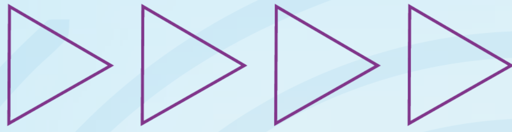
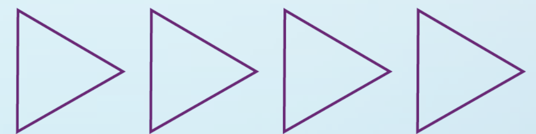


Improving the Delivery of Cataract Surgery in Scotland: Recommendations for Cataract Surgical Training in Scotland

May 2024



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Cataract Surgical Training in Scotland- Task and Finish Group Report – November 2023

The Cataract Sub-Specialty Delivery Group (CSSDG) was established to provide the strategic direction and support for ophthalmic theatre teams across Scotland to increase efficiency and productivity across cataract-only surgical sessions. The sustainability of any development in this area is dependent on surgical training of the service providers of the future. Furthermore, any such development also has a direct implication on surgical training.

The Surgical Training Task and Finish Group (STTFG) was formed with the remit of laying down broad principles for the development of cataract surgical training in Scotland and suggesting mechanisms to enhance this training.

Background

Cataract surgery training, like other areas of surgical training, suffered during the COVID-19 pandemic. However, there is now evidence from the General Medical Council (GMC) survey that cataract surgical training has not recovered to the same degree as many other areas. The 2022 survey showed that 42% of ophthalmic trainees felt they had not been able to compensate for the loss of training opportunities resulting from the pandemic – far higher than the 23% across all specialties. By the end of Year 2 Surgical Training (ST2), only 37% had done more than 90 cataracts. This had never fallen below 56% before 2021[1].

There is a UK-wide drive towards delivering cataract surgery through clearly designated 'cataract hubs' which can provide high flow cataract surgery. In Scotland, a significant bulk of cataract surgery now takes place in the NHS Golden Jubilee, which has been designated as a 'cataract hub' with the purpose-built NHS Golden Jubilee Eye Centre delivering only cataract surgery.

Additional National Treatment Centres (NTCs) are planned, and one has recently opened in Inverness for ophthalmology and orthopaedic surgery.

For Surgical Trainees (STs), the opportunity to be trained in high flow cataract pathways will provide them with the competencies and confidence to work in and lead such setups when they become Consultants[2].

In England, cataract surgery is now increasingly being performed at Independent Sector Treatment Centres (ISTCs). The Royal College of Ophthalmologist's (RCOphth) report for cataract training in the Independent Sector (IS) is unambiguous in saying that, in England, every Independent Sector Provider (ISP) delivering NHS-funded cataract surgery must be able to train NHS ophthalmic trainees on at least 11% of whole NHS cases within 2 years in every region they operate in[3].

In Scotland, the impact of ISTCs is most prominent in the North of Scotland where an ISTC has been performing a significant percentage of cataract surgery for the last 10 years.

Current state of cataract surgery training in Scotland

1. Scotland has, traditionally, been an excellent place for ophthalmology surgical training and, anecdotally, trainees in Scotland achieved high numbers of cataract surgery in their training programme in the pre-pandemic years. However, the pandemic has had a drastic effect on this and the 'training backlog' is still very significant.
2. The perception is that the majority of straightforward cataract surgery which would be suitable for training now takes place in NTCs such as the NHS Golden Jubilee, while the more complex cases or cases with comorbidities are retained in the local Health Boards. There is no data to support or refute this.
3. The NHS Golden Jubilee has no ophthalmology training rotation of its own. In the last 2 years, trainees from the West of Scotland and East of Scotland have had the opportunity to train in cataract lists at the NHS Golden Jubilee. Other specialties in the NHS Golden Jubilee offer regular training opportunities.
4. The feedback from trainees who get the opportunity to train in NTCs such as the NHS Golden Jubilee is overwhelmingly positive. They praise a very constructive learning environment, very proactive and helpful trainers and a satisfying experience of cataract surgical training.
5. **South-East Scotland:** Many senior trainees at the Edinburgh Eye Pavilion have independent cataract lists under a Standard Operating Procedure (SOP) – see Appendix 1. This has enhanced their training significantly. However, anecdotal feedback from trainees suggests increasing concern about junior level training in Edinburgh (as opposed to Fife). An increase in the number of surgeries on a cataract list has had a negative impact on the training of junior trainees.
6. **East Scotland:** Trainees in Tayside do not seem to have any problems in achieving the cataract numbers or opportunities to train. There are a number of Consultants who do cataract-only lists and those who do combined lists within Tayside to achieve this. Senior trainees can undertake independent lists.
7. **North Scotland:** ISTCs play a significant part in delivering cataract surgery in the North of Scotland. This has had an impact on training for the past 10 years. Previously the ISTCs used to operate weekend lists, but post-pandemic, they undertake 4 days of operating (Thursday-Sunday) at the eye unit in Aberdeen. None of these lists have any training component. In April 2023, the NTC opened in Inverness which will provide additional training opportunities in the future.
8. **West of Scotland:** Over the last few years, an arrangement has been reached between the NHS Golden Jubilee and the West of Scotland Ophthalmology Training Programme to have 2 trainees full-time at the NHS Golden Jubilee at any given time. One of these is at a junior level and gets 'Immersion Training' for 3 months while the other is at a senior level and gets 'Fellowship' level training for 6 months. Clear criteria have been laid down for these trainees and the placements are decided by discussion between the West of Scotland Ophthalmology Training Programme Director (TPD) and the Ophthalmology Educational Lead at the NHS Golden Jubilee.
9. Some theatre sessions at the NHS Golden Jubilee have now been utilised by NHS Greater Glasgow & Clyde (NHS GGC) Consultants as part of their job plan. These sessions have trainees allocated to them by the West of Scotland TPD. These are independent of the NHS Golden Jubilee and are completely under NHS GGC control and currently constitute approximately 3-4 lists per week.
10. In many regions, there are many examples of good practice. Some of these are included in Appendix 2.

Scottish trainee survey on cataract surgery training

An electronic survey was sent to all ophthalmology trainees in Scotland as part of the Cataract Surgical Training Task and Finish group's work. The aim was to obtain additional data on cataract training lists, gauge their perception and obtain their views regarding cataract surgery training in Scotland. The survey was open for 23 days. After excluding trainees on extended leave and new start trainees, the survey response rate was 62%.

The key findings are described below:

- 37% of the cataract training lists in Scotland have 5 cataract cases and 33% have 6 cases. The average number of operations, in which a trainee will have "surgical touch time" was 3.3 per list. The average number of completed cataract surgeries reported by the trainees was 2.8 per list.

- 35% of Scottish trainees report not achieving the milestone of 1 completed case by the end of their first year of training. 38% (5/13 responses) of senior grade trainees (ST5-7) are yet to complete 350 cases.

- Established training techniques such as modular training and touch time are not fully employed nationally. For example, 61% of trainees had no experience of "surgical touch time".

- Ranked by value of solutions to improve training, trainees rated the opportunity of a "high volume" operating highest (70%). This supports the argument of training being offered on all 'high-volume' operating lists.

- 30% of trainees are experiencing regular (weekly or monthly) disruption to their training for service or operational reasons.

- Formal training for managing operative complications is not universal (for example, 45% trainees report no education in adjusting intraocular lens (IOL) power for sulcus position or vitrectomy skills).

- Despite the majority of trainees (58%) experiencing low morale at some point during their cataract training, the survey confirms a willingness amongst trainees to travel or make personal life adjustments such as weekend working if training is offered.

  The detailed report is attached as Appendix 3.

Key challenges

1. The increasing complexity of cataract surgical cases is seen as a significant problem for training in some regions. This has resulted from the impact of COVID-19, the changing demographics and the set criteria for case selection for the NHS Golden Jubilee and ISTCs. Theatre lists having all complex cases and cases with co-morbidities are common and are often not suitable for junior trainees.

2. An increasing number of cataract surgeons are not comfortable offering training, especially in a high-volume environment, and many have reported exacerbation of stress levels in these situations. The group is wary of an already depleted workforce losing more cataract surgeons because they decide to give up operating altogether.

3. There is a very strong feeling amongst Consultants that the poor turnaround time between cataract surgeries combined with the pressure to increase output detracts from training as a large amount of time is wasted between cases. However, the group is aware that the overall improvement work aims to address this non value-added time and wastefulness of resource.

   Few Health Boards are able to implement independent lists for senior trainees. This is due to a combination of factors including decreased availability of theatres due to the continuing problems post-pandemic and the perceived concerns around medico-legal responsibility for Consultants. The introduction of the Entrustable Professional Activity (EPA) as part of educational governance as highlighted below should provide assurance with this latter matter.

Recommended principles to enhance cataract surgical training in Scotland

The key principle underlying training across the UK is that 'within every NHS setting that delivers a cataract service, training opportunities must be maximised[3]. Furthermore, the NTCs (including the NHS Golden Jubilee) should have training at their core.

The following are suggestions that may allow increased use of these opportunities and the development of cataract surgical training in Scotland.

1. **'Cataract-only' lists:** Each training Health Board should have very clearly designated 'cataract-only lists' with an appropriate level of trainee on that list. This lays the ground for structured cataract surgical training including modular training and independent trainee lists (see points 3 and 4 below).

2. **Every NHS theatre list is a training list:** Every cataract list in every NHS Board should offer the opportunity for a trainee to be present. This does not mean that all lists will necessarily have a trainee, but it opens up opportunities for surgical training and lays down the foundation for future high-volume cataract surgeons.

   - The above may then allow a stepped increase in the number of cases on cataract lists with a trainee because it allows more lists to be allocated to a trainee. This means that a trainer and a trainee realise that there are more opportunities for cataract training and, therefore, are not under pressure to ensure that the trainee tries to do all cases on every cataract list.

   - The above may also allow a trainee to be shared by 2 Consultants in parallel theatres (for example the trainee doing the first 3 on one list and then moving across to do the last 3 on the other Consultant's list).

3. **Modular training for very junior trainees:** The principle of modular training is well-established and well-known to all trainers. 'Cataract-only lists' allow a trainee to perform the same step on each case on the list until they are comfortable with it and can move on to the next step. The Trainee Survey has indicated the need to promote this concept of modular training amongst trainers.

4. **Immersion training for junior trainees:** This is suitable for trainees who have performed a few complete cases and are therefore familiar with all steps and the flow of a cataract operation. They are then provided an opportunity to spend a defined time-period (say 3 months) in an environment that affords them at least 5 cataract-only lists per week. The feedback from trainees and trainers who have been involved with this in the last 2 years has been overwhelmingly positive. More opportunities for such training need to be explored by every Health Board.

5. **Parallel lists for senior trainees:** If theatre space permits, senior trainees should be allowed the opportunity to operate independently in a theatre while the supervising Consultant is performing cataract surgery on their own list in a parallel theatre. This allows increased training opportunity, confidence-building and the reassurance of a Consultant being available to help or take-over if required.

6. **Independent lists for senior trainees:** The current curriculum allows a trainee to be assessed as being able to run an independent list in the form of signing off an EPAs; 2 such assessments are essential before being awarded a Certificate of Completion of Training (CCT). Senior trainees who have been signed off as been able to operate independently should be given independent lists in parallel to Consultant lists. This would allow the trainee to build their confidence further and prepare them for their future Consultant role. Such lists should, in due course, incorporate supervision of junior trainees by the senior trainees as this is a key competency required for CCT.

7. **Use of opportunities offered by Curriculum 2024:** A new ophthalmology curriculum (Curriculum 2024) was launched in August 2024. This allows trainees to choose cataract surgery as 1 of their high-level special interest areas after 5.5 years of training. This high-level training (designated as Level 4) may be delivered alongside other training or as a dedicated 3 or 6-month posting at a 'cataract hub'. The NHS Golden Jubilee and all Health Boards in Scotland need to put processes in place to support this training. This should include the provision of independent lists for Level 4 cataract surgery trainees and the opportunity to go to the NHS Golden Jubilee for a specified period for Level 4 cataract training.

References

1. https://www.rcophth.ac.uk/news-views/gmcs-annual-training-survey-shows-severely-limited-independent-sector-training-opportunities/

2. https://www.rcophth.ac.uk/wp-content/uploads/2021/09/Cataract-Hubs-and-High-Flow-Cataract-Lists.pdf

3. https://www.rcophth.ac.uk/wp-content/uploads/2022/10/Blueprint-for-cataract-training-2022_v2.pdf

Appendix 1

Examples of good practice

1. **Trainees doing Independent Lists**

   a) **South-East Scotland**

   Trainees routinely do independent lists in Edinburgh when the Consultant is on leave. An SOP is used in South-East Scotland. This document is attached as Appendix 2 and may be a useful template for other units.

   b) **East of Scotland**

   Senior trainees routinely do independent lists. It is rare for a theatre list to be cancelled; instead it will be allocated to a senior trainee after discussion with the Consultant in the adjoining theatre.

2. **Trainee doing parallel list with Consultant in NHS Ayrshire and Arran**

   One of the current trainees (ST3) preforms an independent list. Initially, the trainee did the list in parallel with a Consultant operating in the next theatre - the list template started with 3 Phacoemulsification procedures (Phacos) and 3 Intravitreal Injections (IVTs) and built up to 6 Phacos. The cases were chosen from a pool of more straightforward suitable cases (Degree of Surgical Difficulty 1, 2 and a few selected 3s). As confidence increased, the trainee was at times supervised remotely by a Consultant in the outpatient department. Total numbers were 110 Phacos preformed independently (6 months); the complication rate was zero. One patient was cancelled on the day at pre-assessment (white grade 4 lens).

3. **Immersion Training in NHS Golden Jubilee for West of Scotland trainees**

   An ST1/2 trainee from West of Scotland is allocated to the NHS Golden Jubilee every 3 months. This Trainee gets at least 4 cataract lists a week and has universally increased the numbers and confidence of this trainee. The feedback from each trainee has been overwhelmingly positive.

4. **East of Scotland**

   High volume lists are done on a Thursday in Tayside. An ST2 assigned to the list is given a 1-hour window. For each cataract they are allocated 12 minutes surgical time. If they take longer the excess is deducted from the 1-hour window until it has been used up. This allows the list to run to time. If a senior trainee is allocated to this list, they have been able to do 35 cataracts in a day. This includes Immediate Sequential Bilateral Cataract Surgery (ISBCS) cases.

Appendix 2

Draft SOP for trainee independent cataract lists in south-east Scotland

Independent theatre list by Trainees: Supervising Consultant or named Clinical Supervisor on leave

a) At what stage they should do this – according to Surgical Training (ST) level or competency based?

ST4 or above (the Supervising Consultant must agree that the trainee is able to do a list of their own) and the trainee must be happy to do the list.

b) Do they need to be signing off for competent in anterior vitrectomy before they do the list?

Preferably yes and we must document this aspect while filling up Clinical Supervisor report.

In Patients:

It will be either 'not assessed' (as never had Posterior Capsule Rupture)

- Not competent
- Competent

In simulator:

All trainees need to be signed off by end of ST3 showing competencies in anterior vitrectomy in Simulator.

Please note a session on Friday lunchtime will be organised during post graduate teaching break.

3. Who is the named Clinical Supervisor on the day?

Named Consultant from clinic (name should be on theatre list with prior agreement) but trainee first port of contact is Consultant in adjacent theatre if able to help. If not then Consultant from clinic will have to go and help.

4. Should operate only on cases seen by own Clinical Supervisor and not pool?

Trainee will go through all the notes with the Supervising Consultant or named Clinical Supervisor and agree on biometry etc. Avoid any last minutes changes like adding new patient etc.

5. In the rare event of complications who will be the responsible Consultant for follow up and any complaints?

Short term follow-up and immediate management surgical or non-surgical will be by a trainee and Consultant on the day. Long term follow-up and care by own Clinical Supervisor.

Appendix 3

Scottish trainee survey report on cataract surgery training – 12 November 2023

Authors

Johnathan Nairn, Specialist Trainee
Kelvin Cheng, Specialist Trainee
Vikas Chadha, Consultant Ophthalmologist, TPD West of Scotland and RCOphth Representative

Introduction

This electronic survey was sent to all ophthalmology trainees in Scotland as part of the Cataract Surgery Training Task and Finish Group's work on training in cataract surgery in Scotland. It was open for 23 days between August and September 2023.

Advertisement and awareness of the survey was completed through a network of Scottish Ophthalmology Trainee Group (OTG) representatives, Scottish Training Programme Directors (TPD) and email reminders. Links to the survey were distributed by email, QR code and social media (WhatsApp) nationally to Scottish Ophthalmology Trainees.

SmartSurvey software was used in the design, management and analysis of the results.

There are 71 Ophthalmic Surgical Trainees (OST) in Scotland. From this total, trainees on extended leave (n=2) and new start trainees (Local Appointments for Training (LAT)/ST1/ST3 entry; n=16) have been excluded from analysis. This calculation created a new total of 53 trainees actively operating in Scotland of which 33 complete responses were received. The survey return rate therefore was 62% of this subgroup.

The survey design grouped questions by theme:

1. Demographic Information and Training Opportunities
2. Methods of Training
3. Managing Complications and Future Improvements to Training

Executive summary

- 37% of the cataract training lists in Scotland have 5 cataract cases and 33% have 6 cases. The average number of operations, in which a trainee will have "surgical touch time" was 3.3 per list. The average number of completed cataract surgeries reported by the trainees was 2.8 per list.

- 35% of Scottish trainees report not achieving the milestone of 1 completed case by the end of their first year of training. 38% (5/13 responses) of senior grade trainees (ST5-7) are yet to complete 350 cases.

- Established training techniques such as modular training and touch time are not fully employed nationally. For example, 61% of trainees had no experience of "surgical touch time".

- Ranked by value of solutions to improve training, trainees rated the opportunity of a "high volume" operating highest (70%). This supports the argument of training being offered on all 'high-volume' operating lists.

- 30% of trainees are experiencing regular (weekly or monthly) disruption to their training for service or operational reasons.

- Formal training for managing operative complications is not universal (for example, 45% trainees report no education in adjusting intraocular lens (IOL) power for sulcus position or vitrectomy skills).

- Despite the majority of trainees (58%) experiencing low morale at some point during their cataract training, the survey confirms a willingness amongst trainees to travel or make personal life adjustments such as weekend working if training is offered.

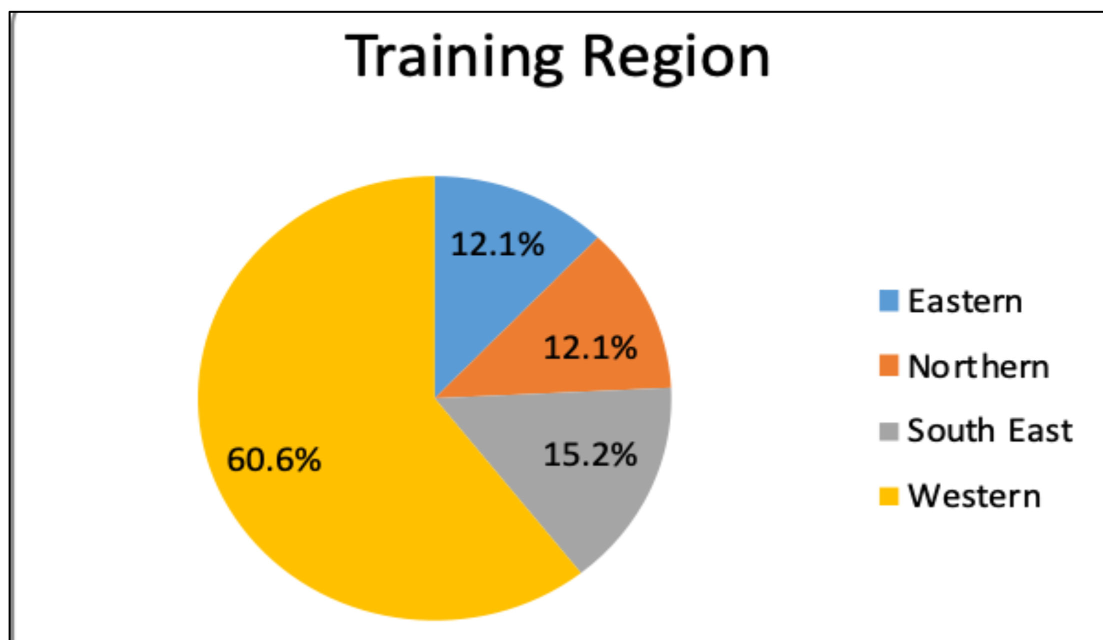
Results

a) Demographic information and training opportunities

There are 4 training regions under the Scotland Deanery - North, East, South-East and West.

The majority of Scottish trainees are geographically based in the West of Scotland region. It was also the area with the largest contribution of responses to this survey (60.6%).

Figure 1: Response by Scottish Training Region



To avoid risk of a "West of Scotland" bias in the sample, the percentage response by training area in Scotland is calculated below. Trainees absent on extended leave (2) and new trainees (16 LAT/ST1/ST3) have been excluded from the survey.

The new trainees were excluded because:

- The Royal College of Ophthalmologists (RCOphth) guidance requires completion of a course before performing intraocular surgery for LAT/ST1 grades[6].
- New ST3 grade trainees were less than 1 month into their new location at the time of survey.

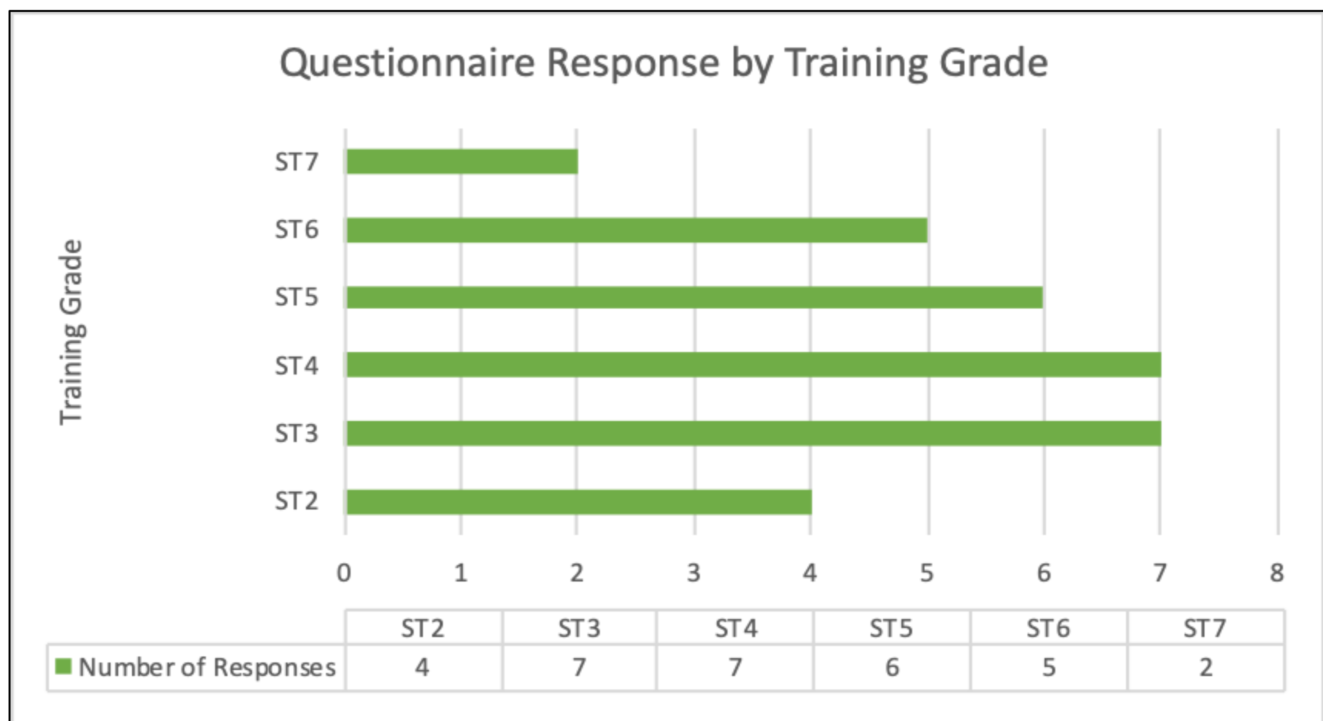
Table 1: Adjusted percentage response from the 4 regions

Region	Number of Responses	Current number of Trainees	New ST1, LAT, ST3	Total (excluding New ST1, LAT, ST3	% response
North	4	8	2	6	66.6%
East	4	10	3	7	57.1%
South-East	5	18	7	11	45.4%
West	19	33	4	29	65.5%

The above table indicates that the responses were relatively proportionate from all regions except the South–East, which had a lower response rate.

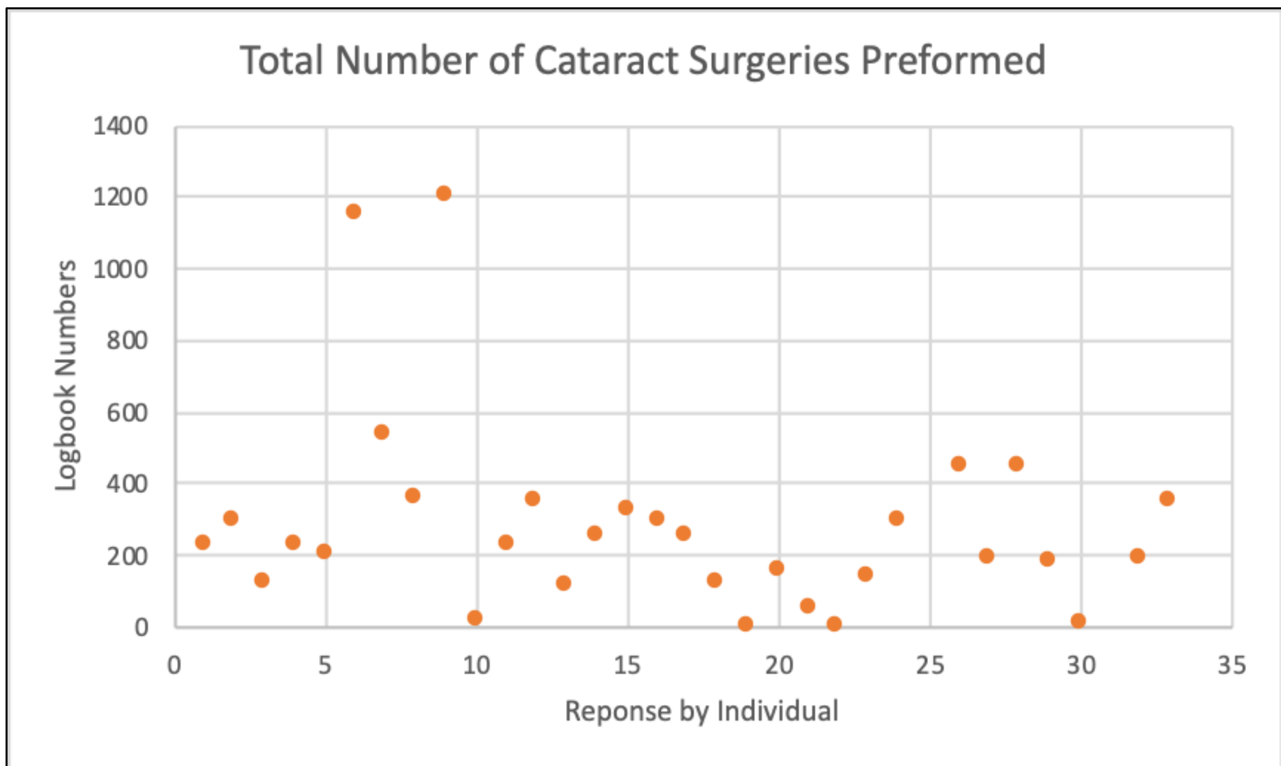
The distribution of trainee grade is displayed in Figure 2 below. ST3 and ST4 responses were the highest in number. The majority of trainees who replied entered Ophthalmic Specialist Training (OST) at the ST1 point (94%).

Figure 2: Response by Trainee Grade



In terms of total number of cataract surgeries performed, there were 2 exceptional declarations; (1,150 and 1,200). The mean number of surgeries was 280 across all grades (range 0-1,200). The median number of surgeries performed was 230.

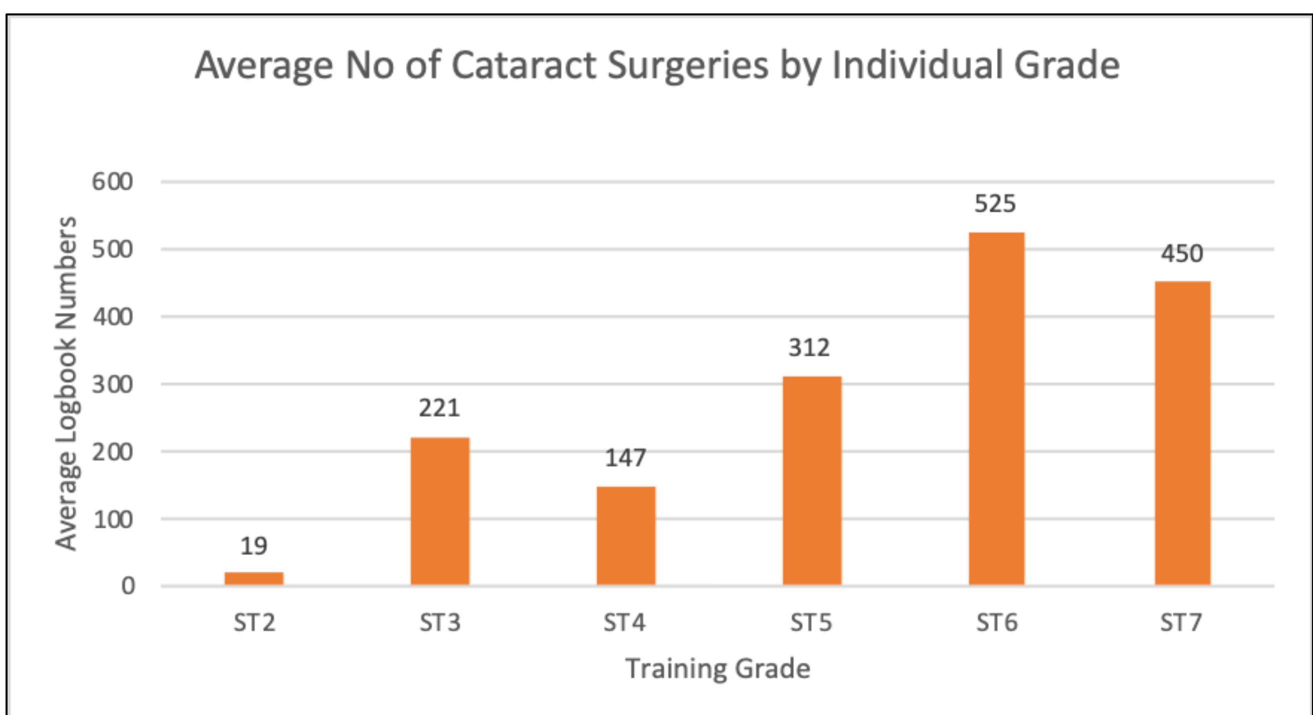
Figure 3: Total Number of Cataract Surgeries, (including statistical outliers)



The results by training year (Figure 4) suggest that ST4 year have achieved lower average totals than might be expected and lower than the ST3 year trainees. This survey shows that, looking at the average, ST5 are on target to achieve 350 cases in the year and ST6 and ST7 have already achieved that number. However, it is of concern that 38% (5 out of 13 responses) of senior grade trainees (ST5-7) have not yet completed 350 cases.

It is to be noted that this survey was carried out in the first 3-5 weeks of the training year, for example, ST2 still have 11 more months to achieve the required number of 50 cases.

Figure 4: Average Number of Cataract Surgeries by Trainee Grade



The majority of trainees (74%) report a job plan with 2 theatre sessions per week (range 1-6 theatres). However only 48% of trainees have 1 dedicated cataract theatre session per week, and to have a job plan with 2 is unusual (13%).

Variation also exists in the number of patients listed for surgery when a trainee is present. Most Scottish trainees report operating in a theatre scheduled for 5 cases (37%). A further 33% report a planned list of 6 surgeries. Only 26% of responses describe operating in a theatre with 7 planned cases.

Analysis of responses reports the average number of operations in which a trainee will have "surgical touch time" within a mixed list theatre session was 3.3. The average number of completed cataract surgery reported was 2.8 per list.

Many ophthalmology trainees consider the completion of 1 full cataract surgery as a milestone and hope to achieve it by the end of their first year of training. However, the survey results indicate that 19% of trainees are not performing a complete surgery until ST2. A similar number (16%) state they did not achieve this milestone until their third year of training.

Disruption to theatre sessions appears to be a widespread issue. 55% of trainees report surgical training opportunities have been missed due to another service commitment. 30% state such interruptions happen at a frequency of at least once a month.

Methods of Training

The majority of Scottish trainees report positive progression in their training (94%).

However, analysis of responses demonstrates variability in how trainees learn intraocular skills. Whilst promoted nationally as tools to educate in high volume settings, 23% of trainees did not learn by "modular training" and 61% have no experience of "surgical touch time."

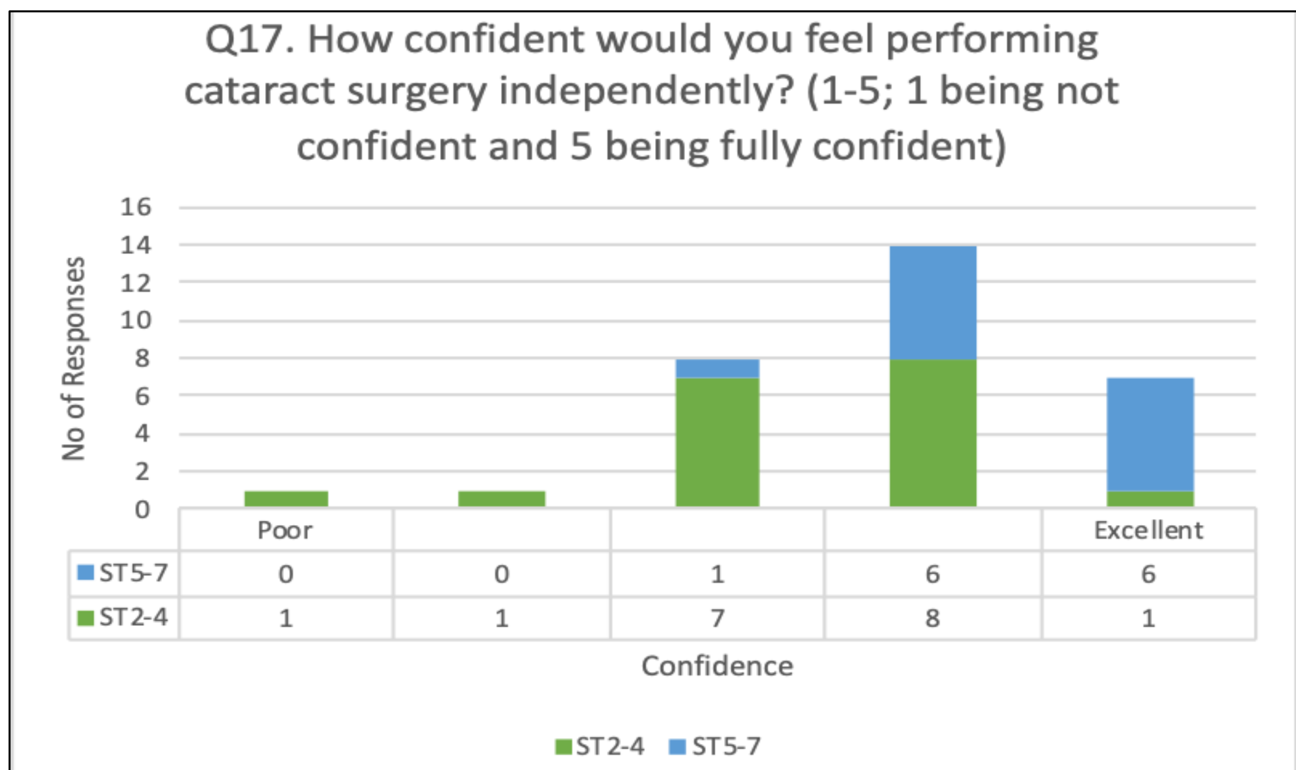
There appears enthusiasm for the idea of a "surgical passport" or equivalent to help demonstrate completion of early intraoperative techniques, (37% positive replies). Only a small number of text replies (3) stated new trainers will ask for this information verbally. One reply stated an international system (ICO-OSCAR) is used in their area to objectively measure such data[3]. Positive responses suggest such a tool would be most helpful for junior trainees and when there are multiple Consultant mentors.

Figure 5 shows the trainees' satisfaction with their cataract surgical training on a scale of 1 to 5. Within this cohort, 48% of trainees (16/33) do not feel fully satisfied (5) or very satisfied (4) with their cataract training.

Figure 5: Trainee Satisfaction

Across all training grades, only 21% (7 out of 31) currently report “excellent” confidence attempting to operate independently. However, the majority of ST5-7s (12 out of 13) feel much greater confidence in operating independently, highlighting the need to provide increasing opportunities for the same.

Figure 6: Trainee Confidence in Independent operating by Grade



Analysis of text responses to “training barriers” revealed common themes and issues experienced nationally.

Figure 7: Main "barriers" to cataract surgery training

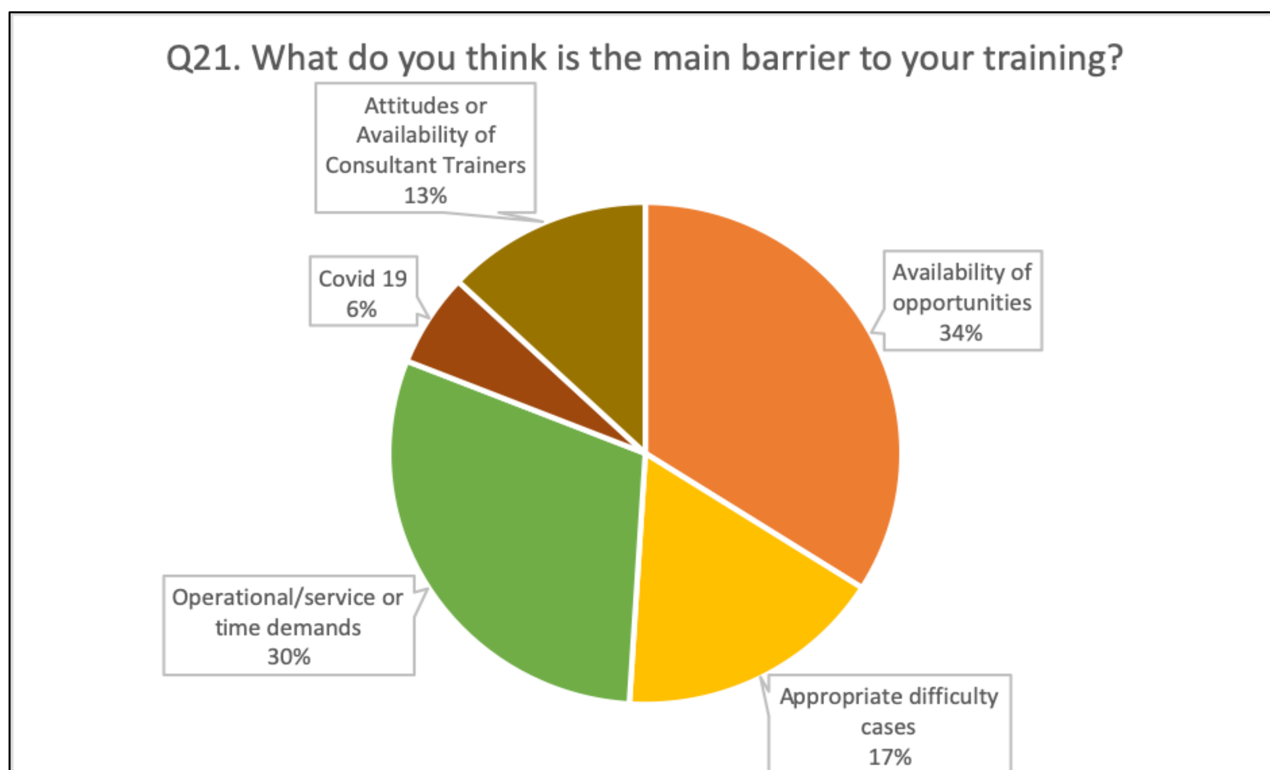


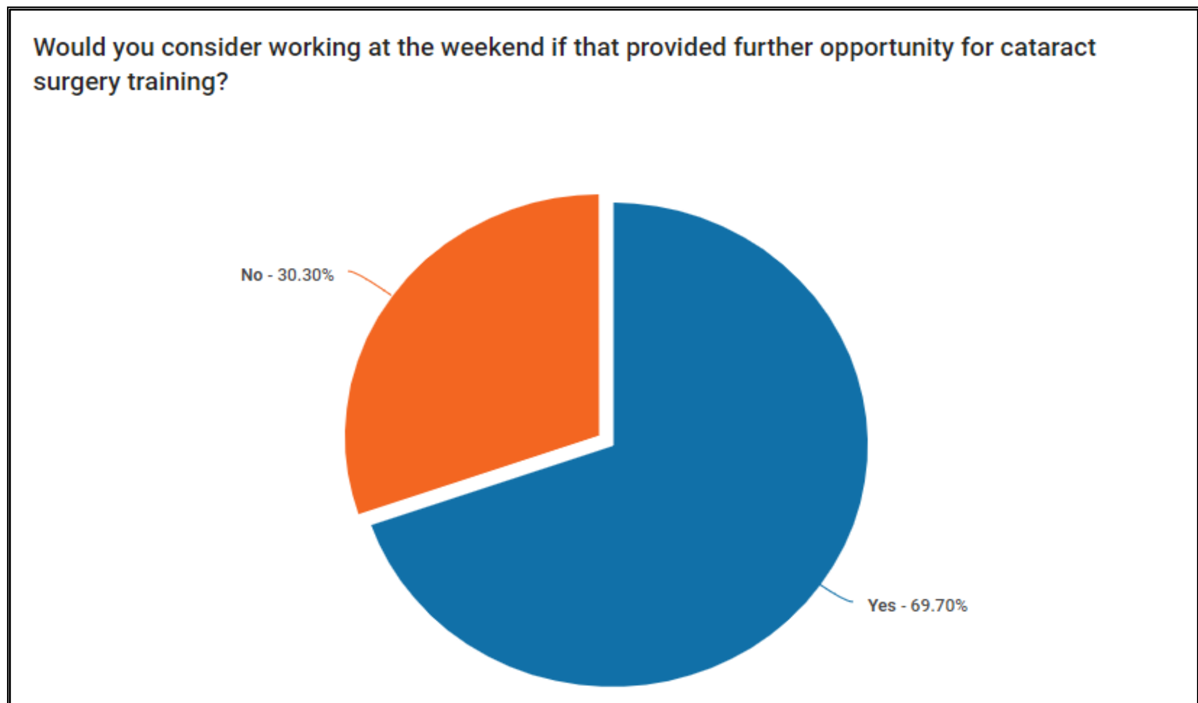
Table 2: Breakdown of Main "Barrier" Themes

Operational/service or time demands (30%)	Appropriate cases (17%)	Availability of opportunities (34%)
• Cancellation of theatre due to operational reasons (i.e. staffing) – (10%) • Loss of theatre time due to service reasons (covering casualty/staff absence etc.) – (13%) • Pressure on time allocated to Trainee operator – (7%)	• Suitable (grade 1) difficulty cases being lost to national centres – (10%) • Advanced complexity of cataracts – (7%)	• Allocation to theatre – (17%) • Sub-specialty cases on cataract list – (17%)

Responses demonstrate commitment amongst Scottish trainees to adapt their working conditions and personal circumstances to learn cataract surgery. 70% of respondents indicated they would work over a weekend to gain training; a further majority (91%) replied they would commute from their base region to a national centre such as the NHS Golden Jubilee.

Of the trainees who indicated they would be unhappy to travel to the NHS Golden Jubilee, 1 of the 3 explained this was due to practicalities of caring for a young family. Within the subgroup who were willing to travel, some (17%) raised concern about the financial and logistical challenges of relocation.

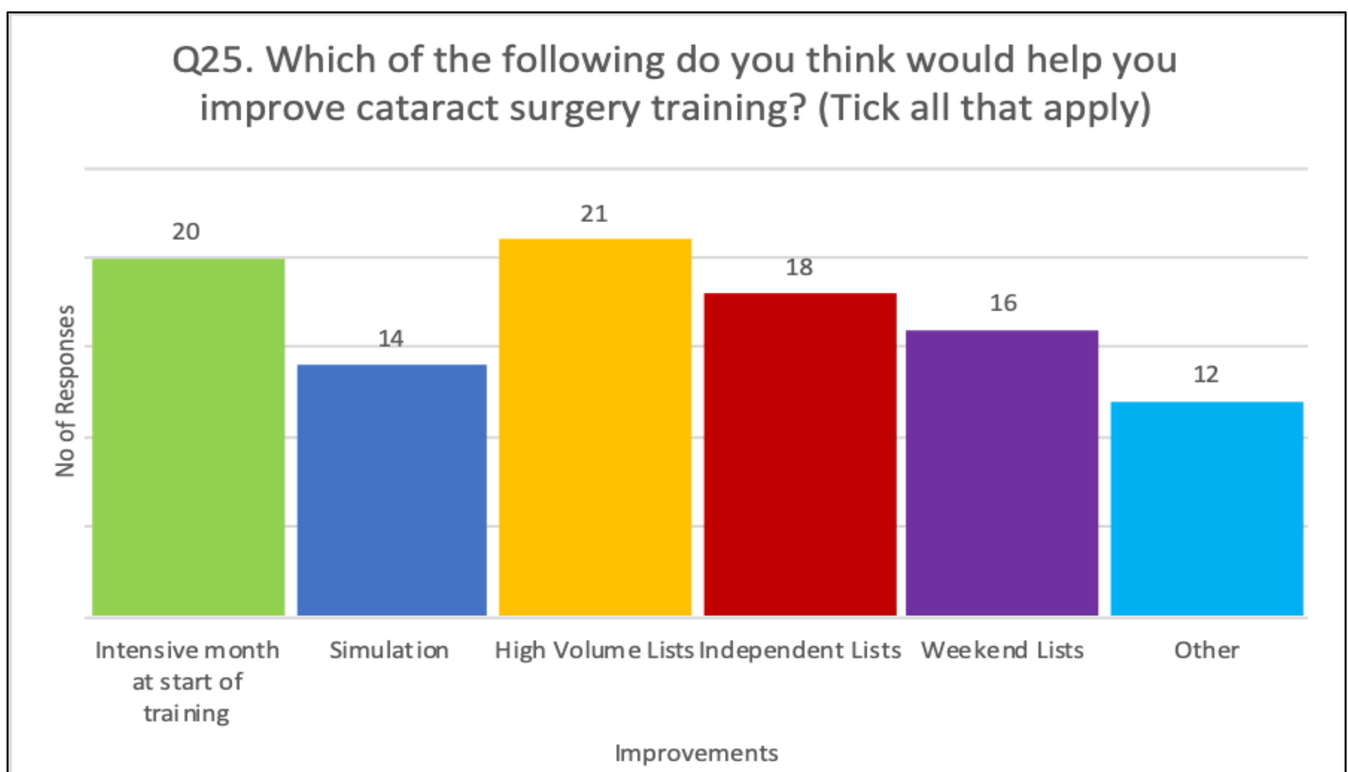
Figure 8: Trainee Attitudes to Cataract Surgical Training at Weekends



Future Improvements to Training and Managing Complications

There was widespread positive response for solutions on how to improve surgical training in Scotland. Ranked by value, trainees rated the opportunity of a 'high-volume list' (70%), an intensive month of training at a junior grade (66%) i.e. 'immersion training', and independent operating (60%) higher than simulation (48%). Trainees place high value (9 out of 10 replies) on consistent weekly exposure and regular feedback from mentors. Only 1 reply placed value on the use of video technology in surgical teaching.

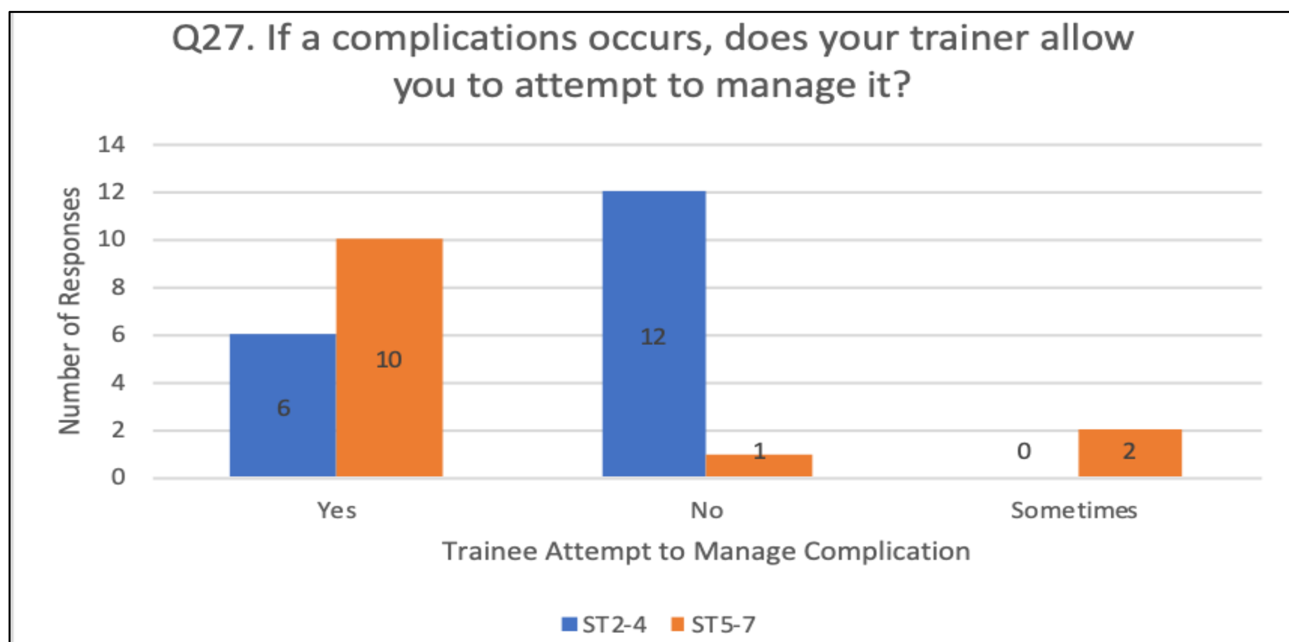
Figure 9: Trainee Preferences on Options to Improve Training



Rupture of the Posterior Capsule (PC) is statistically more likely to occur with junior trainees[1], but not all Scottish trainees appear ready to handle this predicable complication. 35% of trainees report no formal training on the intraoperative skills required to manage PC rupture/vitreous loss. 45% of junior trainees report no education on how to adjust an intraocular lens power (IOL) for the sulcus position.

When a complication does occur, 66% of junior trainees (ST2-4) report their senior will take over and there is not a learning opportunity to manage the problem. However, the data suggests this situation does change with experience with 77% of Scottish Trainees (ST5-7) report managing an intraoperative issue independently.

Figure 10: Managing Operative Complications by Trainee Grade



Although 58% trainees admit feelings of low morale or wanting to “drop” learning cataract surgery at some point in their training, 100% of trainees who replied to the survey stated a desire to continue surgery in the new curriculum (Curriculum 2024 to be launched in August 2024).

Conclusions

The landscape of cataract surgery delivery in Scotland is rapidly changing. The Scottish National Cataract Short Life Working Group (SWLG) published its 'Improving the Delivery of Cataract Surgery in Scotland: a Blueprint for Success' (A Blueprint for Success) in September 2022; the aim being to deliver a minimum of 8 procedures per core 4-hour session or a minimum of one procedure every 30 minutes[1]. “Cataract Surgery Standards for all Healthcare Settings” were published by Health Improvement Scotland (HIS) in December 2023[2] (HIS Cataract Standards).

Cataract surgery is increasingly being undertaken at specialised cataract centres with 1 national centre (NHS Golden Jubilee) undertaking approximately 1/4 to 1/3 of all operations in the country[1] and a NTC being recently opened in the Highlands. This survey of trainee experiences reveals the challenges in delivering Scottish training of cataract surgery in this changing environment.

In terms of opportunities, most trainees currently practice in theatre environments planned for 5 or 6 cases. Nearly 34% of Scottish trainees report not completing one case by the end of ST1 and 38% (5 out of 13 responses) of senior grade trainees (ST5-7) are yet to complete 350 cases.

Trainees report “surgical touch time” of 3.3 cases per mixed list with an average number of completed surgeries of 2.8 per list.

Disruption to training appears to be a regular (weekly or monthly) occurrence for nearly one third of respondents. Nearly half (48%) of trainees express below or average satisfaction in their cataract training experience.

Common barriers experienced nationally are availability of opportunities (35%), access to appropriate difficulty cases (17%) or operational/time/service demands (30%). These results indicate that there is a need to focus on cataract surgical training to ensure that trainees’ surgical experience is enhanced.

The results suggest published methods to adapt surgical training for high volume are not fully embraced by Scottish trainers. 23% of trainees state they did not learn by “modular training” and 61% do not learn through “surgical touch time”. These established principles are not being universally applied across the country.

There is evidence that Scottish trainees are under-prepared for predictable operating complications. Over one third have not received instruction in anterior vitrectomy skills. Consultant takeover is still required (23%) by ST5-7 trainees. There is clear demand for formal training[5] in how to manage posterior capsular rupture and vitreous loss.

Despite questionnaire replies confirming trainees in Scotland have experienced negative morale and doubt at some points in training (58%), there is a strong commitment to self-improvement and learning amongst this cohort of trainees. The changing landscape of cataract surgery in Scotland must be cognisant of this and ensure that training opportunities are maximised.

References

1. Centre for Sustainable delivery. “Improving delivery of Cataract Surgery in Scotland; A Blueprint for Success” NHS Scotland. Accessed on 19/09/23 https://www.nhscfsd.co.uk/media/5sofmknr/cataract-surgery-blueprint-2022.pdf

2. Healthcare Improvements Scotland. Cataract Surgery Standards for all Healthcare Settings. NHS Scotland. Accessed on 20/12/23 https://www.healthcareimprovementscotland.scot/wp-content/uploads/2024/02/20231215-Cataract-surgery-standards-v2-0-Final.pdf

3. International council of Ophthalmology. ICO Surgical competency assessment rubric. Accessed on 19/09/23 https://icoph.org/education/ophthalmic-educators/

4. Narendran N, Jaycock P, Johnston RL, Taylor H, Adams M, Tole DM et al. The Cataract National Dataset electronic multi-centre audit of 55567 operations: risk stratification for posterior capsule rupture and vitreous loss. Eye 2009; **23**(1): 31–37

5. Lockington D, Belin M, McGhee CNJ. The need for all cataract surgeons to run a regular vitreous loss fire drill. Eye (Lond). 2017 Aug; 31(8):1120-1121. doi: 10.1038/eye.2017.58. Epub 2017 Apr 7. PMID: 28387763; PMCID: PMC5558226.

6. Royal College of Ophthalmology. Introduction to Ophthalmic Surgery Course. Accessed 12/11/23. https://www.rcophth.ac.uk/events-courses/all-events-courses/page/3/

Appendix 4

Terms Of Reference (TOR) Cataract Surgical Training Task and Finish Group

Background

In November 2021, the Centre for Sustainable Delivery (CfSD) was commissioned by the Scottish Government to address the current provision of cataract surgery in Scotland with the primary aim of delivering higher numbers of cataract procedures per list. Much work was done pre-pandemic and during the pandemic on the pre-procedure and post-procedure parts of cataract pathways, but the operative delivery has remained highly variable in terms of number of cataract cases done per list.

In January 2022, the Scottish National Cataract Short-Life Working Group (SLWG) comprising of multi professional ophthalmology clinical, operational and managerial experts from across NHS Scotland, the Scottish Government and NHS Education for Scotland (NES) was formed with support from Healthcare Improvement Scotland (HIS), clinical experts from NHS England, the Royal College of Ophthalmologists (RCOphth) and the Royal College of Surgeons, Edinburgh (RCSEd). Over a period of 9 months, this group developed a national blueprint for higher volume cataract surgery to be offered to health boards for implementation. This Blueprint is based on an agreed set of principles; it is built on the existing work that has already been done by the National Eyecare Workstream, it embeds recommendations from Health Board Ophthalmology Peer Reviews, it aligns with the RCOphth's guidelines for training lists and high-volume service lists, and it acknowledges different models of delivery from various sites across the NHS in Scotland.

In August 2022, the Cataract Sub-Specialty Delivery Group (CSSDG) was established to provide the strategic direction and support ophthalmic theatre teams across Scotland to implement the Blueprint and thus increase efficiency and productivity across cataract only Surgical sessions; the aim being to deliver a minimum of 8 procedures per core 4-hour session or a minimum of one procedure every 30 minutes with bespoke centres implementing higher volume Surgical throughput - 10+ per 4 hour session.

In addition, a number of Cataract Task and Finish Groups have been established in recognition that successful implementation of the Blueprint across Scotland will also require special focus in a number of key areas including Surgical Training.

Purpose

The sustainability of any development in the area of cataract surgery is dependent on surgical training of the service providers of the future. Furthermore, any such development also has a direct implication on surgical training.

For Surgical Trainees, the opportunity to be trained in high flow cataract pathways will provide them with the competencies and confidence to work in and lead such setups when they become Consultants.

Remit

A key principle underlying training across the UK is that within every NHS setting that delivers a cataract service, training opportunities must be maximised.

The Surgical Training Task and Finish Group (STTFG) has been formed with the remit of laying down broad principles for the development of cataract Surgical training in Scotland and suggesting mechanisms to enhance this training.

Output

The STTFG aims to produce a document that reflects a consensus developed based on the evidence reviewed, the views of the panel members, views canvassed from various stakeholders in all units by the panel members and the expert opinion in the panel.

Governance

The STTFG has a key linkage to the CSSDG which has been established to support ophthalmic theatre teams increase efficiency and productivity across cataract only surgical sessions in core theatre lists across Hospital Eye Services (HES) in NHS Scotland. The STTFG will work in parallel with the CCSDG ensuring the flow of key information between the groups and will, in addition, be supported by NHS Education for Scotland (NES) in its work.

Membership

Membership of the STTFG is reflective of the expertise and professional requirements needed to support the purpose and remit of the group.

It is anticipated that members will attend virtually. In the case of unavoidable absence from any meetings, group members should provide their input on the agenda and documents circulated prior to the meeting so that their views can be represented. If possible, they can have a nominated and fully briefed deputy who is able to provide full representation, including decision-making powers, in the absence of the standing member.

In addition to the core membership, co-option of individuals for specific issues may take place when necessary.

Where there is a lack of consensus, in order to ensure the ongoing progress of business and to achieve objectives within agreed timescales, the final arbiter maker for the STTFG will be the Chair.

Any conflict of interests should be declared.

Membership roles and responsibilities

The roles and responsibilities of STTFG members includes, but is not exhaustive of;

- Representing their respective profession, area of expertise and wider community.
- Playing an active part in the collective delivery of the outputs from the STTFG workstream by providing expert input, support and constructive challenge.
- Participating in effective and timely communications and information dissemination both at meetings and during engagement with stakeholders within the areas they are representing.
- Identifying appropriate stakeholders within their area for the programme to engage with and providing a conduit as required.
- Taking any mitigation or corrective actions required to ensure alignment between the STTFG and activities.

Members

Dr Vikas Chadha, TPD West of Scotland and RCOphth Representative (Chair)
Dr Pankaj Agarwal, TPD South-East Scotland
Dr Sudipto Bhatta, TPD North of Scotland
Dr Caroline Cobb, TPD East of Scotland
Dr Magdalena Edington, Educational Lead for Ophthalmology, NHS Golden Jubilee
Dr Zac Koshy, Educational Lead for Ophthalmology, NHS Golden Jubilee
Dr Jonathan Nairn, Surgical Trainee, West of Scotland
Dr Kelvin Cheng, Surgical Trainee, South-East Scotland
Mr Alastair Murray, Chair of Surgery Specialty Training Board, NES
Dr Rory Mackenzie, Interim Deputy National Clinical Director, CfSD, NHS Golden Jubilee
Rosanne Macqueen, National Improvement Advisor, CfSD, NHS Golden Jubilee

Meetings

The meetings will take place virtually over MS Teams every 4-8 weeks, however, it is anticipated that some group activity and decisions will be required to be taken by the group outwith of the proposed meeting schedule, and members will be advised accordingly.

Meetings will be formal with an agenda and any other appropriate documentation for the meeting taking place circulated beforehand via email.

If a decision to record a meeting is taken consent from the group will be sought in advance.

Quorum

Meetings will be considered to be quorate if 4 members are present including the Chair.

Date approved

25 May 2023

(Updated 1 June 2023)

This document has been approved and supported by the Surgical Training Board, NHS Education for Scotland (NES) and the Chair of Training, Royal College of Ophthalmologists (RCOphth) Ophthalmology.

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