Aayush Visaria,

Postdoctoral Research Fellow, Rutgers University, New Brunswick, New Jersey; North American Disease Intervention, New Brunswick, New Jersey.

REFERENCES

1. Robson J, Garriga C, Coupland C, Hippisley-Cox J. NHS Health Checks: an observational study of equity and outcomes 2009–2017. *Br J Gen Pract* 2021; DOI: https://doi.org/10.3399/BJGP.2020.1021.
2. Caleyachetty R, Barber TM, Mohammed NI, *et al.* Ethnicity-specific BMI cutoffs for obesity based on type 2 diabetes risk in England: a population-based cohort study. *Lancet Diabetes Endocrinol* 2021; **9(7):** 419–426.
3. Eastwood SV, Mathur R, Sattar N, *et al.* Ethnic differences in guideline-indicated statin initiation for people with type 2 diabetes in UK primary care, 2006–2019: a cohort study. *PLoS Med* 2021; **18(6):** e1003672.

DOI: https://doi.org/10.3399/bjgp21X717461

Primary care clinical pharmacists and chronic disease medication adherence

The NHS Long Term Plan emphasises the vital role of prevention in the NHS of the future.[1] Optimising patients' medical management of chronic disease is an opportunity for primary care. Primary Care Network-based Population Health Management interventions have the potential to augment existing services. Pharmacist-led interventions to improve chronic disease medication adherence have been shown to be effective.[2–4] A study of the New Medicine Service offered by community pharmacies in England showed 70% self-reported medication adherence at 10 weeks in the intervention group compared with 60% in the control.[5]

A Quality Improvement Project in a socioeconomically deprived general practice in Nottinghamshire led to a clinical pharmacist telephoning 30 patients with suboptimally managed lipid profiles and cardiovascular risk. Fourteen patients were prescribed and repeatedly dispensed simvastatin, atorvastatin, or rosuvastatin. Eight (57%) of those confided in the clinical pharmacist that they were non-adherent with the lipid-lowering medication regime. Patients had recently consulted with GPs and nurses prior to the intervention. Clinical pharmacist consultation may lead to more candid discussions about medication. A study of primary care in rural Australia[6] reported a similar finding. Clinical pharmacists asked 50 patients about their drug history. Forty per cent of patients reported they were not adherent to their prescribed medication regime.

All but one of the eight non-adherent Nottinghamshire patients agreed to restart medication after consultation. The most given reason for non-adherence was not feeling any benefit from taking pills regularly. The pharmacist reflected that most patients had a weak understanding of the primary or secondary prevention rationale for treatment. A 2016 meta-analysis found health literacy to be positively correlated with medication adherence and that intervention can increase both. The effect of intervention was more pronounced in patients with lower incomes.[7]

Selective intervention by clinical pharmacists may add health benefit above usual care by increasing adherence to long-term medication regimes. Low levels of health literacy in areas of socioeconomic deprivation may be a factor amenable to pharmacist intervention. Patients with greater socioeconomic deprivation and markers of poor disease control such as lipid profiles, HbA1C, and blood pressure could be prioritised inside a Primary Care Network footprint to maximise health gain.

Stephen Wormall,

(NIHR) In-Practice Fellow in Primary Care; GP, Clinical Design Authority, Nottingham and Nottinghamshire CCG; University of Nottingham, Nottingham.
Email: stephen.wormall@nottingham.ac.uk

Sarah Abbot,

Clinical Pharmacist; Primary Integrated Care Services, Nottingham.

Competing interests

Stephen Wormall is an In-Practice Fellow supported by the Department of Health and Social Care and the National Institute for Health Research (NIHR). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR, or the Department of Health.

REFERENCES

1. NHS. *The NHS Long Term Plan.* 2019. https://www.longtermplan.nhs.uk/ (accessed 6 Oct 2021).
2. Ali F, Laurin M-Y, Lairière C, *et al.* The effect of pharmacist intervention and patient education on lipid-lowering medication compliance and plasma cholesterol levels. *Can J Clin Pharmacol* 2003; **10(3):** 101–106.
3. Milosavljevic A, Aspden T, Harrison J. Community pharmacist-led interventions and their impact on patients' medication adherence and other health outcomes: a systematic review. *Int J Pharm Pract* 2018; **26(5):** 387–397.
4. Elnaem MH, Rosley NFF, Alhifany AA, *et al.* Impact of pharmacist-led interventions on medication adherence and clinical outcomes in patients with hypertension and hyperlipidemia: a scoping review of published literature. *J Multidiscip Healthc* 2020; **13:** 635–645.
5. Elliott RA, Boyd M, Salmea N-E, *et al.* Supporting adherence for people starting a new medication for a long-term condition through community pharmacies: a pragmatic randomised controlled trial of the New Medicine Service. *BMJ Qual Saf* 2016; **25(10):** 747–758.
6. Bonner CJ, Carr B. Medication compliance problems in general practice: detection and intervention by pharmacists and doctors. *Aust J Rural Health* 2002; **10(1):** 33–38.
7. Miller TA. Health literacy and adherence to medical treatment in chronic and acute illness: a meta-analysis. *Patient Educ Couns* 2016; **99(7):** 1079–1086.

DOI: https://doi.org/10.3399/bjgp21X717485