

# Pharmacist Led Hypertension Review Project in Black (African or African-Caribbean origin) Patients



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## Introduction

Black people (African or African-Caribbean origin) have a much higher prevalence of hypertension and subsequent cardiovascular disease, stroke, renal failure and dementia and therefore the potential risks associated with uncontrolled blood pressure are greater for this patient group.<sup>1</sup>

Data from the Queen Mary's University Clinical Effectiveness Group shows that blood pressure is well recorded across the population in City and Hackney. However the data shows that 5% of black patients have an uncontrolled blood pressure of >150/90mmHg compared to 2.5% of non-black patients. In addition 6.7% of black patients have either a systolic blood pressure of >150 mmHg or a diastolic of >90 mmHg compared to 5.4% in the non-black population. Black populations also appear to have uncontrolled blood pressure and/or abnormal blood pressures at an earlier age.<sup>1,2</sup>

## Aim of Project

To review and improve blood pressure in black patients (African or African-Caribbean origin) with uncontrolled hypertension (>140/90 mmHg) by optimising treatment, identifying reasons for non-adherence to antihypertensive medication and providing lifestyle advice through pharmacist led hypertension clinics.

## Objectives

1. Review antihypertensive medication according to NICE guidelines.
2. Provide advice on lifestyle and nutrition.
3. Understand reasons for poor adherence to antihypertensive medication and optimise treatment.

## Methodology

Practice Supports Pharmacists (PSPs) who work in general practice, but who are not normally patient facing, were tasked with setting up hypertension clinics to review Black (African or African-Caribbean origin) patients with uncontrolled blood pressure in practices within City and Hackney CCG. The PSPs attended a one day training session delivered by a consultant cardiovascular pharmacist. PSPs then searched GP records for patients using the specified criteria outlined in the project protocol and sent out a letter inviting them to an initial hypertension clinic. Patients were then followed up in clinic 1-3 months later. Outcomes were recorded on a data collection form, which was piloted prior to the rollout of the review clinics.

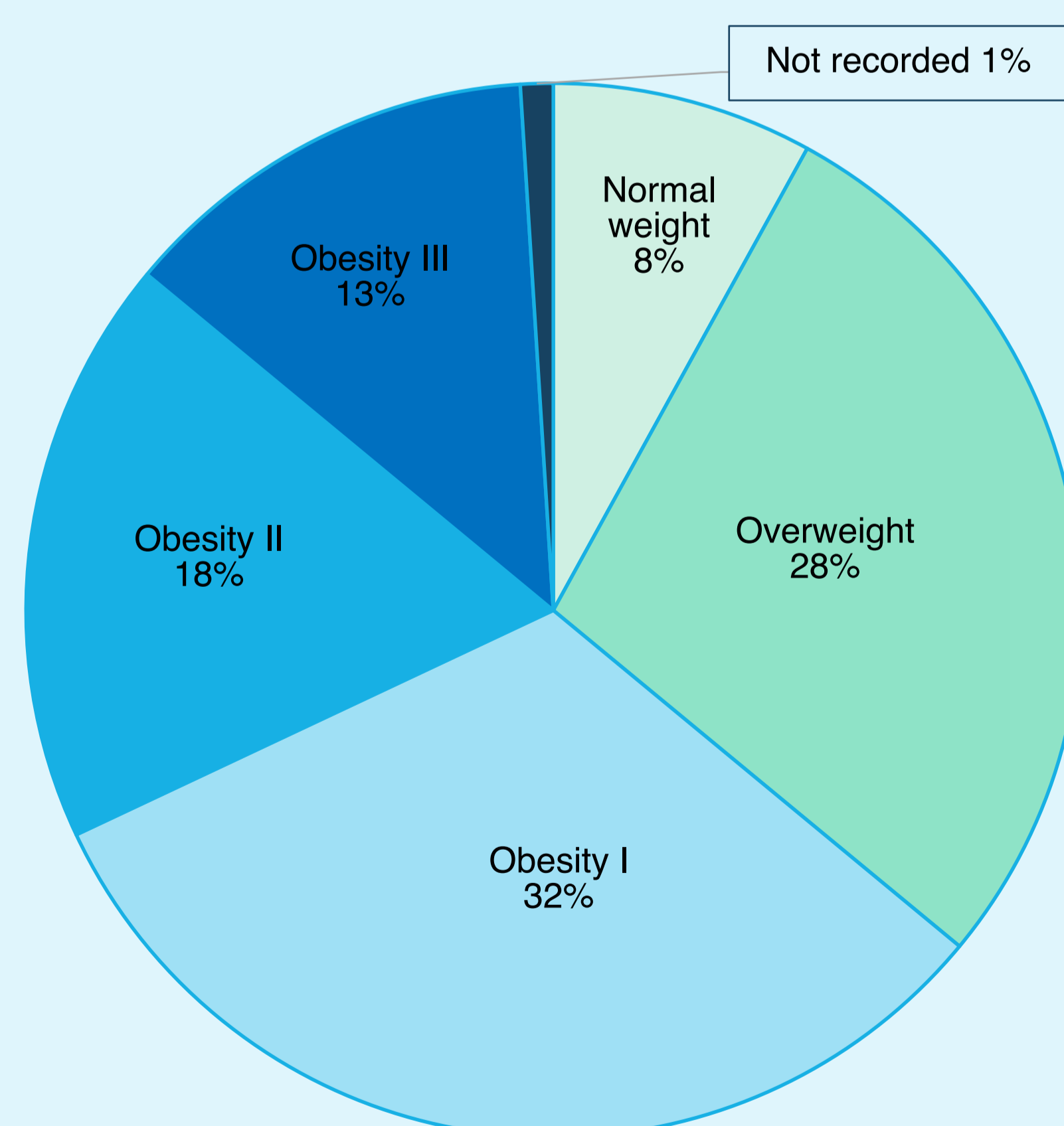
## Results

PSPs reviewed 253 patients across 39 GP practices for the initial hypertension review.

**Objective 1: Review antihypertensive medication according to NICE guidelines.**  
135 (53%) patients were on treatment according to NICE adult hypertension clinical guidelines. However, this does not take account of patients who could not tolerate first, second or third line therapy and therefore is an underestimation of prescribing in line with NICE guidance.

**Objective 2: Provide advice on lifestyle and nutrition**  
PSPs asked all patients about their lifestyle, including diet, levels of exercise, alcohol consumption and smoking status. Weight and BMI were also measured during the initial consultation.

### Percentage of Patients who were Overweight or Obese



The results showed that 91% of patients reviewed were either overweight (28%) or obese (63%).

### Objective 3: Understand reasons for poor adherence to antihypertensive medication and optimise treatment

Of the 253 patients seen in clinic, PSPs identified that 121(48%) were not taking their medication as prescribed. The main reasons identified were:

- ❖ 10% of patients do not believe that their medication works to treat their hypertension
- ❖ 10% of patients forget to take their medication as prescribed and
- ❖ 6% of patients forgot to order an adequate supply of their medicines

PSPs used the Calgary-Cambridge model to undertake their consultation, identifying the reasons for non-adherence and discussing options with the patient to help them to improve their blood pressure control.

## Results

Of the 253 patients seen for an initial consultation, 136 patients were not reviewed mainly due to patients not attending consultations, cancelling appointments or because follow up was not required as the patient's blood pressure during the first consultation was in the normal range.

Of the 117 patients who were followed up, blood pressure could not be accurately measured in 3 patients and the change in systolic blood pressure was as follows for the remaining 114 patients:

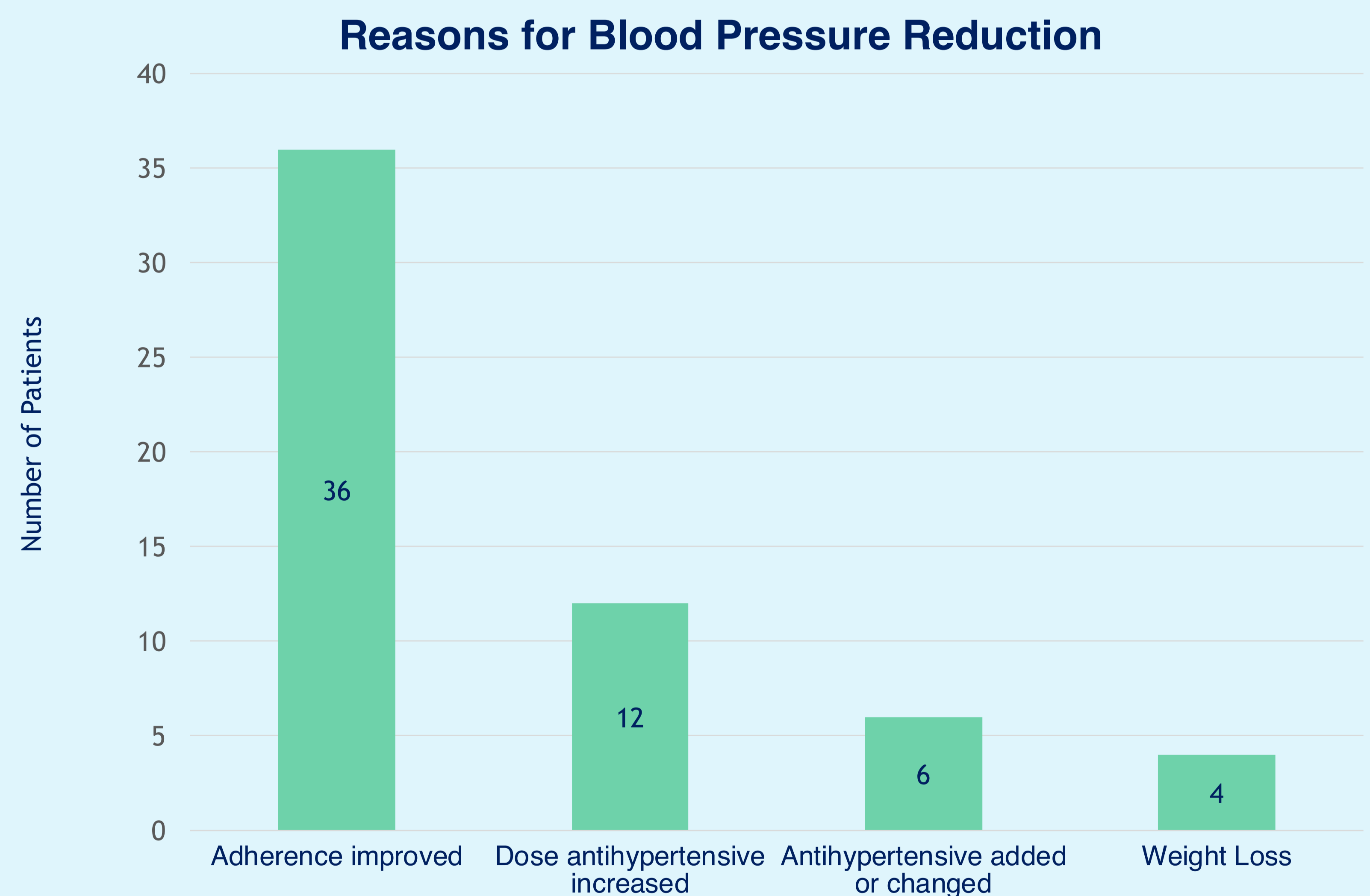
- ❖ No change in systolic blood pressure in 4 (4%) patients
- ❖ A reduction in systolic blood pressure in 66 (58%) patients
- ❖ An increase in systolic blood pressure in 44 (38%) patients

The table below shows the extent of reduction in systolic blood pressure of the 66 patients.

Reduction in Systolic Blood Pressure	No. of Patients
1-10 mmHg	26
11-20 mmHg	11
21-30 mmHg	16
31-40 mmHg	7
41-50 mmHg	4
51-60 mmHg	1
121-130 mmHg	1
<b>Total</b>	<b>66</b>

## Reasons for Blood Pressure Reduction

PSPs documented potential reasons for any changes in blood pressure recorded between the initial and follow up consultations for 58 of the 66 patients. The bar chart below shows the main reasons identified by PSPs which could explain the reduction in systolic blood pressure observed.



## Conclusion

The hypertension review project has demonstrated that using pharmacist led consultations to review hypertensive patients can lead to an improvement in systolic blood pressure control. One of the main reasons leading to a reduction in systolic pressure was an improvement in adherence to antihypertensive medication. Pharmacists discussed adherence with each patient, identifying reasons why patients were not taking their medicines as prescribed and discussed the importance of blood pressure control on health outcomes. The second reason leading to a reduction in systolic pressure was due to PSPs reviewing and making changes to the patient's antihypertensive medication by uptitrating the dose or adding in or switching to another agent.

Systolic blood pressure was shown to have increased in 44 patients. 16 of these patients had a blood pressure that was still in the normal range (<140/90mmHg). Of the remaining 28 patients, 12 were still not adhering to their medication and 3 resisted making any further changes to their medication. There were multiple reasons for non-adherence including patients forgetting to take their medicines e.g. due to irregular patterns of work and patients not believing that their medicines were working and therefore not feeling motivated to take them. This data highlights the importance of regular discussions on adherence during hypertension clinics and the benefit that a pharmacist can bring in improving adherence to medication. Further work should be undertaken to evaluate the impact of regular adherence checks on blood pressure control.

## References

1. NICE NG136; Hypertension in adults: diagnosis and management; August 2019
2. City and Hackney Clinical Effectiveness Group data