

Should points for simulated surgery be removed from the ophthalmology ST1 evidence folder?

BY HARRIET FALLON AND ANNE GOBBETT

The benefits of the Eyesi surgical simulator by Haag-Streit UK for early career ophthalmology speciality trainees are well-established, allowing for the practice of cataract and vitreoretinal surgery in a controlled, risk-free environment. Whilst the Eyesi is an invaluable resource for those on the ophthalmology training pathway, four hours of simulation time using the Eyesi accounts for 1 point in the ST1 evidence folder. This folder is used to rank applicants in ophthalmology training within the NHS during the second round of applications, determining who is invited to interview.

There are significant access barriers and resource allocation biases associated with including the Eyesi point in the evidence folder. These favour a selection process based on geography and income. Many prospective applicants cannot access the machines due to factors such as travel distance from a functioning simulator, financial means, lack of previous experience, and the fact that 46%

of Eyesi simulators in England are reserved for those already on the speciality training pathway. Given these accessibility issues, it should be seen as unfair to include the Eyesi point in the evidence folder as ranking criteria; if the system is intended to narrow down the number of interviewees, then surely the single point cannot offer an equitable measure of an applicant's potential.

Four hours spent using the Eyesi simulator is included in the 'speciality links and commitment to date as a career' section of the Severn deanery's ophthalmology evidence portfolio for 2025 entry, stating, "Evidence of ophthalmology simulation training (including Eyesi experience): 1 point for each activity of at least 4 hours."

Actively seeking exposure and experience within a candidate's desired specialty demonstrates dedication that is a commonplace entry requirement of many other medical specialities. However, it is typically asked of candidates to achieve this through more

Table 1: Demonstrating the availability of the Eyesi machines per medical deanery in England compared to the number of affiliated medical schools and the estimated number of foundation doctors currently employed within that deanery.				
Deanery	Number of Eyesi	Number of Eyesi available prior to speciality training	Number of affiliated medical schools	Estimated number of foundation doctors*
East of England	4	3**	3	1838 (2 x 919)
Kent, Surrey, Sussex	2	2***	1	1360 (2 x 680)
North West	2	1	4	2104 (2 x 1052)
Northern	2	0	2	1096 (2 x 548)
Yorkshire Humber	4	1****	3	1746 (2 x 873)
London	3	1***	5	2342 (2 x 1171)
Peninsula	1	0	2	600 (2 x 300)
Severn	2	1	1	818 (2 x 409)
Oxford	1	1	2	672 (2 x 336)
Wessex	1	0	1	842 (2 x 421)
West Midlands North	1	0	1	842 (2 x 421)
West Midlands Central	1	1	2	558 (2 x 279)
Trent	1	1	2	942 (2 x 471)
Leicestershire, Northamptonshire, Rutland	1	1	1	660 (2 x 330)
West Midlands South	0	0	1	588 (2 x 294)
* Estimated from number jobs in the Foundation Programme listed on Oriol for 2025 entry, multiplied by 2 (for two foundation years total).				
** One EyeSi within this deanery requires organisation of one's own induction and incurs a cost for use.				
*** One EyeSi within this deanery requires previous EyeSi experience before use and/or completion of the RCOphth Microsurgical Skills Course.				
**** One EyeSi within this deanery incurs a cost for use.				

accessible means like speciality-specific taster weeks, audits, and clinic / theatre sessions.

It is also understandable for highly competitive specialities like ophthalmology that these posts will attract exceptionally capable and high-scoring candidates. For 2024 entry, there were 1383 applications for just 96 posts – a competition ratio of 14.41 to 1. This intense competition necessitates differentiation between even the highest-achieving applicants. However, is it appropriate to use an exceptionally fragile and expensive piece of equipment – one marketed to ophthalmology trainees to reduce their surgical margins of error – as a means of distinguishing between prospective candidates, especially one that does not have universal availability?

Of the over 1300 prospective ophthalmology candidates, many will be vying to complete the required four hours on the Eyesi simulator within the space of approximately one year. This machine requires a delicate touch in its operation, and there is a risk that those who view its use merely as a time-based, tick-box exercise may not handle it with the necessary care. For instance, one of only two Eyesi machines in the Northern deanery has been out of operation for the past year due to damages, leaving a singular simulator for an entire region of doctors, all hundreds of miles away from another. This puts Northern trainees at a significant disadvantage in terms of opportunities to hone their surgical skill, which could potentially affect their surgical competency in both the short and long-term, as well as their all-important patient outcomes.

Many Eyesi simulators are sensibly reserved for trainees only. On the other hand, if you study and train in the North of England, an entire portfolio point may be inaccessible due to geographical constraints. For medical students and foundation doctors already managing increasing student debt and early career expenses, the cost of simulator access is an added financial burden, particularly when Eyesi time is unofficially regarded as a 'must-have' for the portfolio. In a competitive field like ophthalmology, even small differences in experience and portfolio points can impact selection for speciality training. Those who can afford the simulator hours are able to list this as a distinguishing factor, giving them a competitive edge over equally skilled candidates who cannot afford extended and frequent time away from work or family commitments.

A further drawback of the ongoing choice to include Eyesi time in the evidence folder is that the point is awarded based on hours spent on the simulator rather than proficiency within it. Hypothetically, a trainee could insert the probe into the virtual eye and wait for the four-hour timer to pass to earn a portfolio point. As a result, the point does not reflect or reward microsurgical skill – instead becoming a point that illustrates one's geographical proximity to an available simulator, their financial ability to travel to one, and their relationship with those supervising the machines. In reality, proof of binocularity or exceptional hand-eye coordination would provide more relevant information about an applicant's employability than time spent in simulation. Even if the final score on the simulator were to be considered, it would consistently favour those with greater socioeconomic and financial means, as the applicant will be able to access additional simulation time. This in turn would increase the likelihood of the simulators becoming non-functional, due to higher machine traffic and additional wear-and-tear.

There are several disadvantages to prospective candidates accessing the Eyesi machine prior to entering formal training – these create problems further along in the candidate's ophthalmology career, and yet are still being actively encouraged within the evidence folder. Eyesi simulations too early in a candidate's career can create an overreliance on simulation, in addition to a premature sense of competence, hampered by a limited contextual understanding and surgical decision-making

skills. Particularly, without guidance and supervision from experienced ophthalmologists, bad habits and improper techniques can form – habits difficult to unlearn later whilst transitioning to real procedures. A common example of this is trainees pressing down on corneal incisions: this helps to stabilise the simulator instruments, but in real-life procedures can be sight-threatening. Trainees enrolled in the speciality pathway use the Eyesi machine in conjunction with wet lab training and extensive practise on model eyes – using the Eyesi simulator pre-training does not illustrate on-the-job learning and therefore does not demonstrate readiness for practice.

If inclusion of the Eyesi simulator in the ophthalmology evidence folder is intended to encourage prospective candidates to experience a realistic theatre session, spending four hours on an ophthalmic simulator offers minimal insight that could not be gained from observing the same procedures. True commitment to specialist, applicable knowledge can be demonstrated without dividing individuals on physical and financial accessibility. Virtual attendance at ophthalmology conferences, organising electives at one's own hospital, and observing surgeries online or in person would be much more inclusive indicators. Instead, inclusion of Eyesi time favours candidates based on questions more in line with "Who do you know?" and "What can you afford?"

The current situation is troubling, and many may not have given pause to consider the equally troubling implications of the status quo. The lack of fair access echoes an uncomfortably paralleled history where only the most affluent students could enter the medical profession. Such an income-based selection process creates an institutional barrier to progression that hinders lower-income individuals within medicine – a challenge faced by many, long before applying to medical school. Ophthalmology, and the medical profession in general, needs to broaden its access to ensure it reflects society as a whole. In short, aspiring ophthalmologists demonstrating the highest capabilities should not be disadvantaged due to access issues.

"Evidence of [other] ophthalmology simulation training" also counts for a further point within the evidence portfolio – the most notable example being the Royal College of Ophthalmology (RCOphth) Introduction to Ophthalmic Surgery course. There also exists the Eyesi Slit Lamp Simulator by Haag-Streit UK. The RCOphth course is extremely costly, and there are even fewer Eyesi Slit Lamp Simulators available in the UK than Eyesi Surgical Simulators. This additional simulation point is meant to provide an alternative or supplement to Eyesi time, but the same access barriers (location and affordability) continue to make it unfeasible for many.

A viable alternative to simulation training would be a basic curriculum that students and foundation doctors alike could use as a blueprint, formally tailoring their learning to the basic skills required to operate a slit-lamp. This would offer a vastly improved indication of the applicant's knowledge and technical proficiency. It would include teaching in manual operation and in recognising the most common pathologies an ophthalmology ST1 might encounter. Completion of this tutorial and demonstration of the knowledge gained, confirmed by a local speciality trainee or consultant, would then constitute the point. This approach closer aligns with the responsibilities and expectations of day-one speciality trainees. Currently, many successful candidates enter ophthalmology training without knowledge of how to use a slit-lamp.

This much-needed alternative to Eyesi time would still encourage knowledge and commitment to the speciality but would instead reflect more practical and useful proficiency rather than simply rewarding accessibility. This would maintain demonstrating commitment to learning within the speciality and would provide speciality trainees with opportunities to fulfil teaching requirements needed for their own progression. This alternative incentivises all

parties involved while protecting the remaining Eyesi machines so that they can be used for their intended purpose: to allow ophthalmologists to practise their skills in a safe, low-stakes environment to the benefit of their future patients.

Survey

Data regarding the accessibility of the Eyesi machines within the country was collected from the RCOphth website, individual Foundation School websites, or by direct contact with persons in charge of the simulators via email (Table 1). A 100% response rate was achieved for all 26 of the Eyesi machines located in England.

1. Six machines are currently available to all medical students, foundation doctors, and ophthalmology speciality trainees for use. One of these locations request financial payment prior to using the simulator.
2. Three machines are currently available to all medical students, foundation doctors, and speciality trainees so long as they have gained prior EyeSi simulation experience elsewhere.
3. Four machines are available for all foundation doctors and speciality trainees, however one of these locations request proof of completion of the RCOphth microsurgical skills course prior to use.
4. One machine allows FY2 doctors and speciality trainees to use the machine.
5. The remaining 12 Eyesi simulator machines are available only for ophthalmology speciality trainees, some of which require that they are currently employed in the respective region.

In total, only 54% of Eyesi simulator locations in England allow access to the machines prior to beginning speciality training, a feat which is allocated 1 point within the evidence folder. If we subtract the three machines that require prior experience, and the subsequent three sites that require either payment for use, or completion of a costly skills course, that means only nine sites, or 35% of machines, have no official financial or experiential barriers to use – not inclusive of travel-related expenses and challenges. For example, only one of the machines that is accessible to all grades, and that is free of charge, is located in the north of the country.

Conclusion

Eyesi surgical simulators should be reserved solely for speciality trainees to apply their theoretical knowledge without risk of the machines becoming non-operational due to mishandling. Concurrently, if geographic and financial barriers prevent universal access to simulation experience, it should be removed from the ophthalmology evidence portfolio. If only certain regions allow foundation doctors and medical students access to their surgical simulators, this is an unfair advantage. Widening participation, it seems, is a sentiment only applied to the application process for a medical degree and no further; for true inclusivity, the net needs to be widened at every stage of the journey to practice. A candidate can get their foot in the door, yet they remain uninvited into the house.

AUTHORS



Harriet Fallon,

Final Year Medical Student, Newcastle University, UK.

Anne Gobbett,

Associate Clinical Lecturer Newcastle University; Speciality Doctor in Ophthalmology, Sunderland Eye Infirmary, UK.

Declaration of competing interests: None declared.