# Audit of Capacity and Delay in the Hospital Eye Service

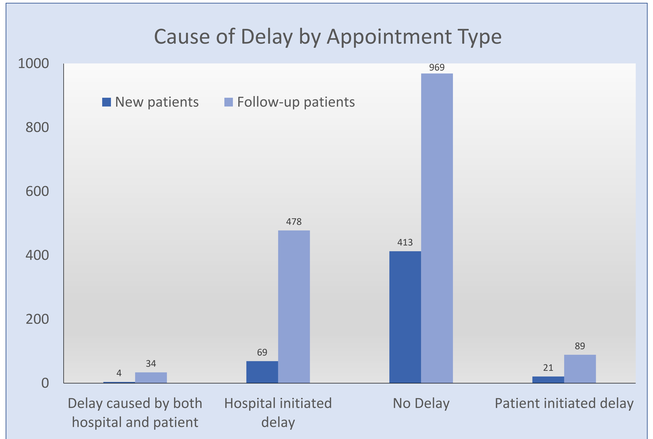
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## Background

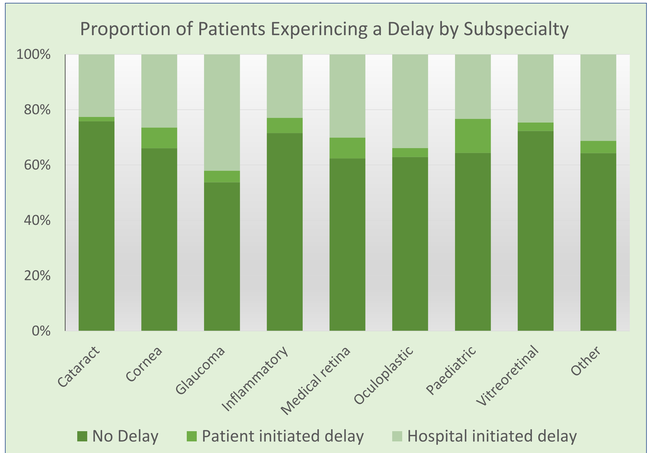
Reports of capacity shortfalls in ophthalmic services brought about by an expanding and ageing population and the rise in cost-effective treatment options are being associated with negative impacts on patient outcomes. A large scale patient review at Moorfields Eye Hospital identified 16 cases of harm occurring in 12 316 delayed or lost to follow-up cases. In a nationwide surveillance The Royal College of Ophthalmologists reported finding at a minimum rate of 14 per month suffering preventable harm due to health service-initiated delay. Whilst harm found to be occurring in patients of all ages, it was most consistently found in those with age related chronic conditions with 78% of patients experiencing permanently reduced vision and 26% eligible for sight impaired or severe sight impaired registration. This challenges the NHS aspiration to provide high-quality care that is safe, effective and focused on patient experience in pursuit of timely and compassionate care for every person who uses and relies on its services. Whilst the frequency of patients suffering the worst immediate outcomes had been assessed, there are many more patients experiencing significant delays in care, with the likelihood that they will suffer inferior prognosis and progressive visual loss over a longer term. The proportion of patients experiencing delay and therefore at risk whilst receiving a standard of healthcare below that recognised had not been established. We undertook a UK wide audit of the demand against the available capacity in the Hospital Eye Service to provide further information on the pressures on the hospital eye service.

## Purpose and methods

To establish the proportion of patients experiencing delay in appointments beyond the required standard or that requested by their doctor across the UK hospital eye service. We asked all eye units to participate in this audit through contact with Clinical leads and the Ophthalmic Trainees Group of The Royal College of Ophthalmologists. Eye units recruited one or more trainees to collect information on 3 specified patients per clinic on a single working day between June 10th and June 28th 2019. The data sought for each hospital were:
Date of Audit, Total number of patients on day of audit, Total number of clinics on day of audit, Number of patients reported. The data sought on each patient were primary diagnosis, appointment type, date of last previous appointment or date of referral, planned time between appointments, cause of the delay.




There was a significant association between the likelihood of a delay and whether patients were attending new or follow-up appointments. $\chi^2$ (2,2077) = 69.27 p<0.0001




There was a similar association between likelihood of a delay and category of primary diagnosis, both for all patients ($\chi^2$ (16, 2077)= 77.91, P<0.0001) and more specifically for follow-up patients. $\chi^2$ (8, 1536)= 46.85, P<0.001

## Length of Delay

The mean length of the delay was 1.83 times longer than the maximum time requested by the clinician for standard care with a median of 1.46, with delays ranging between 1.01 and 42.2 times the planned follow-up, although there were no differences in the proportionality of the delay between diagnosis categories.

| Diagnosis Category | No. of Patients | Mean delay |
|---|---|---|
| **Cataract** | 14 | 1.60 |
| **Cornea** | 45 | 1.60 |
| **Glaucoma** | 151 | 1.77 |
| **Inflammatory** | 23 | 1.54 |
| **Medical retina** | 136 | 1.77 |
| **Oculoplastic** | 21 | 4.05 |
| **Paediatric** | 17 | 1.71 |
| **Vitreoretinal** | 31 | 1.66 |
| **Other** | 33 | 1.90 |
| **Total** | 471 | 1.83 |

## Comparison of Data with Harm due to Delay study data

Using categories and data from the Harm due to delay Study (HDTD) to compare likelihood of harm and with likelihood of delay, there is a correlation in the ranked order between the rate at which patients experience harm per outpatient appointment and the likelihood that patients with that primary diagnosis will experience hospital initiated delay. $r_s$ = 0.9, p (2-tailed) = 0.03739.

*Foot, B., MacEwen, C. Surveillance of sight loss due to delay in ophthalmic treatment or review: frequency, cause and outcome. Eye **31**, 771–775 (2017).*

| Primary Diagnosis category | Frequency of patients in HDTD Study (n=141) | Percentage of follow-up outpatient appointments | Proportion of study patients/ Proportion of FU outpatient appointments (Rank) | Proportion of patients experiencing delay (Rank) |
|---|---|---|---|---|
| **Glaucoma** | 78 | 30.85% | 1.79 (1) | 0.42 (1) |
| **Medical retina** | 43 | 36.08% | 0.85 (2) | 0.30 (2) |
| **Cataract** | 2 | 5.70% | 0.25 (5) | 0.23 (5) |
| **Vitreoretinal** | 3 | 4.23% | 0.50 (3) | 0.25(4) |
| **Other** | 15 | 23.13% | 0.46 (4) | 0.27 (3) |

## Participation and Patient Characteristics

We received information on 2077 patients from 85 different eye units across the UK. The only region without any representation was North Thames. This was made up of 507 new patients and 1570 follow-up patients, 585 (28%) patients received hospital-initiated delays in their appointment, 110 patients were the cause of their delay and 1382 patients received their appointment within the timeframe requested by the clinical care team. The primary diagnosis category for each patient was Cataract 8%, Cornea 10%, Glaucoma 21%, Inflammatory 6%, Medical retina 27%, Oculoplastic 5%, Paediatric 6%, Vitreoretinal 8% and Other 9%.

## Conclusions

A large proportion of patients are not receiving their care within routine recommended timescales and this is happening significantly more frequently in follow-up patients than those scheduled for new appointments. This is more frequent in the common chronic diseases such as glaucoma and medical retinal conditions where there is a cumulative effect on capacity rather than contained episodes of care such as cataract. The length of delay is proportionate to the requested follow-up time, with 50% of patients experiencing a delay of between1.22 to 1.93 times longer than the expected length of follow-up. The identified association between likelihood of delay and the likelihood of harm adds further evidence that this is a preventable cause of sight loss and an increase in capacity within the hospital eye service to reduce or eradicate delays in follow-up appointments beyond clinically indicated limits would reduce or eradicate this source of iatrogenic harm.

Collaborators
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