**Educating primary care patients with and without hypertension about lifestyle changes: a medical student audit at an inner-city practice**

**Kunal Lall**

Fourth Year Medical Student

**Pippa Oakeshott**

Professor of General Practice

Population and Health Research Institute

St. George’s, University of London

SW17 0RE

Correspondence to Kunal Lall m1405559@sgul.ac.uk

**Context**

Educating patients about their medical conditions can be just as important as managing the condition itself.1 This is because many conditions can be prevented or improved by incorporating lifestyle changes which the patient can make themselves. One example is high blood pressure where multiple studies have shown how making relevant dietary and exercise changes can improve control. NICE guidelines state that lifestyle advice should be ‘offered initially and then periodically to patients undergoing assessment or treatment for hypertension’.2 However, few UK studies have looked at the advice given to patients by Healthcare Practitioners (HCPs) in primary care about making such lifestyle changes.

Hypertension, defined as a blood pressure of ≥140/90 mmHg, is a major cause of morbidity and mortality worldwide including ischaemic heart disease and stroke. Whilst pharmacological treatments are important, the value of making appropriate lifestyle changes should not be underestimated. A study by Viera *et al.*3 involving 810 adults with mild hypertension demonstrated that:

* + Every 4-8% reduction in body weight decreased systolic blood pressure (SBP) by 3 mmHg.
  + Restricting salt intake to 1600-2400 mg/day decreased SBP by 2-8 mmHg.
  + Eating a high fruit and vegetable diet reduced SBP by 8-14 mmHg.
  + Thirty minutes of moderate exercise five times/week decreased SBP by 4-9 mmHg.

In 2017 for a medical student project, I conducted an audit of 106 patients at one general practice to explore how proactive HCPs were in advising patients about the importance of lifestyle changes.I then compared the patient-reported advice in those with and without a history of hypertension.

**Research questions**

1. What percentage of patients report being advised by their GP or practice nurse about:

- Losing weight

- Eating a low-salt diet

- Eating at least five portions of fruit and vegetables each day

- Undertaking 30 minutes of moderate exercise five times each week?

2. Is there a difference in reported lifestyle advice given to patients with and without a history of hypertension?

**Description**

We designed an anonymous questionnaire asking patients whether they had ever been told by a HCP that they have high blood pressure, and if they had ever been advised about losing weight, eating a low-salt diet and/or five portions of fruit and vegetables daily, and undertaking 30 minutes of exercise five times each week. We also asked about age, gender, ethnicity, height and weight. Questionnaires were handed to patients aged ≥16 in the waiting room at a London general practice and returned to KL.

**Outcomes**

The response rate was 97% (106/109). The mean age of the 106 responders was 41 (range 22-76 years), 46% were male, 18% were from Black, Asian & Minority Ethnic groups, and 36% were overweight or obese (BMI ≥ 30) based on reported height and weight. Of the 106 responders, 21 (20%) had ever been told that they have high blood pressure.

Overall, 35% (37/106) patients reported being advised to complete 30 minutes of exercise five times each week, 33% (35/106) about eating five portions of fruit and vegetables daily, 20% (21/106) about losing weight, and 13% (14/106) about eating a low-salt diet. More patients with a history of hypertension than without reported being advised about losing weight (43%, 9/21 versus 14%, 12/85) p <0.05) or eating a low-salt diet (33%, 7/21 versus 8%, 7/85 p <0.05), but this did not apply to advice on exercise or five a day.

**Conclusions**

About a third of patients reported being advised by a HCP about diet and/or exercise and this was more common in those with a history of hypertension. However, it is likely that there are missed opportunities since over half of those with hypertension did not recall receiving advice about lifestyle changes.

The main limitation is that we used patient reported data which may not be reliable. However it shows what patients actually remember. An audit of medical records might have shown advice was given more frequently (although this is not always documented). Finally this is a small study from one general practice and findings may not be generalisable.

According to Public Health England, reducing the average national blood pressure could save £850 million of the NHS & Social Care budget between 2014-2024.4 A reduction of just 2mmHg in SBP may prevent 6% of stroke deaths and 4% of coronary deaths.3 With clear health and financial benefits, it is important to address why patients do not report receiving enough lifestyle information from HCPs, though the time constraints placed on ten-minute primary care consultation, coupled with ever growing patient demands, are likely to be major contributors.

**Reflection**

After undertaking this project, I have developed an understanding of how to design, analyse and report an audit in primary care. Wass and colleagues highlight the recruitment and retention of general practitioners as a national issue.5 However, the experiences I had reflect how varied and exciting is life as a portfolio GP, with multiple clinical and research opportunities on offer. This has reinforced my decision to pursue general practice as a career.

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**Disclosure statement**

No potential conflict of interest was reported by the authors.

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