Dr Michelle Tempest and **Patrick Bansch** of bespoke health and social care strategy and investment consultancy Candesic get a close-up look of the private ophthalmology market to find out if the sector is ripe for disruption.

The eyes have it

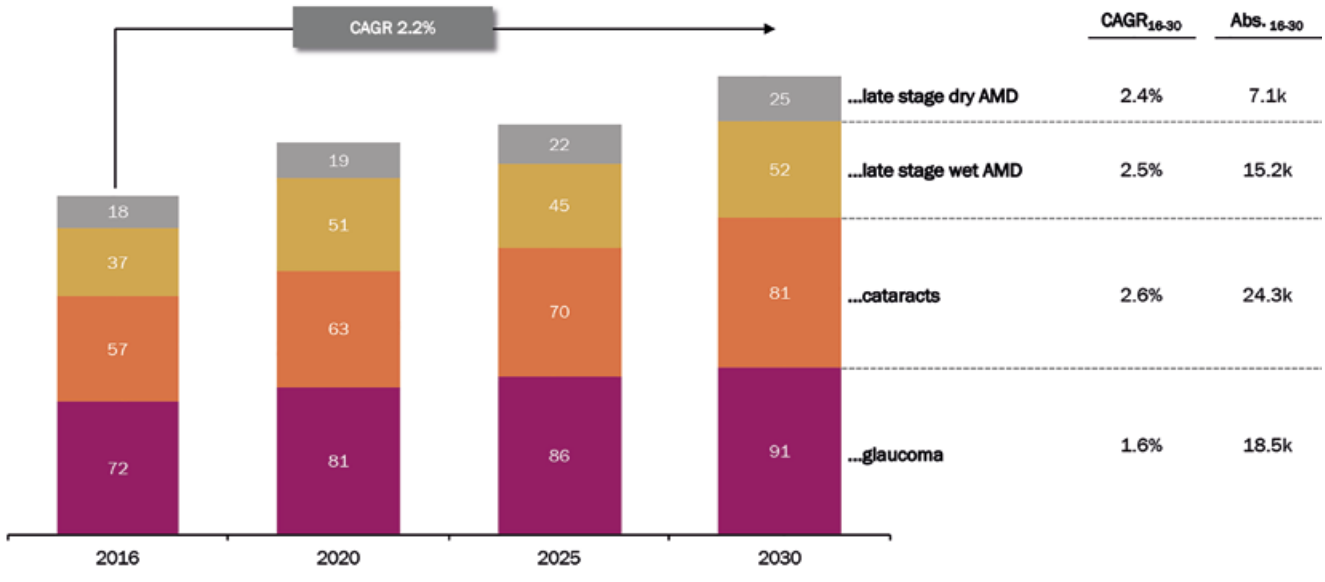
William Shakespeare famously said: 'eyes are the window to your soul'. Currently, ophthalmology is in the headlines, making us question the very essence of our 'healthcare soul'. As recently as June this year, the NHS announced it would no longer fund the 'removal of lesions from eyelids'. This catapulted questions around the rationing of NHS care into centre stage. Although this procedure is not an emergency, nor is it high volume, nor high tariff, it directly questions what English citizens expect the NHS to provide. What will be the consequence if cancerous lid lesions are missed because they are not removed and not examined under a microscope? Are people more willing to self-pay for ophthalmological services after the 'psychological Rubicon' has been crossed, as many people already pay out-of-pocket for eye tests on the high street? In summary, could this be the start of eye care consumerisation?

Why ophthalmology is different

Ophthalmology has a unique care pathway and is an outlier when compared to other sub-specialties. The reason is twofold:

1. Most referrals do not come from primary care via GPs; they come from optometrists often sat in high street opticians.
2. The bulk of eye care can be delivered in an outpatient setting

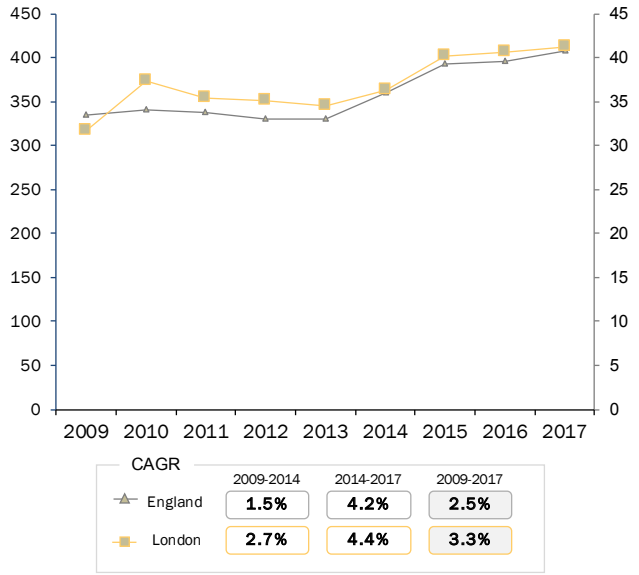
FIGURE ONE - GROWING DEMAND FOR OPHTHALMOLOGICAL SERVICES
ESTIMATED NUMBER OF PEOPLE IN LONDON (000s), LIVING WITH...



SOURCE ONS; NEHEM; CANDESIC RESEARCH AND ANALYSIS

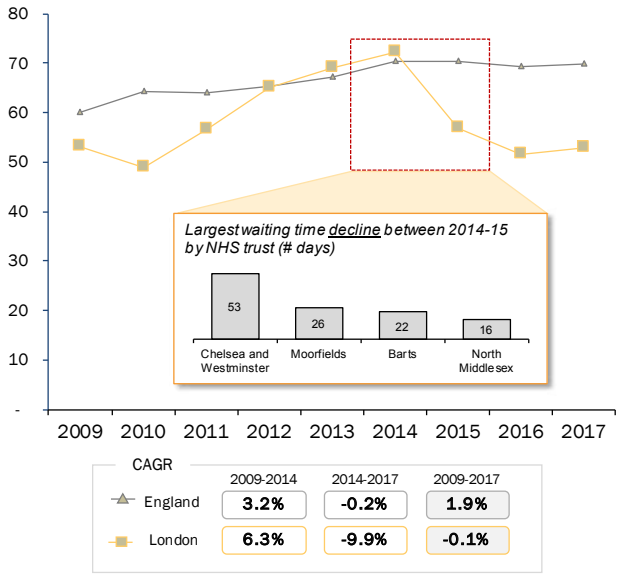
FIGURE TWO - HISTORIC EVOLUTION OF NHS CATARACT SURGERY ACTIVITY AND WAITING TIME

NUMBER OF FINISHED ADMISSION EPISODES, ENGLAND AND LONDON (000s)



CAGR	2009-2014	2014-2017	2009-2017
England	1.5%	4.2%	2.5%
London	2.7%	4.4%	3.3%

AVERAGE WAIT IN DAYS, ENGLAND AND LONDON



CAGR	2009-2014	2014-2017	2009-2017
England	3.2%	-0.2%	1.9%
London	6.3%	-9.9%	-0.1%

Cataract surgery activity has been increasing since 2009, with an acceleration in the last three years...

... and waiting time, in the last three years, has on average been relatively flat nationally, though strongly declining in London.

SOURCE NHSE DIGITAL; CANDESIC RESEARCH AND ANALYSIS

with only a small percentage of procedures requiring inpatient acute hospitals

Currently, there is a clear drive to deliver more care in the community. Ophthalmology also has one of the lowest revenue per inpatient bed of all specialties, mainly as few patients need to stay overnight. So, this naturally begs the question: why is so much ophthalmology still being delivered within the walls and packed car parks of acute hospitals?

Ophthalmology demand is growing

The Royal College of Ophthalmologists describe an impending 'perfect storm of increased demand, caused by more eye disease in an ageing population requiring long-term care'. There is an increase in demand including common conditions such as:

- Age-related Macular Degeneration (AMD), slow deterioration of the cells of the macula leading to the loss of central vision
- Cataracts, clouding of the lens leading to a loss of vision
- Glaucoma, a disease that results in optic nerve damage, and subsequent loss of visual fields

Figure One highlights the 2.2% annual rise in demand within London. Zooming in on cataracts as a case study, Figure Two illustrates how both disease burden and NHS waiting times have increased. Across England, the wait for getting a cataract removed has increased from an average of 60 days in 2009 to 70 days in 2017. London, however, bucked the trend reducing cataract waits to around 50 days, thanks to waiting time reduction initiatives by Chelsea and Westminster, Moorfields, Barts, and North Middlesex NHS Trusts.

Waiting for cataract surgery is reminiscent of the ancient parable about the boiling frog. The premise is that if a frog is put suddenly into boiling water, it will jump out, but if the frog is put into tepid water which is then brought to boil slowly, it will not perceive the danger and will be boiled to death. In some ways this explains the uncertainty surrounding how cataract consumers act. Cataracts tend to develop slowly and visual deterioration is so gradual that there is no exact tipping point when a patient may decide to get out their wallet and self-pay for surgery.

For private providers, cataract surgery is a key revenue driver, either from private pay (PMI/self-pay) or lower margin, high volume NHS lists. Richard Evans, co-founder of Morgan Rossiter, which deals in healthcare PR, recently stated that 'consumer reactions in healthcare are not black and white. Even when they decide not to use the NHS, there remains variation in the weight customers put on ease of access, same day or rapid treatment, high-quality care, and follow up'. Overall, any trend towards rationing NHS healthcare services will push more people to self-pay and the National Institute of Health and Care Excellence (NICE) has already warned that 'restricting cataract surgery until people are almost blind cannot be justified'.

The London landscape

There are around 40 private providers in London spanning both the independent sector and NHS private patient units (PPUs) and around 240 consultant ophthalmologists who practice privately. The famous NHS Moorfields Eye Hospital PPU is the well-established market leader

in London. Figure Three highlights that Moorfields has almost double the number of consultants of its next competitor and Figure Four outlines its stark volume lead in terms of private cataract procedures.

The second largest private provider, measured by the number of consultants who work there, is Optegra, with around 50 private consultants and two London based hospitals. Optegra is backed by Eight Roads (Fidelity International's investment arm) and is the UK's largest network of eye hospitals. It also has an international presence following a string of acquisitions in continental Europe (Memira, Lexum). Optegra, traditionally focused on private ophthalmic care, but more recently it has been applying and winning NHS tenders, such as the Eastern Cheshire CCG tender, which resulted in Optegra's Manchester hospital becoming the only referral centre for NHS non-emergency eye surgeries in the region. It also secured the Barnet CCG tender for community ophthalmology services. TED Europa reports this to be worth c.£11.7m over five years, based on fixed tariffs.

Sharon Lamb, partner at McDermott Will and Emery, said: 'It's important to realise that whilst there has been a spate of NHS tenders for ophthalmic care, most eye surgeries are services that are subject to a patient's constitutional right of choice. This means that patients have a right to choose their provider wherever that provider is located in the country. In addition, providers who meet CCG requirements are entitled to be listed on choice networks even if a procurement has been run. Despite this, wait times have still increased in some parts of the country raising interesting (and concerning) questions about how and why choice is or is not working in practice.'

FOR PRIVATE PROVIDERS, CATARACT SURGERY IS A KEY REVENUE DRIVER, EITHER FROM PRIVATE PAY OR LOWER MARGIN HIGH VOLUME NHS LISTS

Growing investor appetite

Across Europe, investment in ophthalmology has become very topical. Services aside, which benefit from a roll-up play, an increasing number of technologies are seeing strong interest from investors who see the space as an attractive niche that is underpinned by favourable dynamics.

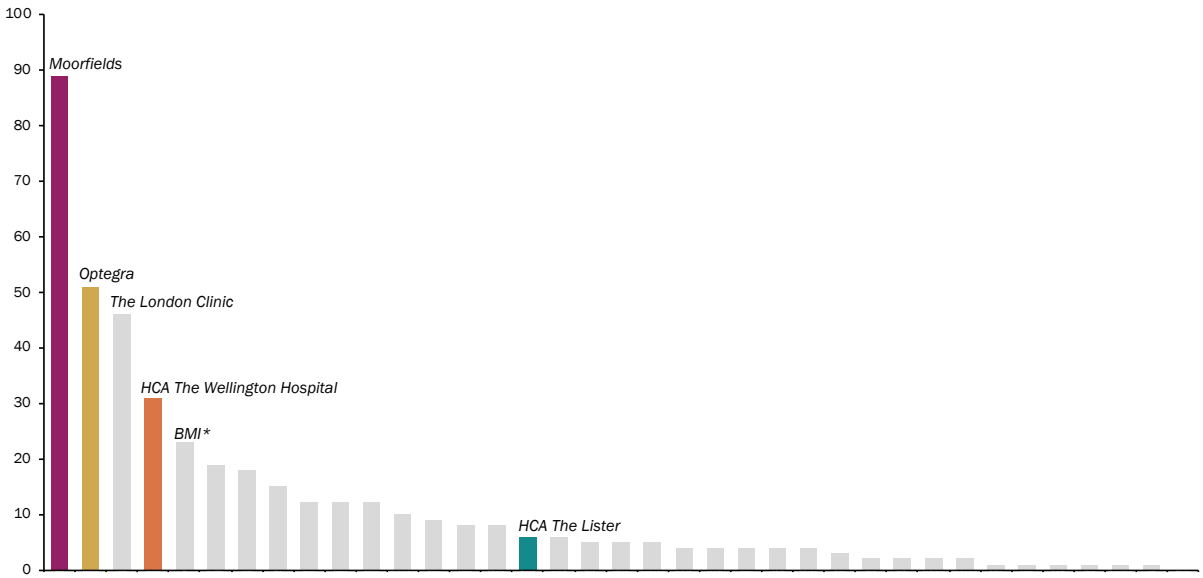
In 2016, GHO, the healthcare-focused PE house, formed a speciality pharmaceutical company centre around ophthalmology. The platform is underpinned by the acquisition of the international commercial operations of NicOx (FR) and Visufarma (ITA). The new entity aims to bring 'global innovations' to European eye health by commercialising a wide portfolio of products and devices.

Within services, Ober Scharrer Gruppe (OSG), the largest German ophthalmology treatment provider, went through a highly contested sales process this year before being acquired by Nordic Capital in March. Other prominent M&A moves in the sector include China-based Aier Eye's acquisition of an 87% stake in Spain-based Clinica Baviera for €147m in 2017.

Dunyagoz, the Turkish ophthalmology hospital group, is also rumoured to be exploring strategic options to help it accelerate growth— the group is looking to become one of Europe's largest eye care clinic chains as well as actively expand its geographically footprint in the Middle East. To date, Dunyagoz operates 23 hospitals in Turkey, Germany, the Netherlands, and Azerbaijan.

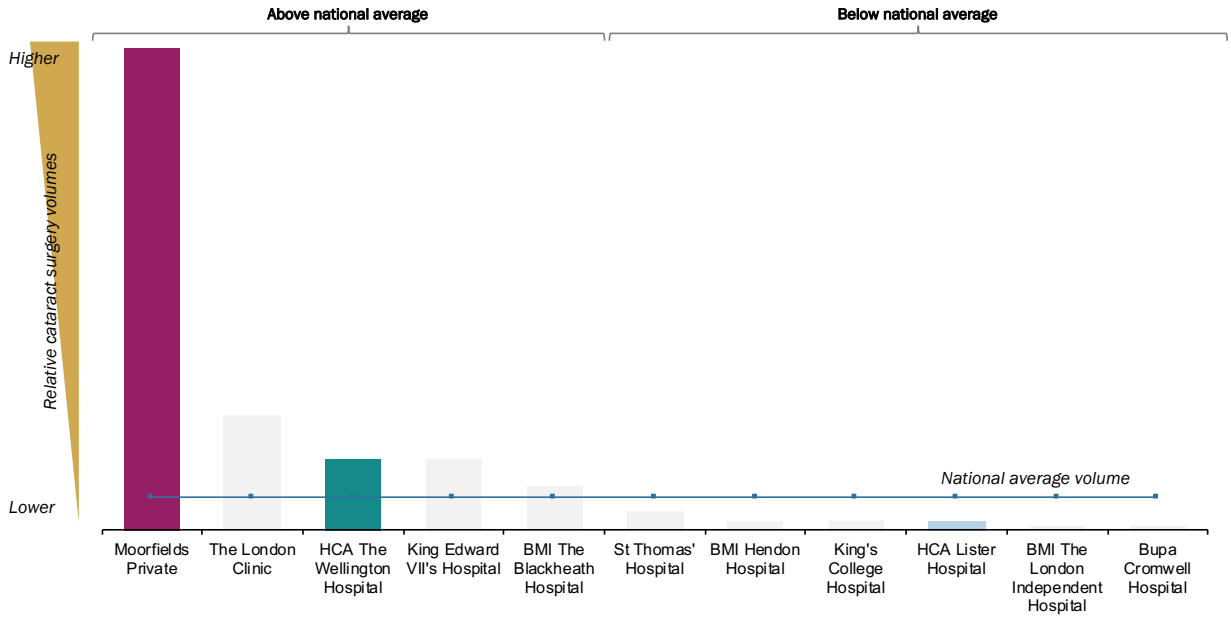
The increasingly high multiple paid for ophthalmology assets will require savvy investors to re-think levers that need to be activated for substantial value creation. Roll-up strategies require significant time,

FIGURE THREE - LONDON'S PRIVATE PROVIDER LANDSCAPE (PART ONE)
NUMBER OF OPHTHALMIC CONSULTANTS PRACTISING AT EACH PRIVATE/MIXED PROVIDER



NOTES *INCLUDES BMI HENDON; BMI BLACKHEALTH; BMI CAVELL AND BMI LONDON INDEPENDENT
SOURCE CANDESIC RESEARCH AND ANALYSIS

FIGURE FOUR - LONDON'S PRIVATE PROVIDER LANDSCAPE (PART TWO)
CATARACT SURGERY VOLUMES ACROSS PRIVATE PROVIDERS (RELATIVE VOLUMES, LONDON)



NOTES *INCLUDES BMI HENDON; BMI BLACKHEALTH; BMI CAVELL AND BMI LONDON INDEPENDENT
SOURCE CANDESIC RESEARCH AND ANALYSIS

often beyond traditional private equity firms' holding period; OSG's former owner Palamon Capital Partners held the asset for seven years, operating a buy-and-build strategy that tripled the size of the business during the holding period.

Market disruption

The ophthalmology market is ripe for disruption on many levels. One example is because ophthalmology is a speciality heavily reliant on retinal images for diagnostics, which means digital technology could 'learn' to read images similar to what is happening in the radiology sector. Photographs of the back of the eye can be labelled for signs of disease by human experts and then fed into artificial intelligence (AI) algorithms.

Moorfields has successfully collaborated with Google's DeepMind to provide a blueprint for how such technology can aid clinical assessments. The aim is for AI to augment diagnosis, especially for early detection, by analysing retinal scans. DeepMind's algorithm has been painstakingly 'trained' on massive data sets of retinal scans provided by Moorfields. This wealth of information provided by the scans along with their expert reports has allowed AI to recognise AMD, diabetic retinopathy and glaucoma and is now readying for clinical trials. Rolling this out across England and internationally will not only create more equitable eye care but also drastically reduce human hours spent assessing scans. The details of this are beyond the scope of this article, but emerging healthcare tech/digital developments are areas we have observed increased activity in.

Summing up

The ophthalmology market is one to watch. It's one with a wide range of investment opportunities but equally one where it's important to delve into both macro and micro trends.

London offers a market microcosm set for disruption. It is a market with more colour than the brown, blue, and green found in the eye. The macro demand trends are clear: an increase in disease burden due to ageing populations alongside investment and consolidation. The opportunity is clear: supply remains heavily reliant upon hospital settings yet community-based sites and even some retail optometry providers are looking to cash in on more complex care. Also, London is at the forefront of practical application of evolving technologies. We must all open our eyes to the fact that AI is here to stay and will increasingly augment clinical care rather than replace staff.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