Delivery of age-related macular degeneration (AMD) service at Oxford Eye Hospital: a closed-loop audit compared against national standards

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Background

AMD is the most common cause of progressive visual impairment in developed countries. Wet AMD is amenable to sight-saving but time-critical intravitreal anti-VEGF injections. The Oxford Eye Hospital (OEH) uses a two-stop referral pathway (**Figure 1**) to identify AMD subtypes to provide timely treatment, according to national guidance.

Objectives

1. To measure compliance of OEH AMD service provision against national standards.
2. To evaluate effects on compliance after implemented changes
3. To identify further recommendations from second audit loop.

Methods

- Retrospective case-note reviews of n=100 patients in each loop (Jan-Mar 2018, Dec 2019-Feb 2020) conducted.
- Parameters based on National standards (RCOphth & NG82 NICE guidelines) collected.
- Results discussed in departmental meetings, identifying recommendations of
  (1) documentation by Eye Clinic Liaison Officers (ECLO) and low vision (LV) services, and
  (2) provision of patient information leaflets.

Key References :

Results

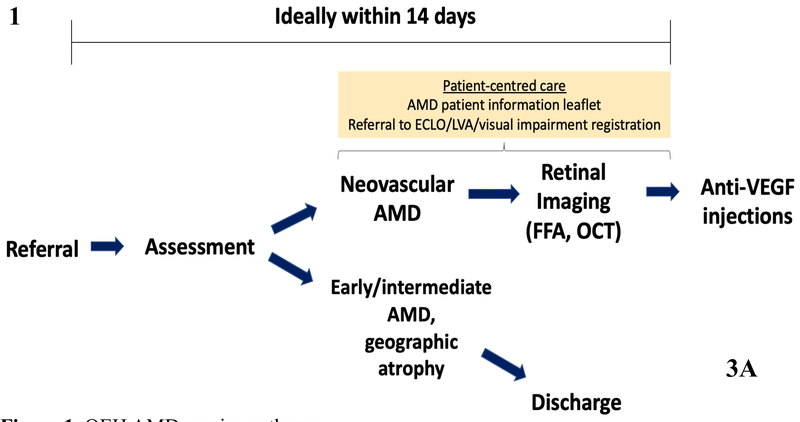


Figure 1. OEH AMD service pathway.

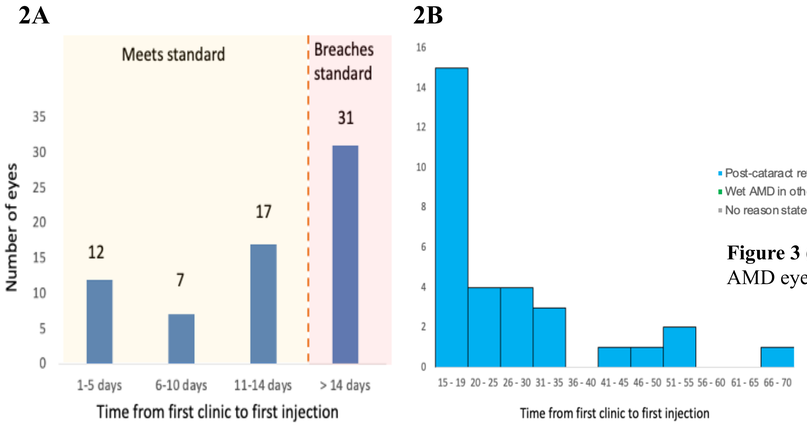


Figure 2 (A). Time from first AMD clinic to first anti-VEGF. **(B).** Histogram of cases delayed longer than 14 days.

- Compliance results are summarised in **Table 1** (right).
- Patients receiving anti-VEGF within two weeks was lower in second loop (76.7% vs. 53.7%, **Figure 2**) with a mean of 15.8 and median of 14.0 days.
- 123 patients with new early or intermediate AMD were not discharged from the service for reasons cited in **Figure 3A**.
- 68/74 eyes (91.9%, 65 patients) received treatment. One had borderline eligibility but included due to therapeutic advantage (improved LogMAR 1.22 to 0.4 after 6 sessions). Six eyes not treated summarised in **Figure 3B**. Therefore 68/68 eyes (100.0%) were appropriately treated.
- Recommendations identified included: (1) administrative safety net to avoid missed booking, (2) ensure access to experienced doctor to allay anxieties of patients, (3) ensuring paperwork completed before injection appointment e.g. Lasting Power of Attorney, and (4) considering injection on first day of appointment.

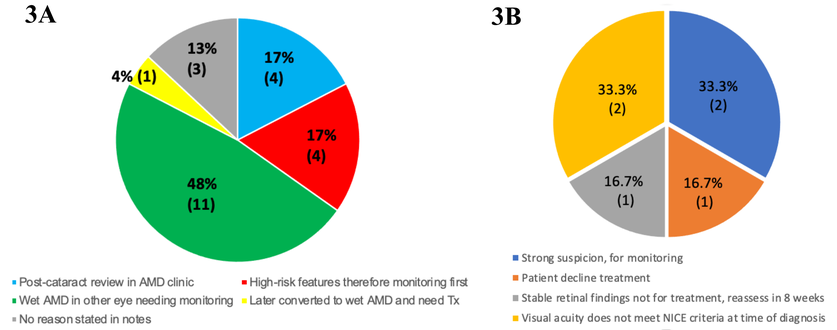


Figure 3 (A). Reasons for new dry AMD patients not being discharged. **(B).** Distribution of wet AMD eyes not treated with anti-VEGF

Criteria	Standards	First loop compliance	Re-audit compliance
Dilated fundus examination	100%	100%	100%
OCT in suspected late AMD	100%	98.0%	100%
FFA in newly diagnosed wet AMD	None; recommended by RCOphth as reference standard	Not measured	87.1%
Provided with written information	100%	47.0%	30.0%
Discharged from AMD service if early/dry AMD only?	100%	85.4%	Geographic atrophy: 60.0% Early/intermediate AMD: 36.4% "Appropriate" discharge for early/intermediate AMD only: 92.3% "Appropriate" discharge for early/intermediate AMD and geographic atrophy: 83.3%
Began anti-VEGF within 2 weeks?	Baseline: 85% Excellent: 98%	76.7%	58.8%
Received anti-VEGF when indicated	Baseline: 85% Excellent: 98%	97.7%	100%
Offered to be seen by ECLO and/or Low Vision service if eligible	Baseline: 70% Excellent: 100%	19.0%	69.2% ECLO: 100% offered LVA: 37.5% offered
If eligible, registered sight-impaired	100%	100%	80% (one patient refused)

Table 1. Summary of results: audit compliance compared against national standards and first loop results.

Conclusions

- Our department was successful in improving patient-centred care.
- However, we identified further improvements are needed to ensure PILs are issued and reduce anti-VEGF delay.
- Increased capacity with extra lists, and access to PILs for staff to hand these out have been highlighted for implementation. Following this, as part of an audit spiral, this will be reaudited.