10). This should then be clearly displayed somewhere on the monitor, either using a sticky label or a permanent marker. If the monitor is stored in a box, this should also be marked with the appropriate number.
2. *Create a log book/ folder:* A log book should be established to enable each monitor to be systematically signed in and out of the practice. The log book should contain a separate log sheet for each monitor which is used to document, at a minimum, the full name of the patient who has been loaned the monitor, their date of birth, the date on which the monitor was lent and the date on which it should be returned. An

example log sheet is provided at the end of this document. It should be clearly agreed who is in charge of making sure this log book is accurate and up-to-date.

The main challenge associated with lending blood pressure monitors to patients is getting the patients to return their monitors on time (or, in some cases, at all). While this problem is only encountered with a minority of patients, it can be very frustrating for the practice as time will need to be spent contacting these patients to ask them to bring their monitor back to the practice.

There are a number of ‘tactics’ that can be put in place to help ensure that patients return their monitors on time. Those that have been tried and tested by other practices include asking patients to sign their name in the log book (which many patients perceive to indicate a commitment to returning the monitor) and including a note on the front of the monitor box about the importance of returning it to the practice.

- **Ensuring that monitors are well-maintained**

While all blood pressure monitors lent to patients will naturally be subjected to a bit of wear and tear over time, it is important that both the practice and patients take good care of them. Patients should be told about the importance of keeping their monitor clean and in proper working order. In particular, patients who smoke should be asked to keep, and use, their monitor in a well-ventilated place to prevent the blood pressure cuff from smelling of smoke in the long term.



*When we first started loaning monitors to patients, we found that some of the blood pressure cuffs smelt of smoke when they were returned and that, on one occasion, a gentleman returned the monitor and cuff without the box it had been given to him in. This made us realise that when we gave the monitors to the patients we had to make it clear that they were responsible for bringing the monitor back in the condition it was given to them in. This seemed to work and patients seem to take better care of the monitors we give them. We still get the odd one or two incidences, but things have really improved.*

*Practice Nurse*

The practice is also responsible for ensuring that all of the home blood pressure monitors lent to patients are cleaned, maintained (e.g. batteries checks) and calibrated in line with the manufacturer’s instructions. In this way, the monitors available to lend to patients should be treated in the same way as those used by the clinical staff within the practice setting.

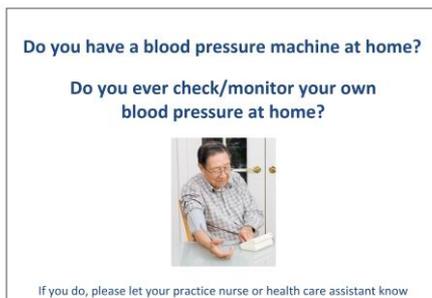
## WORKING IN PARTNERSHIP WITH PATIENTS

Close and effective partnership working between patients and healthcare professionals sits at the very heart of home blood pressure monitoring. Such partnership working can not only help to ensure that patients feel supported every step of the way and empowered to be more closely involved in their care and but can also help to reassure clinicians that the blood pressure readings taken by patients at home are accurate and can therefore be safely used to inform future management.



Working in  
partnership  
with patients

- **Identifying patients who monitor their own blood pressure**



In all practices, there will be a proportion of patients who monitor their own blood pressure at home, but never tell the practice that they are doing so. For some practices, this can represent a significant number of patients, quite often totalling well into the hundreds. Sometimes, such patients fail to disclose that they monitor their own blood pressure at home as they think that their doctor or nurse would disapprove and perceive them as 'meddling and interfering in their care'. It is possible that these patients are deciding themselves to make medication and lifestyle changes based on their home blood pressure readings.

Therefore, it is important that proactive steps are taken to identify patients who monitor their own blood pressure, so that they can be offered the appropriate information, education and support. It also means that the home readings obtained by these patients can also be used, where appropriate, to inform their clinical management.

To identify patients who home monitor, a number of different approaches can be taken. Some of the more successful include putting up posters in the waiting room and in each clinic room, inviting patients to tell a member of the practice team if they monitor their own blood pressure. An example is shown above. It is important that the wording on the poster indicates that the practice *want* people to monitor their own blood pressure, as some patients may think that the practice want to know whether they monitor their blood pressure so that they can then ask them to stop doing so.

Some practices have also chosen to include an additional question about home monitoring on the templates they use for new patient checks, hypertension reviews and other long term condition reviews where good blood pressure control is desirable, such as diabetes and chronic kidney disease. Where a patient indicates that they monitor their own blood pressure, this is documented on their clinical record and the appropriate support is provided.

- **Providing patient education and support**

All patients who monitor their blood pressure at home, whether using their own monitor or one that has been lent to them by their practice, should be provided with education and support. This education should not only be in relation to how and when to take their blood pressure using the monitor, but should also cover related topics, such as the importance of continuing to take their medication as prescribed and factors that can affect the accuracy of blood pressure readings. Many patients find discussions about blood pressure variation particularly useful and comment on how they feel reassured to know that it is natural for their blood pressure to rise and fall slightly over the course of a day.

When teaching patients how to use a blood pressure monitor, it is best practice to do this using a practical demonstration. For example, when showing the patient how to appropriately position the blood pressure cuff, this should be demonstrated by putting the cuff on the patient's arm. Where possible, the blood pressure monitor that the patient will be using at home should be used for the demonstration.



In addition to demonstrations and verbal information, patients should also be provided with written information about home blood pressure monitoring for them to take away and read at their own leisure. To get patients more involved in their care, some practices may also choose to give patients a blood pressure 'goal' or 'target', particularly when asking patients to improve their blood pressure by making lifestyle changes and taking their medication as prescribed. In such circumstances, a goal can act as a real motivator. However, it is important that the decisions about

whether to give a patient a blood pressure goal is made on a patient-by-patient basis. For patients who are reluctant to take medication, for example, it may not be appropriate to provide them with such a goal or target, as this could prompt them to document false and misleading blood pressure readings in an attempt to avoid any additional medication.

