

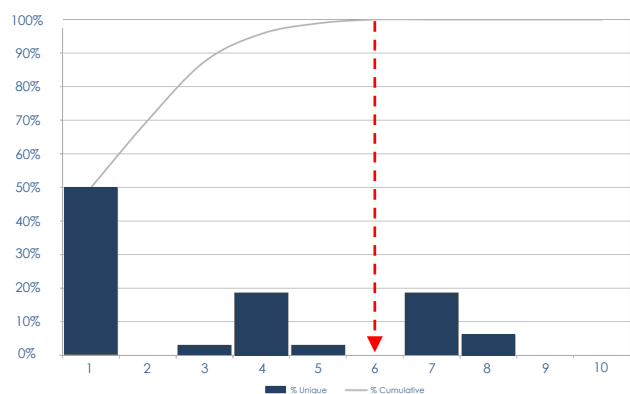
Evaluating the Economic Impact of Real-world Costs in nAMD Treatment Using Neutral Theory: A UK Perspective

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Supplementary Figure 1. Saturation analysis of unique cost items per consultant ophthalmologist



Awareness Round 1 comprised an anonymous, qualitative online survey with free-text responses to six open-ended questions. The consultant ophthalmologists were asked to provide at least 3 and up to 50 cost items relating to the pre-defined cost outcome categories per the real-world context.

The 10 consultant ophthalmologists provided 234 unique cost items on the neutral list, with data saturation achieved at 6 participants. This ensured robust item inclusion.



Supplementary Figure 2. Direct medical, non-medical, and indirect cost items included in the nAS instrument (scenario analysis)

Cost category	Code	Cost item	Awareness score	Consensus score	Cost magnitude (£)
Direct Medical	Code 3	Intraocular Pressure-Lowering drops e.g. iopidine (apraclonidine)	2	1	100
	Code 4	Intraocular Pressure-Lowering tablets e.g. Diamox (acetazolamide)	1	2	25
	Code 6	Dilating drops	2	1	1
	Code 8	Lubricating drops (post injection)	3	2	10
	Code 9	Post operative drops	5	2	10
	Code 10	Fundus Fluorescein Angiography (FFA) or Fluorescein Angiography (FA)	1	2	100
	Code 11	Indocyanine Green Angiography	4	2	100
	Code 12	Color Fundus Photography	4	2	100
	Code 13	Optical Coherence Tomography (OCT)	2	1	100
	Code 14	Optical Coherence Tomography Angiography (OCTA)	2	1	100
	Code 15	Intraocular test (IOP)	4	2	10
	Code 17	Slit lamp for examining eyes	2	1	10
	Code 18	Early Treatment of Diabetic Retinopathy Study (ETDRS) chart	1	2	10
	Code 19	Logarithm of the Minimum Angle of Resolution (LogMAR) chart	2	2	10
	Code 24	Injection set	5	1	10
	Code 25	Iodine drops/minims 5%	5	2	1
	Code 26	Iodine solution	3	2	1
	Code 29	Drape	2	2	1
	Code 32	Surgical scrubs	4	2	1
	Code 35	Surgical face mask	5	1	1
	Code 37	Sharps bins	1	1	1
	Code 42	Aprons	4	2	1
	Code 58	Iatrogenic cataract treatment	1	2	10
	Code 59	Central Retinal Artery Occlusion (CRAO) treatment	1	2	10
	Code 60	Corneal abrasion treatment	2	2	10
	Code 61	Emergency visit transport	1	2	10
	Code 62	Eye casualty time to review patients with complications	5	2	10
	Code 63	Admission to a hospital because of complications	5	2	100
	Code 64	Treatment with intravitreal antibiotics	1	2	10
	Code 65	Time for face to face emergency access	5	1	10
	Code 66	Time for telephone emergency access	2	2	1
	Code 67	Provision of a 24/7 emergency room (ER) ophthalmic service for emergencies	1	2	10
	Code 68	Junior Doctor	1	2	1
	Code 69	Non-consultant Specialist Doctor	5	2	10
	Code 70	Consultant Doctor	3	1	10
	Code 71	Nurse	5	1	1
	Code 72	Optometrist	4	1	1
	Code 73	Sight Loss Advisor	2	2	1
	Code 74	Imaging Technician	4	1	1
	Code 75	Healthcare Assistant	1	1	1
	Code 76	Eye Clinic Liaison Officers	3	2	1
	Code 77	Pharmacist costs	1	2	1
	Code 78	Fallsafe Officer	4	2	1
	Code 79	nAMD service manager for efficient use of service	4	1	1
	Code 80	Pharmacy supportive staff	1	2	1
	Code 83	Trusts	1	2	1
Direct non-medical	Code 97	Hospital transport for patients requiring it by ambulance	3	2	10
	Code 98	Hospital transport for patients requiring it by hospital cars	1	2	10
	Code 99	Hospital transport for patients requiring it by taxi	2	2	10
Indirect	Code 100	Travelling between different sites	5	2	10
	Code 101	Consultant locum	4	2	10
	Code 104	Locum Agency Fees	3	2	1
	Code 108	Community optometry liaison	4	2	1
	Code 110	Non-medical personnel education & training	4	2	1
	Code 112	Loss of productivity (absence from work due to illness or injury)	2	2	10
	Code 113	Presenteeism (turning up to work with reduced productivity due to illness or injury)	1	2	1

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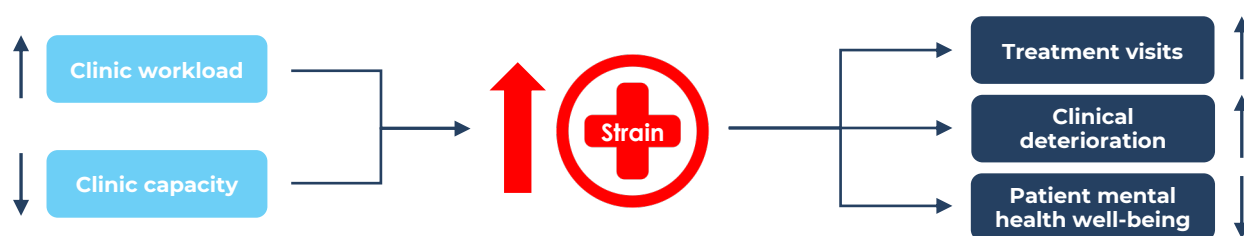
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Supplementary Figure 2b. Clinic strain and outlier cost items included in the nAS instrument (scenario analysis)

Cost category	Code	Cost item	Awareness score	Consensus score	Cost magnitude (£)
Costs incurred due to strain	Code 195	Imaging clinics for patients not actively being treated	5	2	10
	Code 198	Wasted slots for patients not turning up to appointments	5	1	10
	Code 199	Rescheduling and moving appointments due to non-attendance	1	1	1
	Code 200	Overbooking existing clinics (increased patients per clinic)	1	1	100
	Code 201	Overrunning existing clinics (increased duration per clinic)	3	1	100
	Code 202	Booking additional clinics for monitoring visits	2	1	1
	Code 203	Booking additional clinics for treatment visits	4	1	1
	Code 204	Waiting list clinics (paid extra to keep up with demand)	1	1	100
	Code 205	Delay in patient being seen in clinic at the allotted appointment time	1	1	10
	Code 206	Drug error and potential adverse event	4	2	100
	Code 209	Dealing with increased number of complaints from patients	1	2	100
	Code 210	Not following protocol in discharging patients from service	5	2	10
	Code 211	Delay in patient receiving an initial assessment treatment clinic appointment	2	2	100
	Code 212	Delay in patient receiving a treatment clinic appointment	2	1	100
	Code 213	Delay in patient receiving a monitoring clinic appointment	5	2	100
	Code 214	Independent Mental Capacity Advocates (IMCA) or patient advocate time to discuss patients lacking capacity	5	1	1
	Code 215	Bank staff to run extra clinics to manage capacity	1	1	10
	Code 216	Paying locum rates for extra clinics	2	1	10
	Code 217	Full time staff Overtime for extra clinics	3	1	10
	Code 218	Saturday clinics resources	4	1	100
	Code 219	Additional wear and tear on equipment- reducing effective lifespan	5	2	1
	Code 220	Virtual clinics for nAMD monitoring done at home	1	2	10
	Code 221	Missing optimal treatment window for patients' disease	2	1	100
	Code 222	Undertreatment of the disease	5	1	100
	Code 223	Deterioration of clinical status	5	1	100
	Code 225	Management of patients' anxiety and depression	1	1	10
	Code 226	Requirement to book extra patient visits to 'reload' due to treatment delays	3	1	100
	Code 227	Requirement to book extra patient visits to regain disease control	4	1	100
	Code 228	Delayed care leading to requirement for more treatments	3	1	100
	Code 229	Delayed care leading to requirement for more monitoring visits	3	2	100
	Code 230	Delayed care leading to parallel care pathways e.g. vitreo-retinal, glaucoma	3	2	100
	Code 231	Delayed care leading to more counselling visits	2	2	100
Outliers	Code 232	Delayed care leading to more Certificate of Vision Impairment (CVI) registrations	5	2	100
	Code 233	Delayed care leading to more support required from Low Vision Aid (LVA) team	2	1	10
	Code 234	Delayed care leading to more support required from Eye Care Liaison Officer / Eye Clinic Liaison Officer (ECLO) team	2	1	10
	Code 237	Increased attendance to ER due to side effects from injection	1	2	100
Outliers	Code 207	Damage to reputation service	2	2	10 000
	Code 224	Patient loses independence due to deterioration in sight	1	1	1 000

Supplementary Figure 3. Strain on the UK ophthalmology services and its economic impact



Analysis of service strain revealed **no real-world cost values reported from clinical practice**; however, clinic burden was expressed in measurable units (Amoaku, 2012).

Strain costs included **additional treatment visits, clinical deterioration, and patient mental well-being** impacts (Gohil et al., 2015; O'Connor et al., 2022; Skelly et al., 2022).

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