

Poor Patient Adherence to Ocular Hypotensive drops for Glaucoma at a Rural General Practice Surgery



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Introduction

Glaucoma is a progressive, irreversible optic neuropathy which remains the leading cause of irreversible blindness worldwide (1). Glaucoma is responsible for 10% of UK blindness registrations, with approximately half a million diagnosed in the UK (2). It is characterised by optic nerve changes indicative of damage and visual field loss (3). It often remains asymptomatic until advanced, thus highlighting the importance of timely detection and subsequent management. General Practice (GP) is the often first point of contact for glaucoma suspects. This study aims to detect how well patients adhere to glaucoma eye drops.

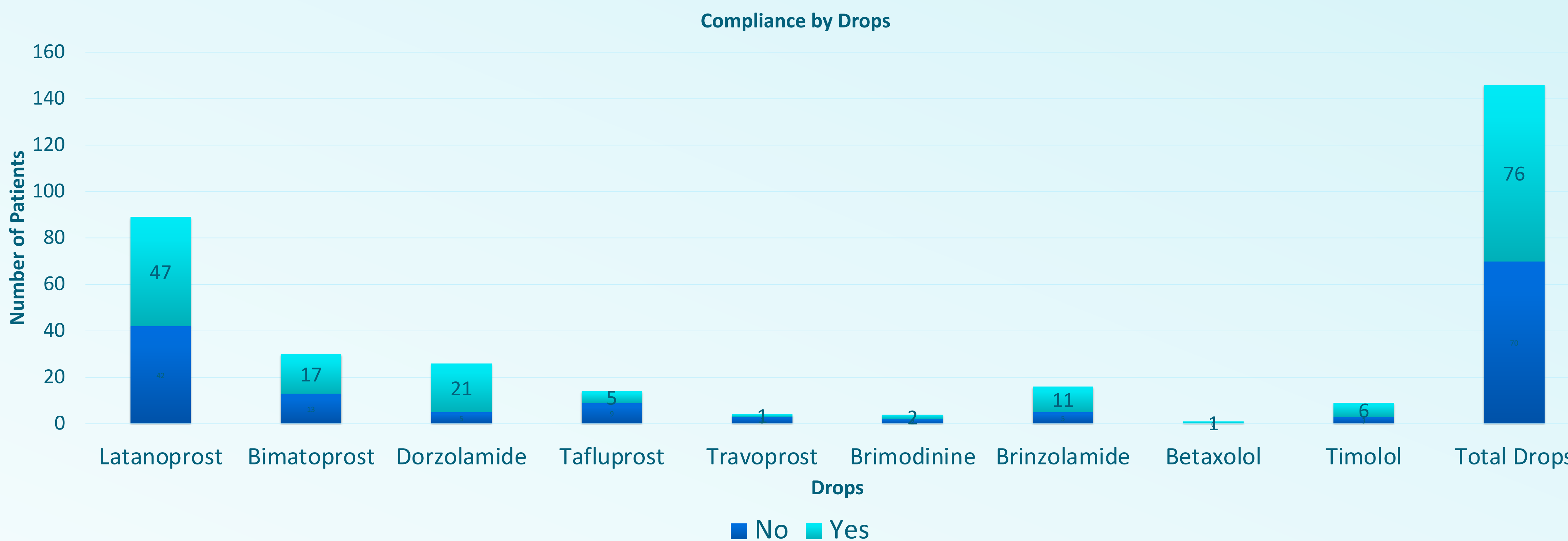
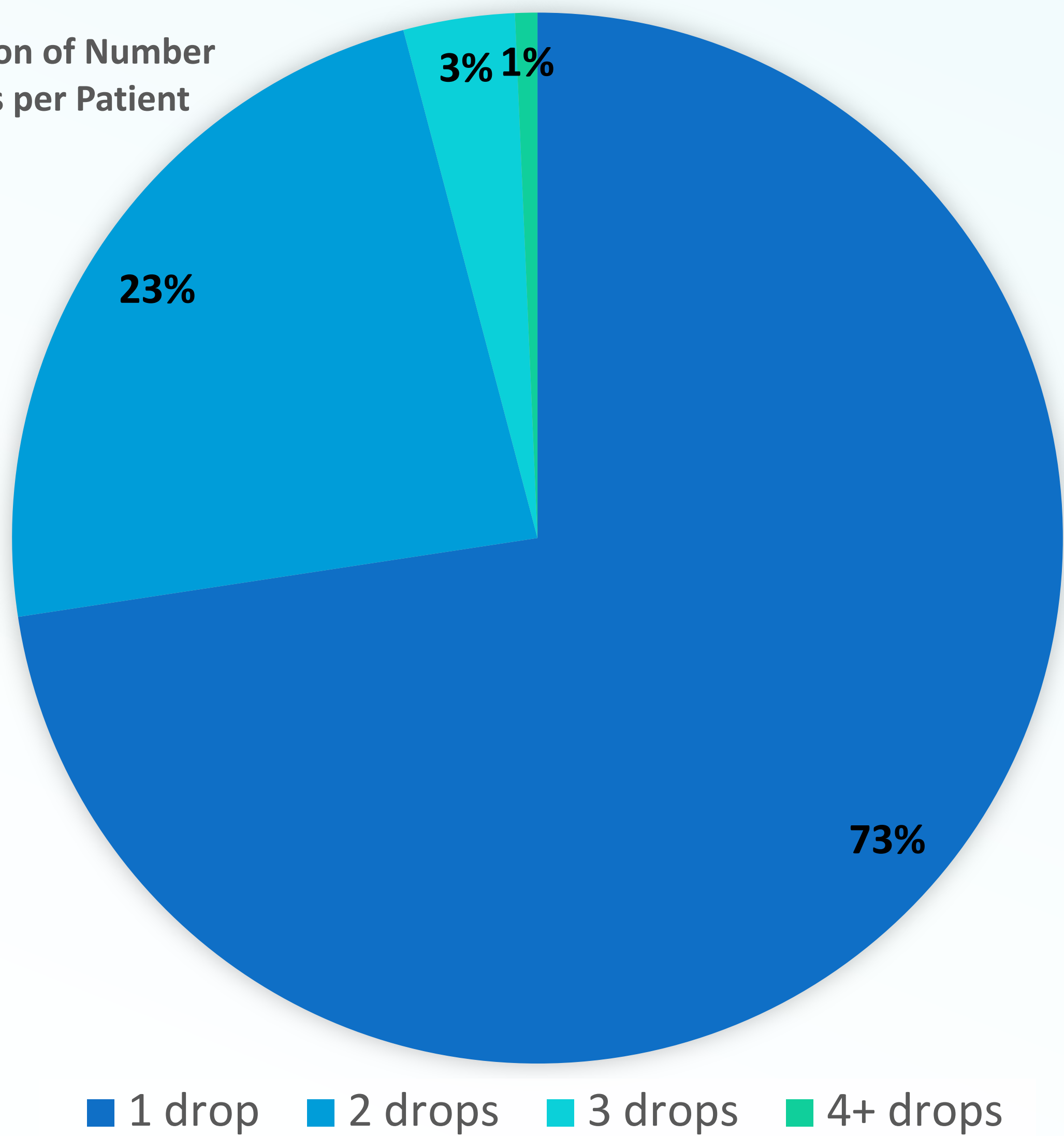
Methodology

This was an audit at a rural GP surgery in Southwest England. Electronic health records (SystemOne, The Phoenix Partnership, Leeds, UK) were accessed retrospectively to retrieve administrative data since inception until 15/10/2025. Patient age, gender, type of residence, date of initial and most recent prescription collection and ocular hypotensive regimen were obtained. Satisfactory adherence was defined as minimum 12 bottles of medication collected across a one-year period, based on a single bottle of medication to be completed in 28 days. An Accurx © (Accurx Ltd., London, UK) message was sent to non-adherent patients with information regarding glaucoma drops. Statistical analyses were executed on VSCode (Microsoft Corp., Redmond, WI) with unpaired t-tests and chi-squared tests. Statistical significance was set at $p > 0.05$.

Results

145 unique records were identified, of whom 47.5% were male. Satisfactory adherence was observed in 53.1% ($n = 77$) of patients. 4.1% of participants resided in care homes, of whom 83.3% were adherent. There was no significant difference between gender ($p = 0.49$) or average age of adherent versus non-adherent patients ($p = 0.45$). No significant difference between adherence to prostaglandin analogues and carbonic anhydrase inhibitors was observed ($p = 0.2751$). 100% of non-adherent participants involved received the Accurx © reminder message.

Distribution of Number of Drops per Patient



Conclusion

Glaucoma medication adherence is poor across both genders, with age not significantly different between groups. The simple low-cost intervention of Accurx © aims to remind patients to collect their medications, as well as refreshing administration technique to help increase the effectiveness of the medication. Patients residing in residential homes had greater adherence, likely due to stricter control through home staff. To action this, further audit to be conducted in six months to assess level of adherence again. This work has demonstrated poor adherence to glaucoma drops, resulting in sight-threatening accelerating disease progression. Future research should reproduce this study to establish the national extent of this predicament and explore techniques to combat it.

References

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