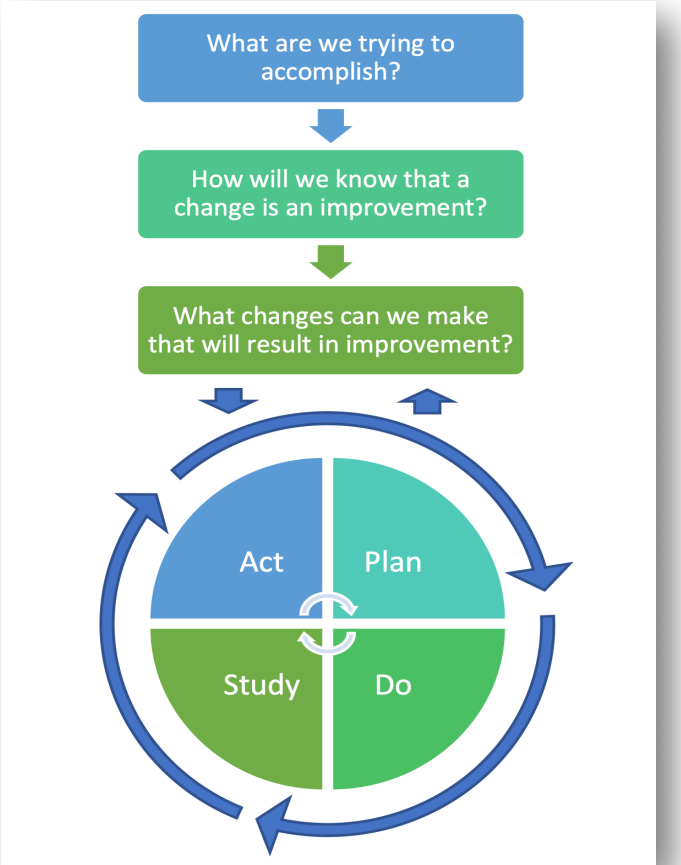
QI Bitesize: Practice Stories

BP AND SNRI

THE QI JOURNEY

Model for Improvement



'Raise your mood not your BP!'

Across 3 practices in the Belfast and South Eastern Trusts

Speakers:

- Suhani Bansal
- Emília Sousa Ua Bruadair
- Niamh Doherty

What are we trying to accomplish?

IDENTIFY AN AREA FOR IMPROVEMENT

- Hypertension - 300,000 patients across NI (145.2 per 1,000 patients)
- Venlafaxine (antidepressant) can elevate BP
  - risk of heart disease, strokes and kidney failure.
- NICE recommend regular BP monitoring, particularly at higher doses of Venlafaxine.
- Missed BP monitoring may jeopardize patient safety, leading to avoidable health risks.
- **Baseline: Mean average BP recording rate across the three practices was approximately 48%** –demonstrating the importance of this intervention for these specific practices.

What are we trying to accomplish?

IDENTIFY AN AREA FOR IMPROVEMENT

ENVIRONMENTAL IMPACT:

- Opportunistic BP checks reduce extra appointments and patient travel
- Electronic prompts limit paper use
- Early management of hypertension may reduce CVD complications and hospital admissions



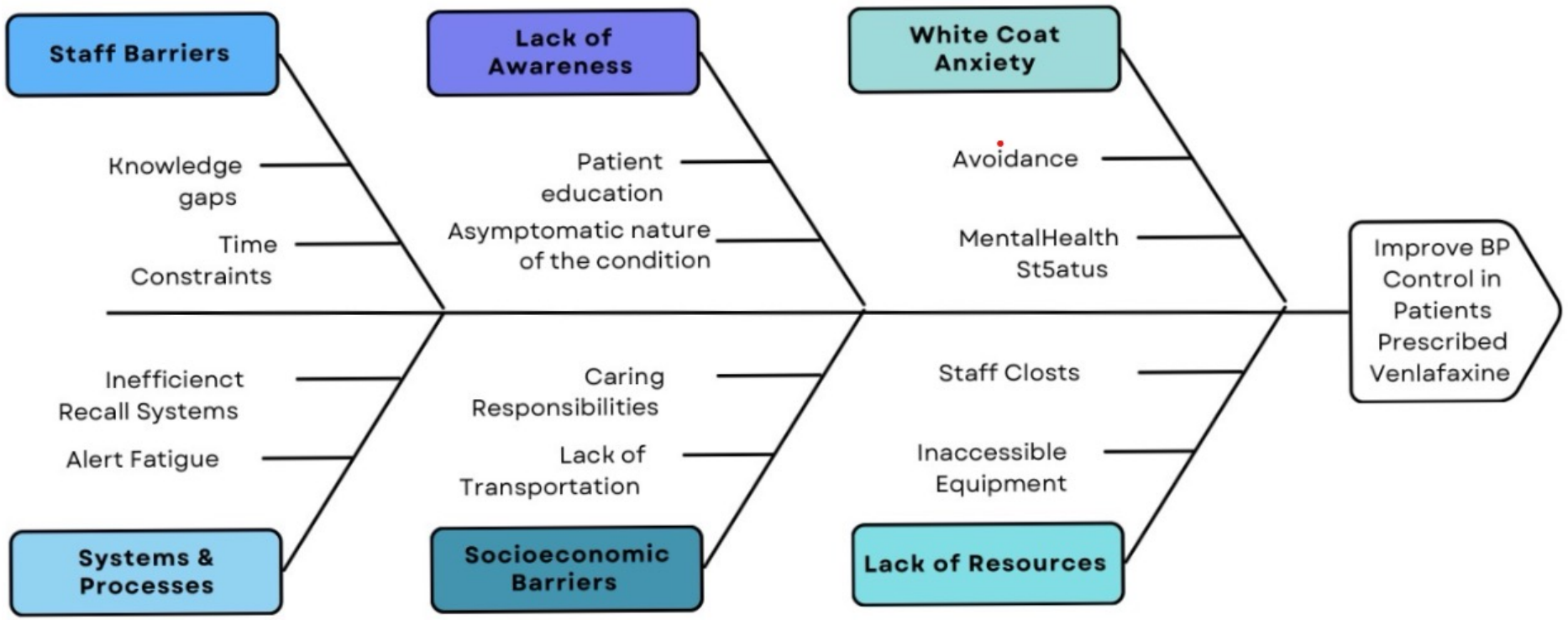
FINANCIAL IMPACT:

- Potential to reduce BP monitoring appointments and minimise administrative costs
- Potential to prevent expensive complications,
    - direct costs (clinic resources, travel, paper)
    - future healthcare costs (hospital admissions, treatment of complications)



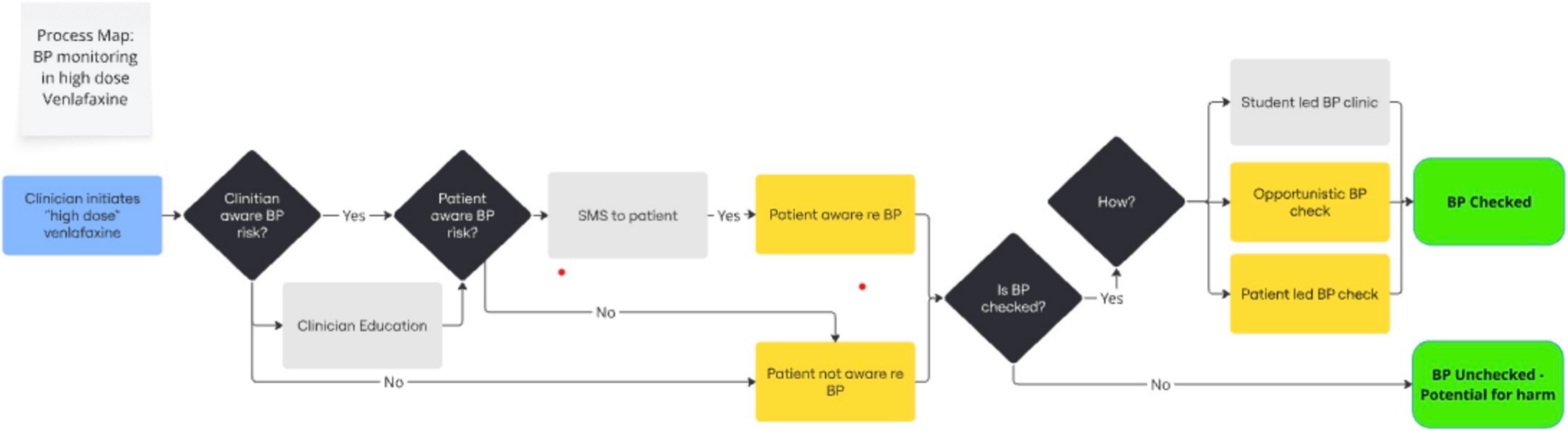
What are we trying to accomplish?

UNDERSTAND THE CURRENT SYSTEM



What are we trying to accomplish?

UNDERSTAND THE CURRENT SYSTEM



What are we trying to accomplish?

AIM

S	• Monitoring Blood pressure in patients on high dose venlafaxine across 3 practises in Northern Ireland
M	• Number of patients with a recorded BP in the last year 12 months
A	• Each GP practise implemented its own targeted intervention e.g. (staff education, text message reminder, BP clinics)
R	• A meta-analysis of 3,744 patients found Venlafaxine significantly increases BP, especially in the first 6 weeks, with higher doses having a greater effect.
T	• By the end of GP placement (8 weeks)

Aim: Increase the number of patients across three practices who are prescribed high dose venlafaxine (150mg+) who have had their BP recorded in the past 12 months from 48% to 65% within 8 weeks.

What changes can we make that will result in improvement?

STRATEGY AND CHANGE IDEAS

METHODS

Design & Setting

- 7-week QI project
- 3 GP practices
- Focus: BP monitoring in venlafaxine patients

Stakeholder Engagement

- Discussions with GPs, nurses, and practice managers
- Identified barriers and priorities
- Co-designed interventions per practice

QI Approach

- Baseline BP recording rates measured
- Tools: Process mapping & fishbone diagrams
- PDSA cycles
- Post-intervention measurement



How will we know that a change is an improvement?

MEASUREMENTS

- Identified patients on high dose Venlafaxine (150mg+) through Emis search
- Manually checked the latest documented BP in the patient's notes

- Repeated the process after 8 weeks

- Baseline data of patients with a documented BP prescribed

GP 1 – 62% (24 patients)
GP 2 – 32% (20 patients)
GP 3 – 63% (256 patients)

If we had more time:

- Process measures
- Balancing measures



PDSA CYCLES

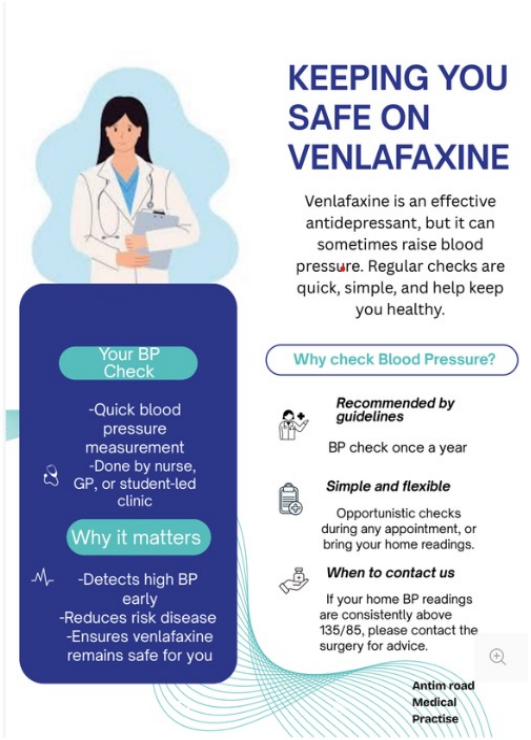


Figure 2



PDSA CYCLES

PATIENT INFORMATION LEAFLETS



KEEPING YOU SAFE ON VENLAFAXINE

Venlafaxine is an effective antidepressant, but it can sometimes raise blood pressure. Regular checks are quick, simple, and help keep you healthy.

Your BP Check

-Quick blood pressure measurement
-Done by nurse, GP, or student-led clinic

Why it matters

-Detects high BP early
-Reduces risk disease
-Ensures venlafaxine remains safe for you

Why check Blood Pressure?

Recommended by guidelines

BP check once a year

Simple and flexible

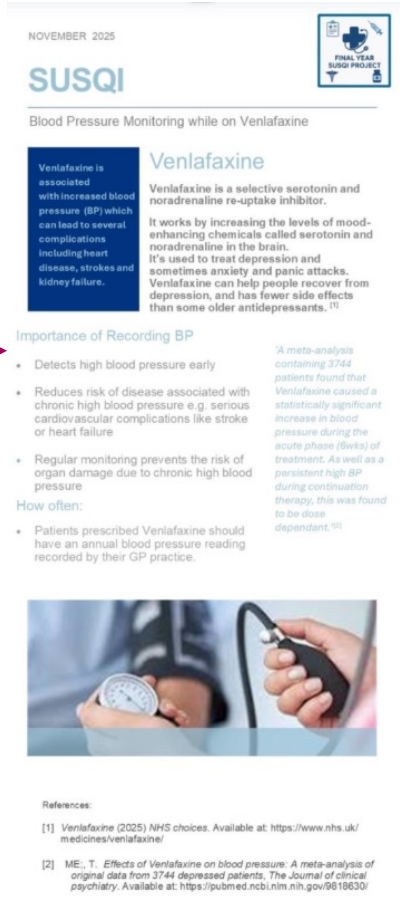
Opportunistic checks during any appointment, or bring your home readings.

When to contact us

If your home BP readings are consistently above 135/85, please contact the surgery for advice.

Antim road Medical Practise

INFORMATION LEAFLETS TO INCREASE STAFF AWARENESS



NOVEMBER 2025

FINAL YEAR SUSQI PROJECT

SUSQI

Blood Pressure Monitoring while on Venlafaxine

Venlafaxine is associated with increased blood pressure (BP) which can lead to several complications including heart disease, strokes and kidney failure.

Venlafaxine

Venlafaxine is a selective serotonin and noradrenaline re-uptake inhibitor.

It works by increasing the levels of mood-enhancing chemicals called serotonin and noradrenaline in the brain.
It's used to treat depression and sometimes anxiety and panic attacks.
Venlafaxine can help people recover from depression, and has fewer side effects than some older antidepressants. [1]

Importance of Recording BP

- Detects high blood pressure early
- Reduces risk of disease associated with chronic high blood pressure e.g. serious cardiovascular complications like stroke or heart failure
- Regular monitoring prevents the risk of organ damage due to chronic high blood pressure

'A meta-analysis containing 3744 patients found that Venlafaxine caused a statistically significant increase in blood pressure during the acute phase (6wks) of treatment. As well as a persistent high BP during continuation therapy, this was found to be dose dependant.' [2]

How often:

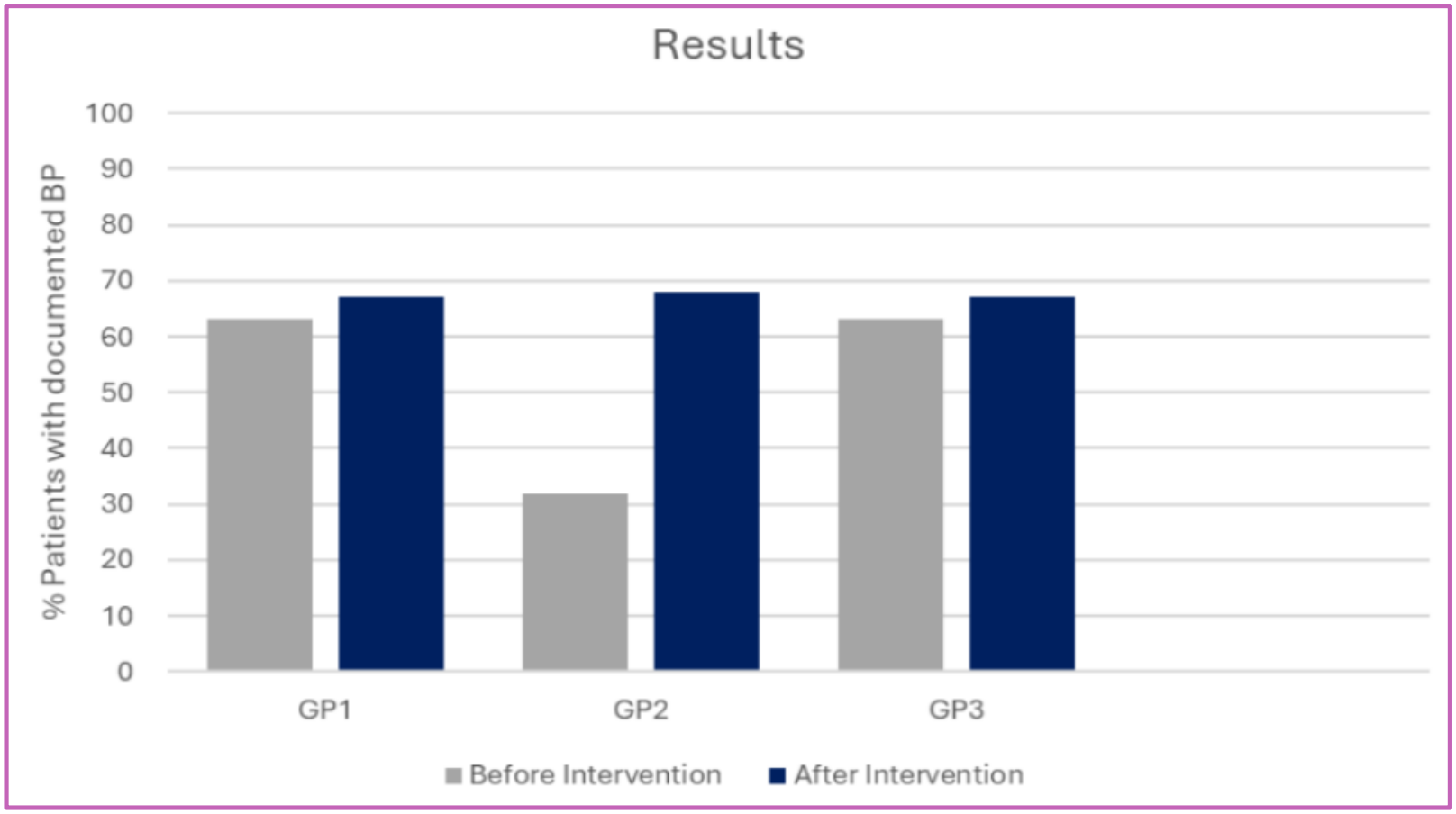
- Patients prescribed Venlafaxine should have an annual blood pressure reading recorded by their GP practice.

References:

[1] *Venlafaxine* (2025) *NHS choices*. Available at: https://www.nhs.uk/medicines/venlafaxine/

[2] ME:, T. *Effects of Venlafaxine on blood pressure: A meta-analysis of original data from 3744 depressed patients, The Journal of clinical psychiatry*. Available at: https://pubmed.ncbi.nlm.nih.gov/9818630/

OUTCOMES


Results
% Patients with documented BP
100
90
80
70
60
50
40
30
20
10
0
GP1
GP2
GP3
Before Intervention
After Intervention

IMPACT/IMPLEMENTATION

Strengths & Successes	Limitations
Real-world, multi-practice approach.	Small sample sizes (GP1: 24, GP2: 20).
Raised clinician awareness of venlafaxine-related hypertension.	Short duration (7 weeks).
Simple interventions improved BP monitoring.	Limited patient consent; possible white-coat effect.
Prompted review of clinically significant cases.	Student-led clinics not sustainable
	Different interventions limit comparison.

TOPS TIPS/CHALLENGES



Project successfully increased clinician awareness and patient outcomes

Demonstrated that simple interventions can improve monitoring and influence clinical decision-making, particularly through opportunistic BP testing.

Future work :

- Extend the intervention period
- Embedding BP checks into routine workflows
- Incorporating home and digital BP monitoring to improve sustainability and patient empowerment
- Consider alternative consent methods beyond text message, such as opportunistic verbal consent during appointments
- Limit the frequency of electronic alerts to reduce fatigue and maintain their impact.
- Plan from the outset how BP monitoring can be embedded into existing workflows so it remains sustainable without student involvement.

THANK YOU



QUESTIONS?

Raise your mood not your blood pressure!

Suhani Bansal, Niamh Doherty, Emília Sousa Ua Bruadair



QUEEN'S UNIVERSITY BELFAST

INTRODUCTION

Hypertension is one of the biggest causes of premature death worldwide, leading to severe complications like heart disease, strokes, and kidney failure.
It affects approximately 300,000 people across Northern Ireland, with a prevalence rate of 145.2 per 1,000 patients.
Venlafaxine, an antidepressant, is associated with elevations in blood pressure, and NICE guidelines recommend regular blood pressure monitoring to reduce the risk of complications.
However, there remains a lack of awareness of this potential side effect amongst both healthcare professionals and patients.

ENVIRONMENTAL IMPACT:

- Opportunistic BP checks reduce extra appointments and patient travel.
- Electronic prompts limit paper use.
- By supporting earlier detection and management of hypertension, this intervention may also reduce future complications and hospital admissions, indirectly lowering the environmental burden of secondary care.

FINANCIAL IMPACT:

- By reducing extra appointments, minimizing administrative costs, and preventing expensive complications, this intervention saves both direct costs (clinic resources, travel, paper) and future healthcare costs (hospital admissions, treatment of complications).

SOCIAL IMPACT:

- This project creates a positive social impact by promoting safer, more holistic care for patients prescribed venlafaxine, a group that may be vulnerable due to mental health needs.
- Improved blood pressure monitoring reduces preventable cardiovascular risk and reinforces parity of esteem between mental and physical health. Regular monitoring may also strengthen patient trust and engagement by helping patients feel valued, listened to, and safely monitored within routine care.

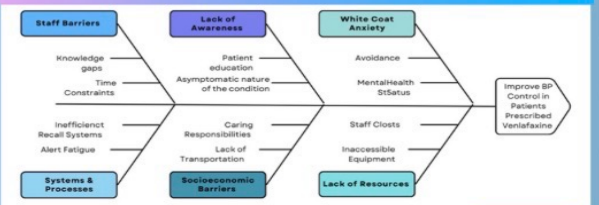
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T	• By the end of GP placement (8 weeks)

REFERENCES

- https://www.who.int/news-room/fact-sheets/detail/hypertension
- https://www.nisra.gov.uk/news/heart-conditions-and-diabetes-continue-affect-thousands-across-northern-ireland
- https://www.psychiatrist.com/jcp/effects-venlafaxine-blood-pressure-meta-analysis-original/

METHODOLOGY



METHODS

Design & Setting
- 7-week QI project
- 3 GP practices
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Stakeholder Engagement
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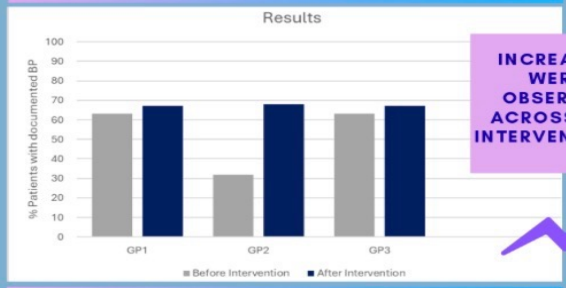


Information leaflets for patients and staff!



Figure 2

RESULT



INCREASES WERE OBSERVED ACROSS ALL INTERVENTIONS

DISCUSSION

GP	Intervention	BP Documentation Pre vs Post (%)	Key Findings	Limitations / Considerations
1	EMIS text messaging reminders	63 → 67	Modest improvement in BP documentation. Limited reach due to low patient consent. Longer intervention likely needed for sustained change.	Low-income population, high workload, limited treatment rooms, long waiting times for non-urgent BP checks.
2	Opportunistic BP testing / student-led BP clinic	32 → 68	Largest improvement. Opportunistic testing effective, particularly during other appointments. Raised awareness of venlafaxine-related BP changes; a patient was diagnosed with malignant hypertension, highlighting clinical impact.	Reliance on student-led clinic affects sustainability. Inconsistent patient attendance limits overall reach.
3	Electronic pop-up reminders & patient leaflets	63 → 67	Positive trend observed. Alert fatigue reduced clinician engagement. Patient leaflets alone had limited impact.	Short intervention period may limit effect despite large sample size (n=256). Additional supportive strategies needed to enhance effectiveness.

STRENGTHS & WEAKNESSES

Strengths
- Real-world, multi-practice approach.
- Raised clinician awareness of venlafaxine-related hypertension.
- Simple interventions improved BP monitoring.
- Prompted review of clinically significant cases.

Weaknesses
- Small sample sizes (GP1: 24, GP2: 20).
- Short duration (7 weeks).
- Different interventions limit comparison.
- Limited patient consent; possible white-coat effect.
- Student-led clinics not sustainable

CONCLUSION

The project successfully increased clinician awareness of venlafaxine-associated hypertension and demonstrated that simple interventions can improve monitoring and influence clinical decision-making, particularly through opportunistic BP testing.
Key barriers were also identified, informing areas for improvement such as enhancing patient engagement, reducing alert fatigue, and improving access to BP measurement.
Future work should focus on extending the intervention period, embedding BP checks into routine workflows, and incorporating home and digital BP monitoring to improve sustainability and patient empowerment.

IF YOU WOULD LIKE SUPPORT TO UNDERTAKE QI IN YOUR PRACTICE:



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