

# Optimisation of Patients with Hypertension aged $\geq 80$ with a sBP reading <120mmHg

A GP Quality Improvement Project

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# Identifying the Problem



This QI project focuses on medication optimisation for those  $\geq 80$  years old with known hypertension, with a measured sBP  $< 120$ mmHg in the past year.



In this rural GP practice, there was no guideline/protocol that everyone followed for said patient cohort. There was variations in the investigations, management and follow up (staff survey completed prior to PDSA cycles)



A lot of these patients only had interventions due to being symptomatic (ie falls), showing a reactive and not a proactive system in place.



I aim to improve patient care by creating a protocol that everyone follows, ensuring all patients receive appropriate referral (from treatment room), investigations (sitting & standing BP), management (dose adjustments/deprescribing when indicated, lifestyle advice) and follow up.



# Consultation of Stakeholders

- ▶ I talked to my **GP tutors (Dr Pinnick & Dr Toner)** about areas that needed improved in the practice.
- ▶ One topic that came up was about falls, a patient came to mind, who had fractured their femur from a fall. Said patient was elderly, and had anti-hypertensives reviewed and reduced following this.
- ▶ **The Practice pharmacist** initially carried out a preliminary search identifying **78 patients** with hypertension,  $\geq 80$  years old, with a sBP  $<120$ mmHg in the past year.
- ▶ A **staff survey** was distributed which showed a lot of **variation** in the investigations, management and follow up of this patient cohort.
- ▶ I also consulted **Dr Kelly** (Recently retired consultant geriatrician in WHSCT) about management of said patients in secondary care.



# The Bigger Picture: Falls

- ▶ Approximately **50%** of those aged 80 & over, will have at least one fall every year. The impact of falls includes the following:
  - ▶ Fractures
  - ▶ Loss of confidence &/or independence
  - ▶ Mortality (1)
- ▶ The impact of fractures are significant, with a **1-year mortality rate of 31% after a hip fracture**. In England (2019-20) there was ~ 234,800 emergency hospital admissions related to falls in patients aged 65 and over. With 67% of these patients being aged 80 and over (1)
- ▶ Hip fractures alone contribute to 1.8 million hospital bed days and £1.1 billion in hospital costs every year, excluding the high cost of associated social care (2)

# The Guidelines

NICE NG136:

- ▶ Check for postural hypotension in people with HTN &:
  - ▶ T2DM or
  - ▶ Symptoms of postural hypotension or
  - ▶ Aged 80 and over
- ▶ Those with a significant postural drop or symptoms of postural hypotension, treat to a BP target based on standing BP.
- ▶ If orthostatic hypotension is present, then medication reduction or withdrawal of antihypertensives can be appropriate (3)

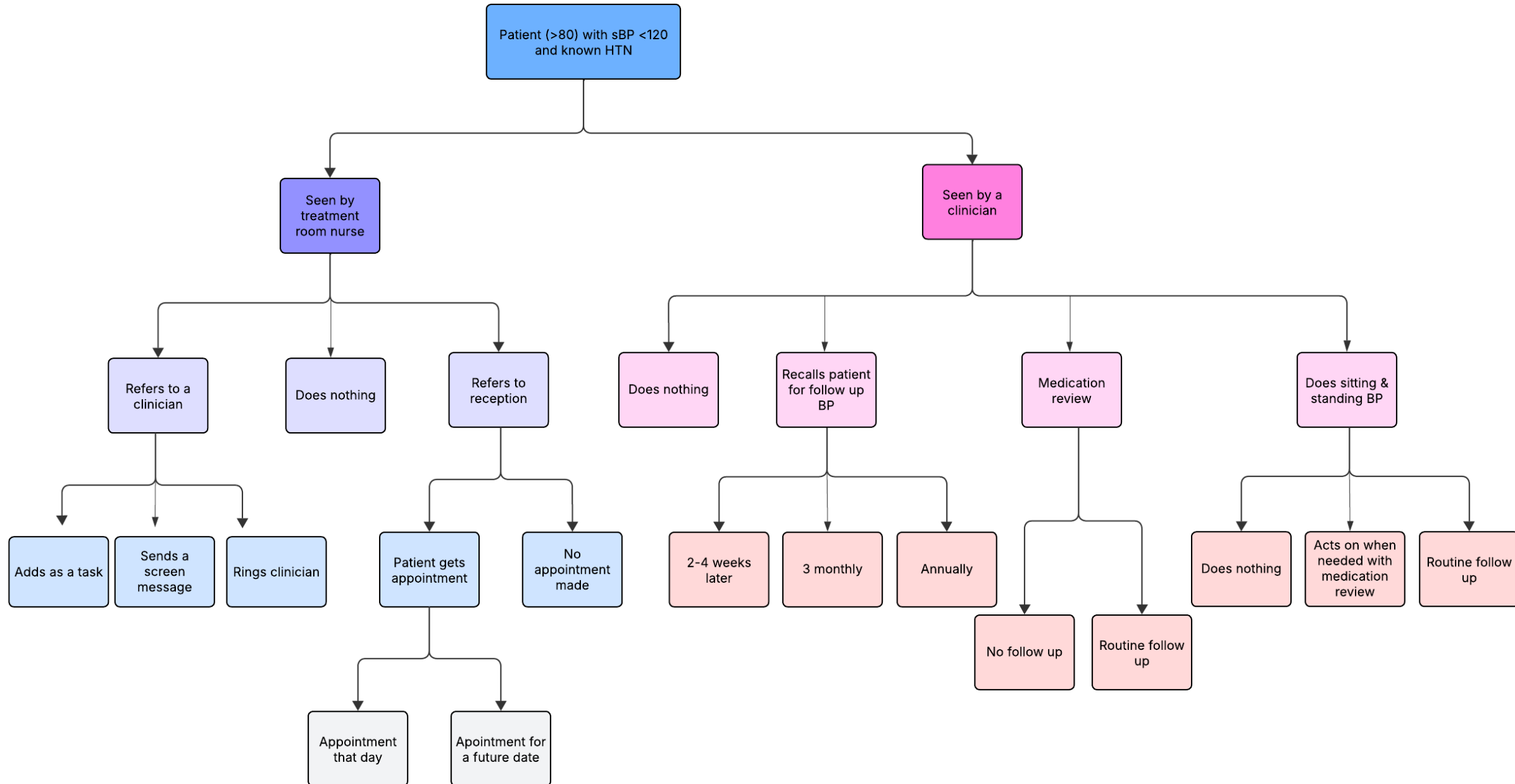
# Trials for Deprescribing Antihypertensives

- ▶ Trials have shown that antihypertensive medications lead to an increased risk of hypotension, syncope, acute kidney injury, hyper/hypokalaemia, and hyponatremia, particularly in older and/ or patients with increasing frailty.
- ▶ **OPTiMISE** trial: effect of deprescribing antihypertensives in patients aged  $\geq 80$  years.

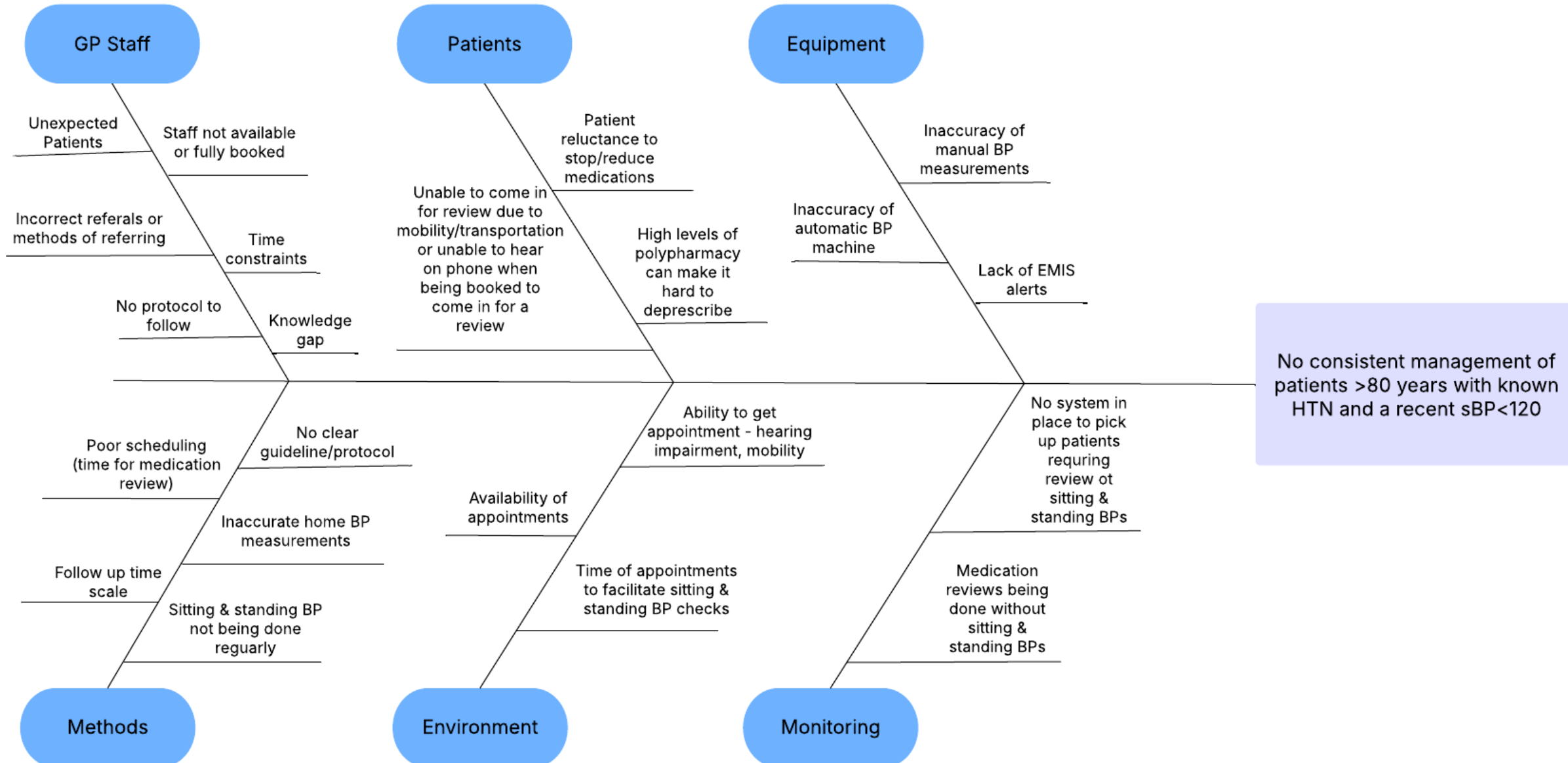
## Findings:

- 1) Demonstrates that pre-emptive deprescribing antihypertensives is possible in a primary care setting
- 2) Shows the long-term effects of such deprescribing on important clinical endpoints
- 3) The trial found **no evidence of harm from deprescribing** either in terms of short-term sBP control or longer-term clinical outcomes (4)

# Management prior to QI Project



# Where is it going wrong?



# Baseline Data Collection

- ▶ A search was carried out on 28/11/25 on EMIS
- ▶ **Baseline measurement:** Number of patients  $\geq 80$  years old, with a systolic blood pressure  $< 120\text{mmHg}$  in the past year, who are coded as 'Hypertension'.
  - ▶ 93 patients identified.
- ▶ **Outcome measure:** from the same group of patients, the number identified that have had up to date follow up blood pressure +/- medication review
  - ▶ 50/93 (54%) patients

## SMART Aim

In order to achieve this Aim...

## Primary Driver

We need to ensure...

## Secondary Driver

Which requires...

## Change Ideas

Ideas to ensure this happens...

Within the next 4 months, ensure that 70% of patients  $\geq 80$  years old with sBP<120mmHg have their BP rechecked and medication reviewed accordingly

Follow up protocol

Practitioner knowledge

Up to date sitting & standing BPs to aid reviews

Active follow up

Standardised practice wide management of sBP<120mmHg in this patient cohort

Education on identifying patients who need follow up & review

Information on how and when to carry out postural BP

Routine medication reviews in a protected slot

Flow scheme for the management of sBP<120mmHg in patients 80 years and older. QR codes to prompt staff on how to check postural BP, lifestyle advice, assessing frailty

Practitioner education (the evidence base, guidelines & trials)

Treatment room education and flow scheme for how and when to carry out postural BP. Practice wide education on postural BP measuring

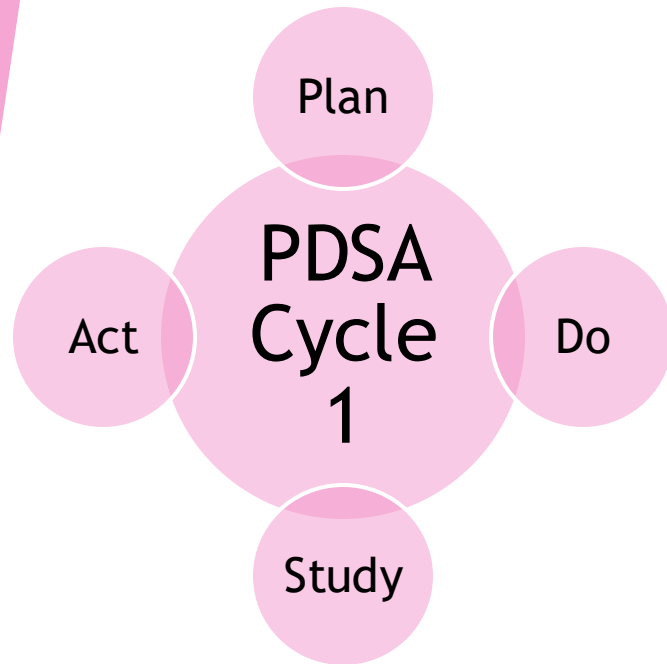
Student surgeries for follow up & review. Protected slots for said patients. Possibly to expand review slots to practitioners also



# Ethical Considerations

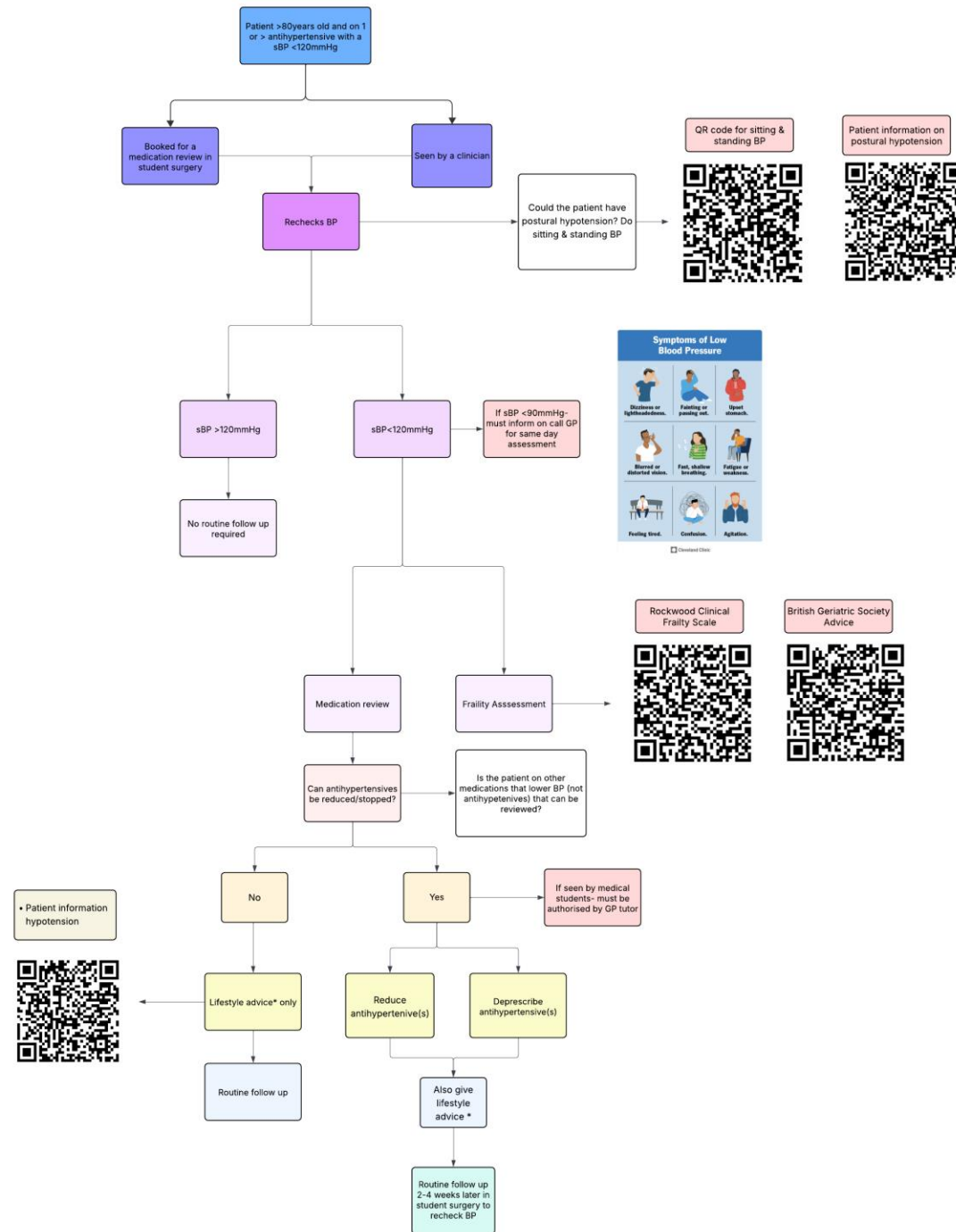
- ▶ No identifiable data removed from the practice
- ▶ When using personal device(s) for data storage and interpretation, ensure all data is anonymised (ie numbered 1-93)

# PDSA Cycle 1- Introduction of a Flow Scheme (12/12/25)



- ▶ **Plan:** I plan to make a flow scheme detailing which patients require further blood pressure monitoring +/- medication reviews. I will include QR codes to help prompt staff about key information for them and patients.
- ▶ **Do:** I made and printed out a flow scheme protocol for every GP, ANP & GP pharmacist in the practice and placed them in their rooms.
- ▶ **Study:** **49/82 (59.76%)** patients (measured 09/01/26) identified that have had up to date follow up blood pressure +/- medication review
  - ▶ Balancing measures: increased appointments may be prebooked in for reviews, taking away from acute appointments
- ▶ **Act:** An education session would be useful to help facilitate the use of the flow scheme and opportunistically identify patients. One of the QR codes became deactivated, so this needed amended.

# Protocol



# QR Code Example- Lifestyle Advice for Hypotension

## Lifestyle Advice for Low Blood Pressure (Hypotension)

### Symptoms of Low Blood Pressure

- Lightheadedness or dizziness
- Feeling sick
- Blurred vision
- Generally feeling weak
- Confusion
- Fainting

**See a GP if:** You keep getting symptoms of low blood pressure such as dizziness and fainting

### How to ease these symptoms

#### Do

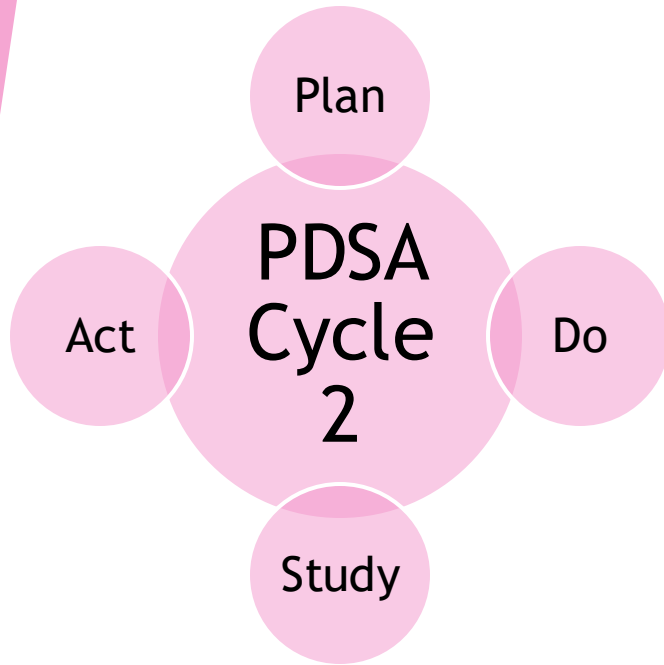
- ✓ Get up slowly from sitting to standing
- ✓ Take care when getting out of bed – move slowly from lying to sitting to standing
- ✓ Eat small, frequent meals – lying down or sitting still for a while after eating may also help
- ✓ Increase the amount of water you drink

#### Don't

- ✗ Do not sit or stand for long periods
- ✗ Do not bend down or change posture suddenly
- ✗ Do not drink too much alcohol

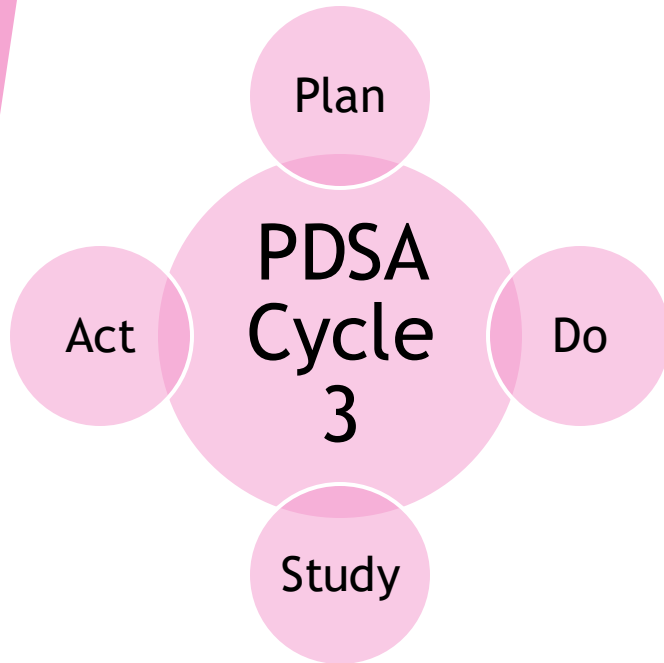
# PDSA Cycle 2- Practitioner Education

## (16/01/26)



- ▶ **Plan:** I plan to carry out teaching to the GP staff (GPs, ANPs, practice pharmacists) during their tea break, covering guidelines and how and when to use the flow scheme.
- ▶ **Do:** staff education session with PowerPoint presentation on Friday 16<sup>th</sup>.
- ▶ **Study:** **52/85 (61.18%)** patients (measured 06/02/26) identified that have had up to date follow up blood pressure +/- medication review
- ▶ **Act:** Group discussion after the education session, highlighted the need for a separate flowchart to prompt the treatment room staff to carry out Postural BP measurements and to contact the on-call GP with the results when required. This will prompt and facilitate overdue medication reviews.

# PDSA Cycle 3- Treatment Room Guidance (06/02/26)



- ▶ **Plan:** I plan to make a poster to prompt the treatment room to do postural BP measurements in this patient cohort and what to do with the results.
- ▶ **Do:** I made a poster and distributed it to the treatment room whilst providing staff education on the topic.
- ▶ **Study:** 57/82 (69.51%) patients (measured 27/02/26) identified that have had up to date follow up blood pressure +/- medication review
  - ▶ Balancing measure: increased workload for treatment room staff to carry out postural blood pressure checks
- ▶ **Act:** Use slots from student surgeries to bring in patients that are due reviews.

Check sitting & standing BP in all patients >80 years old

If sitting sBP < 110 or dBP < 60  
contact on call GP

Orthostatic Hypotension

No orthostatic Hypotension

Contact on call GP

Fall in sBP from baseline of  $\geq 20\text{mmHg}$   
OR  
Fall in dBP from baseline of  $\geq 10\text{mmHg}$   
OR  
Decrease in sBP <90mmHg that reproduces spontaneous symptoms.

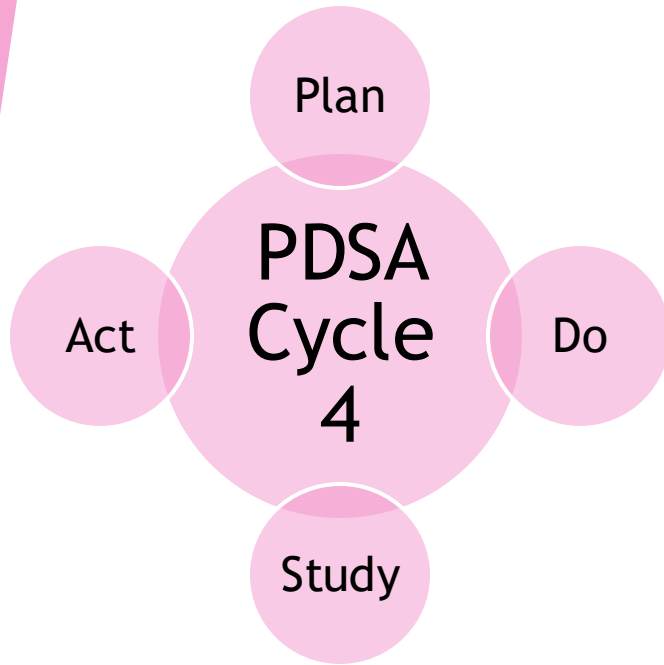
QR code for sitting & standing BP



Patient information on orthostatic hypotension

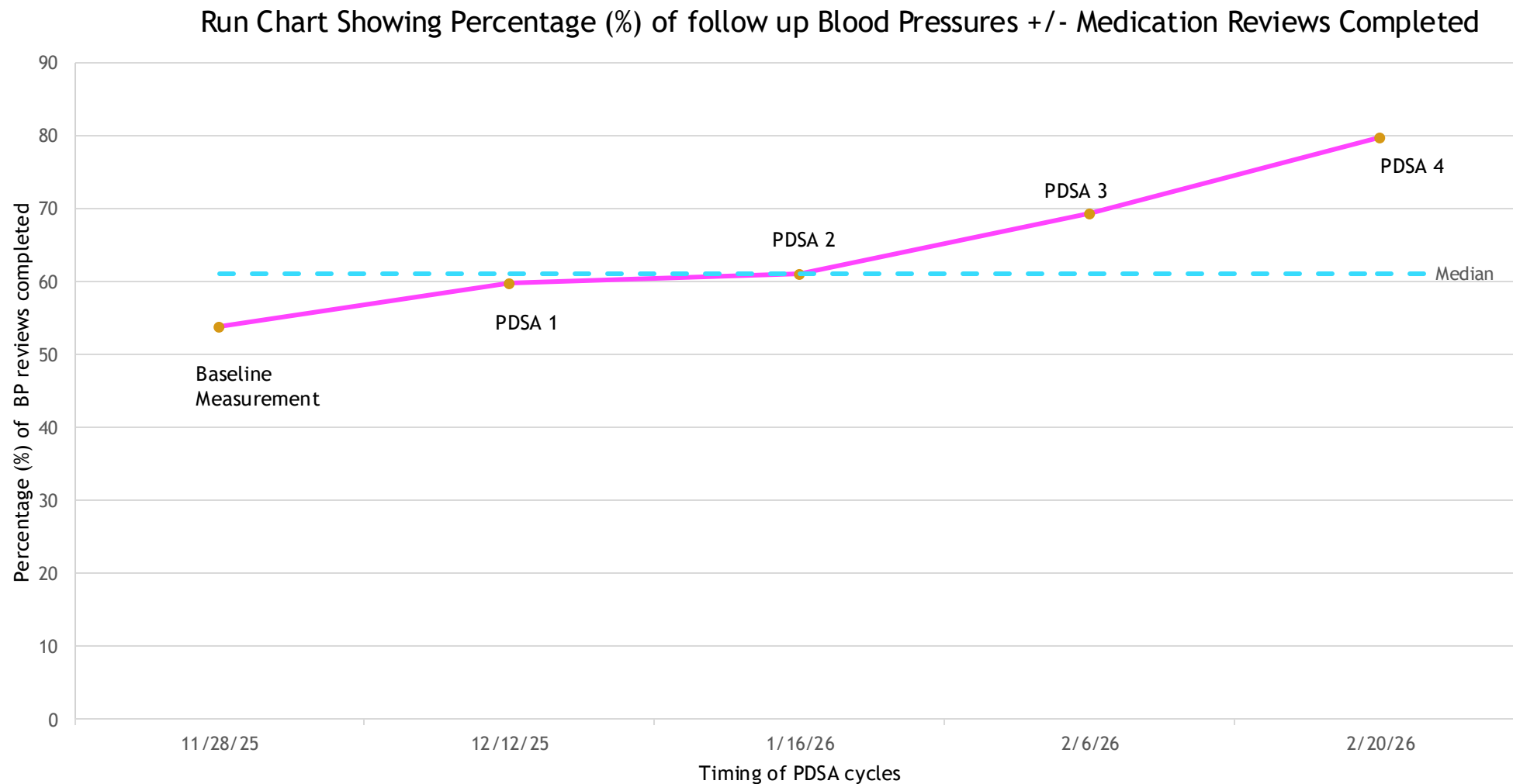


# PDSA Cycle 4 Student Surgeries (20/02/26)



- ▶ **Plan:** I plan to book patients identified from my searches into the student surgeries on Fridays for up-to-date BP (inc postural) and when required carry out medication reviews under guidance from my GP tutors
- ▶ **Do:** 7 patients were booked in for reviews in the medical student surgeries. 2 had to be re-booked in for a 2<sup>nd</sup> appointment due to antihypertensive medications not taken prior to appointment.
- ▶ **Study:** **63/79 (79.75%)** patients (measured 20/03/26) identified that have had up to date follow up blood pressure +/- medication review
  - ▶ Balancing measure: Ensure appointment slots in student surgery also for acute presentations and not only for reviews. Since the addition of review, extra student surgery slots were added throughout the day. Student time spent identifying suitable patients to contact and bring in.
- ▶ **Act:** Future cycle ideas; accurx message to prompt patient to book in for postural BP, protected medication review slots for practitioners

# Overall Results



► Overall: met SMART aim of 70% (**79.75% achieved**), with a net increase of 25.75% from baseline (54%)

# References

- ▶ 1) NICE, 2025-last update, Falls: assessment and prevention in older people and in people 50 and over at higher risk. Available: <https://www.nice.org.uk/guidance/ng249/resources/falls-assessment-and-prevention-in-older-people-and-in-people-50-and-over-at-higher-risk-pdf-66143964997573> [25th January, 2026].
- ▶ 2) Office for health improvement and disparities, 2022-last update, Guidance Falls: applying All Our Health. Available: <https://www.gov.uk/government/publications/falls-applying-all-our-health/falls-applying-all-our-health> [25th January, 2026].
- ▶ 3) British geriatrics society, 2019-last update, CGA in Primary Care Settings: Patients at risk of falls and fractures. Available: <https://www.bgs.org.uk/12-cga-in-primary-care-settings-patients-at-risk-of-falls-and-fractures> [25th January, 2026].
- ▶ 4) Sheppard, J.P. and McManus, R.J., 2024. Challenging the status quo: deprescribing antihypertensive medication in older adults in primary care. *British Journal of General Practice*, 74(748), pp. 484-486.