Surveillance of Deterioration in sight due to Delay in Ophthalmic Review or Treatment in the UK: Contemporary findings and comparison with previous BOSU Studies

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Background

The NHS is committed to delivering safe, effective, and timely care that is free at the point of delivery and based on clinical need. In ophthalmology, however, increasing demand—driven by an ageing population and the expanding availability of effective treatments—has placed growing pressure on hospital eye services, contributing to capacity challenges.

A 2015 prospective BOSU (British Ophthalmological Surveillance Unit) study brought national attention to this issue, estimating that approximately 22 patients per month were experiencing significant, avoidable vision loss due to delays in care. The majority of these cases involved individuals with chronic, age-related eye conditions. Among affected patients, 78% experienced permanent vision loss, and 26% met the criteria for registration as sight impaired or severely sight impaired. A follow-up BOSU study conducted three years later reported similar trends.

Current Study

This study replicates the methodology of the original BOSU investigation to provide updated national data on vision loss due to delayed treatment or follow-up in adult NHS ophthalmology patients. It aims to assess how the scale and nature of such harm may have evolved and to inform efforts to ensure that eye care services remain timely, safe, and responsive to the needs of the population.

Purpose and Methods

This prospective study aimed to identify new cases of patient harm resulting from delays in ophthalmic review or treatment across the UK over a 12-month period (November 2023 – October 2024). Data were collected via the British Ophthalmological Surveillance Unit (BOSU) using active, prospective surveillance involving all UK ophthalmologists. Monthly email notifications invited clinicians to report newly identified cases. For each case, detailed information—including patient demographics, diagnosis, cause and duration of delay, and severity of vision loss—was collected through a standardized questionnaire. To ensure consistency and comparability, the study employed the same case definition and data collection instruments used in previous BOSU studies.

Case Definition

- Irreversible deterioration of vision in at least one eye of 3 lines of Snellen acuity or 15 letters on the ETDRS chart or deterioration in the visual field of 3 decibels due to a delay in ophthalmic review or care caused either wholly or partially by the health service including any delays related to COVID-19
- Patients whose vision has irreversibly deteriorated to below that measured on the Snellen chart to counting fingers or worse following a delay in ophthalmic review or care caused either wholly or partially by the health service including any delays related to COVID-19
- Patients who have required a surgical intervention that would have been unnecessary or avoidable should appropriate follow up have taken place

Exclusions

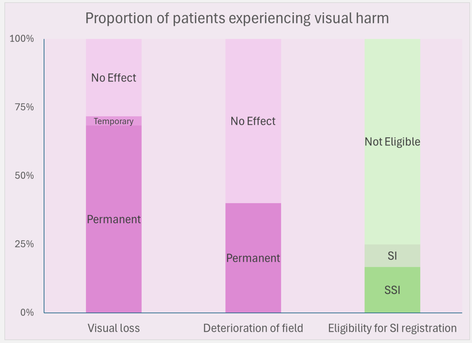
- Patients who are listed for routine cataract surgery where sight loss is expected to be temporary
- Harm due to delays caused solely by the patient's failure to attend (DNA) are not included
- Patients 18 years old or under

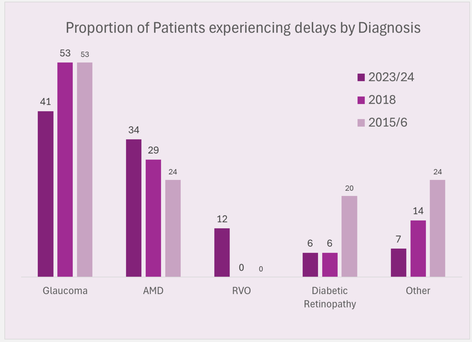
Results

A total of 309 cases were reported to BOSU. Of these, 257 met the inclusion criteria and were within the study period, with 52 (17%) excluded due to being outside the study timeframe or not meeting the case definition. Among the eligible cases, 84 questionnaires (33%) were completed online. The median age of patients was 76 years (range: 51–95 years), with 48% identifying as male. Ethnicity was recorded as White British in 95% of cases. The demographic profile of patients affected by hospital-initiated delays has remained consistent with findings from 2015.

Ascertainment and Frequency

Data collection and case ascertainment are currently in progress; therefore, the figures presented are preliminary estimates. To date, data have been obtained for 136 of 309 case reports, of which 84 (62%) have been confirmed as meeting the case definition. Extrapolating this proportion to the full dataset suggests an estimated annual frequency of approximately 192 cases (16 per month). This represents a notable increase compared to the frequencies reported in earlier studies—13.4 cases in 2016 and 10.8 in 2018. Underascertainment in the 2015 study was estimated at 14–57%, and BOSU participation rates were higher in previous studies (76% compared to 47% in the current study). These factors indicate that the true incidence of iatrogenic sight loss related to delays in treatment or review may now be higher than previously reported.





Vison loss and Diagnosis

A majority of cases (73%) resulted in a permanent reduction in visual acuity, while 28% sustained a permanent decline in visual field. Combined impairment of both visual acuity and field was observed in 11% of cases. Unplanned additional procedures were required in 9% of patients.

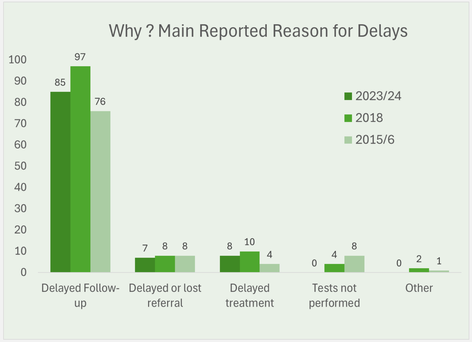
Chronic conditions were the most common diagnoses: Glaucoma (41%), Age-related Macular Degeneration (AMD) (34%).

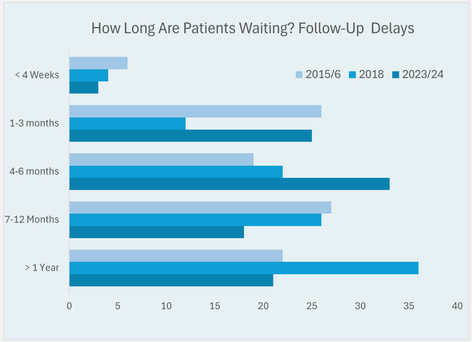
Overall, 23% of patients met the criteria for registration as Severely Sight Impaired (SSI) or Sight Impaired (SI).

Cause and Lengths of Delays

The causes of delay were consistent with findings from previous studies. The most common cause was delayed follow-up (85%), followed by lost referrals (7%) and delayed initiation of treatment (8%).

The median delay duration was 31 weeks (range: 3 weeks to 4.9 years). Despite these delays, 27% of patients maintained stable visual acuity, and 72% retained stable visual fields. Permanent reduction in visual acuity occurred in 73% of cases, while 28% experienced permanent visual field deterioration. Combined loss of both acuity and field was observed in 11% of cases.





Conclusions

Preventable harm resulting in permanent vision loss continues to occur due to health service-initiated delays, particularly affecting patients with chronic eye conditions. The predominant cause is delayed follow-up or review, reflecting ongoing capacity constraints within the hospital eye service. Irrespective of policy changes and interventions since 2015, there has been no meaningful reduction in the incidence of patient harm and indications suggest that harm is more frequent.