

## EDITORIAL



# Ophthalmology in England: how is training geared to supply our future workforce?

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## INTRODUCTION

Training in ophthalmology is currently a 7-year postgraduate run-through programme, where doctors with a full GMC registration are taken through a curriculum to qualify as a consultant ophthalmologist. Understanding their profile, numbers and distribution provides an insight into the state of the ophthalmology workforce at present and into the future.

## PATIENT NEED AND THE REGIONAL DISTRIBUTION OF OPHTHALMOLOGY TRAINEES

Our elderly population carries the greatest burden of eye disease. Public Health England outlined in its 2021 Atlas of variation report [1] that one in three people aged over 84 live with sight impairment, while 79% of those with sight impairment are over 64.

The Office for National Statistics (ONS) [2] projects that, 'in mid 2018 there were 1.6 million people aged 85 years and over; by mid 2043, this is projected to nearly double to 3.0 million'. They also expect that those aged over 67 will increase by 3.6 million, or 30%, in the period.

The upshot of these trends is borne out in The Royal College of Ophthalmologists' 2017 The Way Forward report [3]. This projected a 44% rise in glaucoma cases over the next 20 years, a 50% rise in cataract operations and 59% increase in AMD cases.

ONS also produced a regional analysis of the population by age, which reveals that areas in the South West and East of England particularly will see a big increase in the proportion of their populations aged over 65, and their need for eye care services will increase significantly as a result. The geographical distribution of training is thus key.

Almost 1 in 4 ophthalmology trainees in England are London-based (See Table 1). The North West, West Midlands, and Yorkshire and Humber each support between 10–12% of training posts. The remaining 42% of posts are spread across the other 7 regions.

## EXPANDING THE WORKFORCE

Health Education England (HEE) created 1500 additional undergraduate places at medical school in 2017–18, a 25% boost. Those entering Foundation training from this larger cohort will begin their rotations in 2023. Ophthalmology can therefore anticipate benefitting from the larger workforce capacity from 2024/25. Given this, an increase in training places in ophthalmology is needed. It is therefore welcome that HEE confirmed an extra 15 national ophthalmology training numbers in 2022/23. This will

hopefully be followed up with further expansions, to help cope with the increased demand to come.

There has been a notable expansion in the ophthalmic consultant workforce. There were 1511 consultant ophthalmologists in 2021—a 37% increase since 2013 (See Table 2).

Analysing Hospital Episode Statistics data [4], in 2012/13, there were 340 723 cataract operations in England. This rose to over 450 000 by 2018/19 (the data from the following two years is skewed by the impact of COVID-19)—a 32% increase. Over the same six-year period, there was also a 22% increase in ophthalmology outpatient appointments [5].

Given the consultant ophthalmologist workforce increased by 29% between 2013–2019—similar to the rise in patient demand—this increase in the consultant workforce is only keeping pace with demand, rather than increasing capacity. The increasing role of the wider multi-disciplinary eye care team in this period, including nurses, optometrists and technicians, has therefore been crucial to meeting patient need. Given the population demographics detailed earlier, we will need further significant increases in the multi-disciplinary ophthalmology workforce.

Women and those from Black, Asian and Minority Ethnic (BAME) backgrounds make up an increasing proportion of the ophthalmology workforce and this represents important progress in achieving equality, diversity and inclusiveness in the speciality. In 2013, 42% of the consultant workforce was from a BAME background—by 2021 that figure had reached 52%. The proportion of female consultants increased from 25 to 33% over the same period. Both these trends are likely to continue. Female trainees now comprise the majority (52%) of the ophthalmology trainee workforce, up from 44% in 2013. The proportion of trainees from BAME backgrounds stood at 64% in 2021, compared to 59% in 2013.

## LOOKING AHEAD: WILL THE NEW CURRICULUM INCREASE WORKFORCE SUPPLY?

Changes from 2024 in the ophthalmic specialist training (OST) curriculum [6] will mean that trainees who wish to remain generalists can complete training in 5.5 years, rather than the current 7 years. This subset of trainees will cost less to train than those undertaking 7 years of training. The main costs of training ophthalmologists are salary support and the cost of clinical placements, with additional costs relating to study leave and travel.

HEE estimates [7] that the cost to train an ophthalmologist over 7 years is £258 165 – based on salary contribution and a tariff for placement – with higher costs at ST 4–7 than ST 1–3. The total cost will be higher than this, once other costs such as study leave, relocation costs and education support costs are taken into account. The knock-on effect of some trainees achieving CCT in 5.5 years could therefore be a significant cost saving – estimated at £64 950 per trainee. These savings could be reinvested in increasing the number of training places for ophthalmologists, so

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**Table 1.** Training posts by deanery.

Deanery	Training posts	%
London	136	24.6
North West	67	12.1
West Midlands	58	10.5
Yorkshire and the Humber	57	10.3
South West	41	7.4
East Midlands	37	6.7
East of England	36	6.5
North East	34	6.1
Kent, Surrey, and Sussex	31	5.6
Wessex	30	5.4
Thames Valley	26	4.7

**Table 2.** Consultant & trainee growth and breakdown (\*103 and 89 consultants did not specify their ethnicity in 2013 and 2021 respectively).

Role	2013	2021	% Change
Consultant	1102	1511	37% increase
Male consultants	831 (75%)	1013 (67%)	22% increase
Female consultants	271 (25%)	498 (33%)	84% increase
BAME consultants	416 (42% of known*)	744 (52% of known*)	79% increase
Trainee (NHS)	606	607	No change
BAME trainees	373	373	No change

we can produce more consultants and better meet rising patient demand.

## CONCLUSIONS

The ageing population will result in an enormous demand for ophthalmology services over the next 20 years. This will particularly affect regions with populations comprised of proportionately more people aged over 65. Interestingly, the location of training posts does not correlate with this demand but rather demonstrates a London-focused distribution.


The consultant workforce has expanded significantly over the last 8 years and is becoming more diverse. However, rather than providing for greater capacity in the system, this increase has been met with a parallel increase in demand. There is therefore likely to be an increasing need for support from the non-medical ophthalmic workforce to prop up the system in the coming years.

Finally, news of more national training numbers in ophthalmology are welcome, and further increases, combined with the

implications of the new curriculum, can secure an increase in the supply of the consultant ophthalmologists of tomorrow.

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## DATA AVAILABILITY

All data relevant to the study are included in the article.

## REFERENCES

1. Atlas of Variation - 2021 Report, Office for Health Improvement and Disparities, Public Health England. <https://fingertips.phe.org.uk/profile/atlas-of-variation>.
2. Subnational projections for England: 2018-based, The Office for National Statistics. <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2018based>.
3. The Way Forward 2017, The Royal College of Ophthalmologists. <https://www.rcophth.ac.uk/resources-listing/the-way-forward/>.
4. Hospital Admitted Patient Care Activity, NHS Digital. <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity>.
5. Hospital Outpatient Activity, NHS Digital. <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-outpatient-activity>.
6. Curriculum 2024, The Royal College of Ophthalmologists. <https://www.rcophth.ac.uk/training/ophthalmic-specialist-training/ost-curriculum/curriculum-2024/>.
7. Education and Training Tariffs, Health Education England and Department for Health and Social Care. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1064526/Education-and-Training-Tariff-Guidance-2022-23.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1064526/Education-and-Training-Tariff-Guidance-2022-23.pdf).

## AUTHOR CONTRIBUTIONS

VS, JM and DF conceptualised project. VS and JM produced first draft of manuscript. DF and MAB revised several iterations. Final manuscript approved by all co-authors.

## COMPETING INTERESTS

The authors declare no competing interests.

## ADDITIONAL INFORMATION

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