Simulation training in Ophthalmology: The Pan-London experience

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Introduction

Surgical training in Ophthalmology has been negatively impacted in the post-COVID era during the year 2020 and beyond (1). The effect of simulation-based training has been extensively investigated and multiple studies have identified the need for simulation to enhance surgical competence in managing complications (2,3).

In 2023, Health Education England has invested in funding a one-year Educational Fellowship based at Western Eye Hospital, Imperial College Healthcare NHS trust as part of the training recovery fund. The main role of the Educational fellow was to lead on and deliver surgical simulation courses targeting Pan-London Ophthalmic specialty trainees.

In this review, we summarise 6 simulation courses delivered throughout the year to Pan-London ophthalmic specialty trainees and analyse the impact on their confidence levels in performing this laser/surgical technique. We report in our experience how simulation-based surgical training has become a necessity after COVID & has proven to be beneficial. In addition, we recommend investing in a full-time Educational fellow to design, lead & support the delivery of similar simulation courses in other deaneries across the nation.

Methods

Six simulation courses have been delivered in total during the year 2023-2024 at Western Eye Hospital: two laser simulation courses, two basic surgical courses and two advanced surgical simulation courses. Anonymous Likert scales of confidence have been utilised and distributed before and after delivering each course to assess the improvement of confidence levels of trainees for each laser/surgical skill simulated in the course.

The Laser Course stations included YAG laser capsulotomy, iridotomy and selective laser trabeculoplasty (SLT).

The basic surgical course stations included indirect ophthalmoscopy, tap & inject, corneal gluing, suturing & incisions, suture removal, subconjunctival/subtenon injection, skin suturing and eyelid margin laceration repair, canthotomy/cantholysis, capsulorhexis, capsular tension ring (CTR), iris hooks, 3-piece sulcus IOL & anterior vitrectomy on the EyeSi surgical simulator.

The advanced surgical course stations included trabeculectomy, Baerveldt tube, penetrating keratoplasty (PKP), extra-capsular cataract extraction (ECCE), AC & scleral fixated IOLs, IOL cut/exchange, Malyugian ring and globe repair.

Results

A total of 79 pan-London ophthalmic specialty trainees (OST1-OST8) attended our courses throughout the year.

28 trainees attended the two laser courses on 24th of September 2023 and 9th of June 2024 showing a 138% & 64% increase respectively in confidence levels performing YAG laser capsulotomy, YAG laser iridotomy & selective laser trabeculoplasty.

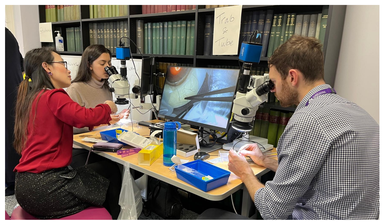
27 trainees (OST1-OST4) attended the two basic surgical courses on 12th of December 2023 and 23rd of February 2024 showing a 50% & 67% increase respectively in confidence levels performing basic surgical simulation skills.

24 trainees (OST5-OST7) attended the two advanced surgical course on 23rd of January 2024 and 22nd of March 2024 showing a 98% & 57% increase respectively in confidence levels performing advanced surgical simulation skills. The highest level of confidence increase was noted after the laser courses.










Conclusions

Many trainees requested more frequent repetition of these courses throughout the year.

Simulation training has a favourable role in skills attainment confidence regardless of procedure or level of training.

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References

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