

Why Ophthalmology?

BY JONATHAN LAI

Ophthalmology is a medical specialty that deals with eye diseases and helps preserve vision. The ophthalmic community consists of a wide range of healthcare professionals who work together to address eye-related problems in many extraordinary ways. This article explores the incredible brilliance of this field, which lies in its purpose, people and passion.

Purpose

The well-defined purpose of ophthalmology and its methods make it an excellent specialty. Although the number of global blindness has reduced over the past decades, in 2020, it was estimated that 43 million people were blind, 295 million were visually impaired, and 257 million were mildly visually impaired [1]. Sight is a central element of life, a gateway to ourselves and the world – disorders and diseases that threaten our sight could have a detrimental effect on our physical, mental and psychological health [2].

Globally, the prevalence of blindness is linked to socioeconomic status, geography and gender [1]. In response, a global directive, VISION 2020, was launched in 1999 by the World Health Organization and the International Agency for the Prevention of Blindness. It seeks to make eyecare services available, accessible, acceptable and affordable for all [3]. Through raising public awareness, advocating political commitments, mobilising funding and implementing local eye services, the programme has helped prevent key infectious causes of blindness, such as trachoma and onchocerciasis, and improved the quantity and quality of cataract surgery in countries like Morocco, Nepal, Sri Lanka and Thailand. The new estimates of global blindness are approximately 15 million less than projected, which was proposed primarily owing to the initiative's effect [4].

In the UK, VISION 2020 promotes collaborations across local and national organisations and helps develop medical and social care agendas. Alongside this directive, the NHS has focused on preventative measures and early intervention. The diabetic eye screening programme has been a considerable success in the UK. The screening programme was estimated to have contributed to reducing severe vision impairment and blindness in diabetic retinopathy by about 40% between 2009 and 2018 [5]. Closer and more proactive

“ The nature of ophthalmic practice attracts those who appreciate a goal-oriented, outcome-directed approach to work ”



collaboration with primary eyecare providers, such as community optometrists and general practitioners, has also helped facilitate the early detection and referral of potentially severe eye disease problems.

Locally, ophthalmology continues to evolve. Over the years, it has become a unique hospital-based practice in that most conditions can be detected in outpatient settings, and treatments can be provided as day cases. Therefore, many ophthalmic patients will not need to stay in hospitals, which minimises interruptions to their lives. This pattern, in turn, is also advantageous to people who work within the specialty, with a more structured work schedule and fewer out-of-hours commitments.

Furthermore, many ophthalmic treatments today have immediate life-changing effects. We often do not have to wait for long to see the benefit of what an ophthalmologist does [6]. For example, a cataract surgery takes about 30 minutes and significantly impacts a patient's quality of life. The nature of ophthalmic practice attracts those who appreciate a goal-oriented, outcome-directed approach to work.

People

Ophthalmology serves a wide range of patients. In England, ophthalmology provides

the highest volume of outpatient (over 7.5 million patient appointments a year) and more than half a million surgical procedures [7]. Ophthalmology serves patients as young as newborns. Paediatric ophthalmology is a subspecialty dealing primarily with strabismus, refractive errors and genetic diseases. Older adults remain the core patient group with conditions like cataracts, age-related macular degeneration and glaucoma, and each is a subspecialty in its merit.

Ophthalmic practice involves a lot of patient contact time, which suits individuals who enjoy working with people. From the initial encounter and the subsequent follow-ups, ophthalmologists tend to develop longitudinal relationships with their patients. Doctors and patients often value long-term continuity of care. It is also perceived to benefit disease control and self-management behaviours [8].

Patients are arguably the heart of ophthalmology. Patient-centred care has shown to be increasingly common in the ophthalmic field, particularly in refractive surgery, as it is highly personalised. Since the development of the Patient and Public Involvement Programme in the UK, more and more ophthalmic patients have been proactively involved in eye research [9]. Such a movement advocates a paradigm shift toward patient-centred outcomes research. This

SPECIALTY TRAINEE

research helps define patient expectations so ophthalmic practice can respond accordingly.

Passion

Ophthalmology has always been at the forefront of innovation, taking advantage of technological advancements. Recent examples of fascinating ophthalmic achievements include: (1) gene therapies for rare diseases such as Leber congenital amaurosis [10]; (2) artificial intelligence analysing optical coherence tomography imaging and assisting in making clinical decisions [11]; (3) teleophthalmology, where diagnostic tests can be done and referred to obtain a clinician opinion remotely [12]; (4) bionic eye achieving visual perception [13]; and (5) development of a variety of intraocular implants with more sophisticated optical designs. The close relationship between ophthalmology and technology helps keep up with patients' expectations and stay relevant in the fast-growing field of medicine.

Orbis International joined forces with both the extended ophthalmic community and the aviation industry to create The Flying Eye Hospital. This state-of-the-art facility is designed to treat patients and train eyecare professionals. Since it took off in 1982, the Orbis programme has enhanced the skills of 325,000 eyecare personnel and provided

medical and optical treatment to more than 23.3 million people in 92 countries [14]. Orbis provides a unique and brilliant way to connect and help people.

Ophthalmology utilises the perfect blend of medicine and surgery to tackle eye problems, which is the most common influencing factor as to why ophthalmologists chose the specialty [15]. The opportunity to make challenging clinical decisions and fix problems by hand on a daily basis is one of the best things about ophthalmology.

Ophthalmologists are also an enthusiastic bunch. During my ophthalmology elective, I met many different ophthalmologists in various subspecialties, from primary eyecare to neuro-ophthalmology, glaucoma to vitreous-retinal surgery, medical ophthalmology to oculoplastics. They all had one thing in common – they all said they love ophthalmology. With so many subspecialties, there is something for everyone.

However, not everyone has an equal opportunity in ophthalmology. Although diversity has increased significantly in ophthalmology over the past two decades, race and ethnic disparities continue globally [16,17]. It is predicted that ethnic minority populations will increase from 13% of the UK population in 2006 to 44% by 2056 [18]. There is currently no data available on the demographics of ophthalmologists

in the UK. Therefore, the representation of ophthalmology in the UK is not yet specified.

The ophthalmic community in the USA has started a movement to confront the issue of sex and racial disparities [17,19]. As part of the global ophthalmic community, the Council of Ophthalmology calls on the UK to commit to more gender and ethnic diversity in ophthalmic leadership [20]. Strategies should be developed to challenge the unconscious bias embedded in underrepresentation. Efforts should be made to assess the extent to which minorities feel included and empowered in ophthalmology in the UK. There is a need for more diversity and inclusion in the future of ophthalmology.

Conclusion

This article has explored many reasons that make ophthalmology so brilliant – a community that inspires locally and globally with a strong drive to use science and technology to improve patient care. As with all medical specialties, ophthalmology has its advantages and disadvantages. Diversity and inclusion in ophthalmology should be readily assessed so that the profession better reflects the population it serves. Being brilliant does not equate to perfection, but rather having a meaningful purpose, teaming up with the right people, and doing things passionately.

References

1. Bourne RRA, Steinmetz JD, Flaxman S, et al. Trends in prevalence of blindness and distance and near vision impairment over 30 years: An analysis for the Global Burden of Disease Study. *Lancet Glob Heal* 2021;**9**(2):e130–43.
2. Assi L, Chamseddine F, Ibrahim P, et al. A global assessment of eye health and quality of life a systematic review of systematic reviews. *JAMA Ophthalmol* 2021;**139**(5):526–41.
3. Bourne RRA, Steinmetz JD, Saylan M, et al. Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: The Right to Sight: An analysis for the Global Burden of Disease Study. *Lancet Glob Heal* 2021;**9**(2):e144–60.
4. Frick KD, Foster A. The magnitude and cost of global blindness: An increasing problem that can be alleviated. *Am J Ophthalmol* 2003;**135**(4):471–8.
5. Scanlon PH. The contribution of the English NHS Diabetic Eye Screening Programme to reductions in diabetes-related blindness, comparisons within Europe, and future challenges. *Acta Diabetol* 2021;**58**(4):521–30.
6. Mozaffarieh M, Krepler K, Heinzl H, et al. Visual function, quality of life and patient satisfaction after ophthalmic surgery: A comparative study. *Ophthalmologica* 2004;**218**(1):26–30.
7. MacEwen C, Davis A, Chang L. Ophthalmology GIRFT Programme National Specialty Report (2019). *Getting It Right First Time*. <https://gettingitrightfirsttime.co.uk/wp-content/uploads/2019/12/OphthalmologyReportGIRFT19P-FINAL.pdf>
8. Baker R, Bankart MJ, Freeman GK, et al. Primary medical care continuity and patient mortality: a systematic review. *Br J Gen Pract* 2020;**70**(698):e600–11.
9. Skilton AM, Low LG, Dimaras H. Patients, Public and Service Users are Experts by Experience: An Overview from Ophthalmology Research in Canada, UK and Beyond. *Ophthalmol Ther* 2020;**9**(2):207–13.
10. Cideciyan AV. Leber congenital amaurosis due to RPE65 mutations and its treatment with gene therapy. *Prog Retin Eye Res* 2010;**29**(5):398–427.
11. Kapoor R, Whigham BT, Al-Aswad LA. Artificial intelligence and optical coherence tomography imaging. *Asia-Pacific J Ophthalmol* 2019;**8**(2):187–94.
12. Kern C, Kortuem K, Hamilton R, et al. Clinical Outcomes of a Hospital-Based Teleophthalmology Service: What Happens to Patients in a Virtual Clinic? *Ophthalmol Retin* 2019;**3**(5):422–8.
13. Nowik K, Langwińska-Wośko E, Skopiński P, et al. Bionic eye review – An update. *J Clin Neurosci* 2020;**78**:8–19.
14. Flying Eye Hospital. Orbis. <https://gbr.orbis.org/en/what-we-do/flying-eye-hospital>
15. Noble J, Schendel S, Daniel S, Baerlocher MO. Motivations and future trends: A survey of Canadian ophthalmology residents. *Can J Ophthalmol* 2007;**42**(6):821–5.
16. Tam EK, Harrell M, Siegel NH. Understanding the Lack of Under-represented Racial and Ethnic Minorities in Ophthalmology. *J Acad Ophthalmol* 2021;**13**(2):e192–4.
17. Colby K. Sex Diversity in Ophthalmology Leadership in 2020-A Call for Action. *JAMA Ophthalmol* 2020;**138**(5):458–9.
18. Coleman D. Projections of the ethnic minority populations of the United Kingdom 2006-2056. *Popul Dev Rev* 2010;**36**(3):441–86.
19. Olivier MMG, Forster S, Carter KD, et al. Lighting a Pathway: The Minority Ophthalmology Mentoring Program. *Ophthalmology* 2020;**127**(7):848–51.
20. Yashadhana A, Clarke NA, Zhang JH, et al. Gender and ethnic diversity in global ophthalmology and optometry association leadership: a time for change. *Ophthalmic Physiol Opt* 2021;**41**(3):623–9.

[All links last accessed November 2023]

AUTHOR



Jonathan YM Lai,

Specialised Foundation Doctor, Liverpool University Hospitals NHS Foundation Trust, UK.

Declaration of competing interests:
None declared.

Note to reader:

The original version of this article was awarded second place in the Essay Prize for Foundation Doctors 2022, organised and held by the Royal College of Ophthalmologists.

For more information about the prize, visit: <https://www.rcophth.ac.uk/events-courses/scholarships-awards-prizes/awards-prizes-reports>