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# TO DETERMINE THE LEVEL OF COMPLIANCE AND THE COMMON OBSTACLES TO GLAUCOMA MEDICATIONS IN CENTRAL LONDON



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## Introduction

Forgetfulness, difficulties instilling eye drops and difficulties with the medication schedule are the main factors that affect adherence to taking glaucoma treatment.<sup>1</sup> Patients with poor adherence (80% or less) have been found to have greater visual field severity or report to be in poor health.<sup>2,3</sup> Failure to take medications as prescribed can result in increased complications, worsened health status, and higher overall healthcare costs.<sup>4</sup> Health behaviour models including the use of education tools and identifying motivation factors linked to adherence may facilitate the development of a tailored approach, accounting for individual and age-related differences.<sup>5,6</sup>

## Purpose

- To assess levels of compliance to ocular medications for patients with glaucoma and ocular hypertension.
- To determine the common obstacles to medications adherence and develop strategies to help improve adherence.

## Methods

Over a period of eight weeks in late 2018, patients who attended the treatment and concordance clinic at the glaucoma outpatient department of St Thomas' Hospital and were on treatment were investigated. Patients who did not instill their own drops due to severe cognitive impairment or had physical disabilities preventing them from doing so were excluded from the study,

Data gathered over the previous month included compliance to treatment, frequency of non-compliance (if any) and any reasons for non-compliance. Information on age, ethnicity, gender, ocular diagnosis, visual field mean deviation as a level of glaucoma disease severity and the presence of any physical dexterity problems was also collected.

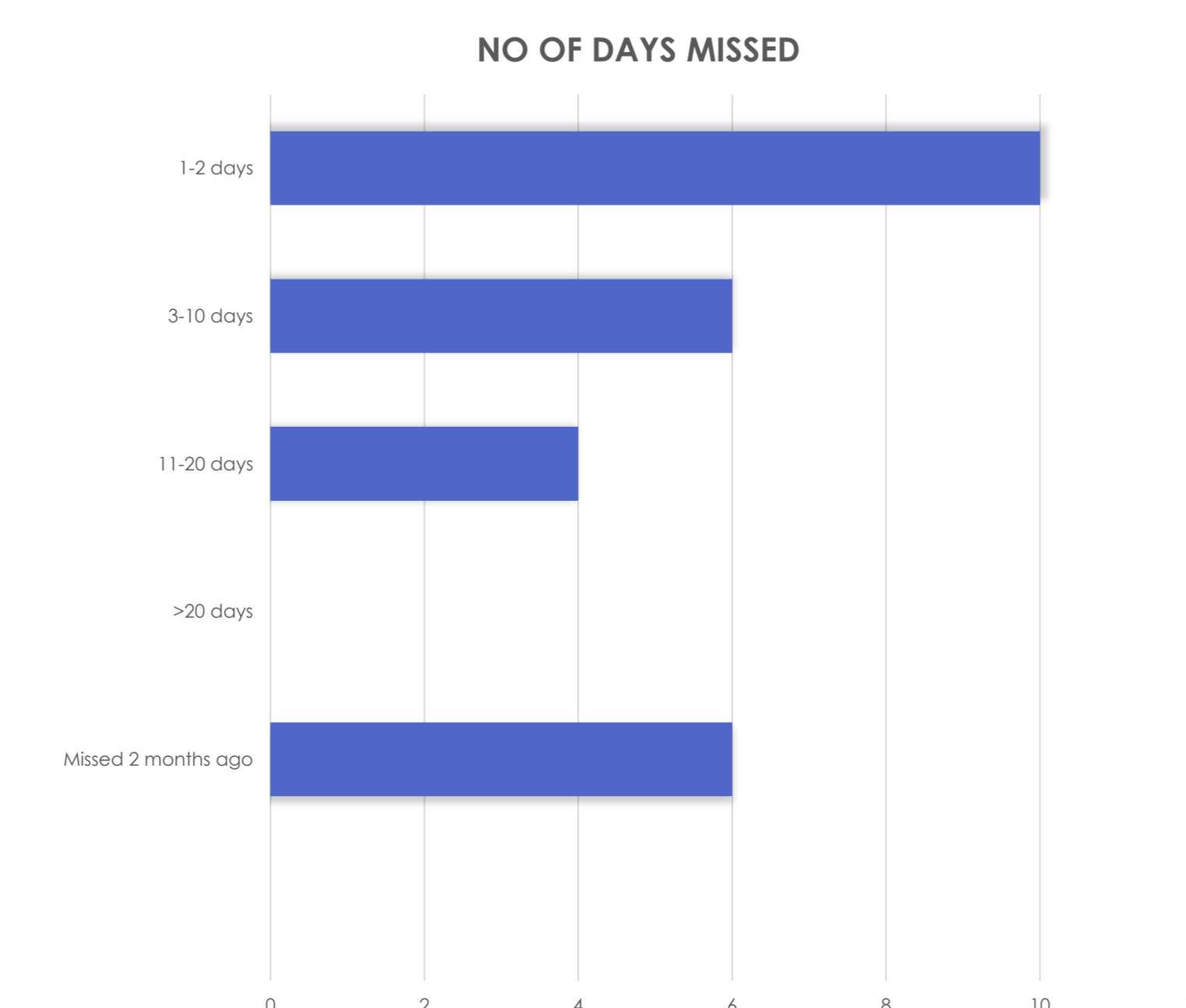
## Results

Data obtained for fifty patients are summarised in Table 1. Figure 1 shows the frequency of drops missed over the last month for the non compliant group. Reasons reported for missing drops are outlined in Table 2. Some of the 'other reasons' for non compliance are shown in the speech bubbles.

**Table 1** Significance tests: Chi-squared test\*, independent samples T Test\*\*, NS=not significant

	Total No. (n=50)	Compliant Group (n=24)	Non-Compliant Group (n=26)	P value
Female (%)	25 (50)	11 (46)	14 (54)	NS*
Median Age yrs [IQR]	69 [56-79]	63 [55-70]	75 [59-82]	P=0.04**
White (%)	17 (34)	10 (42)	7 (27)	NS*
Black (%)	26 (52)	10 (42)	16 (62)	NS*
POAG (%)	29 (58)	15 (63)	14 (54)	NS*
Glaucoma Severity MD in worse eye Mean (SD)	-10.6 (9.1)	-9.4 (7.7)	-11.7 (10.2)	NS**
Physical difficulties (%)	5 (10)	1 (4)	4 (15)	NS*
Taking > 2 bottles (%)	8(16)	2(8)	6 (23)	NS*

**Figure 1**



**Table 2**

Reasons for non compliance	No. (%)
Forgets	11 (42)
Ran out	2 (8)
Difficult to obtain	2 (8)
Not correct frequency	3 (12)
Using wrong drops	1 (4)
Other reasons	7 (27)



## Conclusion

A significant number of our patients reported poor compliance with their drop regime (52%) with over a third missing their medication multiple times per month and 15% admitting to not instilling drops 11- 20 days a month. The non-compliant patients were older (p=0.04), more likely to be non-white (Odds Ratio=1.9) and be on multiple drops (Odds Ratio=3.3) than the compliant group.

The main reason for non compliance was forgetting to instil the drops. It follows that interventions such as smartphone adherence apps,<sup>7</sup> reminder gadgets or alternatives to medical treatment such as Select Laser Trabeculoplasty (SLT) should be considered.

As glaucoma progression has been shown to be linked to poor compliance<sup>4</sup> this may have implications for the future management and subsequent quality of life for these patients. Further work is therefore needed in identifying these patients at an earlier stage and developing more affective individualized adherence management plans.

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