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Adherence to anti-VEGF treatment of patients with Age-related Macular Degeneration of exudative type (nAMD) and Diabetic Macular Edema (DME) in Greece: Evidence from an expert panel

Platon Peristeris, Maria Katsara, Foteini Tsotra, Konstantina Briola, Athanassios Vozikis
Laboratory of Health Economics & Management, Economics Dept., University of Piraeus, Piraeus, Greece

Background

Anatomic Neovascular Age-Related Macular Degeneration (nAMD) and Diabetic Macular Edema (DME) are two leading causes of vision loss, affecting more than 40 million people worldwide[1-3].Approved anti-VEGF treatment options, considered as the standard-of care, require chronic treatment at regular intervals and frequent eye examinations and office visits, potentially creating a significant burden for patients, caregivers, and clinicians and thus barriers to optimal adherence and, by extension, effective management of anti-VEGF therapy[4-7].Poor compliance and retention in anti-VEGF therapy are the main factors contributing to the reduction of injections overtime[8] leading to not achieving the desired improvement or maintaining visual acuity at rates similar to those in clinicaltrials[9-11]. Furthermore, non-compliance has been associated with increased costs for both direct payments and indirectones[12,13].

Objectives

Our study aimed to identify and analyse the key factors that contribute to treatment non-adherence in patients with nAMD and DME, through the recording of Greek real clinical practice from the experiences of agroup of Medical Experts.

Methods

This research used written questionnaire responses and in-person meetings. The questionnaire was designed based on literature identifying factors linked to treatment non-adherence, defined as missing two or more visits in 12 months, and non-retention, defined as missing a scheduled visit within six months. Eight centers participated: three NHS hospitals, three university hospitals, and two private clinics. Data collection took place from October to November 2024.

Results

Results were derived from physicians' perspectives concerning 5,503 patients (4,070 nAMD, 1,433 DME) corresponding to 25% treated patients in Greece and having received10,638 intravitreal injections (7,007 in nAMD,3,611 in DME patients). Table 1 presents treatment patterns.

Category	Key findings
Injection Frequency	▪ Varied significantly(1.1–6.3 injections/patient/year; avg: 1.7 for nAMD, 2.5 for DME). Causes: patient transitions between Centers, patient volume per treatment year.
Non-Compliance	▪ ~10% of patients non-compliant, highest in NHS Clinics.
Injection Timing	▪ 55% of injections delayed beyond protocol. Highest delays in NHS Clinics.
High Compliance	▪ Monocular patients, 1st-yeartreatment.
Low Compliance	▪ Visual acuity >5/10, >4th-yeartreatment.

Table 1: Treatment patterns

Table 2 presents patient perceptions and engagement

Category	Key findings
Information Levels	▪ 66% of patients report no/moderate information; no sector differences.
Physician Consultation	▪ 50% consult physicians, understand compliance need. Influenced by Clinic staffing, patient socio-economic status.
Adherence Awareness	▪ 70% understand treatment adherence importance (high/very high).
Trust in Physicians	▪ 80% of on-treatment patients trust physicians greatly.
Treatment Involvement	▪ 40% moderately/highly involved in decisions, driven by trust, especially in public sector. Large private Centers similar to public.
Vision Improvement	▪ ~40% report moderate improvement; even minimal improvement discourages treatment discontinuation.

Table 2: Patient perception and engagement

Barriers to compliance included both patient- and physician-reported factors. Patients highlighted difficulty in scheduling timely appointments as a very significant barrier, along with the moderately significant challenge of the frequent injection visits required. From the physicians' perspective, delays in the Preapproval Electronic System (PES) process—from prescription to approval—were noted as a key obstacle, alongside a moderate impact on their overall workload.

Challenges related to the Preapproval Electronic System (PES) were notable. Approximately 70% of prescriptions were processed through PES, with physician satisfaction ranging from low to moderate. Dissatisfaction largely stemmed from a lack of specialized ophthalmologists involved in the review process, approval delays of 1–2 months, and the extensive documentation requirements. Additionally, physicians reported inconsistency in approval versus rejection decisions. The average rejection rate was 7.7% (ranging from 0% to 30%), with most rejections attributed to bureaucratic issues, though some were based on clinical considerations.

Physician's recommendations
1. Simplify PES, involve specialized physicians.
2. Staff Clinics with specialized ophthalmologists.
3. Establish clear treatment guidelines/protocols.
4. Enhance patient/public education.
5. Exclude retinal clinics from PES, use random audits.
6. Improve physician-patient relationships, treatment conditions.

Conclusion

These findings underscore the need for streamlined processes and better patient support to optimize outcomes and mitigate the economic and societalburden of nAMD and DME by initiating a meaningful dialogue between all stakeholders to create solutions.

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Contact information: Platon Peristeris, Laboratory of Health Economics & Management, University of Piraeus, 80 Karaoli & Dimitriou Str., 185 34, Piraeus, Greece; e-mail: platon.peristeris@gmail.com, Tel.: +30 6946504287