Measurement and Management of Arterial Hypertension before Elective Surgery in Worcestershire Acute Hospitals

Key Document code:	WAHT-KD-017	
Key Documents Owner:	Dr James Hutchinson	Consultant Anaesthetist
Approved by:	Pre-op Directorate Governance Meeting	
Date of Approval:	15th April 2026	
Date of review: **This is the most current version and should be used until a revised document is in place**	15th April 2029	

Key Amendment

Date	Amendment	Approved by
21st January 2019	Inclusion of advice for edoxaban. Additional information for the management of medicines for diabetes	Medicines Safety Committee
25th June 2020	Document extended for 6 months during COVID-19 period.	QGC
4th January 2021	Pre-operative assessment Key Documents approved for 3 years	Pre-op Directorate Governance Meeting
20th December 2023	Review date extended for 6 months. Updated document owner.	Dr Harsha Mistry
12th November 2024	Document extended for 12 months whilst awaiting National Guidelines to inform if changes are required	Dr Harsha Mistry
15th April 2026	Pre-operative assessment Key Documents approved for 3 years	Pre-op Directorate Governance Meeting

Management of hypertension in the peri-operative period involves balancing the risks of anaesthesia and surgery against the risks of delaying surgical treatment.

This guideline is based upon national guidance published by the AAGBI and the Hypertensive Society: *Measurement and management of adult blood pressure in the peri-operative period: updated guidelines 2026.*

Guidance is given on management of hypertension in primary care, the role of GPs in measuring blood pressure before surgical referral and actions to take when hypertension is identified in the preoperative assessment clinic.

Introduction

Hypertension is common and it has been described as ‘one of the most important preventable causes of premature morbidity and mortality in the UK’. It is present in up to 20-30% of adult patients.

Evidence addressing the effect of pre-operative hypertension on patient outcomes remains very limited. The updated 2026 AAGBI and British Hypertension Society published guidance builds upon initial 2016 guideline and provides an evidence-based approach for peri-operative management of blood pressure control. For a more detailed explanation of the themes within the guideline please refer to that document.

The guideline aims to prevent the diagnosis of hypertension being the reason that planned surgery is cancelled or delayed.

An Overview of the Diagnosis and Management of Hypertension in Primary Care

The aetiology of hypertension is broadly classified into:

- Primary (Essential) Hypertension: the commonest subtype with a multi-factorial aetiology (genetic, environmental, insulin resistance)
- Secondary Hypertension: where there is a specific, potentially treatable cause such as renal disease, endocrine disorders (i.e. Phaeochromocytoma/Conns/Cushings) or drugs such as steroids or the contraceptive pill.

Blood pressure readings are further classified into:

- Stage 1 Hypertension: Clinic BP is 140/90 or higher **and** subsequent ambulatory or home BP readings are 135/85 or higher
- Stage 2 Hypertension: Clinic BP is 160/100 or higher **and** subsequent ambulatory or home BP readings are 150/95 or higher
- Stage 3 Hypertension: Clinic BP is 180 or higher or diastolic BP is 120 or higher

Patients in the community with a BP of 140/90 or higher should have ambulatory/home BP offered to confirm the diagnosis.

The NICE guideline NG136 Hypertension in adults: diagnosis and management details assessment and management of patients with confirmed hypertension. For further details please refer to the full NICE guideline.

Blood Pressure information from Primary Care at Surgical Referral

Blood pressure should be measured in primary care before non-urgent surgical referral and included in the referral. Surgical outpatients should arrange for primary care to supply blood pressure readings from the preceding 12 months if these have not been documented in the referral letter.

For non-urgent surgery the GP should check the BP prior to referral and hypertensive patients in the community should have their blood pressure controlled prior to referral for surgery. Where the BP is 160 / 100, or above, the GP should perform home or ambulatory BP readings. If home/ambulatory BP is raised (above 150/95 or 135/85 with target organ damage) then the patient should be treated and a reduction in BP to a level below 160/100 should precede surgical referral.

For surgery deemed to be urgent the GP should check the BP prior to referral. Where the BP is 160/100 or above the GP should perform home or ambulatory BP readings. If home/ambulatory BP is raised (above 150/95 or 135/85 with target organ damage) then the patient should be treated and BP reduced to a level below 160/100. This process can take place at the same time as the urgent surgical referral so that it does not delay surgery.

When hypertension is resistant to optimal treatment or an informed patient declines antihypertensive treatment this should be detailed in the GP referral letter.

Blood Pressure should be measured in the POA Clinic for patients who do not have a documented primary care BP reading below 160/100 or ambulatory BP reading below 155/95 within the last 12 months.

Measurement of Hypertension in Pre-Operative Assessment Clinic

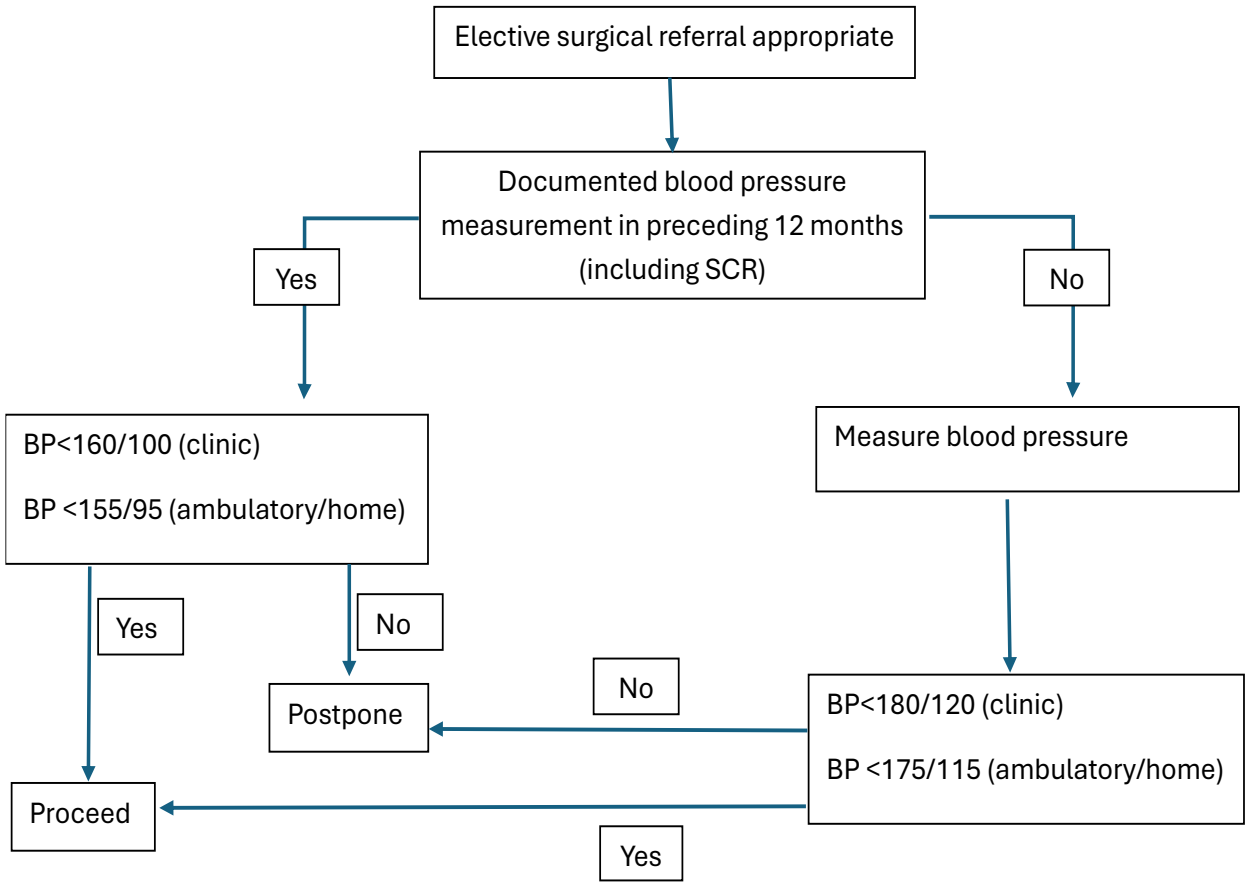
Blood Pressure should be measured in the POA Clinic for patients who do not have a documented BP reading below 160/100 from their GP within the last 12 months. This means that if there is no BP reading or the previous BP reading is above 160/100 then the patients BP should be measured.

For elective (non-essential) surgery:

Clinic Reading	Home/ambulatory Reading	Outcome
>180/120	>175/115	Postpone
>160/100	>155/95	Refer to the GP for investigation and treatment (See appendix A for template communication) Proceed
<160/100	<155/95	Proceed

For urgent surgery (i.e. cancer surgery or life saving surgery)
if the BP reading in POA clinic is 180/110 or above there should be a consensus decision between surgeon, anaesthetist, and patient on whether to proceed. These patients should be highlighted to the POA anaesthetist (using the worklist) and referred to the GP for investigation and treatment concurrently.

Flow chart 1. Summary of blood pressure management in patient pathway for elective surgery. *Adapted from Measurement and management of adult blood pressure in the peri-operative period AAGBI 2026.*



Blood Pressure, Anaesthesia and Surgery

Inducing anaesthesia and performing surgery is associated with exaggerated BP swings in hypertensive patients. There is evidence that hypertension with target organ damage is associated with a small increased incidence of perioperative major cardiovascular events.

However there is no clear evidence that patients with stage 1 or 2 hypertension, without target organ damage, have increased perioperative cardiovascular risk. Patient with severe hypertension have not been subject to rigorous randomised trials of perioperative intervention. It is unclear whether treating these patients hypertension would reduce the incidence of adverse events.

Any decision to postpone surgery should also take into account factors other than the BP reading i.e. cardiovascular risk should be addressed rather than simply blood pressure readings. These factors might include:

- Age
- Co-morbidity
- Functional capacity
- Urgency and indication for surgery

Measurement of Blood Pressure in Pre-Operative Assessment Clinic

- The patient should be measured in a relaxed setting in a standardised environment with calibrated equipment. The seated patient should have their supported arm out stretched for at least one minute before the initial reading.
- If the heart rate is irregular then BP should be taken by manual auscultation because automated sphygmomanometers are inaccurate when there is an irregular pulse.
- If the BP is higher than, or equal to 140/90 then the BP should be measured twice more, with each reading at least 1 minute apart. The lower of the last 2 readings is recorded as the blood pressure.

Communication

- Pre-operative assessment clinics should inform general practitioners when they measure raised blood pressures in patients who have not had readings taken in primary care in the preceding 12 months.
- The letter should state whether surgery will or will not proceed until the diagnosis of hypertension has been excluded or confirmed. As above, generally speaking, elective surgery can proceed where the BP in POAC is 180/120 or below.
- The patient should be given a blood pressure diary (if they have the means of taking a reading at home) and instructed to make an appointment at their GP surgery.
- The GP will first need to establish that blood pressure is high and that this is not white coat effect. Therefore the letter should not demand treatment and should be sent in a co-operative manner.
- Contact details must be included so that the GP can re-establish the procedural pathway when the BP has been shown to be satisfactory, whether this requires treatment or not.

Appendix A

Patient :
Patient Casenote Number
Patient NHS Number:
Patient date of Birth:

CONFIDENTIAL

To:

Re: DOB :
Address:

Urgent *For Information* *Please Action* *Response required*

This above patient attended Pre-operative Assessment Clinic today.
Operation planned: Proposed date of surgery:
The BP in Pre-operative Assessment Clinic was recorded as (lowest reading used):
1st check: 2nd check: 3rd check:
We would be grateful if you would check the blood pressure in the community, and if you feel necessary commence/review treatment.
Because the Pre-operative BP is below 180/120 the patient will proceed for elective surgery.
Because the pre-operative BP is above 180 / 120 elective surgery will be postponed. However if you record the BP as 160/100 or below we would be pleased to accept the patient for surgery. Please contact _____ when you are satisfied with the BP readings.

Many thanks for your help in this matter.

Yours sincerely

wah-tr.cwpoanurses@nhs.net
www.worcsacute.nhs.uk

Appendix B

Patient :
Patient Hospital Number:
Patient NHS Number:
Patient date of Birth:

Home Blood Pressure Diary

Target Reading: Systolic BP below 160 and Diastolic BP below 100 (<160/100)

Please take up to 3 readings a day at various times (AM/PM/Evening) over the period of a week and record below:

	AM	PM	Evening	Notes
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Comments: