



# NOD

National Ophthalmology  
Database Audit

# National Ophthalmology Database Audit

Seventh Annual Report of the National Cataract Audit

National Cataract Audit  
for the 2022 NHS Year:  
01 April 2022 to 31 March 2023



---

[The Royal College of Ophthalmologists](#) (RCOphth) is the professional body for eye doctors, who are medically qualified and have undergone or are undergoing specialist training in the treatment and management of eye disease, including surgery. As an independent charity, we pride ourselves on providing impartial and clinically based evidence, putting patient care and safety at the heart of everything we do. Ophthalmologists are at the forefront of eye health services because of their extensive training and experience. The Royal College of Ophthalmologists received its Royal Charter in 1988 and has a membership of over 4,000 surgeons of all grades. We are not a regulatory body, but we work collaboratively with government, health and charity organisations to recommend and support improvements in the coordination and management of eye care both nationally and regionally.

---



**The ROYAL COLLEGE of  
OPHTHALMOLOGISTS**

**Document authors:**

Paul Henry John Donachie  
Beth Barnes  
Martina Olaitan  
John C Buchan

Published May 2024

© The Royal College of Ophthalmologists 2024. All rights reserved.

For permission to reproduce any of the content contained herein please contact [contact@rcophth.ac.uk](mailto:contact@rcophth.ac.uk)

---

# Foreword

---

Anyone reading this report will undoubtedly be impressed by the huge increase in scope of the National Ophthalmology Database (NOD) cataract audit over the past 13 years. In 2010 the audit assessed 68,107 cataract operations performed at 42 centres. This year, it reports on 481,530 operations performed at 177 centres, including independent treatment centres, between April 2022 and March 2023. This growth is both a testament to dedication of the National Ophthalmology Database team, and evidence of the widespread recognition by clinicians, participating centre and commissioners of healthcare of the value of the NOD as a measure of quality of cataract services.

Crucial to the success of the audit has been its selection of two key patient centred outcome measures:

- Posterior capsule rupture (PCR) is both an internationally recognised marker of quality of surgery, and the most important risk factor for serious postoperative complications including retinal detachment and endophthalmitis. Since 2010 the PCR rate has fallen by 58% to 0.79%.
- The risk of surgery related visual loss is, understandably, a key concern for people contemplating cataract surgery. Since 2010 the risk of visual loss has fallen by 31% to 0.48%.

The significant improvements in these outcome measures are due, at least in part, to clinicians and treatment centres reflecting on quality of their practice and, where necessary implementing change. They also reflect continuing development of phacoemulsification equipment by manufacturers.

This report does highlight some areas of concern and scope for improvement. Only 64.4% of operations had both pre- and post-operative visual acuity data documented. This is surprising given that the majority of centres use electronic medical records as their only documentation of patient care. The low figure also reflects a need to improve communication between primary and secondary care. Another area of concern is the significant reduction in the proportion of operations performed by trainees as compared to pre-COVID. This is undoubtedly affecting training and risks compromising the safety and quality of future cataract services.

Crucial to the value of the cataract audit is the dissemination and use of the data it supplies. Patients and those providing cataract services are encouraged to review and reflect on individual surgeon's and treatment centre's results on the NOD website [nodaudit.org.uk](http://nodaudit.org.uk). Clinicians should incorporate a discussion of NOD key outcome measures as part of the consenting process. They should also use patient specific PCR risk calculations as recommended by [NICE cataract surgery guideline \(NG77\)](#).

The NOD is now an established tool for the assessment of the quality of cataract services. It will continue to evolve, with the eventual aim of complete United Kingdom coverage. It will remain patient focussed and seek to use the data it provides to drive quality improvement.

My thanks go to the NOD audit team.



**Michael Burdon**  
Chair NOD Steering Group

# Contents

---

<b>1. Introduction</b>	<b>5</b>	<b>Appendix R: Percentage of eyes with each ocular co-pathology/ known risk factor for the 2018-2022 NHS years</b>	<b>97</b>
<b>2. Key Findings</b>	<b>8</b>		
<b>3. Summary</b>	<b>11</b>	<b>Appendix S: Participating centres percentage of eyes with VA data for the 2018-2022 NHS years</b>	<b>98</b>
<b>4. Conclusions</b>	<b>13</b>		
<b>5. Recommendations</b>	<b>14</b>	<b>Appendix T: Participating centres case complexity adjusted PCR and Vision loss for the 2018-2022 NHS years</b>	<b>106</b>
<b>6. Future of the audit</b>	<b>17</b>		
<b>Appendix A: Audit Framework</b>	<b>18</b>	<b>Appendix U: Participating centres percentage of eyes with VA data at different time intervals in the 2022 NHS year</b>	<b>114</b>
<b>Appendix B: Methodology</b>	<b>19</b>		
<b>Appendix C: Definitions</b>	<b>21</b>	<b>Appendix V: Operative procedures combined with phacoemulsification ± IOL</b>	<b>122</b>
<b>Appendix D: Detailed Results</b>	<b>22</b>		
<b>Appendix E: Acknowledgements</b>	<b>48</b>		
<b>Appendix F: Funding</b>	<b>48</b>		
<b>Appendix G: Data Flow</b>	<b>49</b>		
<b>Appendix H: Interesting the graphs and tables</b>	<b>50</b>		
<b>Appendix I: Case Definitions</b>	<b>51</b>		
<b>Appendix J: Glossary</b>	<b>54</b>		
<b>Appendix K: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year</b>	<b>56</b>		
<b>Appendix L: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year</b>	<b>64</b>		
<b>Appendix M: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year</b>	<b>71</b>		
<b>Appendix N: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year</b>	<b>78</b>		
<b>Appendix O: Surgeon information for the 2018-2022 NHS years</b>	<b>86</b>		
<b>Appendix P: First eye, second eye and ISBCS patients information for the 2018-2022 NHS years</b>	<b>87</b>		
<b>Appendix Q: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology/ known risk factor for the 2018-2022 NHS years</b>	<b>89</b>		

# 1. Introduction

---

## 1.1 Context

Cataract surgery remains the most frequently undertaken NHS surgical procedure with approximately 608,000 publicly funded cataract operations undertaken in England and 16,000 in Wales during the 2022 NHS year. The annual cost to the NHS of cataract surgery is estimated at around £600 million. Included in this seventh prospective report are **operations undertaken between 01 April 2022 and 31 March 2023 which corresponds to the 2022 NHS year.**

As a quality assurance process, the RCOphth NOD cataract audit seeks to ensure standards are maintained regarding the rates of Posterior Capsule Rupture (PCR) and Vision Loss, as defined below (section 1.3). Since the original proof of concept of a national cataract audit in 2010, there has been around a 58% reduction in recorded PCR and a 31% reduction in assessable Vision Losses in cataract surgery, (Figure 1, page 9 and Table 1, page 10) equating to approximately 7,000 fewer complications annually across the NHS; this conveys an estimated annual saving of around £3.5 million from avoided additional treatments.

In this report we show the case complexity adjusted rates of PCR and monocular Vision Loss for named centres (including all surgeons) which are also available on the [NOD website](#); centre results are also provided to the Care Quality Commission (CQC).

National audit is dependent on adequately complete data submission; incomplete data will therefore be highlighted and where <60% of outcome data are available for Vision Loss, the rate will not be reported as deemed too unreliable.

The audit brief is to include all cataract surgery where permission for inclusion of the institutions' data has been provided by clinical leads / medical directors and Caldicott Guardians or a governance equivalent for centres from a region where Caldicott Guardian approval does not apply.

## 1.2 Aims

The audit is intended to quality assure cataract surgery for patients whose vision is adversely affected by cataract to the point where they seek and undergo surgical intervention. Should performance fall short of what can reasonably be expected by patients, this is highlighted. In addition, the audit serves as a powerful driver of quality improvement with year-on-year reductions in complication rates as evidenced in our series of annual reports available at [nodaudit.org.uk/public/publications](http://nodaudit.org.uk/public/publications).

The audit reports risk-adjusted rates for two primary patient safety outcomes: PCR and Vision Loss in cataract surgery. PCR will have high levels of data completeness for all participating centres as recording of the absence or presence of specified operative complications is mandatory in ophthalmology EMR systems. The preoperative risk indicator and follow up VA data are, however, expected to be less complete because of variations in patient pathways and use of the EMR in different settings.

The quality improvement aims of this report include:

- Reporting of the intraoperative risk adjusted PCR rates, emphasising the need for careful risk profiling of cases in advance of surgery to anticipate and minimise avoidable surgical complications
- Reporting the rates of Vision Loss, highlighting potentially avoidable visual harm where unwarranted variation is observed

There are several secondary aims developed throughout the life of the audit, for example the contextual information includes: case complexity metrics, rates of recorded valid VA data and access (preoperative VA) by centre and overall by deprivation.

### 1.3 Audit measures

The two primary outcome indicators of surgical quality are defined as:

1. Intraoperative surgical complication when there is *posterior capsule rupture with or without vitreous prolapse or zonule rupture with vitreous prolapse*; these intraoperative complications are collectively termed PCR.
2. Vision Loss (doubling or worse of the visual angle) related to surgery (equivalent to a loss of three or more lines or 15 or more letters on a LogMAR chart).

These outcomes are presented as risk adjusted rates for centres, supported by relevant contextual information including surgery volume, data completeness, case complexity, access to surgery and deprivation.

The EMR data collection systems used by most contributing centres allow for real time local tracking of outcomes by surgeons and centres. This empowers them to monitor their results locally and to detect adverse signals early with a view to minimising patient harm through prompt action. The report includes additional contextual information which provides centres, surgeons and the wider NHS with secondary outcomes in terms of case complexity, access to surgery by centre, deprivation, and data completeness.

Providing risk adjusted results for centres and surgeons enables them to benchmark their own performance against their peers and acts as a prompt to reviewing practice where outcomes are less good. Our experience indicates that showing individual surgeons their performance stimulates them to be more mindful of quality generally and to improve performance where needed.

#### 1.3.1 Posterior capsular rupture

PCR is emphasised in the [NICE cataract surgery guideline \(NG77\)](#) in the context of surgical risk and is similarly used as a clinical outcome (adverse event) by the [International Consortium for Health Outcome Measurement \(ICHOM\)](#). This operative complication arises on average in approximately one operation in 100, but the risk of this event varies by as much as fifty-fold depending on preoperative risk factors associated with the patient (e.g. age) and their eye (e.g. how advanced the cataract is).

PCR is relevant as an adverse operative event because it results in a significantly higher risk of harm to the eye and may impact recovery of vision. Where PCR occurs, there is an approximate:

- 20-fold risk of a retinal detachment in the year following surgery
- 17-fold risk of acute intra-operative supra-choroidal haemorrhage
- 16-fold risk of losing  $\geq 0.6$  LogMAR from pre- to postoperatively
- 7-fold risk of post-operative endophthalmitis
- 6-fold risk of losing  $\geq 0.3$  LogMAR from pre- to postoperatively

#### 1.3.2 Vision Loss

Vision Loss from surgery is the opposite of the intended effect; these key primary outcomes together capture relevant safety elements of surgical quality. Vision Loss is emphasised in the [NICE cataract surgery guideline \(NG77\)](#) in the context of surgical risk.

Determination of Vision Loss depends on availability of VA measurements at both pre- and postoperative time points. Rates of missing VA data are thus important and are reported for centres.

The overall rates of 1.10% for PCR and 0.90% for VA Loss which are used for risk adjustment of outcomes were set in the second prospective audit year from the underlying unadjusted rate for consultant surgeons. This is the final annual report for which these will be used as the reference values as the PCR risk adjustment model has been refitted, and this new model will be implemented for the 2023-24 audit year with updated reference values.

## 2. Key Findings

### 2.1 Participation

In this report, most centres were in England (172) with four centres in Wales, and one centre from Guernsey. This report includes 135 currently EMR enabled centres and 42 centres using an in-house or bespoke data collection system. Of the 114 eligible NHS organisations in England and Wales, 73 (64.0%) are represented, plus data from nine independent sector treatment providers of NHS funded services (102 sites), one centre from Guernsey and one private provider. One NHS trust and one independent sector treatment provider (22 sites) contributed data including both NHS funded and private fee-paying surgery. Results for 177 centres are reported.

For the 2022 NHS year, 608,120 cataract operations performed using phacoemulsification were reported to NHS Digital from English centres and 16,338 operations from Welsh Local Health Boards. The audit received data for 496,031 NHS funded cataract operations performed in England and Wales using phacoemulsification, which equates to approximately 79.9% of these cataract operations during the 2022 NHS year.

Around 4% of cataract operations were excluded for a variety of reasons such as being done for indications other than visual improvement or being combined with other significant intra-ocular surgery; this left 481,530 eligible cataract operations available for analysis.

### 2.2. Data Quality

Data completeness was excellent at around 100% for the PCR outcome of reported operations as this is a compulsory operative field in the EMRs.

An eligible preoperative distance VA was recorded for 85.5% of eyes and a postoperative VA for 69.0% of eyes; 64.4% of eyes had both a preoperative and a postoperative VA measurement. There was significant variation between centres for completeness of VA data, reflecting variations in EMR use, patient pathways and service recovery after the service disruption from the COVID 19 pandemic in the 2020 NHS year.

### 2.3 Posterior Capsular Rupture

For all surgeons, 0.79% of operations were recorded as affected by PCR. This is approximately 58% lower than in 2010.

### 2.4 Vision Loss

A 'good' postoperative VA of 0.30 LogMAR (=6/12, required to drive) or better was achieved in 91.8% of eyes overall, 95.8% of eyes with no ocular co-pathology and 86.2% of eyes with a recorded co-pathology. The median preoperative VA was 0.40 LogMAR units (6/15 Snellen equivalent); the median postoperative VA was 0.10 LogMAR units (6/7.5 Snellen); and the median change in VA was a 0.30 LogMAR gain.

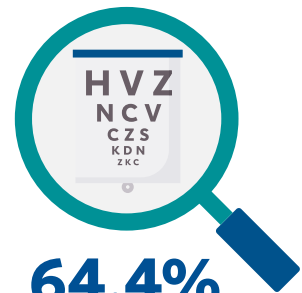


**177** centres

**481,530**

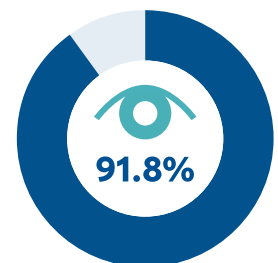
cataract operations

**79.9%** of NHS  
cataract operations  
performed in England  
and Wales



**64.4%**

VA data



A 'good' postoperative  
VA of 0.30 LogMAR or  
better was achieved in

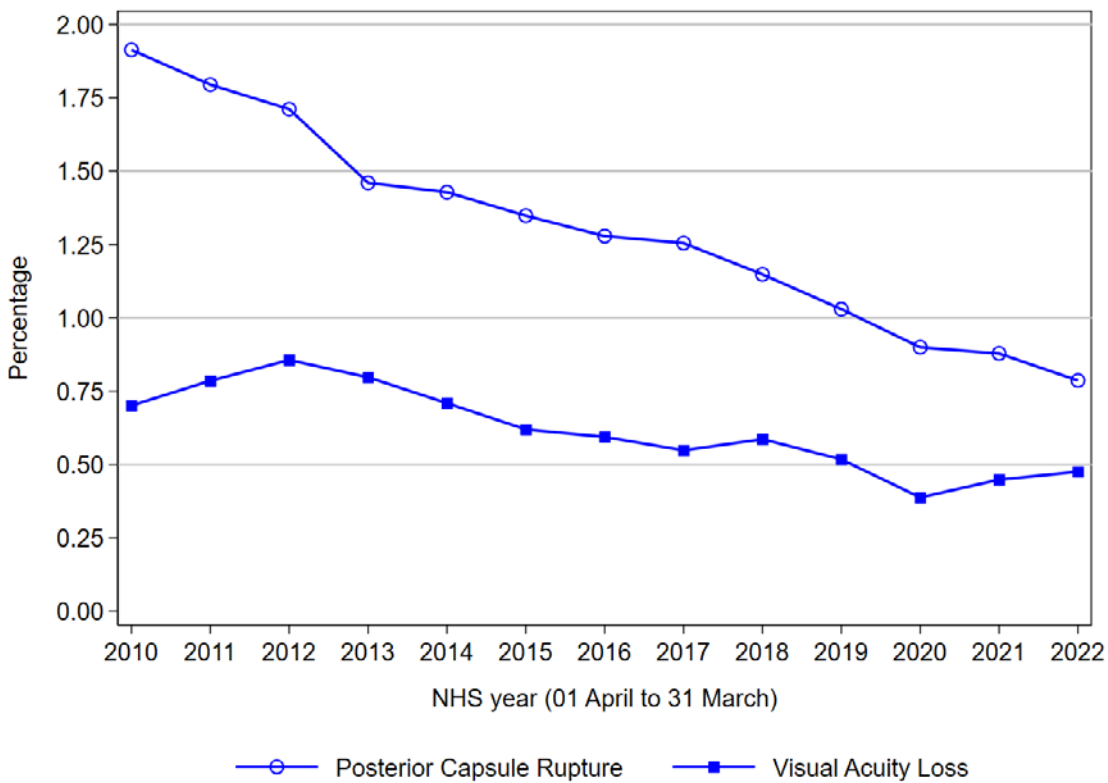
**91.8%**

of overall eyes



Overall, the assessable Vision Loss rate was 0.48%, approximately 31% lower than in 2010. The samples used for the Vision Loss results is smaller than those used for the PCR results due to missing presenting (pre-) and / or postoperative VA measurements, and because operations performed in the last two months of the audit year are not included in this analysis (as this would then require us to wait until October before extracting data to allow six months follow up time to elapse).

**Figure 1: Unadjusted PCR and VA Loss rates for each NHS year**



Over the period in table 1, not all centres have contributed data in consecutive data extractions and some centres have merged. The first audit year ran from 01 September 2015 to 31 August 2016, years 2, 3 and 4 running from the respective months in 2016/17, 2017/18 and 2018/19. Since year 5, the audit year is aligned with the NHS year, 01 April to 31 March. Centres when first submitting data will not always include data for a complete year and there is often a lead time affecting data collection once a centre adopts electronic data collection. When a centre submits data for the first time, they have the option of submitting historic data from 01 April 2010 onwards which is then used in results for historic time periods and increases the number of centres with data for an individual year.

**Table 1: Audit estimates for different NHS years where each year represents the time period of 01 April to 31 March**

	NHS year (01 April to 31 March)												
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of centres	42	49	50	54	58	71	93	103	113	125	135	162	177
Number of eligible operations	68,107	83,460	102,440	121,779	135,924	152,761	193,189	218,454	249,311	283,442	176,398	377,366	481,530
Case ascertainment (%)*	-	-	-	-	-	-	86.7	85.5	86.5	89.6	100.0	99.0	96.0
Unadjusted PCR rate (%)	1.91	1.79	1.71	1.46	1.43	1.35	1.28	1.25	1.15	1.03	0.90	0.88	0.79
The percentage with valid preoperative VA data	86.7	95.4	89.0	88.7	91.0	92.0	92.5	91.6	90.0	85.7	70.8	86.2	86.5
Number of operations for postoperative VA results	55,190	67,373	83,937	99,655	111,990	125,525	155,963	180,778	204,743	241,039	135,481	304,713	391,598
The percentage with valid postoperative VA data	68.8	71.3	72.4	73.0	74.6	76.3	76.4	76.9	75.9	73.0	60.9	67.5	69.0
The percentage with change in VA data	58.0	68.5	68.0	68.1	70.2	72.7	73.1	72.6	71.1	67.9	48.2	62.4	64.4
Number operations eligible for VA loss results	21,259	37,943	47,762	52,173	58,091	80,206	101,666	115,267	130,111	146,418	37,128	150,788	199,763
Unadjusted VA loss rate (%)	0.70	0.79	0.86	0.80	0.71	0.62	0.59	0.55	0.59	0.52	0.39	0.45	0.48

\* The estimate of the proportion of cases submitted to the audit is derived from the number of completed cataract operations supplied to NHS Digital or DHCW for the audit period. This estimation uses a pro rata calculation for a centre's denominator where the proportion of time during the audit cycle that a centre had been recording cataract operations was multiplied by the number of cataract operations supplied to NHS Digital or DHCW. The numerator was the number of operations a centre had supplied to the audit. Centres that had more operations submitted to the national audit than in the NHS Digital or DHCW data were all assumed to have a complete submission rate as the actual rate was not possible to estimate. Case ascertainment rates have not been estimated for the 2010 to 2015 NHS years due to the audit not receiving the NHS Digital or DHCW data for these years.

## 3. Summary

---

1. Over 79% of NHS funded cataract operations performed in England and Wales are now captured by the audit with strong interest in participation being expressed from both Northern Ireland and Scotland. Good progress has been made in terms of expanding the number of centres in successive audit years, with 177 centres in this report including 71 English NHS trusts, two Welsh Local Health Boards, nine independent sector treatment providers reporting 102 sites, one centre from Guernsey and one private provider.
2. Named fully qualified surgeons and centre results are available on the [NOD Audit website](#).
3. Established markers of surgical quality – PCR and Vision Loss – are used as metrics for risk-adjusted outcomes. PCR is the most important intraoperative complication and is associated with increased postoperative loss of vision. Vision Loss is intended to capture all eyes where there has been an adverse outcome, whether or not associated with PCR. For neither outcome were any surgeons or centres identified that were more than 3 standard deviations above the national threshold rate in the 2022 NHS year.
4. Overall, PCR has reduced by around 58% and Vision Loss by 31% since 2010, Figure 1 (page 9) and Table 1 (page 10). The reduction in PCR complications in cataract surgery since 2010 equates to approximately 7,000 fewer complications annually across the NHS. Cost savings from avoided PCR complications are estimated at approximately £3.5 million per annum and the avoidance of Vision Loss can have multiple benefits for a patient due to the importance of vision in daily life.
5. The proportion of eligible cataract operations reported to the audit that were performed by trainee surgeons has decreased from 21.9% in the 2018 NHS year to 11.5% in the 2022 NHS year. This is influenced by the increased representation in the database of high-volume consultant-delivered services which did not provide surgical training during this period. Both the numbers of cases available for training and the complexity of cases operated in training institutions need monitoring to safeguard training for future generations of qualified surgeons and the long-term sustainability of cataract services.
6. Case ascertainment overall, at most contributing centres, is high although there remain some notable exceptions (Appendix K, page 56 and Appendix Q, page 89).
7. Data completeness of reported surgery is excellent for PCR (100%), though less so for VA, particularly for postoperative VA. Several centres and surgeons record VA data on fewer than 60% of their cases, so cannot be evaluated for this outcome measure. The collection of this important postoperative data should generally be improved (Appendix L, page 64 shows the VA data submission rates for each centre).
8. Quality improvement drivers in this audit take the form of risk-adjusted results for surgical complications and vision loss from before to after surgery. These key measures are risk-adjusted, to acknowledge case complexity and provide credit to surgeons and centres undertaking complex work. Without conscientious completion of risk factor data, surgeons and centres run the risk of not being given credit for the complexity of the work undertaken. An important message for participants to take on board both when planning surgery and when recoding their patient notes.

9. The audit is aligned to, and is driving, the NHS digital agenda in the move toward electronic working in ophthalmology. This is exemplified by the 196 centres who have submitted data for at least 50 eligible operations in one of five NHS years' results which are listed in appendices. Data from 146 of these centres was submitted from EMR systems and from in-house databases for the remaining 50 centres. From the centres that have not yet signed-up to participate, it is known that many have not yet adopted an EMR, and some are implementing one which will then enable national audit participation. Most of these centres collect their data as part of routine clinical activity with no additional effort required for submission of data to the audit. Furthermore, the EMR audit tools allow for real time tracking of adverse surgical events locally which facilitates monitoring of complications by centres and surgeons. In the event of an adverse signal becoming apparent, timely corrective action can be taken to avoid unnecessary harm to patients and avoid centres or surgeons being identified as outliers in national audit reports going forward.

## 4. Conclusions

---

- The current report provides assurance that delivery of NHS and publicly funded cataract surgery in the 177 participating centres is of overall good quality.
- It is encouraging to note that since 2010, when this work feeding back cataract surgical results to centres and surgeons began, there has been around a 58% overall reduction in recorded PCR complications and a 31% reduction in assessable Vision Loss. Progress with quality improvement thus far is providing obvious benefits to over 7,000 patients annually in terms of reduced morbidity as well as significant NHS cost savings from avoided complications of around £3.5 million annually.
- The audit aspires to include all providers of publicly funded cataract surgical care, who are accountable to the public for the quality of services they provide. It is pleasing to note that nine independent sector treatment providers with 102 sites are included in the current report. Until all centres join, there will remain uncertainty about national cataract surgical outcomes, and the risk remains that unwarranted variation in surgical quality exists in centres not participating in national audit.
- New outcomes are being considered in order to provide a broader, more patient focused and more easily interpreted assessment of NHS service quality in cataract care.
- The service recovery since the COVID-19 pandemic is illustrated by a return to a more even proportion of operations performed in each month of the 2022 NHS year, Figure 22 (page 47). For the 2021 and 2022 NHS years, the proportion of operations performed in each month are more similar to the equivalent month's proportions for the 2018 and 2019 NHS years, than to the 2020 NHS year which was severely affected by service disruption due to the COVID-19 pandemic, Table 5 (page 47).
- The proportion of operations reported to the NOD that were performed by trainees has almost halved between 2018 and 2022. This may not be fully representative of the national situation but does represent a cause for concern for publicly funded cataract service provision which requires investment in training to be sustainable.
- Despite the overall encouraging results of the National Cataract Audit, we cannot be confident that poor visual outcomes are not being hidden by the variation between centres in the completeness of visual acuity data recording; improvements in the recording of this data would lead to less uncertainty for visual acuity results.

## 5. Recommendations

### 1. Recommendations for Patients



**1.1** Patients, carers and those with an interest in cataract surgery are encouraged to access information about the quality of cataract surgery and their local services and can view information online on the [National Ophthalmology Database Audit website](#).

**1.2** Patients whose local cataract provider is not participating in the national cataract audit could contact their hospital via the [PALS service](#) to inquire about the reasons for non-participation, and request information on the quality of outcomes to compare with national benchmarks.

### 2. Recommendations for Providers of cataract surgery



**2.1** All providers of NHS cataract surgery should submit data to the audit to publicly demonstrate their commitment to high quality care and good professional practice through participation.

**2.2.** Providers should reflect on their centre level data from this report and agree action points to drive quality improvement in their cataract service and data collection. To facilitate this, a RCOphth NOD cataract audit PowerPoint slides are available on the NOD website to facilitate centre-specific presentation of results.

**2.3.** Providers should submit complete data including all relevant risk factors for outcomes to ensure case complexity can be taken into account and results appropriately interpreted ([UK Minimum Cataract Dataset for National Audit](#)).

**2.4.** In line with the NHS Digital Agenda, providers should use electronic data collection to improve data completeness and utilise EMR audit tools for continuous real time monitoring of results for early detection and correction of possible issues.

**2.5.** Providers should review patient pathways to maximise the recording of both preoperative and postoperative VA data for every operation and should aspire to routine collection of postoperative refractive outcome data.

**2.6.** Providers should consider including [Patient Reported Outcome Measures \(PROMs\)](#) before and after surgery to quantify and validate patient benefit from surgery, as advised in the 2019 [NICE Quality standard for serious eye disorders \(QS180\)](#).

**2.7.** EMR enabled providers should review the settings on their EMR regarding mandatory data collection. Specifying mandatory collection for specific data items aids in improving data collection. Surgeon GMC number recording should be mandated as this is the legal clinical record. Trainee surgeon details on EMR should be verified annually to ensure the training grade is accurately recorded.

**2.8.** Surgeons working in non-participating centres should approach their senior management teams and emphasise the importance of participation, pointing out the benefits in terms of quality assurance, quality improvement, accountability, public perception and validation to commissioners of the service being provided.

### 3. Recommendations for Commissioners



**3.1** Commissioners should use quality focused service specification contracts with providers of cataract surgery which include submission of full data to the RCOphth NOD audit, including pre- and postoperative VA for visual outcomes. This applies to NHS providers and independent providers of NHS cataract surgery, and is part of the NHS England's 2022 Supplementary Cataract Contracting [guidance](#).

**3.2** Services where postoperative care is outsourced, e.g. to optometric practices should require return of postoperative data (VA and

refraction) to the operating centre using the data return audit tools available for such purposes.

**3.3** Cataract service providers not participating in the RCOphth NOD Cataract Audit should be asked to provide justification for non-participation. Non-participant providers should be required to undertake their own quality assurance for all surgeons and centres based on national benchmarks, as indicated in the NICE cataract surgery guideline (NG77), report the findings to commissioners and make the results of this quality assurance publicly visible.

## 4. Recommendations for the Regulators



**4.1** Regulators should expect NHS cataract service providers to participate in the NOD Cataract Audit or to provide a rationale for their decision not to participate. This is obligatory in England as the NOD Cataract Audit is included in the NHS England Quality Accounts List.

**4.2.** Regulators should access the RCOphth NOD audit results for centres and their surgeons when inspecting

NHS organisations which either commission or deliver cataract surgery services.

**4.3.** Regulators should ensure that all providers of NHS cataract surgical care are undertaking quality assurance regardless of whether they are traditional NHS centres or independent providers, even if they are not participating in the RCOphth NOD National Cataract Audit



## 6. Future of the audit

---

- The audit relies on the contribution of data and funding from participating centres augmented by donations from industry, and while this continues the RCOphth plan to continue to run the national cataract audit
- The next data extraction planned for June/July 2024 will form the basis of the eighth prospective annual NOD report
- Future NOD extractions will be conducted later in the year than at present, to allow all postoperative results to include the complete reported NHS year
- Electronic data collection for cataract surgery is being implemented in Northern Ireland with participation in the audit from Northern Irish centres commencing once EMR implementation is complete
- National procurement projects are in place in Wales and Scotland to provide centres with an EMR. This will allow participation in the NOD audits for all centres in Wales and Scotland
- Patients are undergoing cataract surgery at increasingly early stages of disease progression with better visual acuity; the RCOphth NOD is therefore committed to promoting collection of patient reported outcome measure (PROM) for cataract surgery, with feasibility studies for CatPROM5 integration into EMR currently under way
- In 2023, the RCOphth NOD published the first report from the national wet age-related macular degeneration audit. Many centres are now participating in both audits
- The RCOphth NOD have applied for section 251 exemption to allow submission of the patients NHS number which would enable linkage of data from patients presenting with complications or treated in multiple centres
- The PCR model used in case complexity adjustment in the audit has been re-fitted, and this updated model will replace the existing model for audit year 8
- The risk factor model used in case complexity adjustment for Vision Loss will be reviewed when resources allow

# Appendices

---

These appendices contain the full audit methodology and detailed findings on which the recommendations. Further information is also available on the [NOD website](#).

## Appendix A: Audit Framework

---

This report covers adult phacoemulsification cataract surgical operations recorded on:

- [Medisoft](#) EMR in use at 127 contributing centres
- [Open Eyes](#) EMR in use at six centres
- Medisoft and OpenEyes EMR used in one centre
- [Epic](#) patient record system in one centre
- In-house cataract or bespoke data collection systems used in 42 contributing centres

For the PCR outcome, the audit included all reported cataract operations performed in the period between 01 April 2022 and 31 March 2023. For the risk adjusted Vision Loss outcome, postoperative complications and postoperative visual acuity results, the reported period was 01 April 2022 to 31 January 2023 to allow time for postoperative data to become available following recovery from surgery. Inclusion and exclusion criteria are detailed in Appendix I (page 51).

Excluded were:

- Cataract operations not done by phacoemulsification
- Operations done as combined procedures along with another significant intraocular procedure (e.g. a trabeculectomy, minimally invasive glaucoma surgical procedure or a pars plana vitrectomy combined with other vitreoretinal procedures)
- Operations done on eyes previously damaged by ocular trauma
- Operations on polar cataracts
- Operations on eyes with significant congenital or developmental abnormalities
- Operations on individuals aged <18 years

Centres are identified by name in appendix tables.

# Appendix B: Methodology

---

## **B.1 Context of the data collection**

The audit data derive from routine data collection in ophthalmology departments providing cataract surgery. Most contributing centres collect this data with no additional effort required by staff due to the integration of EMR systems into the hospital eye service, while some centres without an EMR collect data does require additional effort from staff. Our approach aligns directly with, and powerfully supports the NHS digital agenda, and has catalysed a major shift towards electronic working in cataract services. Complications' data depend on surgeons recording these faithfully. Unlike mortality figures, there is no external validation of the reported complications, although cross-checks are undertaken within the extracted data, as intra-operative complications can be inferred from post-operative findings or the need for subsequent surgery.

The EMR requires the surgeon recording the operation note to specifically indicate a 'Yes / No' response to whether a surgical complication occurred. At all centres the EMR record (or its printed copy for the paper notes) constitutes the medicolegal document of the patient's operation record.

Data completeness for other aspects of care varies between centres for several reasons. Some centres only use the electronic data collection system in theatre, which limits data completeness for items normally collected in the outpatient department at pre- and postoperative visits. Accurate follow up data on VA and refraction mostly depend on patients attending their optometrist for updating of spectacles following surgery and for this information to then be returned to the hospital EMR system. Although some centres have good alternative systems to an EMR in place for optometrists to return postoperative VA and refraction measurements, and for staff at the hospital to enter the data electronically, it is to be expected that this VA outcome will be incomplete in many centres. The audit team has taken steps to enhance returns from optometrists through encouraging proactive local engagement with community optometrists, an active programme of engagement with national optometric professional bodies, and provision of a web-based data return tool for the National Cataract Audit. Centres which have newly adopted an EMR can have a 'time lag' affecting complete implementation of the software across their hospital eye service, for example due to computer availability in theatres and implementation of electronic data recording in the eye service. This can affect the data in their first submission to the audit.

## **B.2 Case ascertainment**

An estimate of the percentage of cataract operations submitted to the audit is based on the number reported centrally to NHS Digital or Digital Health and Care Wales (DHCW). This is calculated pro rata for recent joiners, as reported in Appendix K (page 56).

As the National Cataract Audit has exclusion criteria, the estimate of case ascertainment is calculated using the number of operations performed using phacoemulsification submitted to the audit before the exclusion criteria are applied.

## **B.3 Data quality and completeness**

Among the advantages of EMR data collection are compulsory collection of key data items (e.g. operative complications) and automatic range checking of variables (e.g. axial length) at the time of data entry. This improves data completeness and accuracy. In addition, the richness of EMR data provides a more complete picture of the patient and their state of health making it possible to infer important information through cross-checking.

Completeness of preoperative VA and postoperative VA outcome remain variable and an area for improvement in many centres. The audit tools include a web-based data return tool for use by community optometrists which is intended to facilitate return of postoperative data. This works best when optometrists are commissioned to undertake postoperative follow up in the community as contracting can make payment contingent upon data having been received by the surgical centre.

#### **B.4 Small numbers policy**

Centres with <50 eligible operations have not been included in this report. For estimates of vision, data from centres with <50 eligible operations with a visual acuity measurement are not included, and for postoperative data no results are produced for centres with <50 eligible operations within the postoperative period.

#### **B.5 Outliers policy**

The full audit outliers' policy is available on the NOD Audit website. From this one-year audit report data, an outlying centre or surgeon is identified where the risk-adjusted adverse event rate is above the national threshold rate plus approximately three Standard Deviations (3SD); this outlier definition is consistent with all national audits mandated by NHS England.

#### **B.6 Limitations of the data**

The NOD includes data for cataract surgery to the first treated eye, the second treated eye and in some cases immediate sequential bilateral cataract surgery (ISBCS), but for some patients the record for the first treated eye may be missing. This may arise for example if the first eye operation was performed prior to the centre adopting electronic data collection, or in a different centre. At present the NOD cannot link patients' data if collected at different centres.

When centres change data collection system during an audit year, the audit will receive data from two systems and not be able to match the records of patients with data on both systems. This will impact on the centres results, especially for visual acuity as the preoperative VA measurement could be on one system, and the postoperative VA measurement on the other system. This year the audit results do include data from three centres that changed EMR during the audit year, and the audit is aware of many other centres in the process of changing data collection systems.

Patient's age, and the calculation of the index of multiple deprivation data rely on data entered directly onto the Hospital's Patient Administration System (PAS), which links into EMR systems, hence if this data is not recorded in the PAS it is not present in the data extract for EMR enabled centres with PAS connections. Centres using in-house databases can supply this data if they match their clinical data to the national indices before submitting to the audit. Deprivation data was available for most operations recorded on the Medisoft EMR system, and from one in-house database centre, but not for the other sources of data. The RCOphth NOD is working with providers of EMR systems to facilitate the inclusion of deprivation data during extraction, and the audit has provided information to non-EMR centres on how they can submit deprivation data without transferring the patients' postcode.

# Appendix C: Definitions

---

## C.1 Dataset

A [minimum cataract dataset](#) has been defined for purposes of the audit. These variables include those required for case complexity adjustment of outcomes.

## C.2 Surgeon grade

The grade of surgeon was categorised as consultant surgeons, career grade non-consultant surgeons (associate specialists, staff grade and trust doctors), experienced trainee surgeons (fellows, registrars, speciality registrars years 3 – 7 and specialty trainees years 3 – 7) and less experienced trainee surgeons (SHO, specialty registrars years 1 – 2, specialty trainees years 1 – 2 and foundation doctors years 1 – 2).

## C.3 Posterior Capsule Rupture (PCR)

Posterior capsular rupture (PCR) is defined for the purposes of the National Audit as “posterior capsule rupture with or without vitreous prolapse or zonule rupture with vitreous prolapse” and abbreviated as PCR. It should be noted that the definition excludes zonule dehiscence where no vitreous prolapse has occurred. PCR is thus intended to capture significant breach of the lens-zonule barrier. Detailed criteria for case definitions is in Appendix I (page 51) and on the [audit website](#).

## C.4 Visual Acuity (VA)

VA definitions used were designed to maximise the usefulness of the available data with specified ‘time windows’ for pre- and postoperative measurements and criteria for preferred choices in terms of corrected VA, unaided VA and pin hole corrected VA. The detailed criteria is in Appendix I (page 51) and on the [audit website](#) along with interpretations for levels of VA. The percentage of eyes with VA data for each centre and different time windows are given in Appendix U (page 114).

## C.5 Mixed effects modelling of PCR and Vision Loss

The categorisation of each covariate under investigation in the PCR and Vision Loss mixed effects logistic regression models are detailed for registered users on the [NOD Audit website](#) with operations performed in the four-year period 2011-12 to 2014-15 NHS years used to develop the current models.

The risk adjustment model equations for PCR and Vision Loss respectively were applied to the audit data for the respective results in this report where the case mix adjusted graphs have 95% and 99.8% error lines displayed which are created from the overall consultant rates observed in previous years, these values are 1.1% for PCR and 0.9% for Vision Loss. The audit stipulates that at least 50 eligible operations are required for a centre or surgeon result, and at least 60% of operations with both pre- and postoperative VA data are required to report a result for Vision Loss. On the centre level case mix adjusted funnel plots, data for all surgeons is included (i.e. including trainee surgeons whose results are risk adjusted accordingly).

## C.6 Case complexity index

Based on the risk prediction models a case complexity index is provided for each centre. This is taken as the overall predicted probability of an adverse outcome based on the reported case complexity for the centre. Separate complexity indices are provided for PCR and Vision Loss.

# Appendix D: Detailed Results

---

## D.1 Case ascertainment

In total, 502,183 operations were submitted to the audit by 180 centres, of which 499,662 (99.5%) were performed using phacoemulsification. The estimate of case ascertainment is made by comparison with data from NHS Digital and DHCW. Three centres were excluded from the cataract audit analyses due to supplying <50 eligible operations, two centres are not subject to reporting to either NHS Digital or DHCW and 18 centres did not have any data available from NHS Digital.

The overall case ascertainment for the 157 centres eligible and where case ascertainment could be estimated was 96.0%. The case ascertainment rate was >90% for 143 (91.1%) centres. The range in the percentage of cases submitted to the audit was 3.5% to 100%, Appendix K (page 56), and the case ascertainment for centres for the 2018 - 2022 NHS years is in Appendix Q (page 89).

Of the 502,183 operations submitted for the 2022 NHS year, 20,595 (4.1%) operations are excluded from analysis and a further 58 operations from three centres are excluded due to these centres submitting data for <50 eligible operations; the eligibility information is on the RCOphth NOD Audit website: NOD Audit Eligibility Criteria. This left 481,530 operations performed in 177 participating centres eligible for analysis. The operations were performed on 239,281 (49.7%) left eyes and 242,249 (50.3%) right eyes from 367,515 patients.

Of the eligible cataract operations, 477,340 (99.1%) were performed in English centres, 3,679 (0.8%) in Welsh centres and 511 (0.1%) in Guernsey. From the 481,019 operations performed in England or Wales, 165,983 (34.5%) were performed in traditional NHS centres, 311,927 (64.9%) as NHS funded surgery in ISTC sites, and 3,109 (0.7%) were private fee-paying operations.

## D.2 Surgeons

The 481,530 eligible operations were performed by 2,312 surgeons where;

- 1,244 consultant surgeons performed 406,620 (84.4%) operations
- 217 career grade non-consultant surgeons performed 19,397 (4.0%) operations
- 807 more experienced trainee surgeons performed 49,615 (10.3%) operations
- 151 less experienced trainee surgeons performed 5,898 (1.2%) operations

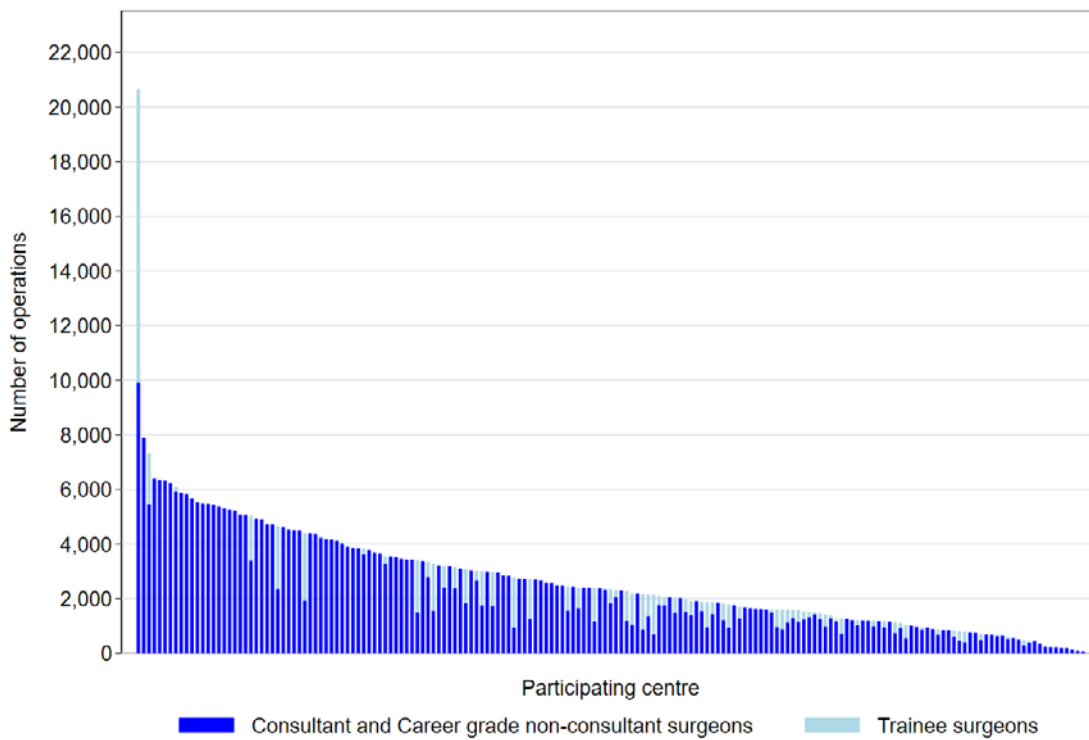
The percentage of operations performed by each grade of surgeon varied between contributing centres reflecting catchment area, NHS trust differences and training opportunities for junior trainee surgeons within England and Wales, Appendix K (page 56) and Figures 2 and 3 (page 24).

The median number of operations each surgeon had performed was 65 operations (IQR; 24 – 144: range; 1 – 7,279). For comparison, the median number of operations per surgeon was 65, 67, 34 and 57 in the 2018, 2019, 2020 and 2021 NHS years respectively. In the 2022 NHS year, 102 surgeons had data for >1,000 operations, one surgeon had all their data from NHS trusts, 61 surgeons had all their data from ISTC sites and 40 surgeons' data from both NHS trusts and independent sector treatment provider sites. In the 2022 NHS year, 1,343 (58.1%) surgeons performed  $\geq 50$  eligible operations, for comparison these percentages were 57.9%, 59.4%, 37.9% and 53.6% for the 2018, 2019, 2020 and 2021 NHS years respectively. Of the 969 (41.9%) surgeons with <50 operations, 492 (50.8%) were consultants or independent non-consultant surgeons, 465 (48.0%) were trainee surgeons and 12 (1.2%) had data as both a trainee and a consultant or independent non-consultant surgeon.

Of the 2,312 surgeons, 1,479 (64.0%) surgeons were male, 821 (35.5%) surgeons were female and the gender was unknown for 12 (0.5%) surgeons. 414 (17.9%) surgeons had data for operations performed in two participating centres, 67 (2.9%) in three participating centres and 137 (5.9%) in four or more centres, with 41 surgeons having data for >10 centres, eight surgeons having data for  $\geq 20$  centres and two surgeons with data for  $\geq 30$  centres. Of the 41 surgeons with data for >10 centres, 18 surgeons had data from one NHS trust and all their other centres were all ISTC sites, and 23 surgeons had all their data only from ISTC sites. Six of the eight surgeons with data for  $\geq 20$  centres had data from only one NHS trust with all their other centres as ISTC sites, the other two surgeons had all their data from ISTC sites. For two surgeons with data for  $\geq 30$  centres, one surgeon had data for 32 different ISTC sites and no NHS trusts, and one surgeon had data for 34 different ISTC sites and one NHS trust.

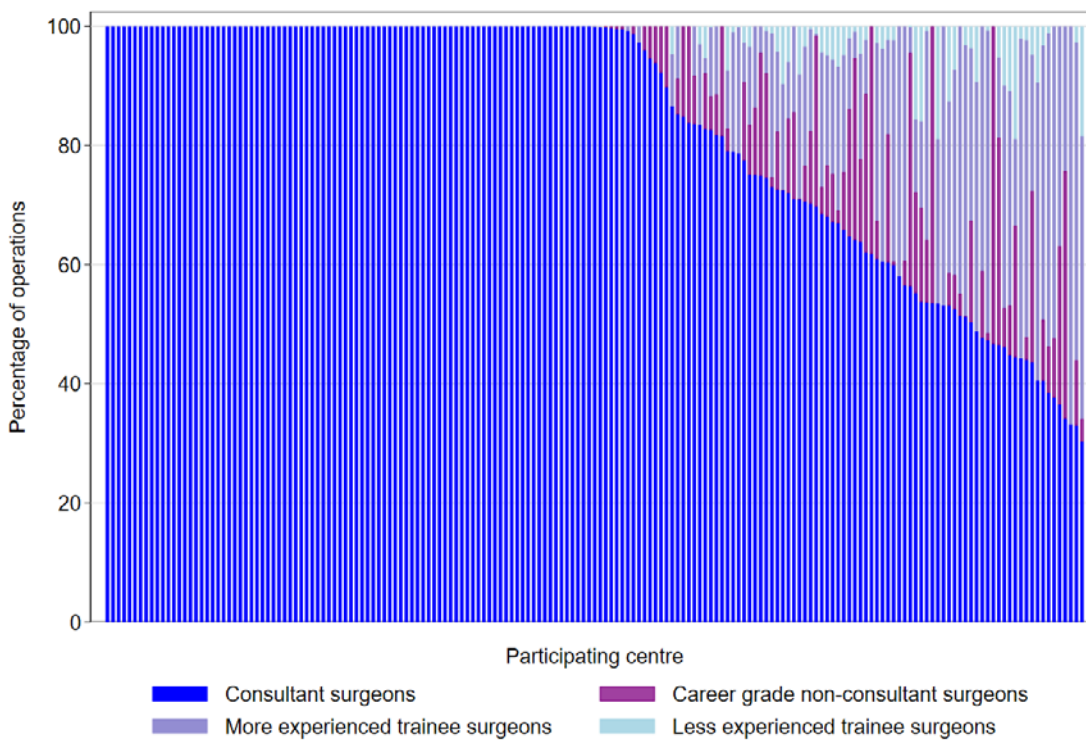
The percentage of operations performed by consultant surgeons has increased since the 2018 NHS year from 70.5% to 84.4% in the 2022 NHS year. This increase is partly due to higher representation from the ISTC who did not provide training during these NHS years. Consequently, the percentage of operations performed by trainee surgeons has decreased by around 47% since 2018, where 21.9% of operations were performed by trainee surgeons compared to 11.5% in 2022. The proportion of operations performed by male and female surgeons was consistent across the 2018 – 2022 NHS years. As the 2020 NHS year matches the period of service disruption due to COVID-19, this led to a higher proportion of surgeons with data for <50 eligible operations and a lower proportion with  $\geq 50$  eligible operations. The 2022 NHS year proportion of surgeons with data for <50 and  $\geq 50$  eligible operations are more similar to the 2021 NHS year and to the pre-2020 NHS year proportions (2018 and 2019 NHS years) indicating some element of service recovery since COVID-19 severely disrupted services in 2020. The number of surgeons with data for >1,000 operations has increased over the 2018 – 2022 NHS years. For the 2022 NHS year, approximately eight times more surgeons had data for >1,000 eligible operations than in the 2018 NHS year, and four-times more than in the 2020 NHS year, Appendix O (page 86). The increase in the number of surgeons with data for >1,000 eligible operations is partly due to representation from the ISTC where most of the high-volume surgeons have data for.

**Figure 2: The number of eligible operations supplied to the national cataract audit for each contributing centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 3: The percentage of eligible operations performed by each grade of surgeon for each contributing centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023



### **D.3 Patient characteristics – age and gender**

Summary details of the 367,515 patients undergoing cataract surgery in the 2022 NHS year were as follows:

- 152,957 (41.6%) patients were men
- 210,555 (57.3%) patients were women
- The gender was not recorded for 4,002 (1.1%) patients
- One patient's gender was recorded as indeterminate / anticipated sex change
- The ethnicity was not recorded for 174,796 (47.6%) patients
- Patient characteristics were very similar for first treated and second treated eyes

### **D.4 First eye, second eye and ISBCS eyes**

All cataract operations performed could be in either the patient's first or second treated eye unless ISBCS was performed. The audit may not have the record for both operations or the first treated eye could have had the operation at another centre or prior to electronic data collection within a centre, or the data for the first and second eye operations could be recorded on different EMR systems used within a centre. For these reasons, no results on time between operations are provided in this report.

Results for first treated, second treated and ISBCS eyes are described below.

First treated eye cataract surgery;

- First eye cataract surgery was performed for 280,357 (58.6%) operations
- The median age at first treated eye surgery was 76.0 years (IQR; 69.4 – 81.5)
- 29,023 (10.4%) patients were recorded as having diabetes mellitus at the time of their first cataract operation
- 3,453 (1.2%) patients were recorded as unable to lie flat
- 6,601 (2.4%) patients were recorded as unable to cooperate during the operation
- 6,119 (2.2%) patients were operated on under general anaesthesia, combined with local and/or topical for 5,528 patients

Second treated eye cataract surgery;

- Second eye cataract surgery was performed for 197,887 (41.4%) operations
- The median age at second treated eye surgery was 76.7 years (IQR; 70.7 – 82.2)
- 21,974 (11.1%) patients were recorded as having diabetes mellitus at the time of their second treated eye surgery
- 2,034 (1.0%) patients were recorded as being unable to lie flat
- 5,218 (2.6%) patients were recorded as being unable to cooperate during the operation
- 4,462 (2.3%) patients were operated on under general anaesthesia, combined with local and/or topical for 4,137 patients

## ISBCS eyes;

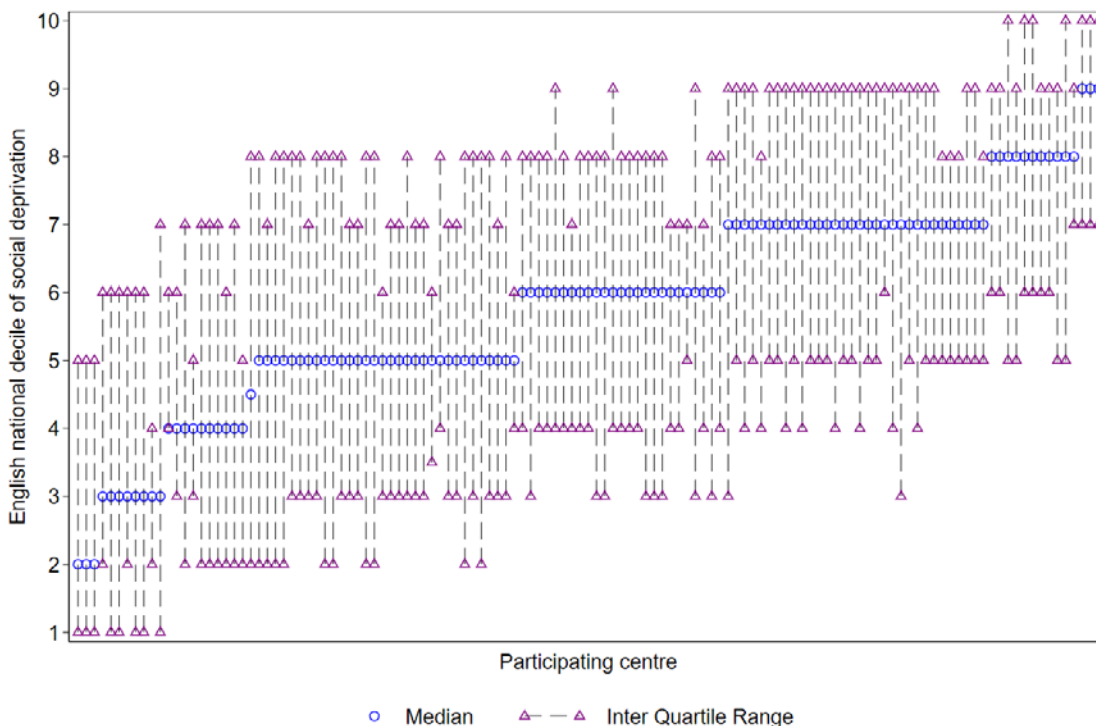
- ISBCS was performed for 1,643 patients by 295 surgeons from 64 centres
- The same surgeon performed the operation to both eyes for 1,458 (88.7%) patients
- A trainee surgeon performed 324 (19.7%) of the operations, and for 90 (5.5%) patients a trainee surgeon performed both eye operations
- The median age was 73.7 years (IQR; 66.0 – 79.6), with no difference between male or female patients (mean age in years; 72.6 for males vs. 71.7 for females)
- 710 (43.2%) patients were male, 931 (56.7%) were female and the gender was not recorded for 2 (0.1%) patients
- 204 (12.4%) patients were recorded as having diabetes mellitus
- 50 (3.0%) patients were recorded as being unable to lie flat
- 42 (2.6%) patients were recorded as being unable to cooperate during the operation
- 164 (10.0%) patients were operated on under general anaesthesia, 141 combined with local or topical anaesthesia

The patient's age, proportions for gender, those who could lie flat and cooperate with surgery were similar in each NHS year for first eye surgery patients and second eye surgery patients. Differences were observed for the proportion of patients with diabetes mellitus and the proportion of patients having surgery under general anaesthesia which are both showing signs of decreasing over the NHS years. There were differences for ISBCS patients across the NHS years for the proportion of patients who could lie flat and cooperate with surgery which have variable proportions over the NHS years, partly due to small samples of patients in the earlier NHS years. The largest difference for ISBCS patients across the NHS years was for the use of general anaesthesia which was 38.2% and 44.7% for the 2018 and 2019 NHS years which are the two pre-COVID 19 NHS years. This proportion reduced to 9.0% in the 2020 NHS year, and around 10% since, indicating that a change to practice made during the COVID 19 service disruption has remained since, Appendix P (pages 87).

### **D.5 Index of multiple deprivation**

The English index of multiple deprivation was calculated for 265,984 (97.8%) patients from 125 participating English centres, with data recorded on the Medisoft EMR for 124 centres and an in-house database for one centre. All but two centres performed cataract surgery on patients in the most deprived national decile of social deprivation (decile 1) and all but two centres performed cataract surgery on patients in the least deprived national decile of social deprivation (decile 10). The median English national decile of social deprivation for patients undergoing cataract surgery varied significantly between centres, confirming that there was variation between the participating centres in the social deprivation status of patients undergoing cataract surgery, Figure 4 (page 27). The index of multiple deprivation was not calculable for operations from the other contributing data collection systems or from the contributing Welsh and Channel Island centres where different indices are used.

**Figure 4: Median and IQR national deciles of social deprivation by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

### D.6 Preoperative Visual Acuity (VA)

From the 481,530 eligible cataract operations a preoperative VA was recorded for 416,311 (86.5%) operations and missing for 65,219 (13.5%) operations, of which 2,937 (0.6% of all operations) had a Pin Hole VA (PHVA) measurement and no Corrected Distance VA (CDVA) or Uncorrected Distance VA (UDVA) operations.

There was wide variation in the percentage of eyes with a preoperative VA by contributing centre, where 13 (7.3%) centres had <50% of eyes with preoperative VA data (including two centres with no preoperative VA data), for 133 (75.1%) centres more than 80% of eyes had a preoperative VA and for 84 (47.5%) centres more than 95% of eyes had a preoperative VA, Figure 5 (page 29).

For comparison with this 86.5% the overall percentage of eyes with a preoperative VA, the proportions were 90.0%, 85.7%, 70.8% and 86.2% for the 2018, 2019, 2020 and 2021 NHS years respectively. The percentage of eligible operations with a preoperative VA for contributing centres and NHS years is in Appendix S (page 98).

From the 416,311 eyes with a preoperative VA measurement from 175 centres, the VA measurement was CDVA in 294,439 (70.7%) eyes, UDVA in 114,601 (27.5%) eyes and in 7,271 (1.8%) eyes the CDVA measurement was the same as the UDVA measurement.

The median preoperative VA was 0.40 LogMAR units (6/15 Snellen equivalent), and the range was -0.30 to NPL (6/3 to NPL Snellen equivalent); where 11,154 (2.7%) eyes were CF, 8,919 (2.1%) eyes were HM, 2,252 (0.5%) eyes were PL and 161 (<0.1%) eyes were NPL. The median preoperative VA was 0.40 LogMAR units for eyes operated on by qualified surgeons, and 0.50 LogMAR units for eyes operated on by trainee surgeons.

The preoperative VA was 0.30 LogMAR units (6/12) or better for 168,522 (40.5%) eyes, 0.60 LogMAR units (6/24) or better for 314,714 (75.6%) eyes and 1.0 LogMAR units (6/60) or better for 378,649 (91.0%) eyes.

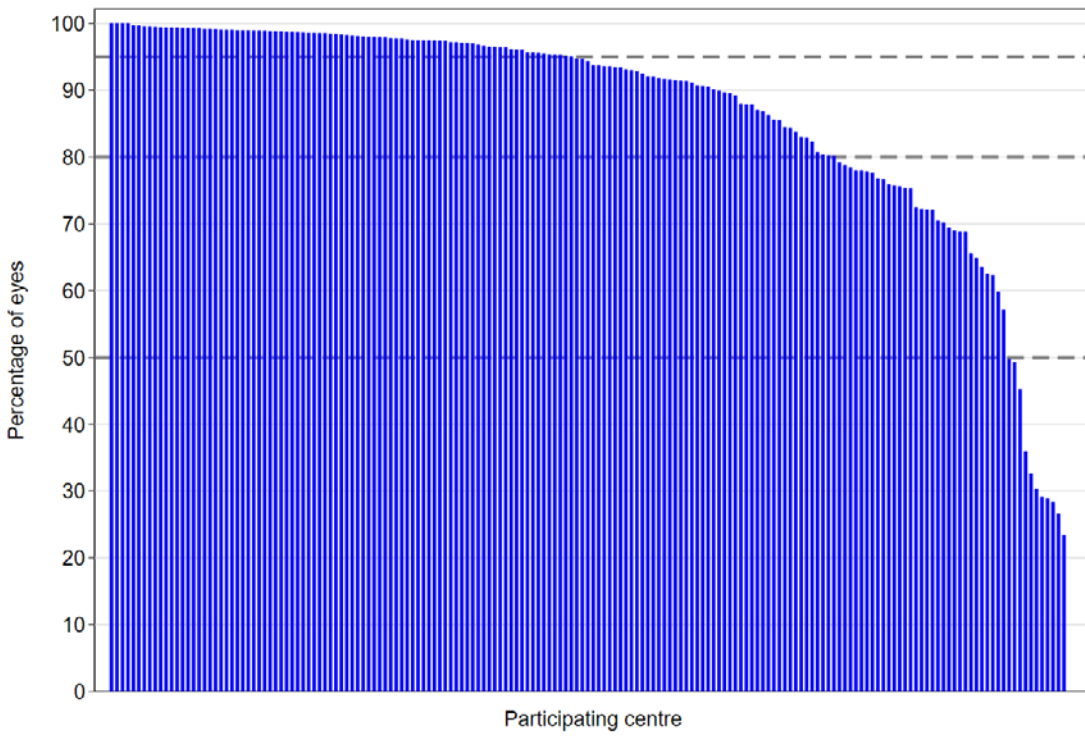
There was variability in the preoperative VA between contributing centres, where for 52 (29.7%) centres the median preoperative VA was 0.50 LogMAR (6/19 Snellen equivalent) and the range in the centres median preoperative VA was 0.00 to 0.80 LogMAR (6/6 to 6/38 Snellen equivalent), Figure 6 (page 29). For 169 (96.6%) centres, the median preoperative VA was between 0.30 and 0.60 LogMAR.

Deprivation is recognised as an influential factor on the ability of individuals to access care for a variety of conditions. Here we have used preoperative VA as a proxy for cataract severity to assess whether deprivation is (or is not) related to timely access to surgery before symptoms of vision loss become advanced. On this basis variation is observed across the Index of Multiple Deprivation (IMD) as demonstrated on Figure 7 (page 30) and Table 2 (page 30), where there is association between higher levels of deprivation and worse preoperative VA, for example 21.9% of the patients in the most deprived decile (decile 1) had a preoperative VA of  $\geq 1.00$  LogMAR, compared to 10.1% of patients in the least deprived decile (decile 10).

For 94,546 patients who had both eyes undergo cataract surgery during the 2022 NHS year with a preoperative VA measurement for both eyes (excluding ISBCS patients), the mean presenting VA was 0.15 LogMAR units worse (95% CI: 0.148 to 0.154 LogMAR) for the first treated eye than for the second treated eye (means = 0.55 (6/21) and 0.40 LogMAR (6/15) respectively,  $p < 0.001$ ). This implies that first eye surgery is generally undertaken at a more advanced stage of cataract than second eye surgery.

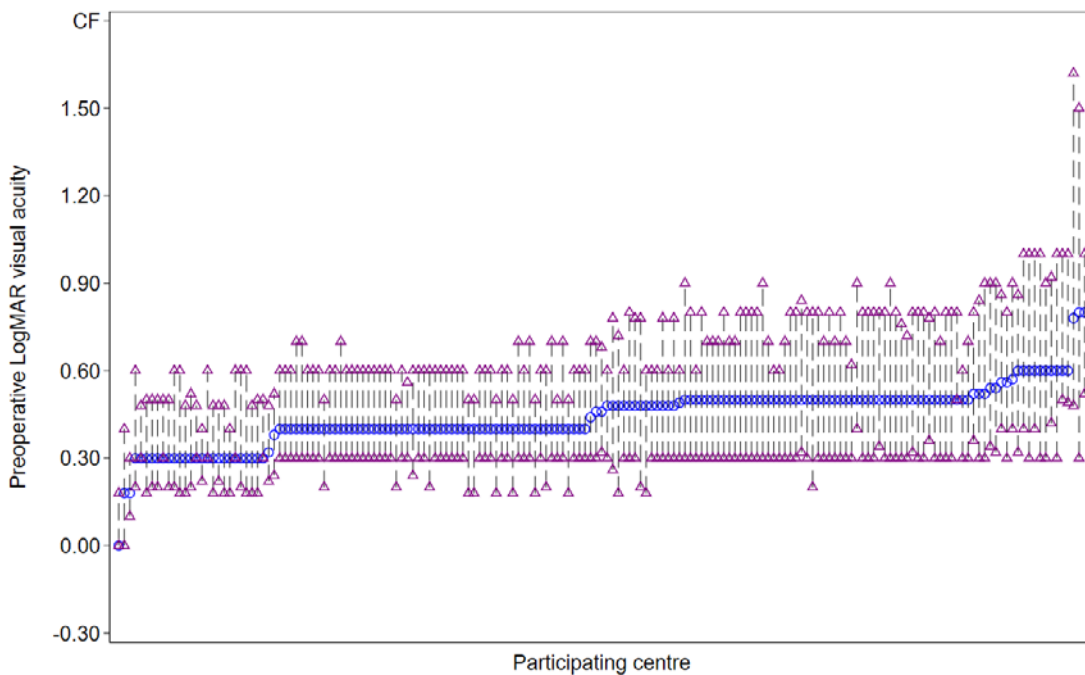
For 1,523 ISCBS patients with a preoperative VA measurement for both eyes, the median difference in the VA between the better and worse vision eye was 0.00 LogMAR units, and for 557 (36.6%) patients the preoperative VA was the same in both eyes.

**Figure 5: The percentage of cataract operations supplied to the audit with a valid preoperative VA by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

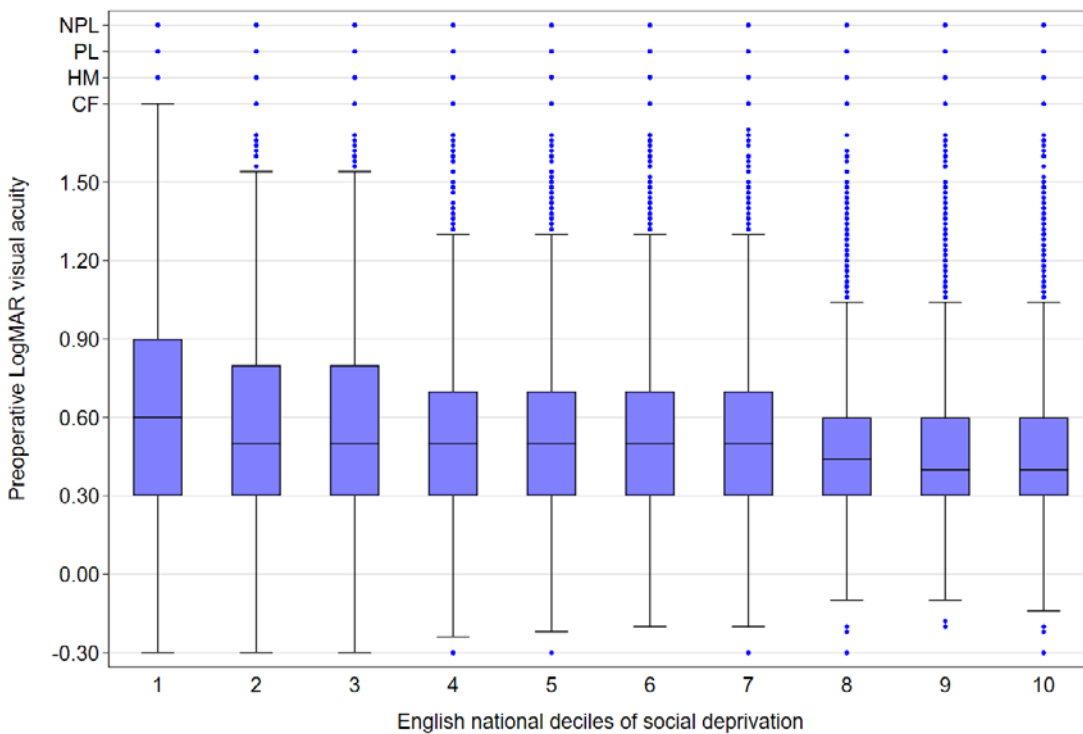
**Figure 6: Median and IQR for preoperative VA by participating centre – ordered by median preoperative VA**



○ Median    ▲ — ▲ Inter Quartile Range

The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 7: Box and whisker plots of preoperative VA by national deciles of social deprivation**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Table 2: Preoperative visual acuity and social deprivation where decile 1 is the most deprived decile and decile 10 the least deprived**

Decile of social deprivation	N	Preoperative LogMAR visual acuity			
		<0.30	0.30 – <0.60	0.60 – <1.00	≥1.00
1 (most deprived)	21,581	11.8	37.5	28.8	21.9
2	21,047	12.6	39.7	27.3	20.4
3	21,404	13.6	42.3	26.5	17.6
4	22,885	14.8	43.8	25.2	16.2
5	24,408	15.3	45.3	25.1	14.3
6	25,486	16.0	45.7	24.6	13.7
7	26,505	16.7	46.1	24.7	12.6
8	27,075	17.1	47.7	23.4	11.8
9	27,208	18.1	47.6	23.2	11.1
10 (least deprived)	27,580	18.4	48.8	22.7	10.1
<b>Overall</b>	<b>238,248</b>	<b>15.7</b>	<b>44.8</b>	<b>25.0</b>	<b>14.6</b>

## D.7 Ocular co-pathologies and risk factors

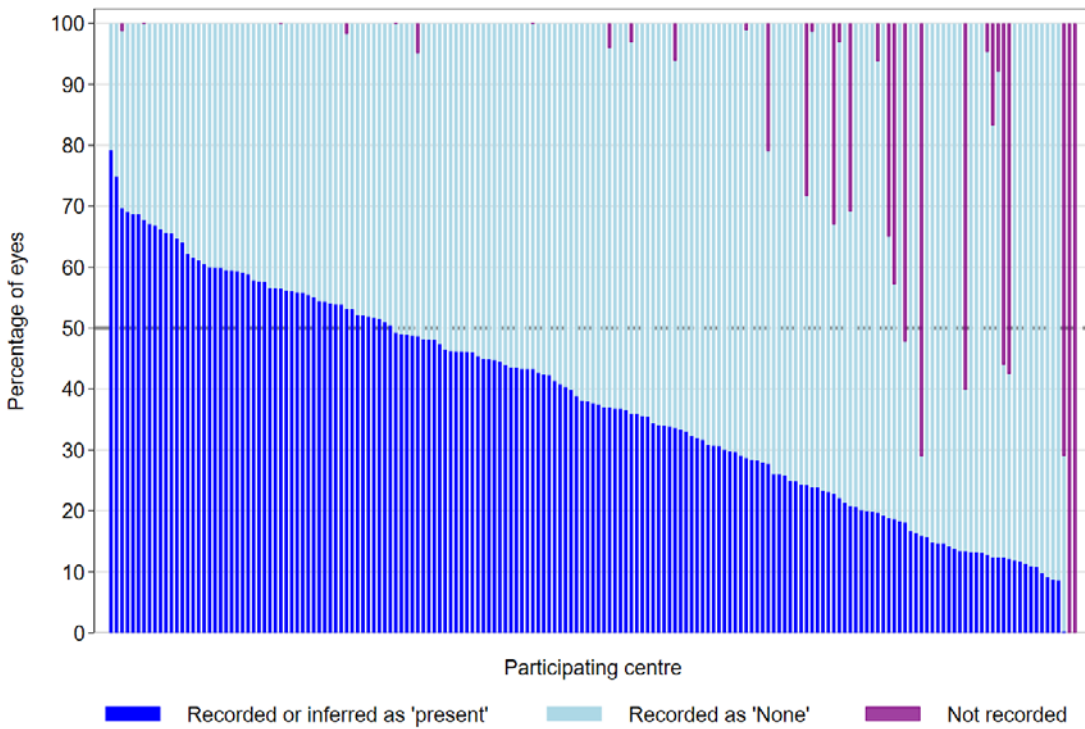
The presence or absence of an ocular co-pathology or known risk factor was recorded for 94.0% of operated eyes and was not recorded for 6.0% of eyes. Assuming that the not recorded ocular co-pathology or known risk factors are 'none', then an ocular co-pathology or known risk factor was present in 170,902 (35.5%) eyes and recorded as absent (or not recorded) for 310,628 (64.5%) eyes.

The percentage of eyes with ocular co-pathology or known risk factor data recorded (any, none or not recorded) varied between centres, where the percentage of eyes reported to have any ocular co-pathology ranged between centres from 0.0% to 79.1%, and 52 (29.4%) centres had >50% of operated eyes with an ocular co-pathology, Figure 8 (page 32). Two centres had all operations submitted with a not recorded ocular co-pathology.

The most recorded ocular co-pathologies were age-related macular degeneration, Corneal pathology, unspecified 'other', and glaucoma, which were recorded for 7.4%, 7.1%, 5.6% and 5.6% of operations respectively, Figure 9 (page 32). Consultant surgeons performed >60% of operations with each individual co-pathology, Figure 10 (page 33).

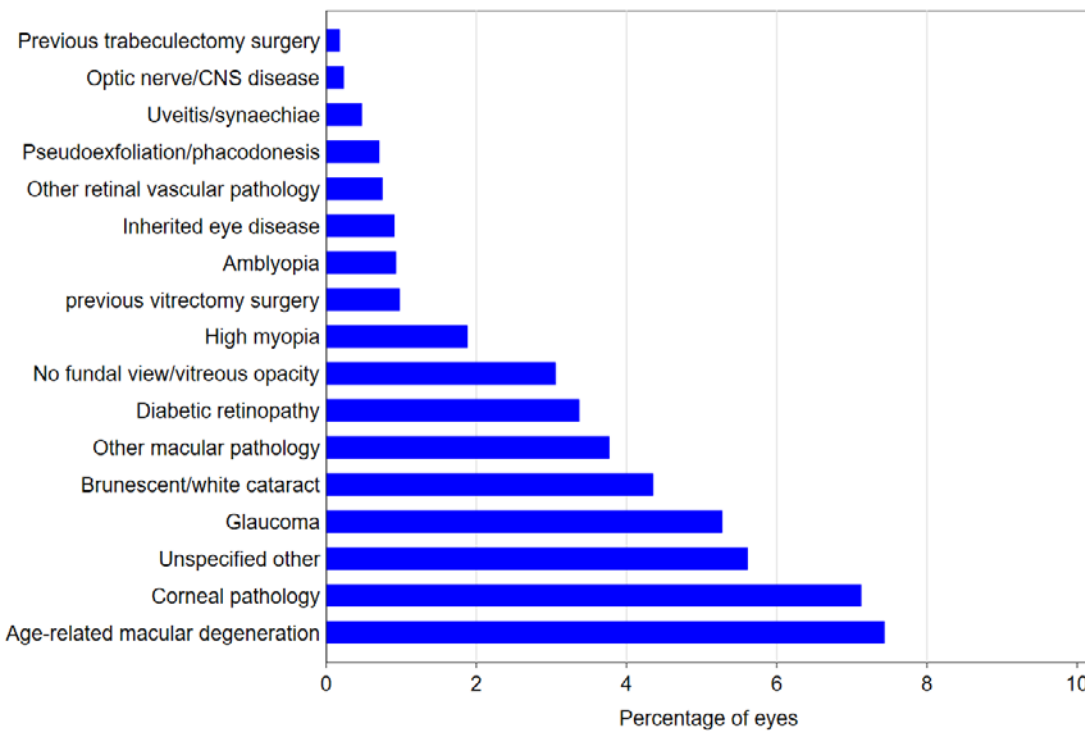
Variation between centres in the percentage of eyes with any ocular co-pathology or known risk factor exists in each NHS year, Appendix Q (page 89). The percentage of eyes with each of the individual ocular co-pathology or known risk indicators has been consistent for some co-pathologies and variable for others across the 2018 – 2022 NHS years, Appendix R (page 97).

**Figure 8: Percentage of cataract operations supplied to the audit according to recorded ocular co-pathology or known risk factor data by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

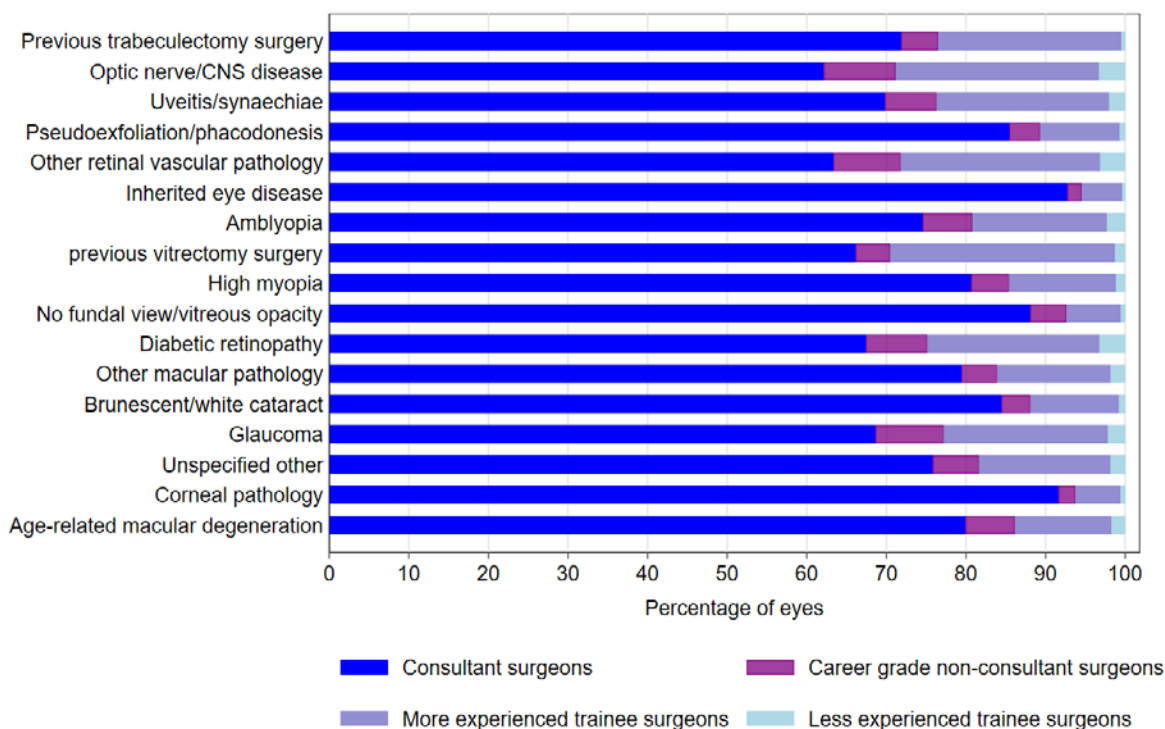
**Figure 9: Percentage of cataract operations supplied with individual ocular co-pathologies or known risk factor**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023



**Figure 10: The percentage of cataract operations supplied to the audit with individual ocular c o-pathologies or known risk factor by grade of surgeon**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

### D.8 Operation characteristics

Phacoemulsification ± IOL was the only operative procedure performed for 459,151 (95.4%) operations, was combined with one other procedure in 20,239 (4.2%) operations, and with ≥2 other procedures in 2,140 (0.4%) operations.

The most frequently performed operative procedures combined with phacoemulsification ± IOL were insertion of pupil ring expander, intraoperative phenylephrine and anterior vitrectomy, which were performed in 1.4%, 0.9% and 0.5% of operations respectively. A full list of operative procedures combined with phacoemulsification ± IOL is in Appendix V (page 122).

### D.9 Operative complications

One or more intraoperative complication was recorded for 7,642 (1.6%) operations, with the most frequently recorded being PCR which was reported for 3,786 (0.8%) operations. The ‘any’ intraoperative complication rates were higher for the less experienced grade of surgeons, while the rates for individual intraoperative complications were similar across the grades of surgeon for most intraoperative complications, with some exceptions where higher rates were observed for less experienced grades, Table 3 (page 35).

## D.10 Case complexity adjusted PCR results

Unadjusted for case complexity PCR rates for the 177 participating centres are shown in Figure 11 (page 36) and an adjusted for case complexity graph in Figure 12 (page 36). No participating centres were outliers in the 2022 NHS year. Details of the unadjusted and adjusted for case complexity PCR results for the 177 participating centres is in Appendix N (page 78), along with a case complexity index which is the overall predicted probability of PCR for all the cases reported for each centre. The case complexity adjusted PCR rate for contributing centres in the 2018 – 2022 NHS years is in Appendix T (page 106).

Displayed on the public section of the [audit website](#) will be case complexity adjusted PCR results for participating centres and fully qualified surgeons (consultants and career grade non-consultants) with at least 50 eligible operations.

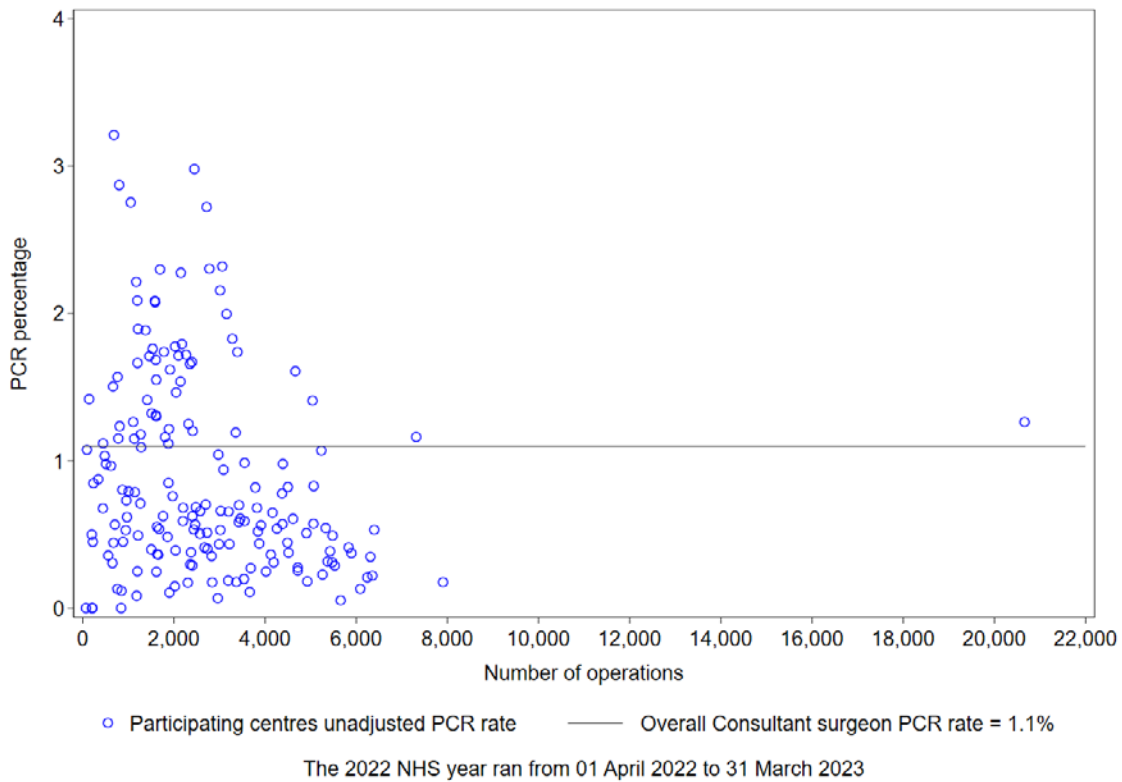
Posterior capsular rupture (PCR) is defined for the purposes of the National Cataract Audit as “posterior capsule rupture with or without vitreous prolapse or zonule rupture with vitreous prolapse” and abbreviated simply as PCR. Retained lens fragments in the vitreous implies PCR.

**Table 3: Recorded Intraoperative complications for cataract operations for the 2022 NHS year by grade of surgeon**

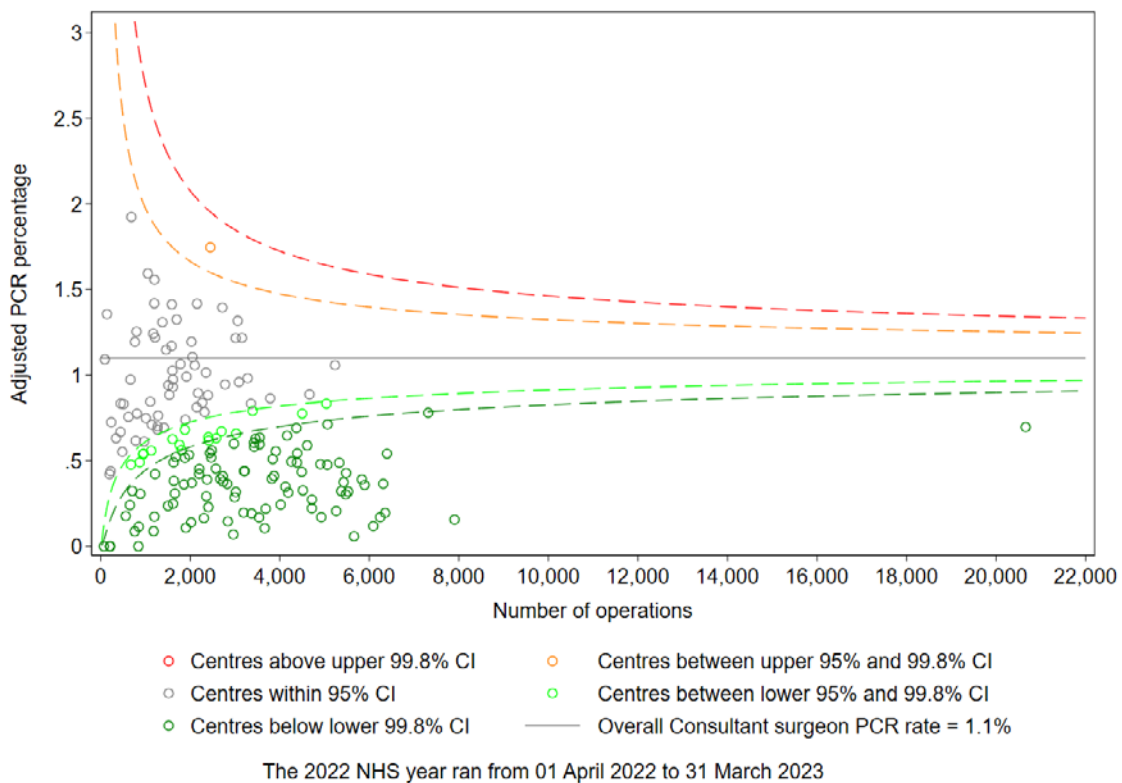
Intraoperative complications N (column %)	Consultant surgeons (N = 406,620)	Career grade non-consultant surgeons (N = 19,397)	More experienced trainee surgeons (N = 49,615)	Less experienced trainee surgeons (N = 5,898)	Total (N = 481,530)
Eyes with no complications	4,888 (1.2)	593 (3.1)	1,866 (3.8)	295 (5.0)	7,642 (1.6)
Eyes with ≥1 complication	401,732 (98.8)	18,804 (96.9)	47,749 (96.2)	5,603 (95.0)	473,888 (98.4)
<b>Recorded intraoperative complications*</b>					
Posterior capsular rupture	2,456 (0.6)	315 (1.6)	878 (1.8)	137 (2.3)	3,786 (0.8)
Zonule rupture – no vitreous loss	512 (0.1)	62 (0.3)	217 (0.4)	25 (0.4)	816 (0.2)
Corneal epithelial abrasion	254 (<0.1)	41 (0.2)	91 (0.2)	30 (0.5)	416 (<0.1)
Torn iris / damage from the phaco	224 (<0.1)	44 (0.2)	93 (0.2)	12 (0.2)	373 (<0.1)
Anterior capsular tear	180 (<0.1)	15 (<0.1)	146 (0.3)	9 (0.2)	350 (<0.1)
Iris prolapses	136 (<0.1)	14 (<0.1)	113 (0.2)	15 (0.3)	278 (<0.1)
Lens exchange required / other IOL problems	138 (<0.1)	22 (0.1)	47 (0.1)	9 (0.2)	216 (<0.1)
Iris trauma	130 (<0.1)	7 (<0.1)	70 (0.1)	0 (0.0)	207 (<0.1)
Endothelial damage / Descemet’s tear	125 (<0.1)	21 (0.1)	52 (0.1)	8 (0.1)	206 (<0.1)
Hyphaema	92 (<0.1)	10 (<0.1)	23 (<0.1)	1 (<0.1)	126 (<0.1)
Corneal oedema	67 (<0.1)	6 (<0.1)	32 (<0.1)	6 (0.1)	111 (<0.1)
Choroidal / suprachoroidal haemorrhage	57 (<0.1)	3 (<0.1)	5 (<0.1)	1 (<0.1)	66 (<0.1)
Phaco burn / wound problems	33 (<0.1)	7 (<0.1)	17 (<0.1)	5 (<0.1)	62 (<0.1)
Unspecified other**	944 (0.2)	85 (0.4)	255 (0.5)	52 (0.9)	1,336 (0.3)

\*Each operation can have more than one intraoperative complication recorded. \*\*The unspecified other included one corneal burn, two incorrect IOL implanted, four vitreous haemorrhages, 18 decentred IOLs and 27 instances when the operation was cancelled.

**Figure 11: Unadjusted for case complexity PCR funnel plot for participating centres**



**Figure 12: Adjusted for case complexity PCR funnel plot for participating centres with confidence intervals (CI)**



## D.11 Postoperative complications

To submit postoperative complication data to the audit there needs to be enough time after the operation for patients to receive postoperative follow-up. Therefore, the audit reports on operations performed in the first 10 months of the NHS year (before 31 January). This allows the potential for two months' follow-up.

Of the 481,530 eligible cataract operations submitted to the audit, 391,679 (81.3%) operations from 176 centres were performed before 31 January 2023 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying time and data from four centres (81 operations) are excluded due to these centres having <50 eligible operations in the postoperative qualifying time period. This left 391,598 eligible operations from 172 centres available for postoperative complication results. No postoperative complication data was recorded for 233,455 (59.6%) operations, for 133,364 (34.1%) operations 'none' was recorded as the postoperative complication, and 24,779 (6.3%) operations had at least one postoperative complication recorded. The variation in data likely reflects differences in cataract surgery patient pathways across centres.

The percentage of operations with a postoperative complication record (none or a complication), or no postoperative complication record, varied significantly between the participating centres, with 12 (7.0%) centres having no records of any specific postoperative complications, Figure 13 (page 38).

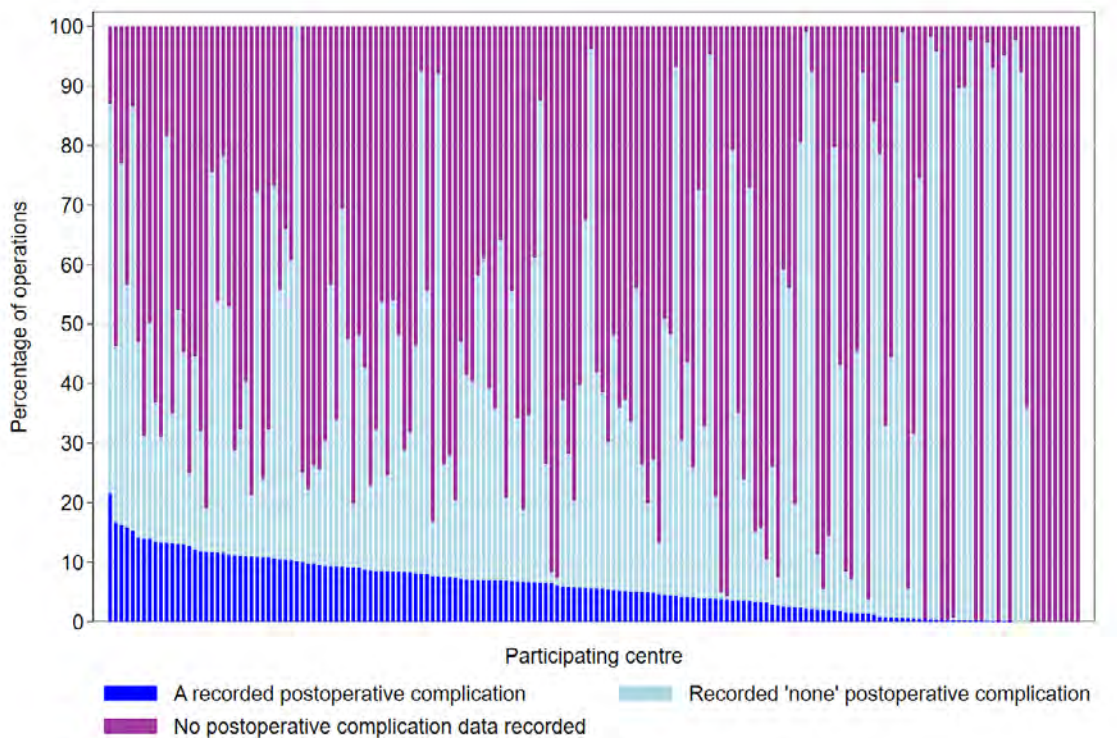
The most frequently recorded postoperative complications were postoperative uveitis, postoperative cystoid macular oedema (CMO), and corneal oedema / striae / haze which were the only individual postoperative complications recorded for >1.0% of operations, Figure 14 (page 38).

For the 391,598 eligible operations for postoperative complication assessment, 388,820 were for the patients first or second treated eye (excluding ISBCS eyes). For 229,528 first treated eyes, postoperative CMO developed in 3,383 (1.47%) eyes, postoperative endophthalmitis developed in 41 (0.02%) eyes and postoperative uveitis developed in 5,723 (2.49%) eyes. For 159,292 second treated eyes, postoperative CMO developed in 2,163 (1.36%) eyes, postoperative endophthalmitis developed in 27 (0.02%) eyes and postoperative uveitis developed in 3,804 (2.39%) eyes.

Within the 10—month postoperative complication assessment time period, 82,473 patients had cataract surgery to both eyes (excluding ISBCS eyes). For these patients, postoperative CMO developed in 712 (0.86%) patient's first treated eye and 803 (0.97%) second treated eyes, with 133 (0.16%) patients developing postoperative CMO in both eyes. Postoperative uveitis developed in 1,623 (1.97%) patient's first treated eye and 1,711 (2.07%) second treated eyes, with 280 (0.34%) patients developing postoperative uveitis in both eyes. Postoperative endophthalmitis developed in only three patient's first treated eye and 16 (0.02%) second treated eyes, with no patients developing postoperative endophthalmitis in both eyes.

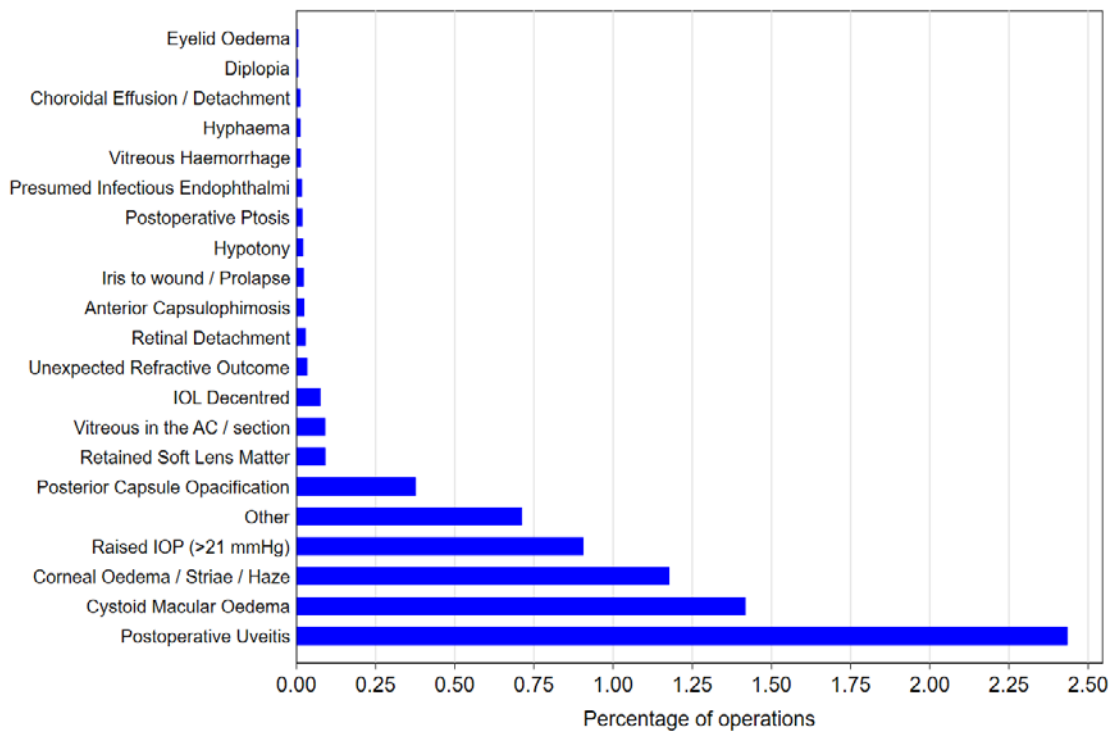
For 1,389 patients (2,778 eyes) who had ISBCS during the 10-month time period for postoperative assessment, seven eyes developed postoperative uveitis, no eyes developed postoperative endophthalmitis and seven eyes developed postoperative CMO. Three patients developed postoperative CMO in both eyes, and two patients developed postoperative uveitis in both eyes.

**Figure 13: The percentage of cataract operations supplied to the audit with and without postoperative complication data by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 14: The percentage of cataract operations supplied to the audit with each individual postoperative complication**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

## D.12 Postoperative visual acuity

From the 481,530 eligible operations from 177 centres, 391,679 (81.3%) operations were performed before 31 January 2023 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying period and data from four centres (81 operations) are excluded due to these centres having <50 eligible operations in the postoperative qualifying time period. This left 391,598 eligible operations from 172 centres available for the assessment of the percentage of eyes with a postoperative VA measurement. Of these, a postoperative visual acuity was recorded for 270,155 (69.0%) eyes and missing for 121,443 (31.0%) eyes. For comparison the percentage of eyes with a postoperative VA were 75.9%, 73.0%, 60.9% and 67.5% for the 2018, 2019, 2020 and 2021 NHS years respectively. The percentage of eyes with a postoperative VA for contributing centres and each audit year is in Appendix S (page 98).

There was wide variation in the percentage of eyes with postoperative VA by contributing centre; four centres had no eyes with a postoperative VA, for 30 (17.4%) centres <50% of eyes had a postoperative VA, for 74 (43.0%) centres >80% of eyes had a postoperative VA and for 10 (5.8%) centres >95% of eyes had a postoperative VA, Figure 15 (page 40) and Appendix L (page 64). Influencing this result are operations performed in the latter part of the audit period where not all patients could have sufficient follow-up for all postoperative results to be available. Another factor is the move to patient-initiated follow-up (PIFU) as a routine practice following cataract surgery with patients then attending community optometrists under the General Ophthalmic Services (GOS) contract, or more constructed arrangements which still involve discharge to the community for a commissioned follow up assessment. In either case, post-operative measurements are not always sent back to the hospitals for recording on the hospitals' EMR system.

Overall, the percentage of eyes with postoperative VA data was 72.4% for first treated eyes and 64.0% for second treated eyes. The percentage of first and second treated eyes with postoperative VA data varied between centres, where 148 (86.0%) centres had a higher percentage of first treated eyes with postoperative VA data than second treated eyes, for 50 (29.1%) centres this difference was >10% points and for 18 (10.5%) centres >25% points, Appendix L (page 64).

From the 270,155 eyes with a postoperative VA measurement, data from one centre (33 operations) are excluded from the estimate of postoperative vision due to the centres having <50 eligible operations with a postoperative VA measurement. Eligible for assessing postoperative vision are 270,122 operations from 167 contributing centres.

For the 270,122 eyes eligible for postoperative VA assessment, the best measurement was CDVA in 120,813 (44.7%) eyes, UDVA in 62,770 (23.2%) eyes, PHVA in 36,960 (13.7%) eyes; the best measurement was the same for two of the assessment methods for 47,274 (17.5%) eyes and the same for all three methods in 2,305 (0.9%) eyes.

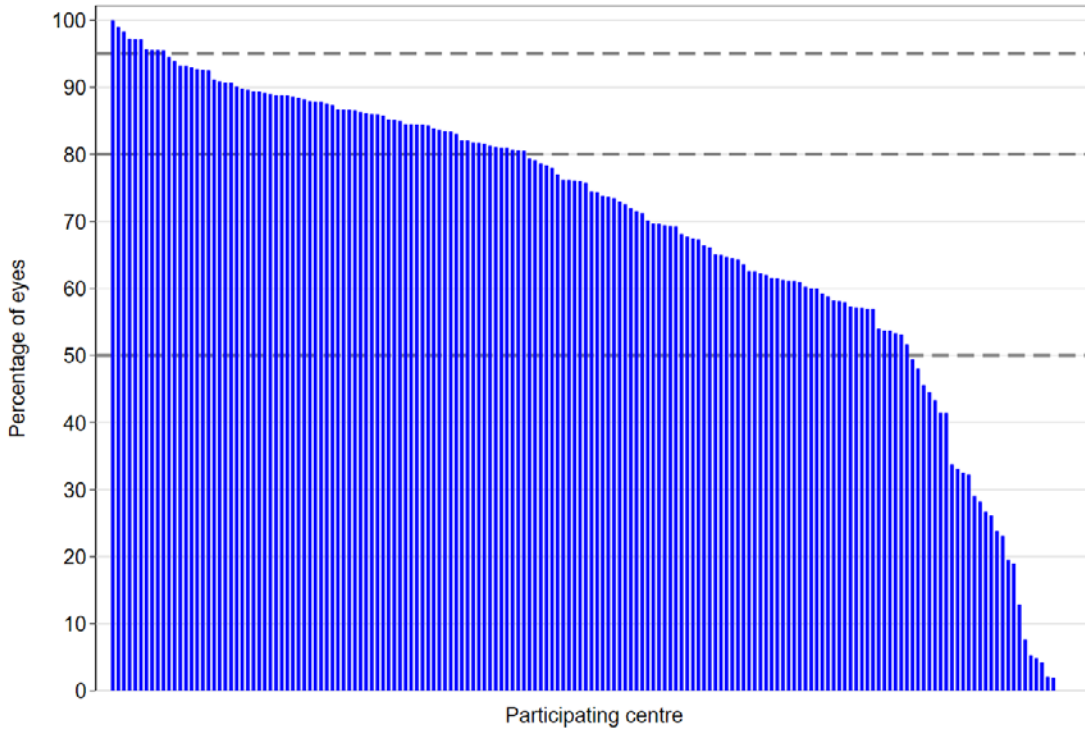
The median postoperative VA was 0.10 LogMAR units (range; -0.30 to NPL) (6/7.5 Snellen equivalent); where 706 (0.3%) eyes were CF, 513 (0.2%) eyes were HM, 98 (<0.1%) eyes were PL and 30 (<0.1%) eyes were NPL.

The postoperative VA was 0.30 LogMAR units (6/12) or better for 247,940 (91.8%) eyes, 0.60 LogMAR units (6/24) or better for 262,742 (97.3%) eyes and 1.0 LogMAR units (6/60) or better for 267,534 (99.0%) eyes.

The postoperative VA was stable across participating centres, although there was some variation where the median postoperative VA was 0.00 LogMAR for 55 (32.9%) centres, 0.10 LogMAR for 67 (40.1%) centres and 0.20 LogMAR for 16 (9.6%) centres. The overall median postoperative VA for centres was 0.10 LogMAR with a range in the centres median postoperative VA of 0.00 to 0.30 LogMAR, Figure 16 (page 40).

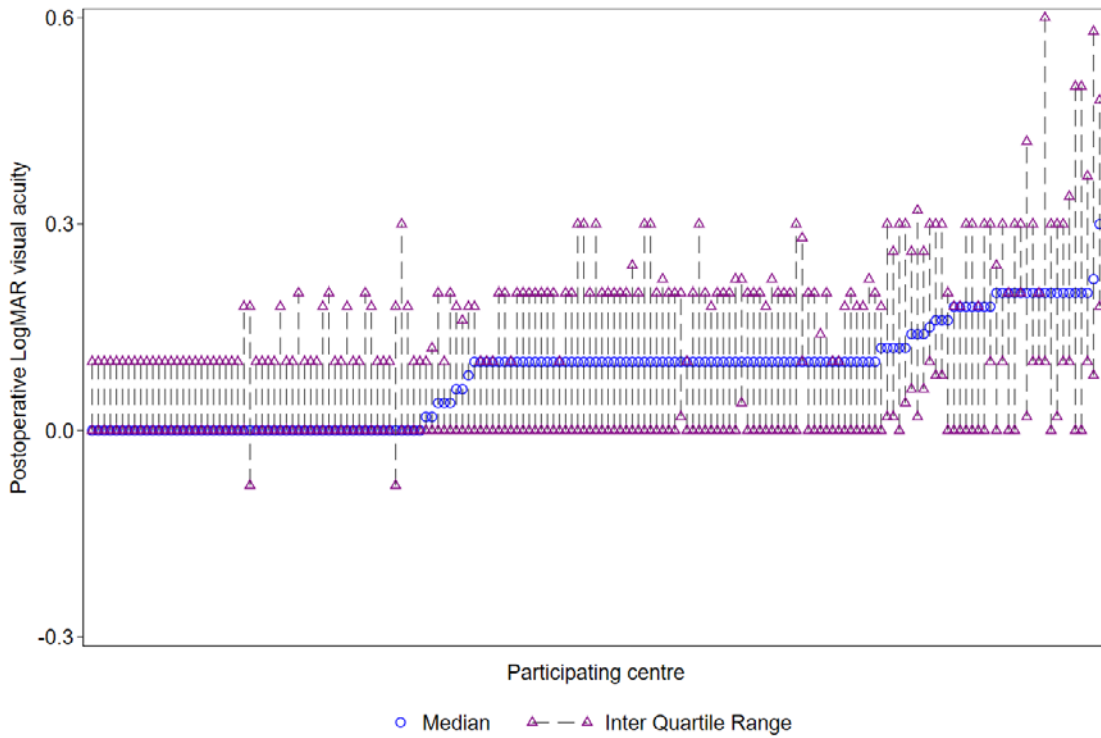
Overall, VA outcomes were as expected, though data completeness remains an area for improvement and results for centres with small numbers will be subject to significant statistical uncertainty and potential bias.

**Figure 15: The percentage of cataract operations supplied to the audit with a valid postoperative VA by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 16: Median and IQR for postoperative VA by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023



### D.13 Change in visual acuity

Of the 481,530 eligible cataract operations submitted to the audit performed before 31 January 2023. One centre had no operations in the postoperative qualifying time and data from four centres (81 operations) are excluded from change in VA results due these centres having <50 eligible operations in the qualifying time period. This left 391,598 eligible operations from 172 centres considered for the reporting of the percentage of eyes with change in VA data, where 252,139 (64.4%) eyes had both a preoperative VA and a postoperative VA measurement. Four centres had no eyes with both a postoperative and preoperative VA, 44 (25.6%) centres had <50% of eligible eyes with both VA measurements and 57 (33.1%) centres had >80% of eyes with both VA measurements, Figure 17 (page 42). For comparison, the percentages of eyes with change in VA data were 71.0%, 67.9%, 48.2% and 62.4% for the 2018, 2019, 2020 and 2021 NHS years respectively. Data completeness for this measure has increased since the 2020 NHS year reflecting less service disruption in the 2021 and 2022 NHS years. The audit will continue to encourage centres to collect and record both preoperative and postoperative VA to allow for determination of this measure.

From the 252,139 eyes with both a preoperative and postoperative VA measurement, data from five centres (178 operations) are excluded from the change in VA analysis due to the centres having <50 eligible operations with both a preoperative and a postoperative VA measurement. Eligible for change in VA analysis are 251,961 operations from 163 participating centres.

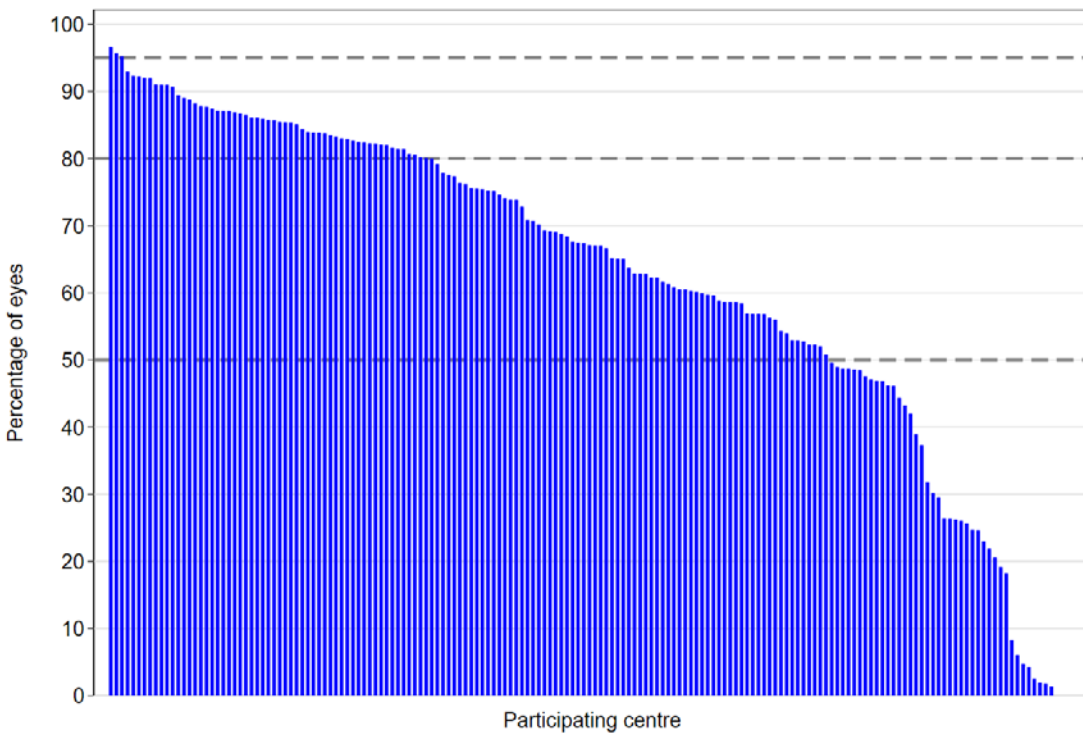
The median change in VA from baseline was a 0.30 LogMAR gain (IQR; 0.20 – 0.60 gain). A loss of >0.10 LogMAR (1 Snellen line loss) was experienced by 7,541 (3.0%) eyes, a change of  $\pm 0.10$  LogMAR ( $\pm 1$  Snellen line) by 19,751 (7.8%) eyes and a gain of >0.10 LogMAR (1 Snellen line gain) by 224,669 (89.2%) eyes. The change in VA was not similar for all centres with some difference's observable, Figure 18 (page 42). Overall, most cataract surgery operations resulted in a significant improvement in visual acuity for patients, as illustrated in Figure 19 (page 43) where for all bar two centres, the median postoperative VA was better than the median preoperative VA.

74.7% of eyes with a preoperative VA of 0.00 LogMAR or better had a postoperative VA of 0.00 LogMAR or better and 97.8% of eyes with a preoperative VA of 0.30 LogMAR or better had a postoperative VA of 0.30 LogMAR or better.

Eyes that had an ocular co-pathology or experienced an intraoperative complication or PCR during surgery had worse postoperative VA than eyes that did not have any of these problems. >90% of eyes without these problems had a postoperative VA of 0.30 LogMAR (6/12 Snellen) or better, Table 4 (page 44).

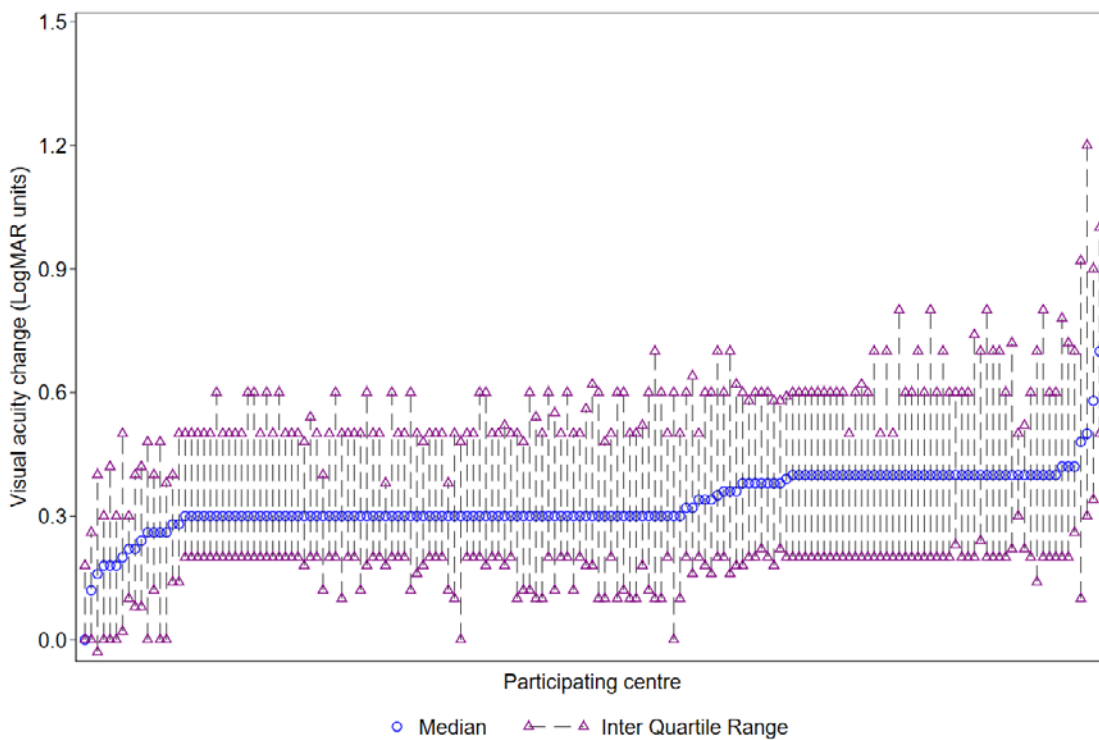
The percentage of operations from each participating centre with preoperative VA, postoperative VA and both pre- and postoperative VA data varied between participating centres, Appendix L (page 64).

**Figure 17: The percentage of eligible operations with both a preoperative and a postoperative VA measurement by participating centre**



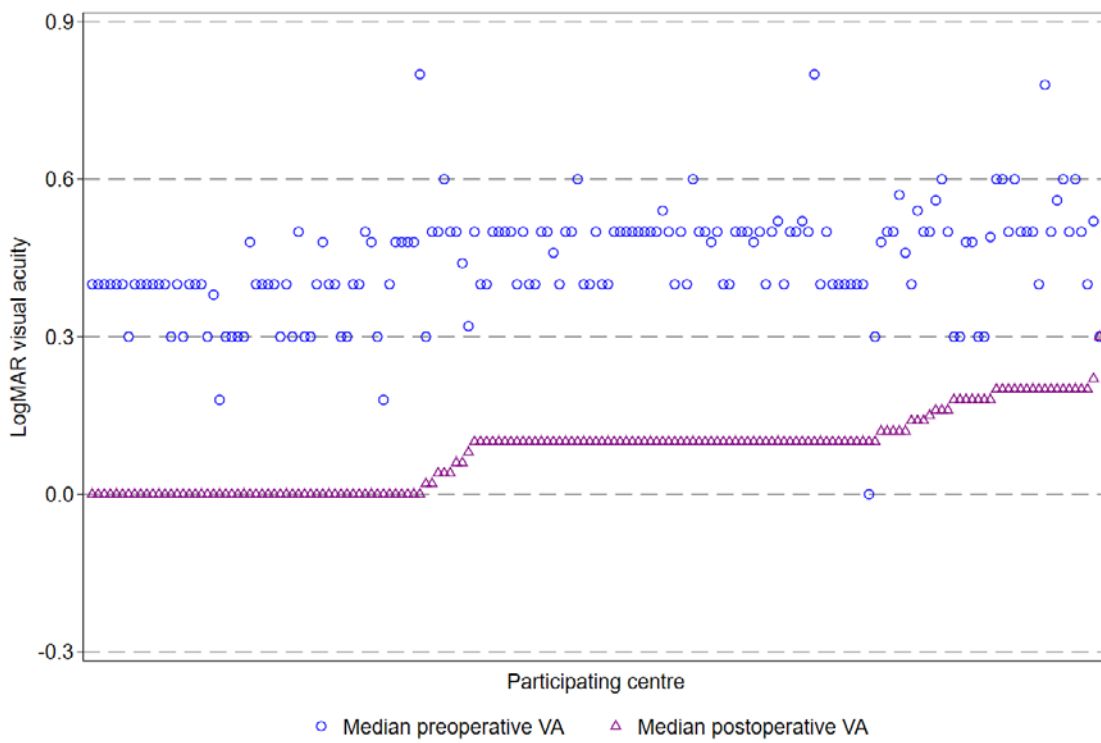
The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 18: Median and IQR for change in VA by participating centre**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Figure 19: Median preoperative and postoperative VA by participating centre – Ordered by median postoperative VA**



The 2022 NHS year ran from 01 April 2022 to 31 March 2023

**Table 4: Postoperative VA by preoperative VA, ocular co-pathology / known risk indicator and intraoperative complications**

	Postoperative LogMAR visual acuity				
<b>Percentages are row % (Approximate Snellen)</b>	≤0.00 (6/6 or better)	≤0.18 (6/9 or better)	≤0.30 (6/12 or better)	≤0.60 (6/24 or better)	≤1.00 (6/60 or better)
All eyes (N = 251,961)	46.6	73.8	92.0	97.4	99.1
<b>Preoperative LogMAR VA (Snellen)</b>					
≤0.00 (N = 4,996)	74.7	92.8	99.2	99.8	99.9
≤0.18 (N = 23,106)	63.3	91.1	98.6	99.8	99.9
≤0.30 (N = 98,237)	55.3	83.3	97.8	99.7	99.9
≤0.60 (N = 188,935)	49.4	77.8	95.4	99.5	99.9
≤1.00 (N = 228,602)	47.8	75.6	93.7	98.7	99.8
<b>Ocular co-pathology / risk indicator</b>					
No (N = 151,964)	53.1	80.6	95.8	99.1	99.7
Yes (N = 99,997)	36.8	63.4	86.2	94.7	98.1
<b>Intraoperative complications</b>					
No (N = 247,925)	47.0	74.2	92.2	97.5	99.2
Yes (N = 4,036)	25.5	48.9	76.0	88.2	94.4
<b>PCR</b>					
No (N = 249,747)	46.8	74.1	92.2	97.5	99.1
Yes (N = 2,214)	21.6	42.5	71.1	85.2	92.7

#### **D.14 Outcomes in surgery for Severely Sight Impaired Eyes**

When a person has a corrected visual acuity of less than 1.30 LogMAR with both eyes open, they are eligible for certification as severely sight impaired. From the 251,961 eyes with both an eligible preoperative and postoperative VA, the preoperative VA was worse than 1.30 LogMAR for 15,643 (6.2%) eyes, where 1,153 (7.4%) of these eyes VA was still worse than 1.30 LogMAR post-cataract surgery, and 14,490 (92.6%) eyes VA had improved to a level better than the severely sight impaired certification VA threshold. For the 236,318 (93.8%) eyes with a preoperative of 1.30 LogMAR or better, 235,942 (99.8%) eyes VA was 1.30 LogMAR or better post-cataract surgery, and for 376 (0.2%) eyes, the postoperative VA had decreased to the level where the person was eligible to be registered as severely sight impaired. These results are produced only from visual acuity measurements, and if a person has visual field damage, they can be eligible for severely sight impairment certification if their VA is better than 1.30 LogMAR.

#### **D.15 Severe Visual Loss**

The National Cataract Audit has, since inception, been reporting Vision Loss as an outcome based on a loss of 0.30 LogMAR or more. However, for the purpose of informed consent, it is useful to be able to cite the risk of severe loss of vision following cataract surgery. A loss of 0.60 LogMAR (quadrupling of the visual angle), has been adopted as a level of change from preoperative to postoperative VA that could be described as severe. Eyes with PL or NPL vision preoperatively are excluded. For the 251,961 eyes with both an eligible preoperative and postoperative VA, the preoperative VA was HM or better for 250,569 (99.4%) eyes; severe vision loss was experienced by 532 (0.21%) eyes. Excluding ISBCS eyes, severe VA loss was experienced by 335 (0.22%) of 155,503 first treated eyes and in 196 (0.21%) of 93,767 second treated eyes. For 505 ISBCS patients (1,010 eyes) severe VA loss was experienced by 1 (<0.1%) eye.

#### **D.16 Case complexity adjusted Visual Loss results**

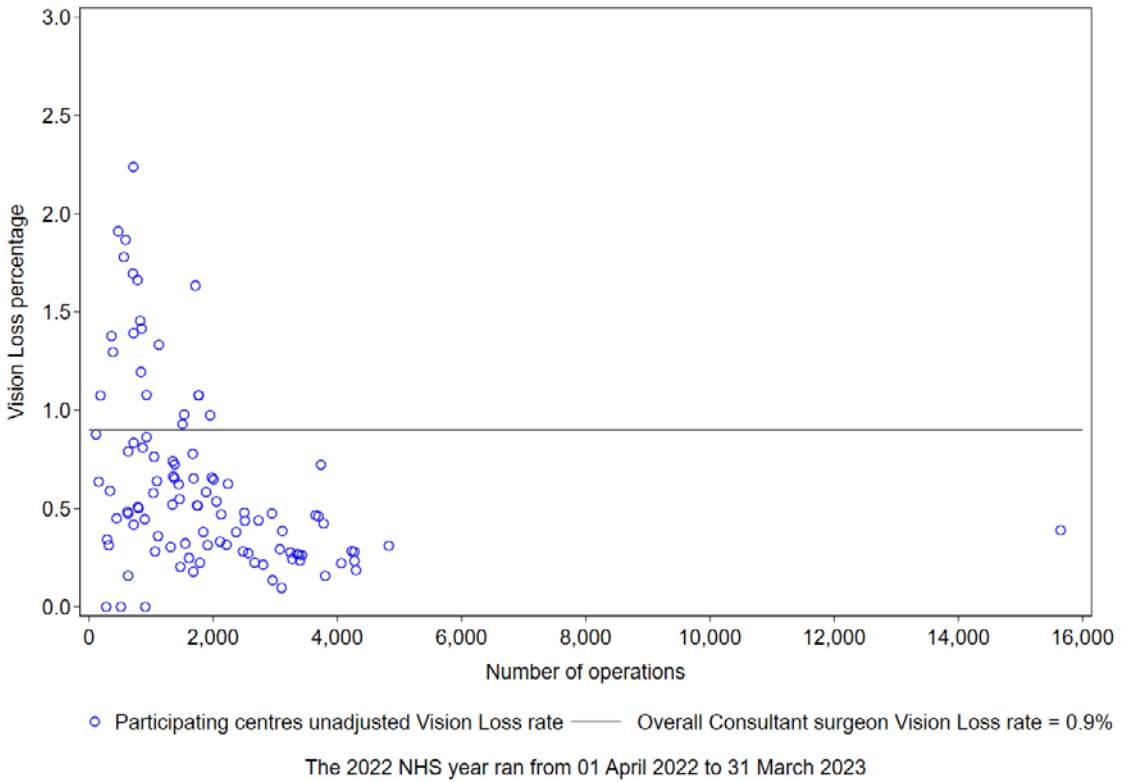
Of the 481,530 eligible operations, 391,679 operations were performed up to 31 January 2023 and had the potential for two months' follow-up. One centre had no operations in the postoperative qualifying period and data from four centres (81 operations) are excluded from the postoperative Vision Loss results due these centres having <50 eligible operations in the qualifying time period. This left 391,598 eligible operations from 172 centres with at least 50 eligible operations in the postoperative qualifying time period. From these, 199,763 (51.0%) operations from 104 centres were performed in centres where a preoperative and postoperative VA was recorded for at least 60% of the operations and in at least 50 operations per centre.

An unadjusted for case complexity funnel plot of Vision Loss is shown in Figure 20 (page 46) and an adjusted for case complexity funnel plot in Figure 21 (page 46). Details of the unadjusted and adjusted for case complexity Vision Loss results is in Appendix N (page 78), along with a case complexity index which is the overall predicted probability of Vision Loss for the cases reported by each centre. The case complexity adjusted Vision Loss rate for contributing centres for the 2018 – 2022 NHS years is in Appendix T (page 106). Centres with >40% operations without VA measurements and centres with <50 operations with both a preoperative and postoperative VA have not been reported as the estimates would be too unreliable.

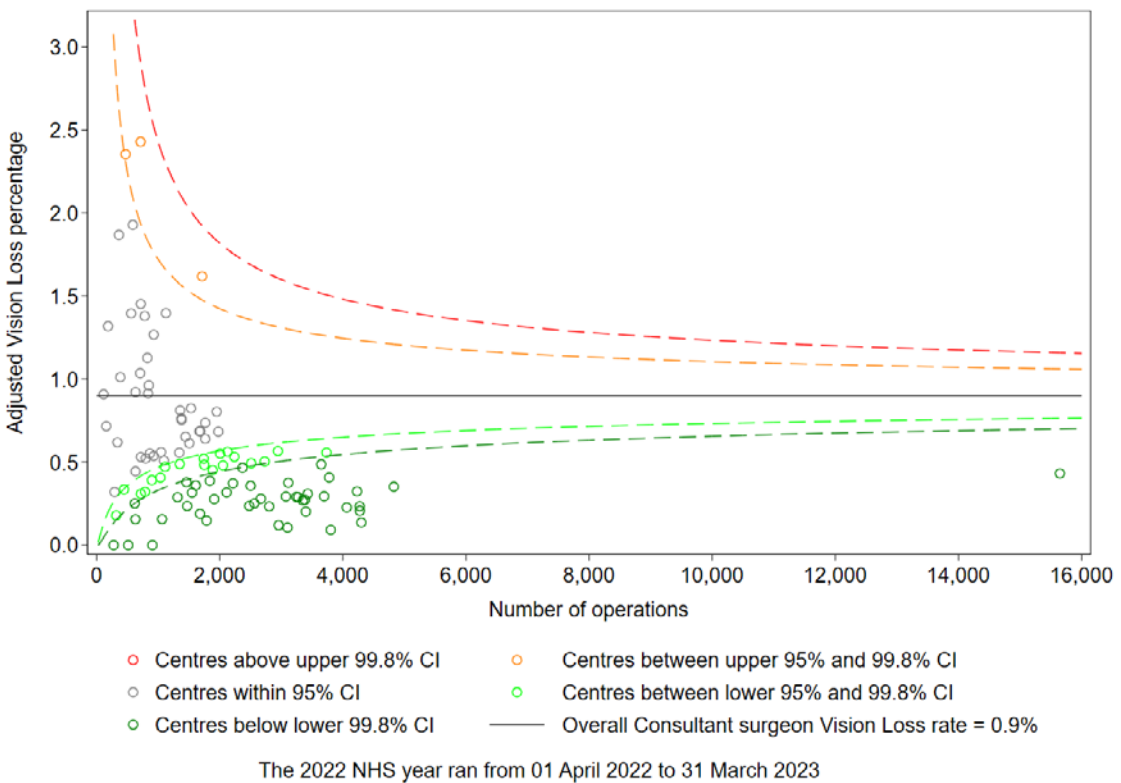
Displayed on the public section of the [audit website](#) will be case complexity adjusted Vision Loss results for participating centres and fully qualified surgeons (consultants and career grade non-consultants) with sufficient data for a result to be produced.

The actual observed Vision Loss rate for the year six sample was 0.48%, which is lower than the percentage rate used for complexity adjustment. This is not an unexpected finding, as there is variation between centres in the percentage of reported operations, percentage of operations with both preoperative postoperative VA.

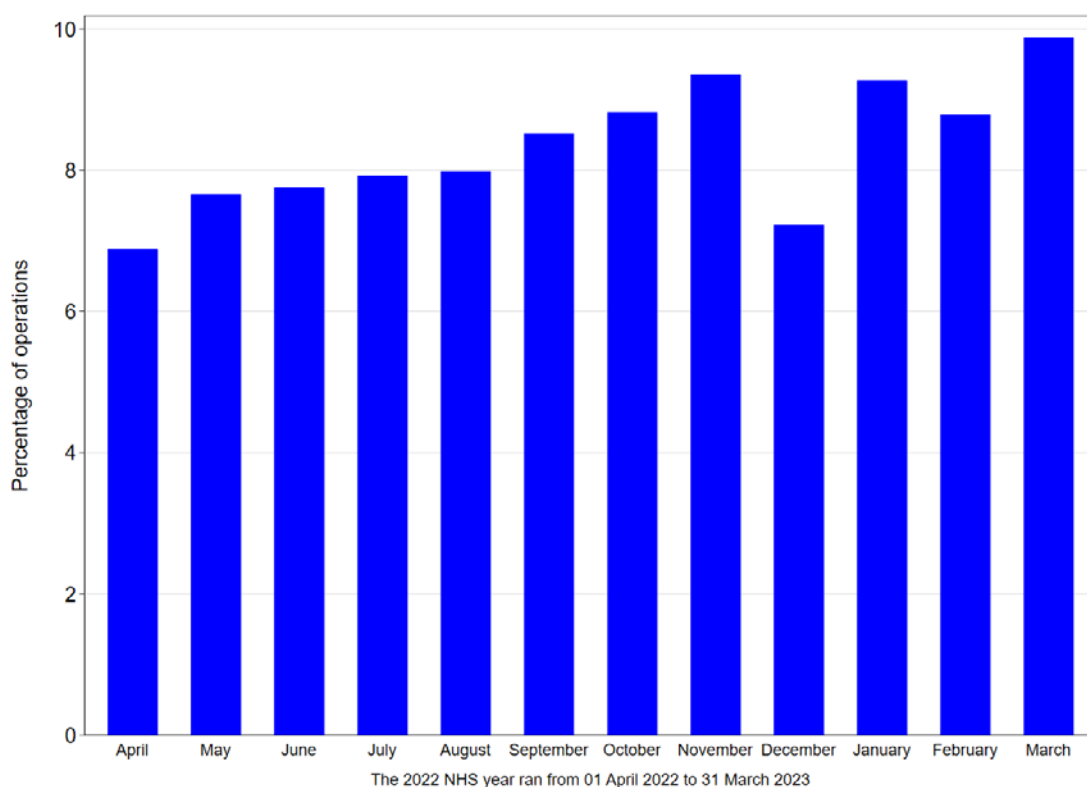
**Figure 20: Unadjusted for case complexity Vision Loss funnel plot for participating centres**



**Figure 21: Adjusted for case complexity Vision Loss funnel plot for participating centres with confidence intervals (CI)**



**Figure 22: The percentage of eligible cataract operations performed in each month of the 2022 NHS year**



**Table 5: The percentage of eligible operations performed in each month of the NHS years**

	NHS year (01 April to 31 March)				
	2018	2019	2020	2021	2022
Number of operations	249,311	283,442	176,398	377,366	481,530
<b>Month</b>					
April	7.6	7.5	0.0	6.8	6.9
May	8.0	8.0	0.2	7.3	7.7
June	8.2	7.9	2.0	8.4	7.8
July	8.1	8.8	6.4	8.3	7.9
August	7.8	7.6	8.3	7.8	8.0
September	7.8	8.8	12.2	8.5	8.5
October	9.2	9.6	13.6	8.8	8.8
November	9.2	9.5	14.4	9.5	9.4
December	7.1	7.7	11.7	7.3	7.2
January	9.2	9.7	8.0	8.1	9.3
February	8.6	8.9	9.2	9.1	8.8
March	9.2	6.0	13.9	10.2	9.9

# Appendix E: Acknowledgements

---

We would like to acknowledge the support and guidance of the NOD the NOD Steering Group, Executive Committee, Quality and Standards Committee, Informatics and Audit Subcommittee, Lay Advisory Group and the Cataract Audit Advisory Group, whose members are named in Table 6 (page 48). Their guidance has helped us to ensure the audit has relevance for not only the professional readership but also patients, their relatives and carers.

We also acknowledge the support of the hospitals participating in the audit and thank our medical and non-medical colleagues for the considerable time and effort devoted to conscientious electronic data collection as they go about caring for their patients.

We acknowledge with thanks the contribution of Professor John Sparrow who provided diligent clinical and academic oversight and leadership of the NOD over many years to bring it to its current stature. It is with gratitude that we remember our friend and colleague Robert Johnston, who sadly died in September 2016. Without his inspirational vision, determination and career long commitment to quality improvement in ophthalmology this work would not have been possible.

**Table 6: National Ophthalmology Database Audit Cataract Advisory Group Membership**

Name	Designation
Andrew Tatham	Cataract Representative
Beth Barnes	Head of Professional Support
Catey Bunce	Independent Statistician, The Royal Marsden NHS Foundation Trust
Clare Pearce	The College of Optometrists
Colm McAlinden	PROM Advisor
Dr Yan Ning Neo	Cataract Representative
John Buchan	Clinical Lead for RCOphth National Ophthalmology Database Audit
Martina Olaitan	NOD Cataract Audit Project Manager
Mhairi Thurston	Lay Group Representative
Paul Donachie	Senior Medical Statistician for the RCOphth NOD
Stephen Stewart	Cataract Representative
Steven Naylor	Cataract Representative

## 12. Funding

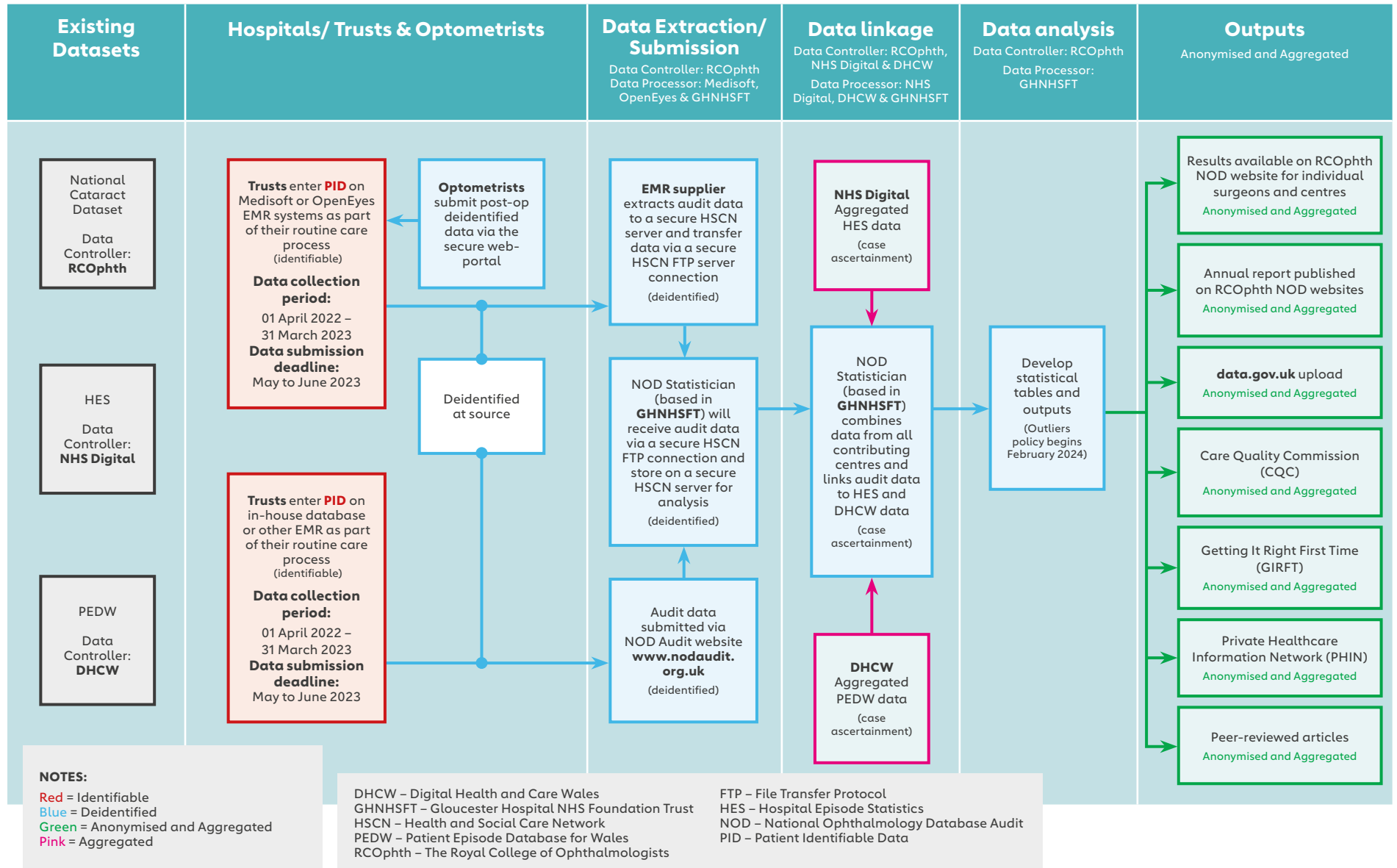
---

The National Cataract Audit is funded through participation fees from centres as well as unrestricted contributions from Alcon Eye Care UK Limited and Bausch + Lomb. We are grateful for the donations received from these organisations. We are also grateful for specific funds provided to support individual analyses (Alcon – PCO) (B&L Capsuleguard) (Rayner Endophthalmitis).



# Appendix G : Data Flow

## National Ophthalmology Database Cataract Audit – Data Flow



# Appendix H: Interpreting the graphs and tables

---

Among the results there are five types of graphs;

1. Bar charts – these are either horizontally or vertically aligned depending on the data being plotted. One axis displays the categorical element, usually contributing centre and when bar charts are sub-divided by another category, the length of each bar indicates the quantity of interest for the sub-category as read from the numeric axis. Some vertically aligned bar charts have horizontal dashed reference lines at specific points on the y-axis, these relate to cut-off points used in the reporting of results, for example 50%. Each bar chart is ordered (sorted) by a quantity being plotted, i.e. percentage. Figure 5 (page 29) is an example of a bar chart.
2. Box and Whisker plots – the spread for the variable of interest is shown where the central line is the median or ‘middle’ value. The box outlines the inter quartile range (25% and 75% centiles), and the horizontal lines above and below the inter quartile range display either the position of the furthest value or a value at a ‘reasonable’ stretch from the middle. Extreme values are the dots beyond that. Figure 7 (page 30) is an example of a Box and Whisker plot.
3. Funnel plots – The spread of dots on these looks like a funnel going from left to right. Each dot represents a result for a centre or surgeon as read off the vertical axis (proportion or rate). The funnel effect results from increasing statistical precision as the numbers get higher going along the horizontal axis, for example Figure 11 (page 36). Some of the plots have lines on them showing what is expected. A result above the top line (three standard deviations) would be deemed unacceptably high, for example Figure 12 (page 36). Statistical precision increases as the sample increases, this is illustrated by narrower confidence intervals. When the PCR rate or Vision Loss rate for a centre or surgeon is extremely low and they have a high number of cases, it is more likely that they will be a positive outlier due to the narrowing confidence intervals with higher volume.
4. Median and IQR plots – These display for each contributing centre, the median and IQR for a numeric quantity as read from the vertical axis. These estimates indicate variation between centres and by not including the range these graphs allow magnification on the y-axis and a clearer view of the distribution of the median and IQR across contributing centres. Each of these graphs are ordered (sorted) by a quantity being plotted, i.e. the median. Figure 4 (page 27) is an example of a Median and IQR graph.
5. Scatter plots – The display for each contributing centre an estimate of interest which can be read from the y-axis. Each scatter plot is ordered (sorted) by a quantity of interest. Figure 19 (page 43) is an example of a scatter plot. Scatter plots over time display a quantity for a time point, i.e., NHS year. When lines join the plotted points, these lines indicate a general trend. Figure 1 (page 9) is an example of a Scatter plot over time.

Appendix tables with results for named centres;

On all tables that display results for contributing centres, the centres are ordered in alphabetical order according to the centre’s name.

On tables that include equivalent results for previous NHS years, some centres have a result for an NHS year before they first contributed as they submitted historic data for time periods before the first audit year they contributed to, and some centres have contributed data to an audit year and not done so in subsequent audit years.

# Appendix I: Case Definitions

---

## Eligible Cataract Surgery Criteria

- Operation performed between 1st April 2022 – 31st March 2023
- Operation performed in adults (aged 18 or above)
- Operation included a phacoemulsification procedure
- Operative data includes a surgeon identifier and valid surgeon grade
- Operation included a “cataract” indication for surgery (see the RCOphth [NOD audit website](#) for details)
- Operation without any of the ineligible indications for surgery (see RCOphth [NOD audit website](#) for details)
- Operation did not include certain operative procedures (see RCOphth [NOD audit website](#) for details)
- Operations that included a pars plana vitrectomy with no vitreoretinal indication for surgery and no other vitreoretinal procedures except for sponge and scissor vitrectomy or automated anterior vitrectomy
- Operation not for a traumatic injury
- Operations in eyes with certain current or historic diagnosis (see RCOphth [NOD audit website](#) for details).
- A minimum of 50 eligible cataract operations for each participated centre

**For comparisons against previous NHS years, all the above apply except for the date period criteria which is as follows;**

- 2018 NHS year – 1st April 2018 – 31st March 2019
- 2019 NHS year – 1st April 2019 – 31st March 2020
- 2020 NHS year – 1st April 2020 – 31st March 2021
- 2021 NHS year – 1st April 2021 – 31st March 2022

## PCR – Posterior Capsule Rupture or Vitreous Prolapse or both

PCR was deemed to have occurred if any of the following intra-operative complications are recorded during surgery; Zonule rupture – vitreous loss, PC rupture ± vitreous loss, Vitreous to the section at end of surgery, Vitreous loss, Nuclear/ epinuclear fragment into vitreous, Intra-ocular lens (IOL) into the vitreous, Lens fragments into vitreous, Lens matter in posterior segment, Nuclear matter in posterior segment or if any of the following occurred.

- The operation includes any of ‘Sponge and scissors vitrectomy’, ‘Automated anterior vitrectomy’ or ‘Scleral fixed IOL’
- The operative procedure includes ‘Fragmatome lensectomy ± IOL’ with a previous or concurrent phacoemulsification procedure\*
- The operative procedure includes ‘Removal of lens fragments’ or ‘Removal of lens nucleus’ combined with a pars plana vitrectomy\*
- If either of ‘Lens matter in posterior segment’, ‘Nuclear matter in posterior segment’, ‘Vitreous to the section’ or ‘Vitreous in the anterior chamber’ were recorded within eight weeks of cataract surgery, this includes the day of cataract surgery in the time frame. It is recognised that vitreous egress is possible in rare cases, despite the absence of compromise of the capsule or zonules. This still represents a complication of surgery, however EMR providers may offer a diagnosis of post-operative complication that identifies such cases of vitreous in the anterior chamber unrelated to intra-operative complication
- If there is a record of a dropped nucleus operation within 90 days of cataract surgery, this includes the day of cataract surgery in the time frame

\* For these cases, if there is a recorded intraoperative complication of PCR the case is eligible for inclusion in the audit and allocated as PCR. If there is no recorded intraoperative complication of PCR, the case is excluded from the audit under the assumption of previous cataract surgery.

## Visual Acuity (VA)

Visual acuity measurements are reported using the LogMAR scale with numeric substitutions of 2.10, 2.40, 2.70 and 3.00 for the ability to count fingers (CF), the ability to distinguish hand movements (HM), perception of light (PL) and no perception of light (NPL) respectively.

Preoperative VA was defined as the better of corrected distance visual acuity (CDVA) and uncorrected distance visual acuity (UDVA) recorded within a six month ‘time window’ prior to surgery. Where there are multiple occasions of measurement the VA measurement closest to the date of surgery is used and measurements recorded on the same day as cataract surgery are considered as preoperative measurements.

Postoperative VA was defined as the best measurement of CDVA or UDVA or pinhole visual acuity (PHVA) within the ‘time window’ of between eight days and six months of cataract surgery (inclusive).

At least 50 eligible operations with VA data are required for a VA result to be produced. Postoperative VA results were restricted to operations performed in the first 10 months of an NHS year to allow for at least two months potential follow up. At least 50 eligible operations within the postoperative time period are required for a result to be produced. For Vision Loss results, only centres with <40% missing pre- and post-operative VA data were included.

### Vision Loss was defined as

- For eyes with a preoperative VA of <1.00 LogMAR, a loss of  $\geq 0.30$  LogMAR (doubling or worse of the visual angle) between the preoperative and postoperative VA measurements
- For eyes with a preoperative VA of  $\geq 1.00$  LogMAR and <CF, VA Loss is designated if the postoperative VA is HM, PL or NPL
- For eyes with a preoperative VA of CF, VA Loss is designated if the postoperative VA is PL or NPL
- For eyes with a preoperative VA of HM, VA Loss is designated if the postoperative VA is NPL
- For eyes with a preoperative VA of PL or NPL no VA Loss is considered

Eligible for severely sight impairment registration results in this report only use VA measurements and not visual field measurements which are not provided to the audit. For eligible for severely sight impairment registration results, a definition of VA  $>1.30$  LogMAR.

Severe VA loss is defined as a loss of  $\geq 0.60$  LogMAR units from preoperative VA to postoperative VA, and eyes with a preoperative VA of PL or NPL are not considered for severe VA loss estimates.

LogMAR VA is a continuous scale conversion for Snellen fractions that allows arithmetic calculations to be employed in the analysis. Conversion between LogMAR and approximate Snellen scores, and their interpretations, are as follows:

Approximate Snellen to LogMAR Conversion		
LogMAR	Snellen	VA Interpretation
-0.1	6/5	Excellent
0.0	6/6	Very Good
0.2	6/9	Good
0.3	6/12	Reasonably Good
0.5	6/18	WHO Mild Vision Impairment
0.6	6/24	Moderate Sight Impairment
0.8	6/36	WHO Moderate Vision Impairment
0.9	6/48	WHO Moderate Vision Impairment
1.0	6/60	UK Sight Impairment
1.1	5/60	UK Sight Impairment
1.2	4/60	UK Sight Impairment
1.3	3/60	WHO Sight Impairment
2.1	Count Fingers (CF)	WHO Severe Sight Impairment
2.4	Hand Movements (HM)	WHO Severe Sight Impairment
2.7	Perception of Light (PL)	WHO Severe Sight Impairment
3.0	No Perception of Light (NPL)	WHO Severe Sight Impairment

# Appendix J: Glossary

Abbreviation	Description
CDVA	Corrected distance visual acuity
CF	The ability to count fingers
CI	Confidence Interval
COVID 19	Coronavirus Disease 2019
CQC	Care Quality Commission
DHCW	Digital Health and Care Wales
EMR	Electronic Medical Record
GOS	General Ophthalmic Services
HM	The ability to distinguish hand movements
IOL	Intra-ocular lens is an artificial lens generally inserted into the capsule of the lens after cataract removal
ICHOM	International Consortium for Health Outcomes Measurement
IQR	Inter Quartile Range
LogMAR	Logarithm of the Minimum Angle of Resolution
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NOD	National Ophthalmology Database
NPL	No perception of light
PAS	Patient Administration System
PCR	Posterior capsule rupture is a break in the posterior capsule of the lens as a complication of cataract surgery. It may or may not be accompanied by vitreous prolapse into the anterior chamber of the eye. For the purpose of the NOD Cataract Audit, zonular dehiscence when accompanied by vitreous loss is also termed PCR.
PHVA	Pin hole visual acuity – The pinhole is an eye shield with several small holes which allow light rays to reach the retina without the interference of optical problems of the eye. It is used to test visual acuity.
PIFU	Patient initiated follow-up
PL	Perception of light
PROM	Patient Reported Outcome Measures
RCOphth	The Royal College of Ophthalmologists

## Appendix J continued: Glossary

Abbreviation	Description
SD	Standard Deviation
UDVA	Uncorrected distance visual acuity
UK	United Kingdom
VA	Visual acuity is the sharpness of vision, measured by the ability to distinguish letters or numbers at a given distance according to a fixed standard. We have reported VA using the LogMAR scale (base 10 Log of the reciprocal of the visual angle). A normal LogMAR VA is 0.0 and the number increases as vision gets worse. LogMAR=0.3 would be at the boundary for driving a car and >1.3 would be at the level of registrable severe sight impairment. A postoperative VA of 0.3 or better is often used as a measure of a favourable outcome from surgery.
WHO	World Health Organisation

## Appendix K: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year

Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	The percentage of operations performed by			
					Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
Barking, Havering and Redbridge University Hospitals NHS Trust	01-Apr-22	1,602	95.3	20	70.9	0.2	20.8	8.1
Barts Health NHS Trust	01-Apr-22	2,268	100.0	47	44.8	8.4	35.9	10.8
Benenden Health	01-Apr-22	3,026	100.0	11	100.0	0.0	0.0	0.0
Bolton NHS Foundation Trust	01-Apr-22	1,534	99.4	23	46.5	34.8	13.5	5.1
Bradford Teaching Hospitals NHS Foundation Trust	01-Apr-22	1,583	98.5	32	72.5	0.1	17.8	9.7
Buckinghamshire Healthcare NHS Trust	01-Apr-22	4,391	98.6	37	33.0	11.0	53.3	2.7
Cambridge University Hospitals NHS Foundation Trust	01-Apr-22	2,203	94.3	37	47.3	1.3	50.7	0.7
Cardiff & Vale University Local Health Board	01-Apr-22	1,882	58.2	34	51.3	0.2	45.4	3.1
CHEC (Accrington)	22-Dec-22	93	**	2	100.0	0.0	0.0	0.0
CHEC (Atria Watford)	01-Apr-22	5,374	**	14	99.7	0.3	0.0	0.0
CHEC (Blackpool)	01-Apr-22	3,089	**	17	93.8	6.2	0.0	0.0
CHEC (Bridgend)	06-Jun-22	653	**	5	61.9	38.1	0.0	0.0
CHEC (Coventry)	06-Apr-22	2,406	**	17	46.6	53.4	0.0	0.0
CHEC (Leicester)	09-Apr-22	2,037	**	14	89.8	10.2	0.0	0.0
CHEC (New Cross)	05-Apr-22	3,192	**	7	100.0	0.0	0.0	0.0
CHEC (Newcastle)	21-Jun-22	945	**	8	100.0	0.0	0.0	0.0
CHEC (Northampton)	07-Jun-22	443	**	5	94.6	5.4	0.0	0.0
CHEC (Nottingham)	01-Apr-22	2,572	**	20	83.8	16.2	0.0	0.0
CHEC (Preston)	05-Apr-22	971	3.5	11	92.3	7.7	0.0	0.0
CHEC (Slough)	01-Apr-22	1,902	**	8	98.7	1.3	0.0	0.0
CHEC (Stoke)	01-Apr-22	2,729	**	17	53.5	46.5	0.0	0.0
Chesterfield Royal Hospital NHS Foundation Trust	01-Apr-22	685	100.0	11	84.8	15.2	0.0	0.0



**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
County Durham and Darlington NHS Foundation Trust	01-Apr-22	1,214	99.3	25	64.7	21.4	11.9	2.0
Cwm Taf Morgannwg University Local Health Board	04-Apr-22	801	39.0	12	47.7	11.2	41.1	0.0
East Cheshire NHS Trust	04-Apr-22	1,144	99.1	6	96.0	4.0	0.0	0.0
East Kent Hospitals University NHS Foundation Trust	01-Apr-22	1,504	98.5	31	74.9	20.6	4.5	0.0
East Suffolk and North Essex NHS Foundation Trust	01-Apr-22	4,665	91.0	43	40.5	10.2	46.0	3.2
East Sussex Healthcare NHS Trust	01-Apr-22	3,551	100.0	24	82.7	9.5	2.5	5.4
Epsom and St Helier University Hospitals NHS Trust	01-Apr-22	2,396	98.1	32	48.8	0.0	41.9	9.3
Exeter Eye	07-Apr-22	851	***	7	100.0	0.0	0.0	0.0
George Eliot Hospital NHS Trust	12-May-22	765	100.0	3	100.0	0.0	0.0	0.0
Gloucestershire Hospitals NHS Foundation Trust	01-Apr-22	2,101	97.7	33	72.0	12.6	9.4	6.0
Great Western Hospitals NHS Foundation Trust	01-Apr-22	1,108	91.3	14	83.4	0.0	13.6	3.0
Guy's and St Thomas' NHS Foundation Trust	01-Apr-22	1,604	58.3	50	51.4	3.8	44.8	0.0
Hampshire Hospitals NHS Foundation Trust	01-Apr-22	2,050	87.4	24	75.0	11.3	13.7	0.0
Harrogate and District NHS Foundation Trust	01-Apr-22	706	99.3	14	55.2	17.0	12.2	15.6
Imperial College Healthcare NHS Trust	02-Apr-22	2,779	100.0	72	30.3	3.9	47.4	18.4
Isle of Wight NHS Trust	04-Apr-22	1,614	100.0	13	74.5	17.7	7.0	0.8
James Paget University Hospitals NHS Foundation Trust	01-Apr-22	1,973	94.7	21	63.8	14.0	17.6	4.6
Kettering General Hospital NHS Foundation Trust	01-Apr-22	665	99.6	15	69.8	28.7	0.3	1.2
King's College Hospital NHS Foundation Trust	01-Apr-22	5,042	99.0	75	61.0	6.4	29.8	2.8
Kingston Hospital NHS Foundation Trust	01-Apr-22	2,413	100.0	27	67.0	2.1	24.2	6.7
Leeds Teaching Hospitals NHS Trust	01-Apr-22	2,176	95.8	50	40.5	0.0	50.0	9.4
Liverpool University Hospitals NHS Foundation Trust	01-Apr-22	2,718	95.9	79	38.5	7.8	52.6	1.1
London North West University Healthcare NHS Trust	04-Apr-22	782	83.0	18	53.5	0.0	27.6	18.9
Manchester University NHS Foundation Trust	01-Apr-22	1,053	24.6	35	46.2	6.6	37.3	10.0
Medical Specialists Group (Guernsey)	01-Apr-22	511	***	6	100.0	0.0	0.0	0.0

**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
Mersey and West Lancashire Teaching Hospitals NHS Trust	04-Apr-22	1,379	65.7	25	64.1	30.6	4.4	0.9
Mid and South Essex NHS Foundation Trust	01-Apr-22	3,156	90.6	46	34.2	41.5	24.3	0.0
Mid Cheshire Hospitals NHS Foundation Trust	01-Apr-22	1,916	100.0	21	43.6	28.8	22.8	4.8
Mid Yorkshire Teaching NHS Trust	01-Apr-22	1,174	100.0	16	70.3	12.2	17.1	0.4
Moorfields Eye Hospital NHS Foundation Trust	01-Apr-22	20,661	100.0	273	44.0	3.9	49.7	2.4
Newmedica (Aztec West)	04-Jul-22	3,425	100.0	12	100.0	0.0	0.0	0.0
Newmedica (Barlborough)	02-Apr-22	222	100.0	4	100.0	0.0	0.0	0.0
Newmedica (Birmingham)	23-Jan-23	200	100.0	4	100.0	0.0	0.0	0.0
Newmedica (Brigg)	03-Apr-22	2,828	99.9	10	100.0	0.0	0.0	0.0
Newmedica (Bristol)	02-Apr-22	2,406	100.0	11	100.0	0.0	0.0	0.0
Newmedica (Exeter)	07-Apr-22	2,992	99.9	6	100.0	0.0	0.0	0.0
Newmedica (Frome)	01-Apr-22	1,617	100.0	9	100.0	0.0	0.0	0.0
Newmedica (Gloucester - Aspen)	04-Apr-22	1,675	100.0	16	100.0	0.0	0.0	0.0
Newmedica (Gloucester - Brighouse)	01-Apr-22	5,427	100.0	18	100.0	0.0	0.0	0.0
Newmedica (Grimsby)	02-Apr-22	2,963	100.0	8	100.0	0.0	0.0	0.0
Newmedica (Ipswich)	01-Apr-22	5,659	100.0	7	100.0	0.0	0.0	0.0
Newmedica (Leeds)	02-Apr-22	3,664	100.0	8	100.0	0.0	0.0	0.0
Newmedica (Leicester)	04-Apr-22	3,371	99.6	4	100.0	0.0	0.0	0.0
Newmedica (Newcastle)	26-Jul-22	2,021	100.0	4	100.0	0.0	0.0	0.0
Newmedica (North Derbyshire)	11-May-22	4,189	100.0	14	100.0	0.0	0.0	0.0
Newmedica (Northampton)	03-Apr-22	2,306	100.0	6	100.0	0.0	0.0	0.0
Newmedica (Norwich)	04-Apr-22	4,021	100.0	7	100.0	0.0	0.0	0.0
Newmedica (Oxfordshire)	09-Jan-23	214	100.0	4	100.0	0.0	0.0	0.0
Newmedica (Plymouth)	17-Aug-22	1,635	100.0	4	100.0	0.0	0.0	0.0
Newmedica (Shrewsbury)	01-Apr-22	4,491	100.0	5	99.8	0.2	0.0	0.0

**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
Newmedica (Teesside)	01-Apr-22	5,529	100.0	12	100.0	0.0	0.0	0.0
Newmedica (Wakefield)	02-Apr-22	843	99.8	5	100.0	0.0	0.0	0.0
Newmedica (Worcester)	06-Jun-22	3,219	100.0	9	100.0	0.0	0.0	0.0
Norfolk and Norwich University Hospitals NHS Foundation Trust	01-Apr-22	1,613	98.2	27	60.0	0.6	37.1	2.4
North Middlesex University Hospital NHS Trust	04-Apr-22	1,198	99.8	13	79.0	3.8	9.7	7.4
North West Anglia NHS Foundation Trust	01-Apr-22	1,697	97.7	25	70.5	6.1	19.9	3.4
Northampton General Hospital NHS Trust	01-Apr-22	2,145	94.5	24	33.2	0.0	66.8	0.0
Northern Care Alliance NHS Foundation Trust	01-Apr-22	1,462	95.1	16	71.0	14.6	14.4	0.0
Optegra Eye Health Care (Birmingham Eye Hospital)	01-Apr-22	4,908	100.0	6	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Hampshire Eye Hospital)	04-Apr-22	5,474	100.0	11	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Maidstone Eye Clinic)	13-Sep-22	761	100.0	3	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Manchester Eye Hospital)	01-Apr-22	7,904	100.0	12	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Newcastle Eye Clinic)	05-Apr-22	3,686	100.0	7	100.0	0.0	0.0	0.0
Optegra Eye Health Care (North London Eye Hospital)	04-Apr-22	4,516	**	12	99.6	0.4	0.0	0.0
Optegra Eye Health Care (Surrey Eye Hospital)	01-Apr-22	4,718	100.0	11	99.5	0.5	0.0	0.0
Optegra Eye Health Care (Uttoxeter Eye Clinic)	07-Feb-23	236	100.0	4	100.0	0.0	0.0	0.0
Optegra Eye Health Care (Yorkshire Eye Hospital)	04-Apr-22	2,737	100.0	10	100.0	0.0	0.0	0.0
Optimax Clinic (Leicester)	05-Nov-22	72	**	3	100.0	0.0	0.0	0.0
Optimax Clinic (Newton Abbot)	11-Apr-22	560	**	4	100.0	0.0	0.0	0.0
Oxford University Hospitals NHS Foundation Trust	01-Apr-22	3,394	97.9	59	44.3	0.0	53.7	2.1
Portsmouth Hospitals University NHS Trust	01-Apr-22	2,028	100.0	29	68.6	4.4	22.6	4.4
Practice Plus Group Hospital, Barlborough	14-Sep-22	141	100.0	3	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Emersons Green	01-Apr-22	2,199	100.0	10	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Ilford	07-Apr-22	1,010	100.0	3	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Plymouth	05-Apr-22	1,265	100.0	7	100.0	0.0	0.0	0.0

**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
Practice Plus Group Hospital, Shepton Mallet	01-Apr-22	1,658	100.0	5	100.0	0.0	0.0	0.0
Practice Plus Group Hospital, Southampton	02-Apr-22	1,183	97.9	8	100.0	0.0	0.0	0.0
Practice Plus Group Ophthalmology, Rochdale	02-Apr-22	1,861	100.0	8	100.0	0.0	0.0	0.0
Practice Plus Group Surgical Centre, Devizes	25-Apr-22	886	100.0	7	100.0	0.0	0.0	0.0
Practice Plus Group Surgical Centre, Gillingham	01-Apr-22	1,763	100.0	12	100.0	0.0	0.0	0.0
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	01-Apr-22	3,550	100.0	9	100.0	0.0	0.0	0.0
Royal Berkshire NHS Foundation Trust	01-Apr-22	2,977	96.8	41	52.5	5.8	34.3	7.4
Royal Cornwall Hospitals NHS Trust	01-Apr-22	3,823	100.0	19	56.3	39.2	4.4	0.0
Royal Devon University Healthcare NHS Foundation Trust	01-Apr-22	447	10.2	11	85.2	6.0	8.7	0.0
Royal Free London NHS Foundation Trust	01-Apr-22	3,014	97.9	49	53.2	5.4	28.8	12.6
Royal United Hospitals Bath NHS Foundation Trust	01-Apr-22	1,131	100.0	18	44.5	22.1	14.5	18.9
Salisbury NHS Foundation Trust	01-Apr-22	871	98.6	13	78.6	0.0	21.2	0.1
Sandwell and West Birmingham Hospitals NHS Trust	01-Apr-22	2,450	95.3	81	53.6	10.5	35.0	0.8
Sherwood Forest Hospitals NHS Foundation Trust	01-Apr-22	1,283	98.3	19	77.5	13.3	6.5	2.7
Somerset NHS Foundation Trust	01-Apr-22	3,357	100.0	37	75.1	8.4	13.1	3.4
South Tees Hospitals NHS Foundation Trust	01-Apr-22	1,782	90.7	40	53.2	0.0	46.8	0.0
South Warwickshire University NHS Foundation Trust	04-Apr-22	1,200	99.2	8	81.6	18.4	0.0	0.0
SpaMedica - Bedford	01-Apr-22	4,260	100.0	35	100.0	0.0	0.0	0.0
SpaMedica - Birkenhead	01-Apr-22	5,895	100.0	26	100.0	0.0	0.0	0.0
SpaMedica - Birmingham	01-Apr-22	6,089	100.0	21	97.3	0.0	2.7	0.0
SpaMedica - Bolton	01-Apr-22	6,396	100.0	36	100.0	0.0	0.0	0.0
SpaMedica - Bradford	01-Apr-22	2,438	100.0	25	100.0	0.0	0.0	0.0
SpaMedica - Brighton	01-Apr-22	4,373	100.0	21	100.0	0.0	0.0	0.0
SpaMedica - Bristol	04-Apr-22	3,429	100.0	24	100.0	0.0	0.0	0.0
SpaMedica - Bromley	01-Apr-22	3,844	100.0	24	100.0	0.0	0.0	0.0

**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
SpaMedica - Chelmsford	01-Apr-22	5,834	98.7	28	100.0	0.0	0.0	0.0
SpaMedica - Coventry	01-Apr-22	5,261	100.0	25	100.0	0.0	0.0	0.0
SpaMedica - Derby	01-Apr-22	4,928	100.0	16	100.0	0.0	0.0	0.0
SpaMedica - Doncaster	01-Sep-22	1,629	100.0	17	100.0	0.0	0.0	0.0
SpaMedica - Epsom	04-Apr-22	1,202	100.0	11	100.0	0.0	0.0	0.0
SpaMedica - Exeter	01-Apr-22	4,127	100.0	13	100.0	0.0	0.0	0.0
SpaMedica - Gateshead	01-Apr-22	4,613	100.0	30	100.0	0.0	0.0	0.0
SpaMedica - Gloucester	01-Apr-22	2,580	100.0	14	100.0	0.0	0.0	0.0
SpaMedica - Hull	02-Apr-22	3,787	100.0	17	100.0	0.0	0.0	0.0
SpaMedica - Kendal	01-Apr-22	5,235	100.0	31	100.0	0.0	0.0	0.0
SpaMedica - Leeds	01-Jul-22	2,376	100.0	20	100.0	0.0	0.0	0.0
SpaMedica - Leicester	04-Apr-22	2,841	100.0	12	100.0	0.0	0.0	0.0
SpaMedica - Liverpool	01-Apr-22	4,717	100.0	28	100.0	0.0	0.0	0.0
SpaMedica - Manchester	01-Apr-22	5,067	98.3	35	100.0	0.0	0.0	0.0
SpaMedica - Newark	01-Apr-22	3,538	100.0	20	100.0	0.0	0.0	0.0
SpaMedica - Newcastle Under Lyme	01-Apr-22	5,330	100.0	29	100.0	0.0	0.0	0.0
SpaMedica - Norwich	02-Apr-22	2,482	100.0	21	100.0	0.0	0.0	0.0
SpaMedica - Oldham	06-May-22	3,911	100.0	32	100.0	0.0	0.0	0.0
SpaMedica - Peterborough	04-Apr-22	2,469	100.0	15	100.0	0.0	0.0	0.0
SpaMedica - Poole	02-Apr-22	4,383	100.0	18	100.0	0.0	0.0	0.0
SpaMedica - Preston	04-Apr-22	4,501	100.0	39	100.0	0.0	0.0	0.0
SpaMedica - Romford	04-Apr-22	4,164	100.0	24	100.0	0.0	0.0	0.0
SpaMedica - Sheffield	01-Apr-22	6,354	100.0	28	100.0	0.0	0.0	0.0
SpaMedica - Sittingbourne	02-Apr-22	2,699	100.0	12	100.0	0.0	0.0	0.0
SpaMedica - Solihull	26-Sep-22	1,215	100.0	10	100.0	0.0	0.0	0.0

**Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year**

					The percentage of operations performed by			
Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
SpaMedica - Southampton	05-Apr-22	2,673	100.0	16	100.0	0.0	0.0	0.0
SpaMedica - Stockton-on-Tees	05-Apr-22	3,873	99.5	13	100.0	0.0	0.0	0.0
SpaMedica - Swansea	15-Oct-22	343	**	6	100.0	0.0	0.0	0.0
SpaMedica - Wakefield	01-Apr-22	6,311	100.0	20	100.0	0.0	0.0	0.0
SpaMedica - Watford	07-Apr-22	3,457	100.0	14	100.0	0.0	0.0	0.0
SpaMedica - West Lancashire	05-Apr-22	2,360	100.0	24	99.2	0.0	0.8	0.0
SpaMedica - Widnes	01-Apr-22	5,482	100.0	35	100.0	0.0	0.0	0.0
SpaMedica - Wokingham	01-Apr-22	5,062	100.0	25	100.0	0.0	0.0	0.0
SpaMedica - Wolverhampton	02-Apr-22	6,244	99.9	23	99.8	0.0	0.2	0.0
St. Stephens Gate Medical Practice	18-Jan-23	203	**	6	100.0	0.0	0.0	0.0
Surrey and Sussex Healthcare NHS Trust	01-Apr-22	1,589	97.9	25	72.6	9.7	13.4	4.3
The Dudley Group NHS Foundation Trust	01-Apr-22	810	89.6	19	67.2	8.1	19.1	5.6
The Hillingdon Hospitals NHS Foundation Trust	01-Apr-22	1,416	99.7	22	53.7	15.9	14.5	15.9
The Newcastle upon Tyne Hospitals NHS Foundation Trust	01-Apr-22	7,316	98.0	66	73.0	1.7	24.2	1.1
The Shrewsbury and Telford Hospital NHS Trust	01-Apr-22	2,321	98.5	30	62.0	26.7	9.0	2.3
The Stoneygate Eye Hospital	01-Apr-22	675	**	5	100.0	0.0	0.0	0.0
Torbay and South Devon NHS Foundation Trust	01-Apr-22	1,881	100.0	22	68.1	8.7	18.3	4.9
United Lincolnshire Hospitals NHS Trust	01-Apr-22	1,512	98.9	23	82.6	5.7	11.6	0.1
University Hospital Southampton NHS Foundation Trust	01-Apr-22	3,283	97.8	58	37.7	10.0	52.3	0.0
University Hospitals Birmingham NHS Foundation Trust	01-Apr-22	2,353	99.6	54	79.0	0.0	20.1	0.9
University Hospitals Bristol and Weston NHS Foundation Trust	01-Apr-22	3,061	86.1	58	56.5	4.2	39.3	0.0
University Hospitals Coventry and Warwickshire NHS Trust	01-Apr-22	1,808	97.6	45	50.3	17.1	29.0	3.6
University Hospitals Dorset NHS Foundation Trust	01-Apr-22	3,202	89.2	26	65.8	9.7	19.6	4.8
University Hospitals Plymouth NHS Trust	01-Apr-22	1,892	98.9	24	60.4	21.6	15.7	2.3
University Hospitals Sussex NHS Foundation Trust	01-Apr-22	2,153	33.6	32	36.5	26.6	36.9	0.0

## Appendix K table continued: Number of eligible operations and proportion performed by each grade of surgeon for participating centres in the 2022 NHS year

Centre name	Date of first cataract operation during the audit period	Number of eligible operations	Estimate of cases submitted to the audit (%)*	Number of surgeons	The percentage of operations performed by			
					Consultant surgeons	Career grade non-consultant surgeons	More experienced trainee surgeons	Less experienced trainee surgeons
Warrington and Halton Teaching Hospitals NHS Foundation Trust	01-Apr-22	621	99.9	14	86.6	0.0	8.7	4.7
West Suffolk NHS Foundation Trust	01-Apr-22	484	48.2	11	60.5	0.0	35.7	3.7
Wirral University Teaching Hospital NHS Foundation Trust	01-Apr-22	1,272	99.0	18	58.1	0.0	41.9	0.0
Wrightington, Wigan and Leigh NHS Foundation Trust	04-Apr-22	958	100.0	7	83.6	8.1	8.2	0.0
York and Scarborough Teaching Hospitals NHS Foundation Trust	01-Apr-22	3,019	100.0	32	81.7	7.0	11.3	0.0
<b>Overall for all centres</b>	<b>01-Apr-22</b>	<b>481,530</b>	<b>96.0</b>	<b>2,312</b>	<b>84.4</b>	<b>4.0</b>	<b>10.3</b>	<b>1.2</b>

\*The estimate of the proportion of cases submitted to the audit is derived from the number of completed cataract operations supplied to NHS digital or DHCW for the 2022 NHS year. This estimation uses a pro-rata calculation for a centre's denominator where the proportion of time during the NHS year that a centre had been recording cataract operations was multiplied by the number of cataract operations supplied to NHS digital or DHCW. The numerator was the number of operations a centre supplied to the audit. Centre's that had more operations submitted to the national audit than in the NHS digital or DHCW data were all assumed to have a complete submission rate as the actual rate was not possible to estimate. \*\*These centres had no data in the NHS digital or DHCW data. \*\*\*These centres do not have to report to either NHS Digital or DHCW.

## Appendix L: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
Barking, Havering and Redbridge University Hospitals NHS Trust	95.3	1,602	84.3	1,305	53.2	46.9
Barts Health NHS Trust	100.0	2,268	87.9	1,899	61.1	53.9
Benenden Health	100.0	3,026	78.8	2,428	29.1	24.6
Bolton NHS Foundation Trust	99.4	1,534	95.3	1,229	79.1	75.4
Bradford Teaching Hospitals NHS Foundation Trust	98.5	1,583	77.8	1,284	82.0	65.2
Buckinghamshire Healthcare NHS Trust	98.6	4,391	75.3	3,736	26.1	20.6
Cambridge University Hospitals NHS Foundation Trust	94.3	2,203	69.0	1,799	81.6	56.0
Cardiff & Vale University Local Health Board	58.2	1,882	86.2	1,443	33.1	29.5
CHEC (Accrington)	**	93	97.8	12	****	****
CHEC (Atria Watford)	**	5,374	99.3	4,198	74.4	73.9
CHEC (Blackpool)	**	3,089	97.5	2,473	85.2	83.0
CHEC (Bridgend)	**	653	99.7	636	74.4	74.1
CHEC (Coventry)	**	2,406	95.6	1,847	78.6	74.6
CHEC (Leicester)	**	2,037	99.5	1,786	62.5	62.3
CHEC (New Cross)	**	3,192	95.6	2,565	66.4	62.8
CHEC (Newcastle)	**	945	98.9	528	69.3	68.8
CHEC (Northampton)	**	443	99.5	306	61.1	60.8
CHEC (Nottingham)	**	2,572	99.0	2,300	49.4	48.9
CHEC (Preston)	3.5	971	98.9	862	83.6	82.9
CHEC (Slough)	**	1,902	98.5	1,540	61.0	60.3
CHEC (Stoke)	**	2,729	97.9	2,309	43.3	43.2
Chesterfield Royal Hospital NHS Foundation Trust	100.0	685	76.6	571	84.4	67.6
County Durham and Darlington NHS Foundation Trust	99.3	1,214	78.4	961	63.6	54.3
Cwm Taf Morgannwg University Local Health Board	39.0	801	94.4	652	61.5	58.4



**Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year**

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
East Cheshire NHS Trust	99.1	1,144	85.5	944	67.7	56.3
East Kent Hospitals University NHS Foundation Trust	98.5	1,504	82.9	1,250	58.1	49.6
East Suffolk and North Essex NHS Foundation Trust	91.0	4,665	72.2	3,831	84.5	58.6
East Sussex Healthcare NHS Trust	100.0	3,551	89.7	2,991	71.9	67.1
Epsom and St Helier University Hospitals NHS Trust	98.1	2,396	80.4	1,995	56.9	46.9
Exeter Eye	***	851	89.9	763	75.8	67.4
George Eliot Hospital NHS Trust	100.0	765	95.4	647	95.5	91.0
Gloucestershire Hospitals NHS Foundation Trust	97.7	2,101	91.8	1,799	81.8	75.1
Great Western Hospitals NHS Foundation Trust	91.3	1,108	92.1	873	87.9	82.4
Guy's and St Thomas' NHS Foundation Trust	58.3	1,604	90.6	1,373	83.9	76.3
Hampshire Hospitals NHS Foundation Trust	87.4	2,050	78.0	1,712	64.7	48.6
Harrogate and District NHS Foundation Trust	99.3	706	69.4	585	73.8	48.7
Imperial College Healthcare NHS Trust	100.0	2,779	91.3	2,379	90.1	82.0
Isle of Wight NHS Trust	100.0	1,614	77.9	1,254	80.9	62.8
James Paget University Hospitals NHS Foundation Trust	94.7	1,973	86.8	1,644	65.0	59.9
Kettering General Hospital NHS Foundation Trust	99.6	665	93.7	550	26.7	26.4
King's College Hospital NHS Foundation Trust	99.0	5,042	99.0	4,194	89.6	89.1
Kingston Hospital NHS Foundation Trust	100.0	2,413	90.7	2,044	95.7	87.4
Leeds Teaching Hospitals NHS Trust	95.8	2,176	99.4	1,739	84.5	84.0
Liverpool University Hospitals NHS Foundation Trust	95.9	2,718	70.2	2,316	89.8	65.0
London North West University Healthcare NHS Trust	83.0	782	97.7	663	97.1	95.2
Manchester University NHS Foundation Trust	24.6	1,053	89.6	1,053	28.2	26.4
Medical Specialists Group (Guernsey)	***	511	93.5	422	73.5	69.2
Mersey and West Lancashire Teaching Hospitals NHS Trust	65.7	1,379	80.7	1,128	78.0	63.7
Mid and South Essex NHS Foundation Trust	90.6	3,156	64.9	2,641	32.3	26.0
Mid Cheshire Hospitals NHS Foundation Trust	100.0	1,916	76.8	1,632	86.0	67.0

**Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year**

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
Mid Yorkshire Teaching NHS Trust	100.0	1,174	91.5	942	79.4	75.2
Moorfields Eye Hospital NHS Foundation Trust	100.0	20,661	94.7	17,259	93.2	90.7
Newmedica (Aztec West)	100.0	3,425	28.8	2,579	7.6	4.3
Newmedica (Barlborough)	100.0	222	83.8	222	84.2	70.7
Newmedica (Birmingham)	100.0	200	95.0	23	****	****
Newmedica (Brigg)	99.9	2,828	72.1	2,372	62.0	52.2
Newmedica (Bristol)	100.0	2,406	23.5	2,116	4.2	1.7
Newmedica (Exeter)	99.9	2,992	79.2	2,423	23.8	18.2
Newmedica (Frome)	100.0	1,617	26.6	1,271	5.3	2.5
Newmedica (Gloucester - Aspen)	100.0	1,675	84.4	1,538	59.2	52.9
Newmedica (Gloucester - Brighouse)	100.0	5,427	87.0	4,529	58.2	52.2
Newmedica (Grimsby)	100.0	2,963	82.3	2,379	53.7	47.5
Newmedica (Ipswich)	100.0	5,659	0.0	4,565	0.0	0.0
Newmedica (Leeds)	100.0	3,664	63.6	2,995	0.0	0.0
Newmedica (Leicester)	99.6	3,371	28.3	2,648	2.1	1.4
Newmedica (Newcastle)	100.0	2,021	45.3	1,354	51.6	48.4
Newmedica (North Derbyshire)	100.0	4,189	62.5	3,176	65.0	56.9
Newmedica (Northampton)	100.0	2,306	97.7	1,780	77.0	76.2
Newmedica (Norwich)	100.0	4,021	32.6	3,182	72.6	30.2
Newmedica (Oxfordshire)	100.0	214	72.4	85	60.0	47.1
Newmedica (Plymouth)	100.0	1,635	68.8	988	57.3	44.3
Newmedica (Shrewsbury)	100.0	4,491	77.6	3,658	1.9	1.9
Newmedica (Teesside)	100.0	5,529	0.0	4,706	0.0	0.0
Newmedica (Wakefield)	99.8	843	59.8	738	0.0	0.0
Newmedica (Worcester)	100.0	3,219	57.2	2,296	72.9	72.8
Norfolk and Norwich University Hospitals NHS Foundation Trust	98.2	1,613	91.7	1,296	19.5	19.1

**Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year**

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
North Middlesex University Hospital NHS Trust	99.8	1,198	93.6	987	98.3	91.0
North West Anglia NHS Foundation Trust	97.7	1,697	93.0	1,430	64.5	60.5
Northampton General Hospital NHS Trust	94.5	2,145	29.1	1,777	19.0	8.3
Northern Care Alliance NHS Foundation Trust	95.1	1,462	49.2	1,217	56.9	31.8
Optegra Eye Health Care (Birmingham Eye Hospital)	100.0	4,908	99.1	3,918	57.1	56.8
Optegra Eye Health Care (Hampshire Eye Hospital)	100.0	5,474	98.9	4,379	53.3	52.9
Optegra Eye Health Care (Maidstone Eye Clinic)	100.0	761	100.0	420	80.7	80.7
Optegra Eye Health Care (Manchester Eye Hospital)	100.0	7,904	99.1	6,367	60.2	59.7
Optegra Eye Health Care (Newcastle Eye Clinic)	100.0	3,686	99.4	2,841	61.6	61.3
Optegra Eye Health Care (North London Eye Hospital)	**	4,516	98.6	3,518	61.2	60.5
Optegra Eye Health Care (Surrey Eye Hospital)	100.0	4,718	99.5	3,799	57.1	56.8
Optegra Eye Health Care (Uttoxeter Eye Clinic)	100.0	236	100.0	0	****	****
Optegra Eye Health Care (Yorkshire Eye Hospital)	100.0	2,737	97.9	2,123	66.1	65.0
Optimax Clinic (Leicester)	**	72	100.0	53	62.3	62.3
Optimax Clinic (Newton Abbot)	**	560	98.6	367	76.0	75.5
Oxford University Hospitals NHS Foundation Trust	97.9	3,394	93.7	2,840	48.0	46.1
Portsmouth Hospitals University NHS Trust	100.0	2,028	97.1	1,663	94.5	92.2
Practice Plus Group Hospital, Barlborough	100.0	141	97.2	118	100.0	96.6
Practice Plus Group Hospital, Emersons Green	100.0	2,199	97.5	1,819	76.2	73.9
Practice Plus Group Hospital, Ilford	100.0	1,010	70.5	790	32.5	25.7
Practice Plus Group Hospital, Plymouth	100.0	1,265	36.0	1,134	12.9	6.1
Practice Plus Group Hospital, Shepton Mallet	100.0	1,658	97.4	1,415	95.5	92.9
Practice Plus Group Hospital, Southampton	97.9	1,183	95.4	1,043	23.1	21.9
Practice Plus Group Ophthalmology, Rochdale	100.0	1,861	98.7	1,631	69.7	69.0
Practice Plus Group Surgical Centre, Devizes	100.0	886	91.1	729	97.1	86.7
Practice Plus Group Surgical Centre, Gillingham	100.0	1,763	30.3	1,353	69.4	23.0

**Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year**

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	100.0	3,550	99.4	2,932	76.1	75.5
Royal Berkshire NHS Foundation Trust	96.8	2,977	92.9	2,495	41.4	38.9
Royal Cornwall Hospitals NHS Trust	100.0	3,823	96.5	3,109	54.0	52.0
Royal Devon University Healthcare NHS Foundation Trust	10.2	447	96.4	447	58.8	58.6
Royal Free London NHS Foundation Trust	97.9	3,014	68.8	2,537	67.2	58.8
Royal United Hospitals Bath NHS Foundation Trust	100.0	1,131	91.6	954	60.1	56.8
Salisbury NHS Foundation Trust	98.6	871	97.5	751	97.2	95.7
Sandwell and West Birmingham Hospitals NHS Trust	95.3	2,450	93.4	2,006	90.7	85.4
Sherwood Forest Hospitals NHS Foundation Trust	98.3	1,283	75.7	1,049	69.6	50.8
Somerset NHS Foundation Trust	100.0	3,357	83.0	2,876	92.6	77.8
South Tees Hospitals NHS Foundation Trust	90.7	1,782	49.8	1,468	45.6	26.2
South Warwickshire University NHS Foundation Trust	99.2	1,200	85.6	1,006	69.3	61.6
SpaMedica - Bedford	100.0	4,260	98.2	3,411	83.4	82.2
SpaMedica - Birkenhead	100.0	5,895	97.0	4,774	71.6	70.2
SpaMedica - Birmingham	100.0	6,089	98.7	4,989	86.6	85.7
SpaMedica - Bolton	100.0	6,396	98.6	5,249	93.2	92.0
SpaMedica - Bradford	100.0	2,438	97.7	1,826	80.5	79.1
SpaMedica - Brighton	100.0	4,373	97.4	3,673	85.1	83.7
SpaMedica - Bristol	100.0	3,429	93.4	2,724	80.9	77.5
SpaMedica - Bromley	100.0	3,844	97.2	2,958	85.8	83.8
SpaMedica - Chelmsford	98.7	5,834	95.3	4,757	88.6	85.4
SpaMedica - Coventry	100.0	5,261	98.3	4,366	88.4	87.1
SpaMedica - Derby	100.0	4,928	99.1	3,966	86.3	85.7
SpaMedica - Doncaster	100.0	1,629	99.3	1,127	71.3	70.8
SpaMedica - Epsom	100.0	1,202	99.3	1,028	88.8	88.2
SpaMedica - Exeter	100.0	4,127	99.0	3,396	87.8	87.1

**Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year**

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
SpaMedica - Gateshead	100.0	4,613	93.1	3,595	87.6	81.9
SpaMedica - Gloucester	100.0	2,580	97.1	2,186	81.0	80.1
SpaMedica - Hull	100.0	3,787	98.8	3,197	86.1	85.4
SpaMedica - Kendal	100.0	5,235	98.5	4,153	92.5	91.0
SpaMedica - Leeds	100.0	2,376	98.7	1,790	83.4	82.2
SpaMedica - Leicester	100.0	2,841	98.9	2,348	82.0	81.4
SpaMedica - Liverpool	100.0	4,717	95.5	3,805	89.0	86.1
SpaMedica - Manchester	98.3	5,067	92.4	4,483	87.3	81.4
SpaMedica - Newark	100.0	3,538	99.0	2,945	87.8	87.1
SpaMedica - Newcastle Under Lyme	100.0	5,330	94.6	4,383	89.3	84.3
SpaMedica - Norwich	100.0	2,482	97.4	2,038	84.4	82.7
SpaMedica - Oldham	100.0	3,911	99.0	2,829	89.4	88.8
SpaMedica - Peterborough	100.0	2,469	99.2	1,934	80.6	80.2
SpaMedica - Poole	100.0	4,383	98.5	3,550	88.8	87.7
SpaMedica - Preston	100.0	4,501	97.6	3,735	89.1	86.9
SpaMedica - Romford	100.0	4,164	96.4	3,151	64.3	62.8
SpaMedica - Sheffield	100.0	6,354	96.1	5,138	85.9	83.2
SpaMedica - Sittingbourne	100.0	2,699	99.0	2,341	81.3	80.6
SpaMedica - Solihull	100.0	1,215	99.7	731	86.6	86.5
SpaMedica - Southampton	100.0	2,673	98.4	2,057	90.7	89.5
SpaMedica - Stockton-on-Tees	99.5	3,873	96.0	3,100	88.8	86.1
SpaMedica - Swansea	**	343	99.4	37	****	****
SpaMedica - Wakefield	100.0	6,311	98.1	5,182	83.1	81.6
SpaMedica - Watford	100.0	3,457	98.0	2,786	86.5	85.1
SpaMedica - West Lancashire	100.0	2,360	99.0	1,820	93.0	92.3
SpaMedica - Widnes	100.0	5,482	98.1	4,436	78.4	77.3

## Appendix L table continued: Participating centres preoperative, postoperative and change in VA percentages in the 2022 NHS year

Centre name	Estimate of cases submitted to the audit (%)*	Number of eligible operations	% with preoperative VA data	Number of operations eligible for postoperative VA results	% with postoperative VA data	% with change in VA data
SpaMedica - Wokingham	100.0	5,062	96.7	4,053	86.7	83.5
SpaMedica - Wolverhampton	99.9	6,244	96.5	5,219	85.0	82.4
St. Stephens Gate Medical Practice	**	203	100.0	9	****	****
Surrey and Sussex Healthcare NHS Trust	97.9	1,589	96.8	1,341	53.7	52.8
The Dudley Group NHS Foundation Trust	89.6	810	65.6	661	88.2	59.6
The Hillingdon Hospitals NHS Foundation Trust	99.7	1,416	95.1	1,223	70.2	67.5
The Newcastle upon Tyne Hospitals NHS Foundation Trust	98.0	7,316	92.1	6,065	44.6	42.0
The Shrewsbury and Telford Hospital NHS Trust	98.5	2,321	75.8	1,919	62.5	48.7
The Stoneygate Eye Hospital	**	675	90.5	675	41.5	37.3
Torbay and South Devon NHS Foundation Trust	100.0	1,881	62.3	1,586	33.7	24.7
United Lincolnshire Hospitals NHS Trust	98.9	1,512	89.2	1,300	68.1	60.2
University Hospital Southampton NHS Foundation Trust	97.8	3,283	97.9	2,721	93.9	92.0
University Hospitals Birmingham NHS Foundation Trust	99.6	2,353	96.0	2,012	91.2	87.8
University Hospitals Bristol and Weston NHS Foundation Trust	86.1	3,061	90.1	2,632	73.6	67.1
University Hospitals Coventry and Warwickshire NHS Trust	97.6	1,808	75.6	1,535	90.9	69.3
University Hospitals Dorset NHS Foundation Trust	89.2	3,202	75.3	2,644	57.9	46.2
University Hospitals Plymouth NHS Trust	98.9	1,892	87.9	1,556	76.2	66.6
University Hospitals Sussex NHS Foundation Trust	33.6	2,153	91.4	1,789	4.9	4.8
Warrington and Halton Teaching Hospitals NHS Foundation Trust	99.9	621	80.2	518	99.0	85.9
West Suffolk NHS Foundation Trust	48.2	484	97.5	399	81.7	79.9
Wirral University Teaching Hospital NHS Foundation Trust	99.0	1,272	87.9	1,011	95.5	83.9
Wrightington, Wigan and Leigh NHS Foundation Trust	100.0	958	72.1	822	92.7	68.4
York and Scarborough Teaching Hospitals NHS Foundation Trust	100.0	3,019	80.2	2,423	67.5	58.6
<b>Overall for all centres</b>	<b>96.0</b>	<b>481,530</b>	<b>86.5</b>	<b>391,598</b>	<b>69.0</b>	<b>64.4</b>

\*The estimate of the proportion of cases submitted to the audit is derived from the number of completed cataract operations supplied to NHS Digital or DHCW for the NHS year. This estimation uses a pro rata calculation for a centre's denominator where the proportion of time during the NHS year that a centre had been recording cataract operations was multiplied by the number of cataract operations supplied to NHS Digital or DHCW. The numerator was the number of operations a centre had supplied to the audit. Centres that had more operations submitted to the national audit than in the NHS Digital or DHCW data were all assumed to have a complete submission rate as the actual rate was not possible to estimate. \*\*These centres had no data in the NHS digital data. \*\*\*These centres do not have to report to either NHS Digital or DHCW. \*\*\*\*No estimate is produced for centres with <50 eligible operations in the postoperative qualifying time period.

## Appendix M: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
Barking, Havering and Redbridge University Hospitals NHS Trust	1,305	53.2	719	54.9	586	51.0
Barts Health NHS Trust	1,899	61.1	1,030	63.1	869	58.8
Benenden Health	2,428	29.1	1,277	36.3	1,151	21.0
Bolton NHS Foundation Trust	1,229	79.1	670	83.0	559	74.4
Bradford Teaching Hospitals NHS Foundation Trust	1,284	82.0	758	85.1	526	77.6
Buckinghamshire Healthcare NHS Trust	3,736	26.1	1,987	29.5	1,749	22.3
Cambridge University Hospitals NHS Foundation Trust	1,799	81.6	1,090	78.7	709	86.0
Cardiff & Vale University Local Health Board	1,443	33.1	809	35.1	634	30.6
CHEC (Accrington)	12	*	12	*	0	*
CHEC (Atria Watford)	4,198	74.4	3,040	74.4	1,158	74.4
CHEC (Blackpool)	2,473	85.2	1,576	87.9	897	80.5
CHEC (Bridgend)	636	74.4	525	76.4	111	64.9
CHEC (Coventry)	1,847	78.6	1,292	80.1	555	75.1
CHEC (Leicester)	1,786	62.5	1,398	64.2	388	56.4
CHEC (New Cross)	2,565	66.4	1,957	67.7	608	62.3
CHEC (Newcastle)	528	69.3	419	72.6	109	56.9
CHEC (Northampton)	306	61.1	226	65.5	80	48.8
CHEC (Nottingham)	2,300	49.4	1,937	48.0	363	56.7
CHEC (Preston)	862	83.6	538	85.5	324	80.6
CHEC (Slough)	1,540	61.0	1,217	62.0	323	57.3
CHEC (Stoke)	2,309	43.3	1,484	57.2	825	18.3
Chesterfield Royal Hospital NHS Foundation Trust	571	84.4	352	85.5	219	82.6
County Durham and Darlington NHS Foundation Trust	961	63.6	572	76.4	389	44.7
Cwm Taf Morgannwg University Local Health Board	652	61.5	461	61.6	191	61.3

**Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year**

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
East Cheshire NHS Trust	944	67.7	548	75.0	396	57.6
East Kent Hospitals University NHS Foundation Trust	1,250	58.1	760	62.2	490	51.6
East Suffolk and North Essex NHS Foundation Trust	3,831	84.5	2,266	84.0	1,565	85.1
East Sussex Healthcare NHS Trust	2,991	71.9	1,719	73.6	1,272	69.6
Epsom and St Helier University Hospitals NHS Trust	1,995	56.9	1,029	55.0	966	59.0
Exeter Eye	763	75.8	443	76.3	320	75.0
George Eliot Hospital NHS Trust	647	95.5	393	95.7	254	95.3
Gloucestershire Hospitals NHS Foundation Trust	1,799	81.8	997	94.6	802	65.8
Great Western Hospitals NHS Foundation Trust	873	87.9	488	88.1	385	87.5
Guy's and St Thomas' NHS Foundation Trust	1,373	83.9	745	88.7	628	78.2
Hampshire Hospitals NHS Foundation Trust	1,712	64.7	979	67.0	733	61.7
Harrogate and District NHS Foundation Trust	585	73.8	398	73.1	187	75.4
Imperial College Healthcare NHS Trust	2,379	90.1	1,284	92.3	1,095	87.5
Isle of Wight NHS Trust	1,254	80.9	735	81.5	519	80.2
James Paget University Hospitals NHS Foundation Trust	1,644	65.0	986	64.2	658	66.3
Kettering General Hospital NHS Foundation Trust	550	26.7	423	27.2	127	25.2
King's College Hospital NHS Foundation Trust	4,194	89.6	2,448	90.9	1,746	87.8
Kingston Hospital NHS Foundation Trust	2,044	95.7	1,123	97.7	921	93.3
Leeds Teaching Hospitals NHS Trust	1,739	84.5	929	92.7	810	75.1
Liverpool University Hospitals NHS Foundation Trust	2,316	89.8	1,567	90.1	749	89.2
London North West University Healthcare NHS Trust	663	97.1	381	96.9	282	97.5
Manchester University NHS Foundation Trust	1,053	28.2	583	31.0	470	24.7
Medical Specialists Group (Guernsey)	422	73.5	232	88.4	190	55.3
Mersey and West Lancashire Teaching Hospitals NHS Trust	1,128	78.0	720	80.4	408	73.8
Mid and South Essex NHS Foundation Trust	2,641	32.3	1,782	34.2	859	28.3
Mid Cheshire Hospitals NHS Foundation Trust	1,632	86.0	900	88.2	732	83.2



**Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year**

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
Mid Yorkshire Teaching NHS Trust	942	79.4	573	83.9	369	72.4
Moorfields Eye Hospital NHS Foundation Trust	17,259	93.2	10,521	93.6	6,738	92.6
Newmedica (Aztec West)	2,579	7.6	1,604	7.9	975	7.2
Newmedica (Barlborough)	222	84.2	144	93.8	78	66.7
Newmedica (Birmingham)	23	*	23	*	0	*
Newmedica (Brigg)	2,372	62.0	1,503	61.3	869	63.2
Newmedica (Bristol)	2,116	4.2	1,403	4.6	713	3.5
Newmedica (Exeter)	2,423	23.8	1,676	27.4	747	15.7
Newmedica (Frome)	1,271	5.3	743	5.8	528	4.5
Newmedica (Gloucester - Aspen)	1,538	59.2	995	62.6	543	53.0
Newmedica (Gloucester - Brighouse)	4,529	58.2	2,954	61.0	1,575	53.0
Newmedica (Grimsby)	2,379	53.7	1,502	52.6	877	55.6
Newmedica (Ipswich)	4,565	0.0	2,830	0.0	1,735	0.0
Newmedica (Leeds)	2,995	0.0	1,751	0.0	1,244	0.0
Newmedica (Leicester)	2,648	2.1	2,049	2.5	599	0.5
Newmedica (Newcastle)	1,354	51.6	917	52.9	437	49.0
Newmedica (North Derbyshire)	3,176	65.0	2,178	75.9	998	41.1
Newmedica (Northampton)	1,780	77.0	1,310	80.3	470	67.9
Newmedica (Norwich)	3,182	72.6	2,152	71.2	1,030	75.5
Newmedica (Oxfordshire)	85	60.0	80	60.0	5	60.0
Newmedica (Plymouth)	988	57.3	793	58.6	195	51.8
Newmedica (Shrewsbury)	3,658	1.9	2,387	2.3	1,271	1.3
Newmedica (Teesside)	4,706	0.0	2,610	0.0	2,096	0.0
Newmedica (Wakefield)	738	0.0	455	0.0	283	0.0
Newmedica (Worcester)	2,296	72.9	1,528	71.4	768	75.9
Norfolk and Norwich University Hospitals NHS Foundation Trust	1,296	19.5	731	22.8	565	15.2

**Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year**

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
North Middlesex University Hospital NHS Trust	987	98.3	549	98.7	438	97.7
North West Anglia NHS Foundation Trust	1,430	64.5	826	66.9	604	61.1
Northampton General Hospital NHS Trust	1,777	19.0	999	19.6	778	18.1
Northern Care Alliance NHS Foundation Trust	1,217	56.9	898	60.4	319	47.3
Optegra Eye Health Care (Birmingham Eye Hospital)	3,918	57.1	2,247	75.6	1,671	32.3
Optegra Eye Health Care (Hampshire Eye Hospital)	4,379	53.3	2,401	74.2	1,978	28.1
Optegra Eye Health Care (Maidstone Eye Clinic)	420	80.7	267	89.1	153	66.0
Optegra Eye Health Care (Manchester Eye Hospital)	6,367	60.2	3,290	81.7	3,077	37.3
Optegra Eye Health Care (Newcastle Eye Clinic)	2,841	61.6	1,631	80.0	1,210	36.7
Optegra Eye Health Care (North London Eye Hospital)	3,518	61.2	2,062	74.3	1,456	42.7
Optegra Eye Health Care (Surrey Eye Hospital)	3,799	57.1	1,987	78.9	1,812	33.2
Optegra Eye Health Care (Uttoxeter Eye Clinic)	0	*	0	*	0	*
Optegra Eye Health Care (Yorkshire Eye Hospital)	2,123	66.1	1,193	79.3	930	49.2
Optimax Clinic (Leicester)	53	62.3	43	65.1	10	50.0
Optimax Clinic (Newton Abbot)	367	76.0	252	75.8	115	76.5
Oxford University Hospitals NHS Foundation Trust	2,840	48.0	1,650	51.8	1,190	42.7
Portsmouth Hospitals University NHS Trust	1,663	94.5	924	95.6	739	93.2
Practice Plus Group Hospital, Barlborough	118	100.0	78	100.0	40	100.0
Practice Plus Group Hospital, Emersons Green	1,819	76.2	1,171	72.6	648	82.7
Practice Plus Group Hospital, Ilford	790	32.5	490	39.0	300	22.0
Practice Plus Group Hospital, Plymouth	1,134	12.9	659	12.7	475	13.1
Practice Plus Group Hospital, Shepton Mallet	1,415	95.5	772	97.3	643	93.5
Practice Plus Group Hospital, Southampton	1,043	23.1	548	21.9	495	24.4
Practice Plus Group Ophthalmology, Rochdale	1,631	69.7	847	78.7	784	59.8
Practice Plus Group Surgical Centre, Devizes	729	97.1	415	97.8	314	96.2
Practice Plus Group Surgical Centre, Gillingham	1,353	69.4	806	73.4	547	63.4

**Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year**

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	2,932	76.1	1,542	97.1	1,390	52.9
Royal Berkshire NHS Foundation Trust	2,495	41.4	1,338	43.4	1,157	39.2
Royal Cornwall Hospitals NHS Trust	3,109	54.0	1,731	70.7	1,378	32.9
Royal Devon University Healthcare NHS Foundation Trust	447	58.8	218	53.2	229	64.2
Royal Free London NHS Foundation Trust	2,537	67.2	1,482	69.2	1,055	64.5
Royal United Hospitals Bath NHS Foundation Trust	954	60.1	547	65.6	407	52.6
Salisbury NHS Foundation Trust	751	97.2	435	98.6	316	95.3
Sandwell and West Birmingham Hospitals NHS Trust	2,006	90.7	1,168	91.7	838	89.3
Sherwood Forest Hospitals NHS Foundation Trust	1,049	69.6	718	70.8	331	67.1
Somerset NHS Foundation Trust	2,876	92.6	1,705	93.1	1,171	91.7
South Tees Hospitals NHS Foundation Trust	1,468	45.6	946	47.7	522	41.8
South Warwickshire University NHS Foundation Trust	1,006	69.3	518	83.4	488	54.3
SpaMedica - Bedford	3,411	83.4	1,959	86.1	1,452	79.9
SpaMedica - Birkenhead	4,774	71.6	2,535	79.7	2,239	62.3
SpaMedica - Birmingham	4,989	86.6	2,698	89.7	2,291	83.0
SpaMedica - Bolton	5,249	93.2	2,913	94.8	2,336	91.2
SpaMedica - Bradford	1,826	80.5	1,063	85.4	763	73.7
SpaMedica - Brighton	3,673	85.1	1,991	87.4	1,682	82.4
SpaMedica - Bristol	2,724	80.9	1,687	86.7	1,037	71.6
SpaMedica - Bromley	2,958	85.8	1,680	86.8	1,278	84.4
SpaMedica - Chelmsford	4,757	88.6	2,738	90.6	2,019	85.9
SpaMedica - Coventry	4,366	88.4	2,411	90.3	1,955	86.1
SpaMedica - Derby	3,966	86.3	2,501	88.2	1,465	83.1
SpaMedica - Doncaster	1,127	71.3	673	79.8	454	58.6
SpaMedica - Epsom	1,028	88.8	619	89.3	409	88.0
SpaMedica - Exeter	3,396	87.8	2,087	90.2	1,309	84.0

**Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year**

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
SpaMedica - Gateshead	3,595	87.6	2,304	90.1	1,291	83.0
SpaMedica - Gloucester	2,186	81.0	1,176	87.5	1,010	73.5
SpaMedica - Hull	3,197	86.1	1,674	91.7	1,523	80.0
SpaMedica - Kendal	4,153	92.5	2,466	94.0	1,687	90.2
SpaMedica - Leeds	1,790	83.4	1,052	87.5	738	77.4
SpaMedica - Leicester	2,348	82.0	1,395	84.2	953	78.9
SpaMedica - Liverpool	3,805	89.0	2,061	91.5	1,744	86.2
SpaMedica - Manchester	4,483	87.3	2,498	91.1	1,985	82.6
SpaMedica - Newark	2,945	87.8	1,660	89.9	1,285	85.1
SpaMedica - Newcastle Under Lyme	4,383	89.3	2,529	92.1	1,854	85.5
SpaMedica - Norwich	2,038	84.4	1,181	84.7	857	84.1
SpaMedica - Oldham	2,829	89.4	1,649	93.6	1,180	83.6
SpaMedica - Peterborough	1,934	80.6	1,123	82.7	811	77.7
SpaMedica - Poole	3,550	88.8	2,126	91.0	1,424	85.7
SpaMedica - Preston	3,735	89.1	2,036	92.8	1,699	84.7
SpaMedica - Romford	3,151	64.3	1,836	69.1	1,315	57.6
SpaMedica - Sheffield	5,138	85.9	2,981	90.0	2,157	80.4
SpaMedica - Sittingbourne	2,341	81.3	1,399	82.3	942	79.8
SpaMedica - Solihull	731	86.6	497	88.9	234	81.6
SpaMedica - Southampton	2,057	90.7	1,232	92.0	825	88.6
SpaMedica - Stockton-on-Tees	3,100	88.8	1,801	92.7	1,299	83.4
SpaMedica - Swansea	37	*	23	*	14	*
SpaMedica - Wakefield	5,182	83.1	2,848	88.2	2,334	76.8
SpaMedica - Watford	2,786	86.5	1,631	88.4	1,155	83.9
SpaMedica - West Lancashire	1,820	93.0	1,067	95.6	753	89.2
SpaMedica - Widnes	4,436	78.4	2,636	82.4	1,800	72.6

## Appendix M table continued: Participating centres percentage of first and second treated eyes with postoperative VA data in the 2022 NHS year

Centre name	Number of operations eligible for postoperative VA results	% with postoperative VA data	Number of first treated eyes	% first treated eyes with postoperative VA data	Number of second treated eyes	% second treated eyes with postoperative VA data
SpaMedica - Wokingham	4,053	86.7	2,285	88.1	1,768	84.8
SpaMedica - Wolverhampton	5,219	85.0	3,119	89.0	2,100	79.1
St. Stephens Gate Medical Practice	9	*	8	*	1	*
Surrey and Sussex Healthcare NHS Trust	1,341	53.7	820	59.8	521	44.1
The Dudley Group NHS Foundation Trust	661	88.2	447	89.5	214	85.5
The Hillingdon Hospitals NHS Foundation Trust	1,223	70.2	680	84.3	543	52.5
The Newcastle upon Tyne Hospitals NHS Foundation Trust	6,065	44.6	2,954	51.0	3,111	38.4
The Shrewsbury and Telford Hospital NHS Trust	1,919	62.5	934	76.1	985	49.6
The Stoneygate Eye Hospital	675	41.5	573	39.4	102	52.9
Torbay and South Devon NHS Foundation Trust	1,586	33.7	902	37.7	684	28.5
United Lincolnshire Hospitals NHS Trust	1,300	68.1	926	72.0	374	58.3
University Hospital Southampton NHS Foundation Trust	2,721	93.9	1,523	94.6	1,198	92.9
University Hospitals Birmingham NHS Foundation Trust	2,012	91.2	1,151	92.0	861	90.1
University Hospitals Bristol and Weston NHS Foundation Trust	2,632	73.6	1,429	74.5	1,203	72.6
University Hospitals Coventry and Warwickshire NHS Trust	1,535	90.9	856	93.9	679	87.0
University Hospitals Dorset NHS Foundation Trust	2,644	57.9	1,534	60.9	1,110	53.9
University Hospitals Plymouth NHS Trust	1,556	76.2	876	70.0	680	84.3
University Hospitals Sussex NHS Foundation Trust	1,789	4.9	971	6.9	818	2.4
Warrington and Halton Teaching Hospitals NHS Foundation Trust	518	99.0	318	99.4	200	98.5
West Suffolk NHS Foundation Trust	399	81.7	299	82.9	100	78.0
Wirral University Teaching Hospital NHS Foundation Trust	1,011	95.5	559	95.9	452	95.1
Wrightington, Wigan and Leigh NHS Foundation Trust	822	92.7	477	93.7	345	91.3
York and Scarborough Teaching Hospitals NHS Foundation Trust	2,423	67.5	1,326	72.8	1,097	61.1
<b>Overall for all centres</b>	<b>391,598</b>	<b>69.0</b>	<b>232,306</b>	<b>72.4</b>	<b>159,292</b>	<b>64.0</b>

Note: Both eyes from a patient undergoing ISBCS are included as 'first treated' eyes. \*No estimate is produced for centres with <50 eligible operations in the postoperative qualifying period.

## Appendix N: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
Barking, Havering and Redbridge University Hospitals NHS Trust	1,602	1.69	1.81	1.03				
Barts Health NHS Trust	2,268	1.72	2.25	0.84				
Benenden Health	3,026	0.66	1.10	0.66				
Bolton NHS Foundation Trust	1,534	1.76	2.19	0.88	927	0.86	1.45	0.54
Bradford Teaching Hospitals NHS Foundation Trust	1,583	2.08	1.96	1.17	837	1.19	1.18	0.91
Buckinghamshire Healthcare NHS Trust	4,391	0.98	1.98	0.54				
Cambridge University Hospitals NHS Foundation Trust	2,203	0.68	1.65	0.45				
Cardiff & Vale University Local Health Board	1,882	0.85	1.81	0.52				
CHEC (Accrington)	93	1.08	1.08	1.09				
CHEC (Atria Watford)	5,374	0.32	1.08	0.32	3,102	0.10	0.82	0.11
CHEC (Blackpool)	3,089	0.94	1.08	0.96	2,053	0.54	1.00	0.48
CHEC (Bridgend)	653	0.31	1.40	0.24	471	1.91	0.73	2.35
CHEC (Coventry)	2,406	0.29	1.39	0.23	1,378	0.65	0.77	0.76
CHEC (Leicester)	2,037	0.39	1.17	0.37	1,112	0.36	0.69	0.47
CHEC (New Cross)	3,192	0.19	1.05	0.20	1,611	0.25	0.62	0.36
CHEC (Newcastle)	945	0.53	1.08	0.54	363	1.38	0.66	1.87
CHEC (Northampton)	443	0.68	1.11	0.67	186	1.08	0.73	1.32
CHEC (Nottingham)	2,572	0.51	1.22	0.45				
CHEC (Preston)	971	0.62	1.11	0.61	715	2.24	0.83	2.43
CHEC (Slough)	1,902	0.11	1.07	0.11	928	1.08	0.77	1.27
CHEC (Stoke)	2,729	0.51	1.38	0.41				
Chesterfield Royal Hospital NHS Foundation Trust	685	3.21	1.84	1.92	386	1.30	1.15	1.01
County Durham and Darlington NHS Foundation Trust	1,214	1.89	1.71	1.22				
Cwm Taf Morgannwg University Local Health Board	801	2.87	2.52	1.25				

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
East Cheshire NHS Trust	1,144	0.79	1.22	0.71				
East Kent Hospitals University NHS Foundation Trust	1,504	0.40	1.86	0.24				
East Suffolk and North Essex NHS Foundation Trust	4,665	1.61	1.99	0.89				
East Sussex Healthcare NHS Trust	3,551	0.99	1.71	0.64	2,007	0.65	1.06	0.55
Epsom and St Helier University Hospitals NHS Trust	2,396	1.67	2.08	0.88				
Exeter Eye	851	0.12	1.13	0.11	514	0.00	1.15	0.00
George Eliot Hospital NHS Trust	765	1.57	1.44	1.19	589	1.87	0.87	1.93
Gloucestershire Hospitals NHS Foundation Trust	2,101	1.71	1.78	1.06	1,351	0.74	1.36	0.49
Great Western Hospitals NHS Foundation Trust	1,108	1.26	1.64	0.85	719	0.83	1.41	0.53
Guy's and St Thomas' NHS Foundation Trust	1,604	1.31	2.30	0.63	1,048	0.76	1.23	0.56
Hampshire Hospitals NHS Foundation Trust	2,050	1.46	1.46	1.11				
Harrogate and District NHS Foundation Trust	706	0.57	1.93	0.32				
Imperial College Healthcare NHS Trust	2,779	2.30	2.68	0.95	1,951	0.97	1.09	0.80
Isle of Wight NHS Trust	1,614	1.30	1.47	0.97	788	0.51	1.42	0.32
James Paget University Hospitals NHS Foundation Trust	1,973	0.76	1.57	0.53				
Kettering General Hospital NHS Foundation Trust	665	1.50	1.70	0.97				
King's College Hospital NHS Foundation Trust	5,042	1.41	1.86	0.83	3,735	0.72	1.17	0.56
Kingston Hospital NHS Foundation Trust	2,413	1.20	2.14	0.62	1,787	0.22	1.36	0.15
Leeds Teaching Hospitals NHS Trust	2,176	1.79	2.20	0.90	1,460	0.55	1.30	0.38
Liverpool University Hospitals NHS Foundation Trust	2,718	2.72	2.15	1.40	1,506	0.93	1.36	0.61
London North West University Healthcare NHS Trust	782	1.15	2.05	0.62	631	0.16	0.91	0.16
Manchester University NHS Foundation Trust	1,053	2.75	1.90	1.59				
Medical Specialists Group (Guernsey)	511	0.98	1.29	0.83	292	0.34	0.96	0.32
Mersey and West Lancashire Teaching Hospitals NHS Trust	1,379	1.89	1.58	1.31	718	1.39	0.86	1.45
Mid and South Essex NHS Foundation Trust	3,156	2.00	1.80	1.22				

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
Mid Cheshire Hospitals NHS Foundation Trust	1,916	1.62	1.79	0.99	1,094	0.64	1.13	0.51
Mid Yorkshire Teaching NHS Trust	1,174	2.21	1.96	1.24	708	1.69	1.47	1.04
Moorfields Eye Hospital NHS Foundation Trust	20,661	1.26	1.99	0.70	15,647	0.39	0.81	0.43
Newmedica (Aztec West)	3,425	0.58	1.06	0.60				
Newmedica (Barlborough)	222	0.45	1.13	0.44	157	0.64	0.80	0.72
Newmedica (Birmingham)	200	0.50	1.31	0.42				
Newmedica (Brigg)	2,828	0.35	1.07	0.36				
Newmedica (Bristol)	2,406	0.62	1.08	0.64				
Newmedica (Exeter)	2,992	0.43	1.67	0.29				
Newmedica (Frome)	1,617	0.25	1.10	0.25				
Newmedica (Gloucester - Aspen)	1,675	0.54	1.13	0.52				
Newmedica (Gloucester - Brighouse)	5,427	0.39	1.14	0.37				
Newmedica (Grimsby)	2,963	0.07	1.07	0.07				
Newmedica (Ipswich)	5,659	0.05	1.01	0.06				
Newmedica (Leeds)	3,664	0.11	1.14	0.11				
Newmedica (Leicester)	3,371	0.18	1.02	0.19				
Newmedica (Newcastle)	2,021	0.15	1.17	0.14				
Newmedica (North Derbyshire)	4,189	0.31	1.09	0.31				
Newmedica (Northampton)	2,306	0.17	1.16	0.16	1,357	0.66	0.74	0.81
Newmedica (Norwich)	4,021	0.25	1.13	0.24				
Newmedica (Oxfordshire)	214	0.00	1.35	0.00				
Newmedica (Plymouth)	1,635	0.37	1.06	0.38				
Newmedica (Shrewsbury)	4,491	0.45	1.13	0.43				
Newmedica (Teesside)	5,529	0.29	1.00	0.32				
Newmedica (Wakefield)	843	0.00	1.08	0.00				



**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
Newmedica (Worcester)	3,219	0.43	1.09	0.44	1,671	0.78	1.02	0.69
Norfolk and Norwich University Hospitals NHS Foundation Trust	1,613	1.55	1.83	0.93				
North Middlesex University Hospital NHS Trust	1,198	2.09	1.62	1.42	898	0.45	1.02	0.39
North West Anglia NHS Foundation Trust	1,697	2.30	1.91	1.33	865	0.81	1.32	0.55
Northampton General Hospital NHS Trust	2,145	1.54	2.08	0.81				
Northern Care Alliance NHS Foundation Trust	1,462	1.71	1.64	1.15				
Optegra Eye Health Care (Birmingham Eye Hospital)	4,908	0.51	1.17	0.48				
Optegra Eye Health Care (Hampshire Eye Hospital)	5,474	0.31	1.12	0.30				
Optegra Eye Health Care (Maidstone Eye Clinic)	761	0.13	1.66	0.09	339	0.59	0.86	0.62
Optegra Eye Health Care (Manchester Eye Hospital)	7,904	0.18	1.25	0.16				
Optegra Eye Health Care (Newcastle Eye Clinic)	3,686	0.27	1.36	0.22	1,741	0.52	0.89	0.52
Optegra Eye Health Care (North London Eye Hospital)	4,516	0.38	1.27	0.33	2,128	0.47	0.75	0.56
Optegra Eye Health Care (Surrey Eye Hospital)	4,718	0.28	1.11	0.27				
Optegra Eye Health Care (Uttoxeter Eye Clinic)	236	0.85	1.29	0.73				
Optegra Eye Health Care (Yorkshire Eye Hospital)	2,737	0.40	1.17	0.38	1,380	0.72	0.86	0.75
Optimax Clinic (Leicester)	72	0.00	2.44	0.00				
Optimax Clinic (Newton Abbot)	560	0.36	2.21	0.18	277	0.00	0.57	0.00
Oxford University Hospitals NHS Foundation Trust	3,394	1.74	2.42	0.79				
Portsmouth Hospitals University NHS Trust	2,028	1.78	1.63	1.20	1,534	0.98	1.07	0.82
Practice Plus Group Hospital, Barlborough	141	1.42	1.15	1.36	114	0.88	0.87	0.91
Practice Plus Group Hospital, Emersons Green	2,199	0.59	1.54	0.42	1,344	0.52	0.84	0.56
Practice Plus Group Hospital, Ilford	1,010	0.79	1.16	0.75				
Practice Plus Group Hospital, Plymouth	1,265	0.71	1.15	0.68				
Practice Plus Group Hospital, Shepton Mallet	1,658	0.36	1.29	0.31	1,315	0.30	0.95	0.29
Practice Plus Group Hospital, Southampton	1,183	0.08	1.05	0.09				

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
Practice Plus Group Ophthalmology, Rochdale	1,861	0.48	1.47	0.36	1,126	1.33	0.86	1.40
Practice Plus Group Surgical Centre, Devizes	886	0.45	1.62	0.31	632	0.79	0.77	0.92
Practice Plus Group Surgical Centre, Gillingham	1,763	0.62	1.16	0.59				
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	3,550	0.59	1.09	0.60	2,215	0.32	0.76	0.37
Royal Berkshire NHS Foundation Trust	2,977	1.04	1.91	0.60				
Royal Cornwall Hospitals NHS Trust	3,823	0.68	1.90	0.39				
Royal Devon University Healthcare NHS Foundation Trust	447	1.12	1.48	0.83				
Royal Free London NHS Foundation Trust	3,014	2.16	1.95	1.22				
Royal United Hospitals Bath NHS Foundation Trust	1,131	1.15	2.26	0.56				
Salisbury NHS Foundation Trust	871	0.80	1.80	0.49	719	0.42	1.22	0.31
Sandwell and West Birmingham Hospitals NHS Trust	2,450	2.98	1.88	1.75	1,714	1.63	0.91	1.62
Sherwood Forest Hospitals NHS Foundation Trust	1,283	1.09	1.57	0.76				
Somerset NHS Foundation Trust	3,357	1.19	1.57	0.83	2,238	0.63	1.06	0.53
South Tees Hospitals NHS Foundation Trust	1,782	1.74	1.80	1.06				
South Warwickshire University NHS Foundation Trust	1,200	0.25	1.58	0.17	620	0.48	1.73	0.25
SpaMedica - Bedford	4,260	0.54	1.20	0.50	2,804	0.21	0.83	0.23
SpaMedica - Birkenhead	5,895	0.37	1.15	0.36	3,351	0.27	0.90	0.27
SpaMedica - Birmingham	6,089	0.13	1.22	0.12	4,274	0.28	1.08	0.23
SpaMedica - Bolton	6,396	0.53	1.08	0.54	4,828	0.31	0.80	0.35
SpaMedica - Bradford	2,438	0.53	1.08	0.55	1,445	0.62	0.86	0.65
SpaMedica - Brighton	4,373	0.78	1.24	0.69	3,075	0.29	0.90	0.29
SpaMedica - Bristol	3,429	0.70	1.32	0.58	2,112	0.33	0.94	0.32
SpaMedica - Bromley	3,844	0.52	1.12	0.51	2,480	0.28	1.08	0.24
SpaMedica - Chelmsford	5,834	0.41	1.16	0.39	4,063	0.22	0.88	0.23
SpaMedica - Coventry	5,261	0.23	1.22	0.21	3,804	0.16	1.55	0.09

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
SpaMedica - Derby	4,928	0.18	1.18	0.17	3,399	0.24	1.05	0.20
SpaMedica - Doncaster	1,629	0.55	1.24	0.49	798	0.50	0.86	0.52
SpaMedica - Epsom	1,202	1.66	1.18	1.56	907	0.00	0.93	0.00
SpaMedica - Exeter	4,127	0.36	1.15	0.35	2,957	0.14	1.02	0.12
SpaMedica - Gateshead	4,613	0.61	1.13	0.59	2,946	0.48	0.75	0.57
SpaMedica - Gloucester	2,580	0.66	1.15	0.63	1,750	0.51	0.96	0.48
SpaMedica - Hull	3,787	0.82	1.04	0.86	2,730	0.44	0.79	0.50
SpaMedica - Kendal	5,235	1.07	1.11	1.06	3,778	0.42	0.94	0.41
SpaMedica - Leeds	2,376	0.38	1.07	0.39	1,472	0.20	0.78	0.24
SpaMedica - Leicester	2,841	0.18	1.34	0.14	1,911	0.31	1.02	0.28
SpaMedica - Liverpool	4,717	0.25	1.26	0.22	3,275	0.24	0.76	0.29
SpaMedica - Manchester	5,067	0.83	1.28	0.71	3,649	0.47	0.86	0.49
SpaMedica - Newark	3,538	0.20	1.29	0.17	2,564	0.27	0.98	0.25
SpaMedica - Newcastle Under Lyme	5,330	0.54	1.22	0.49	3,696	0.46	1.41	0.29
SpaMedica - Norwich	2,482	0.68	1.35	0.56	1,685	0.65	0.86	0.69
SpaMedica - Oldham	3,911	0.56	1.11	0.56	2,512	0.44	0.80	0.49
SpaMedica - Peterborough	2,469	0.57	1.20	0.52	1,551	0.32	0.92	0.32
SpaMedica - Poole	4,383	0.57	1.28	0.49	3,114	0.39	0.92	0.38
SpaMedica - Preston	4,501	0.82	1.17	0.78	3,244	0.28	0.86	0.29
SpaMedica - Romford	4,164	0.65	1.10	0.65	1,978	0.66	0.87	0.68
SpaMedica - Sheffield	6,354	0.22	1.24	0.20	4,276	0.23	1.02	0.21
SpaMedica - Sittingbourne	2,699	0.70	1.15	0.67	1,886	0.58	1.16	0.45
SpaMedica - Solihull	1,215	0.49	1.29	0.42	632	0.47	0.96	0.44
SpaMedica - Southampton	2,673	0.41	1.15	0.39	1,840	0.38	0.88	0.39
SpaMedica - Stockton-on-Tees	3,873	0.44	1.17	0.41	2,668	0.22	0.73	0.28

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
SpaMedica - Swansea	343	0.87	1.52	0.63				
SpaMedica - Wakefield	6,311	0.35	1.05	0.37	4,231	0.28	0.79	0.32
SpaMedica - Watford	3,457	0.61	1.06	0.63	2,370	0.38	0.73	0.47
SpaMedica - West Lancashire	2,360	0.30	1.12	0.29	1,680	0.18	0.85	0.19
SpaMedica - Widnes	5,482	0.49	1.27	0.43	3,430	0.26	0.76	0.31
SpaMedica - Wokingham	5,062	0.57	1.32	0.48	3,384	0.27	0.88	0.27
SpaMedica - Wolverhampton	6,244	0.21	1.34	0.17	4,301	0.19	1.23	0.14
St. Stephens Gate Medical Practice	203	0.00	1.01	0.00				
Surrey and Sussex Healthcare NHS Trust	1,589	2.08	1.62	1.41				
The Dudley Group NHS Foundation Trust	810	1.23	1.75	0.78				
The Hillingdon Hospitals NHS Foundation Trust	1,416	1.41	2.24	0.69	825	1.45	1.16	1.13
The Newcastle upon Tyne Hospitals NHS Foundation Trust	7,316	1.16	1.64	0.78				
The Shrewsbury and Telford Hospital NHS Trust	2,321	1.25	1.75	0.78				
The Stoneygate Eye Hospital	675	0.44	1.02	0.48				
Torbay and South Devon NHS Foundation Trust	1,881	1.12	1.80	0.68				
United Lincolnshire Hospitals NHS Trust	1,512	1.32	1.55	0.94	782	1.66	1.08	1.38
University Hospital Southampton NHS Foundation Trust	3,283	1.83	2.05	0.98	2,502	0.48	1.21	0.36
University Hospitals Birmingham NHS Foundation Trust	2,353	1.66	1.80	1.01	1,766	1.08	1.31	0.74
University Hospitals Bristol and Weston NHS Foundation Trust	3,061	2.32	1.94	1.32	1,765	1.08	1.51	0.64
University Hospitals Coventry and Warwickshire NHS Trust	1,808	1.16	2.27	0.56	1,064	0.28	1.62	0.16
University Hospitals Dorset NHS Foundation Trust	3,202	0.66	1.64	0.44				
University Hospitals Plymouth NHS Trust	1,892	1.22	1.81	0.74	1,037	0.58	1.28	0.41
University Hospitals Sussex NHS Foundation Trust	2,153	2.28	1.77	1.42				
Warrington and Halton Teaching Hospitals NHS Foundation Trust	621	0.97	1.41	0.76	445	0.45	1.21	0.34
West Suffolk NHS Foundation Trust	484	1.03	2.06	0.55	319	0.31	1.58	0.18

**Appendix N table continued: Participating centres case complexity PCR and Vision Loss rates in the 2022 NHS year**

Centre name	Posterior Capsular Rupture Overall consultant surgeon PCR rate = 1.1%				Vision Loss Overall consultant surgeon VA Loss rate = 0.9%			
	Number of operations	Unadjusted PCR rate (%)	Case complexity index (%)	Adjusted PCR rate (%)	Number of operations	Unadjusted Vision Loss rate (%)	Case complexity index (%)	Adjusted Vision Loss rate (%)
Wirral University Teaching Hospital NHS Foundation Trust	1,272	1.18	1.85	0.70	848	1.42	1.32	0.96
Wrightington, Wigan and Leigh NHS Foundation Trust	958	0.73	1.48	0.54	562	1.78	1.15	1.40
York and Scarborough Teaching Hospitals NHS Foundation Trust	3,019	0.53	1.84	0.32				
<b>Overall for all centres</b>	<b>481,530</b>	<b>0.79</b>	<b>1.42</b>	<b>0.61</b>	<b>199,763</b>	<b>0.48</b>	<b>0.98</b>	<b>0.44</b>

The case complexity index is an estimate of the overall predicted probability of the adverse event based on the reported case complexity.

## Appendix O: Surgeon information for the 2018 – 2022 NHS years

	NHS year				
	2018	2019	2020	2021	2022
Number of centres	113	125	135	162	177
Number of operations	249,311	283,442	176,398	377,366	481,530
<b>Percentage of operations by</b>					
Consultant surgeons	70.5	72.8	82.1	81.1	84.4
Career grade non-consultant surgeons	7.6	7.3	4.5	5.5	4.0
More experienced trainee surgeons	19.3	17.6	12.0	12.1	10.3
Less experienced trainee surgeons	2.6	2.3	1.5	1.4	1.2
<b>Surgeons</b>					
Number of surgeons	2,187	2,288	1,953	2,299	2,312
Number of surgeons data >1 grade	97	112	74	103	107
<b>Surgeon gender, percentage</b>					
Male	63.3	63.4	64.9	63.6	64.0
Female	36.4	36.0	34.2	35.8	35.5
Not recorded	0.3	0.6	0.9	0.7	0.5
<b>Surgeon grade, number of</b>					
Consultant surgeons	1,124	1,210	1,081	1,216	1,244
Career grade non-consultant surgeons	215	231	172	221	217
More experienced trainee surgeons	773	790	649	810	807
Less experienced trainee surgeons	172	169	125	155	151
<b>Number of surgeons with data for</b>					
<50 operations	921	930	1,212	1,067	969
50 – 100 operations	467	541	386	489	531
101 – 250 operations	587	585	233	473	496
251 – 500 operations	166	163	59	136	133
501 – 1,000 operations	33	45	40	65	81
>1,000 operations	13	24	23	69	102
<b>Median number of operations per surgeon</b>	65	67	34	57	65
<b>Percentage of surgeons with data for</b>					
<50 operations	42.1	40.6	62.1	46.4	41.9
≥50 operations	57.9	59.4	37.9	53.6	58.1

## Appendix P: First eye, second eye and ISBCS patients for the 2018 – 2022 NHS years

**Table A: First eye surgery patient details**

First eye surgery	NHS year				
	2018	2019	2020	2021	2022
Number patients	147,098	168,469	106,932	226,144	280,357
<b>Patient age in years</b>					
Median	75.8	75.7	75.2	75.7	76.0
IQR	68.9 – 82.0	68.9 – 81.8	68.4 – 81.3	69.1 – 81.7	69.4 – 81.5
<b>Percentage of patients</b>					
Males	42.6	41.6	42.6	41.6	41.7
Females	56.7	56.1	55.2	56.6	57.2
Gender not recorded	0.8	2.3	2.2	1.8	1.0
With diabetes	15.2	13.4	10.9	11.3	10.4
Unable to lie flat during surgery	1.8	1.6	1.3	1.3	1.2
Unable to cooperate with surgery	2.9	2.6	2.5	2.5	2.4
General anaesthesia used	4.2	3.9	2.5	2.9	2.2

**Table B: Second eye surgery patient details**

Second eye surgery	NHS year				
	2018	2019	2020	2021	2022
Number patients	101,815	114,633	68,062	148,122	197,887
<b>Patient age in years</b>					
Median	76.8	76.7	76.2	76.5	76.7
IQR	70.3 – 82.6	70.3 – 82.5	70.0 – 82.0	70.4 – 82.2	70.7 – 82.2
<b>Percentage of patients</b>					
Males	41.2	40.3	41.1	40.4	40.2
Females	58.3	58.1	57.1	58.2	58.9
Gender not recorded	0.5	1.6	1.7	1.4	0.9
With diabetes	16.7	15.1	12.7	12.8	11.1
Unable to lie flat during surgery	1.6	1.3	1.0	1.1	1.0
Unable to cooperate with surgery	2.8	2.6	2.5	2.7	2.6
General anaesthesia used	4.0	3.6	2.7	2.9	2.3

**Table C: ISBCS patient details**

Second eye surgery	NHS year				
	2018	2019	2020	2021	2022
Number patients	199	170	702	1,550	1,643
<b>Patient age in years</b>					
Median	71.7	72.0	74.0	74.0	73.7
IQR	59.8 – 79.4	59.5 – 79.1	67.0 – 80.0	67.4 – 80.6	66.0 – 79.6
<b>Percentage of patients</b>					
Males	38.7	42.4	42.5	42.7	43.2
Females	61.3	52.9	57.3	57.1	56.7
Gender not recorded	0.0	4.7	0.3	0.2	0.1
With diabetes	13.6	10.6	9.1	13.9	12.4
Unable to lie flat during surgery	11.6	8.2	5.8	5.4	3.0
Unable to cooperate with surgery	6.5	8.2	2.3	3.7	2.6
General anaesthesia used	38.2	44.7	9.0	10.1	10.0

Notes: The gender was recorded as indeterminate/anticipated sex change for one first eye surgery patient in the 2022 NHS year, and one second eye surgery patient in the 2021 NHS year.



## Appendix Q: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk indicator for the 2018 – 2022 NHS years

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Aneurin Bevan University Local Health Board	24.2	12.7	19.3			55.8	60.1	63.0		
Barking, Havering and Redbridge University Hospitals NHS Trust	87.2	79.2	100.0	96.3	95.3	43.3	50.3	47.8	46.2	54.4
Barnsley Hospital NHS Foundation Trust	14.0	4.8		19.9		45.3	52.9		81.6	
Barts Health NHS Trust	100.0	98.3	98.5	96.4	100.0	46.7	48.9	56.7	54.6	56.2
Benenden Health				****	100.0				****	28.4
Bolton NHS Foundation Trust	100.0	98.5	100.0	99.5	99.4	52.3	55.7	61.4	63.9	67.8
Bradford Teaching Hospitals NHS Foundation Trust	94.9	97.7	100.0	99.8	98.5	59.0	58.8	55.0	67.8	64.6
Buckinghamshire Healthcare NHS Trust	76.0	96.3	100.0	96.6	98.6	35.9	38.1	36.9	40.2	44.7
Calderdale and Huddersfield NHS Foundation Trust	43.6					56.1				
Cambridge University Hospitals NHS Foundation Trust	96.7	95.7	100.0	98.1	94.3	31.2	35.4	20.2	19.3	15.9
Cardiff & Vale University Local Health Board	93.6	92.7	100.0	93.0	58.2	47.3	43.6	54.2	54.8	46.2
CHEC (Accrington)					**					10.8
CHEC (Atria Watford)		**	**	**	**		5.6	12.8	14.0	13.2
CHEC (Blackpool)			**	**	**			13.5	14.0	11.3
CHEC (Bridgend)		****		**	**		****		10.4	9.8
CHEC (Coventry)				**	**				21.2	13.3
CHEC (Face and Eye)		**	****				1.3	****		
CHEC (Grange Medical Centre)			****	**	****			****	8.8	****
CHEC (Leicester)				**	**				19.7	14.2
CHEC (New Cross)				**	**				16.0	10.9
CHEC (Newcastle)					**					8.7
CHEC (Northampton)					**					13.3
CHEC (Nottingham)				**	**				14.9	23.1
CHEC (Preston)			**	35.1	3.5			23.8	13.9	16.4

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
CHEC (Slough)				**	**				14.8	11.7
CHEC (Stoke)		**	**	**	**		3.0	13.6	11.5	11.9
Chesterfield Royal Hospital NHS Foundation Trust	97.5	100.0	100.0	100.0	100.0	67.3	58.9	52.3	63.0	56.1
County Durham and Darlington NHS Foundation Trust	95.8	99.1	100.0	98.3	99.3	52.3	46.5	51.1	58.1	58.8
Cwm Taf Morgannwg University Local Health Board	96.9	42.0	28.4	37.8	39.0	58.2	58.5	64.2	72.2	69.0
East Cheshire NHS Trust	59.2	98.9	99.2	82.9	99.1	20.7	23.2	30.4	37.7	36.5
East Kent Hospitals University NHS Foundation Trust	100.0	96.7	37.8	65.0	98.5	36.8	44.9	52.0	53.0	49.3
East Suffolk and North Essex NHS Foundation Trust	55.5	47.0	84.6	86.4	91.0	46.9	49.2	52.8	53.0	49.0
East Sussex Healthcare NHS Trust	100.0	100.0	100.0	100.0	100.0	50.4	53.8	51.1	51.3	48.9
Epsom and St Helier University Hospitals NHS Trust	100.0	98.8	98.7	99.0	98.1	50.9	48.3	47.2	49.3	48.1
Exeter Eye	***	***	***	***	***	35.2	33.6	34.3	38.2	38.0
Frimley Health NHS Foundation Trust	96.7	98.1	100.0	98.7		35.6	41.2	39.5	43.9	
George Eliot Hospital NHS Trust	44.2	91.3	100.0	99.3	100.0	7.5	11.9	18.5	49.2	30.8
Gloucestershire Hospitals NHS Foundation Trust	92.7	98.5	96.6	97.9	97.7	53.8	58.7	67.7	63.7	68.6
Great Western Hospitals NHS Foundation Trust	91.9	89.0	92.6	89.4	91.3	70.5	67.7	68.8	72.1	74.9
Guy's and St Thomas' NHS Foundation Trust	45.5	68.3	69.4	64.8	58.3	26.0	33.7	46.5	48.0	53.1
Hampshire Hospitals NHS Foundation Trust	74.6	84.5	91.2	77.1	87.4	39.2	33.9	36.7	36.1	38.8
Harrogate and District NHS Foundation Trust	96.2	100.0	100.0	100.0	99.3	47.4	52.8	52.8	62.1	51.8
Hywel Dda University Local Health Board	18.6	29.0	36.9	****		35.4	32.3	52.7	****	
Imperial College Healthcare NHS Trust	97.1	97.5	100.0	98.8	100.0	56.7	54.0	61.9	56.5	55.8
Isle of Wight NHS Trust	100.0	99.0	100.0	100.0	100.0	46.9	53.2	55.8	51.5	51.5
James Paget University Hospitals NHS Foundation Trust	96.8	94.6	100.0	97.3	94.7	46.9	48.1	45.6	38.8	43.6
Kettering General Hospital NHS Foundation Trust	4.8	47.7	98.4	91.4	99.6	24.1	11.2	14.8	10.0	43.3
King's College Hospital NHS Foundation Trust	100.0	98.2	90.2	98.7	99.0	39.6	49.3	54.5	57.8	53.0
Kingston Hospital NHS Foundation Trust	76.5	88.0	100.0	100.0	100.0	38.7	42.2	46.8	58.8	69.6

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Leeds Teaching Hospitals NHS Trust	99.9	98.1	93.3	98.0	95.8	55.3	61.7	62.7	63.6	65.7
Liverpool University Hospitals NHS Foundation Trust	80.1	90.1	92.5	96.0	95.9	49.6	49.6	51.9	64.1	64.0
London North West University Healthcare NHS Trust	30.0	****		85.0	83.0	61.8	****		48.6	56.5
Manchester University NHS Foundation Trust	59.6	62.9	39.2	52.8	24.6	44.1	41.3	45.8	44.3	55.1
Medical Specialists Group (Guernsey)	***	***	***	***	***	49.2	49.0	55.0	48.7	41.3
Mersey and West Lancashire Teaching Hospitals NHS Trust	79.9	74.2	75.7	63.6	65.7	36.9	33.3	35.5	42.7	42.7
Mid and South Essex NHS Foundation Trust	100.0	88.4	78.9	84.8	90.6	36.3	41.0	44.8	43.7	48.7
Mid Cheshire Hospitals NHS Foundation Trust	100.0	99.6	100.0	96.3	100.0	37.4	37.3	39.4	49.5	46.2
Mid Yorkshire Teaching NHS Trust	96.9	100.0	100.0	99.7	100.0	64.6	63.3	71.3	72.9	65.6
Moorfields Eye Hospital NHS Foundation Trust	98.0	97.2	100.0	100.0	100.0	29.1	29.1	34.2	37.4	36.0
Newmedica (Aztec West)					100.0					12.1
Newmedica (Barlborough)		91.6	100.0	100.0	100.0		0.0	23.0	25.9	23.9
Newmedica (Birmingham)					100.0					37.0
Newmedica (Brigg)			100.0	100.0	99.9			6.0	11.1	12.4
Newmedica (Bristol)		91.7	100.0	100.0	100.0		0.0	7.2	23.4	12.4
Newmedica (Exeter)			100.0	100.0	99.9			10.1	23.8	48.7
Newmedica (Frome)			100.0	100.0	100.0			26.6	36.4	13.4
Newmedica (Gloucester - Aspen)		95.3	100.0	100.0	100.0		0.0	3.1	22.0	19.6
Newmedica (Gloucester - Brighouse)			****	100.0	100.0			****	23.5	22.1
Newmedica (Grimsby)		100.0	100.0	100.0	100.0		0.0	2.0	9.9	12.9
Newmedica (Ipswich)			100.0	100.0	100.0			0.0	0.0	0.0
Newmedica (Leeds)		97.8	100.0	100.0	100.0		0.0	3.1	35.5	22.8
Newmedica (Leicester)				99.6	99.6				0.3	0.3
Newmedica (Newcastle)					100.0					18.1
Newmedica (North Derbyshire)					100.0					20.9

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Newmedica (Northampton)				****	100.0				****	28.7
Newmedica (Norwich)				100.0	100.0				25.3	24.2
Newmedica (Oxfordshire)					100.0					33.6
Newmedica (Plymouth)					100.0					12.4
Newmedica (Shrewsbury)				100.0	100.0				12.7	27.7
Newmedica (Teesside)		100.0	100.0	100.0	100.0		0.0	0.0	0.0	0.0
Newmedica (Wakefield)			100.0	100.0	99.8			0.0	4.0	18.7
Newmedica (Worcester)					100.0					18.6
Norfolk and Norwich University Hospitals NHS Foundation Trust	100.0	98.4	96.7	97.8	98.2	39.2	37.7	48.1	50.2	51.7
North Cumbria Integrated Care NHS Foundation Trust	61.6	7.4				28.5	33.0			
North Middlesex University Hospital NHS Trust	100.0	98.3	100.0	99.2	99.8	44.2	52.1	47.2	47.9	48.2
North West Anglia NHS Foundation Trust	100.0	98.7	90.9	98.9	97.7	55.2	58.3	64.8	63.0	59.4
Northampton General Hospital NHS Trust	81.3	85.4	57.6	92.3	94.5	37.0	29.3	36.4	30.7	36.8
Northern Care Alliance NHS Foundation Trust			23.4	15.9	95.1			34.1	40.9	43.3
Northern Lincolnshire and Goole NHS Foundation Trust	9.2					36.9				
Nottingham University Hospitals NHS Trust	67.0	87.4	87.9	91.7		53.0	52.0	52.6	58.0	
Optegra Eye Health Care (Birmingham Eye Hospital)	100.0	100.0	100.0	100.0	100.0	28.0	28.5	12.5	21.7	20.1
Optegra Eye Health Care (Central London Eye Hospital)	43.2	16.4	17.0	17.6	****	24.5	26.5	19.8	19.8	****
Optegra Eye Health Care (Hampshire Eye Hospital)	100.0	100.0	100.0	100.0	100.0	54.5	38.5	33.4	27.0	16.7
Optegra Eye Health Care (Maidstone Eye Clinic)					100.0					53.9
Optegra Eye Health Care (Manchester Eye Hospital)	100.0	100.0	100.0	100.0	100.0	30.9	21.2	39.4	28.1	37.7
Optegra Eye Health Care (Newcastle Eye Clinic)				100.0	100.0				15.5	30.7
Optegra Eye Health Care (North London Eye Hospital)	**	**	**	**	**	33.7	36.9	34.2	30.8	26.1
Optegra Eye Health Care (Surrey Eye Hospital)	100.0	100.0	100.0	100.0	100.0	10.8	12.1	17.5	22.9	13.8
Optegra Eye Health Care (Uttoxeter Eye Clinic)					100.0					35.6

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Optegra Eye Health Care (Yorkshire Eye Hospital)	100.0	100.0	100.0	100.0	100.0	32.7	30.8	35.7	34.4	24.8
Optimax Clinic (Leicester)					**					40.3
Optimax Clinic (Newton Abbot)					**					32.3
Oxford University Hospitals NHS Foundation Trust	100.0	98.0	98.8	98.1	97.9	48.8	45.9	53.0	65.5	53.9
Portsmouth Hospitals University NHS Trust	98.1	96.5	100.0	95.8	100.0	53.1	52.6	48.9	49.0	50.4
Practice Plus Group Hospital, Barlborough					100.0					24.8
Practice Plus Group Hospital, Emersons Green	100.0	100.0	100.0	100.0	100.0	47.0	57.1	53.4	57.8	40.8
Practice Plus Group Hospital, Ilford	95.1	100.0	100.0	100.0	100.0	19.3	27.7	11.8	18.4	21.3
Practice Plus Group Hospital, Plymouth	100.0	100.0	100.0	100.0	100.0	84.7	89.2	23.0	29.1	29.1
Practice Plus Group Hospital, Shepton Mallet	100.0	100.0	100.0	100.0	100.0	55.7	21.7	18.9	33.5	35.5
Practice Plus Group Hospital, Southampton	66.5	80.6	100.0	100.0	97.9	2.5	3.4	7.3	6.1	9.1
Practice Plus Group Ophthalmology, Rochdale	97.5	100.0	100.0	100.0	100.0	31.5	30.7	40.2	47.9	42.3
Practice Plus Group Surgical Centre, Devizes	97.6	100.0	100.0	100.0	100.0	7.1	9.5	41.9	57.4	39.8
Practice Plus Group Surgical Centre, Gillingham	100.0	100.0	100.0	100.0	100.0	11.5	28.5	26.9	27.5	18.4
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	97.0	100.0	100.0	100.0	100.0	14.5	16.9	21.9	18.8	14.6
Royal Berkshire NHS Foundation Trust	68.3	93.5	100.0	97.8	96.8	39.7	36.6	40.7	45.1	46.5
Royal Cornwall Hospitals NHS Trust	100.0	100.0	100.0	100.0	100.0	63.5	61.8	58.6	60.3	60.0
Royal Devon University Healthcare NHS Foundation Trust	100.0	99.8	100.0	99.8	10.2	49.0	49.3	49.9	52.7	48.1
Royal Free London NHS Foundation Trust	42.1	81.2	93.6	100.0	97.9	31.3	30.6	36.0	43.9	43.3
Royal Surrey County Hospital NHS Foundation Trust	18.3	9.3	****			38.8	42.7	****		
Royal United Hospitals Bath NHS Foundation Trust	99.1	99.6	100.0	100.0	100.0	51.7	51.8	46.6	51.0	59.9
Salisbury NHS Foundation Trust	100.0	99.7	100.0	99.3	98.6	55.2	52.3	63.2	73.4	67.0
Sandwell and West Birmingham Hospitals NHS Trust	93.0	95.6	96.3	79.8	95.3	51.0	52.5	58.6	62.1	56.6
Sheffield Teaching Hospitals NHS Foundation Trust	94.4	75.0				52.0	51.0			
Sherwood Forest Hospitals NHS Foundation Trust	81.2	79.0	100.0	96.9	98.3	29.6	33.5	56.4	43.4	44.4

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Somerset NHS Foundation Trust	41.1	96.1	100.0	100.0	100.0	53.6	45.2	47.3	46.2	47.4
South Tees Hospitals NHS Foundation Trust	85.4	85.0	70.4	87.4	90.7	51.0	52.3	58.1	62.1	61.6
South Warwickshire University NHS Foundation Trust	95.5	99.7	100.0	99.2	99.2	64.0	60.5	62.0	65.5	66.8
SpaMedica - Bedford		100.0	100.0	100.0	100.0		63.4	52.1	38.5	33.4
SpaMedica - Birkenhead	96.3	100.0	100.0	100.0	100.0	49.6	36.1	30.6	32.6	30.1
SpaMedica - Birmingham	98.7	100.0	100.0	100.0	100.0	71.4	63.4	59.9	47.1	45.0
SpaMedica - Bolton	100.0	100.0	100.0	100.0	100.0	45.8	35.2	24.8	22.4	19.8
SpaMedica - Bradford		100.0	100.0	100.0	100.0	27.9	23.0	38.8	36.1	23.9
SpaMedica - Brighton				100.0	100.0				41.7	34.0
SpaMedica - Bristol			****	100.0	100.0			****	37.4	37.5
SpaMedica - Bromley			100.0	100.0	100.0			52.2	28.9	24.3
SpaMedica - Chelmsford		100.0	100.0	99.2	98.7		46.9	43.2	36.7	30.6
SpaMedica - Coventry			100.0	100.0	100.0			55.3	54.8	59.4
SpaMedica - Derby			100.0	99.9	100.0			48.9	39.4	42.3
SpaMedica - Doncaster					100.0					36.8
SpaMedica - Epsom				100.0	100.0				47.8	34.4
SpaMedica - Exeter				100.0	100.0				43.7	36.0
SpaMedica - Gateshead				100.0	100.0				18.6	19.2
SpaMedica - Gloucester				100.0	100.0				43.5	29.8
SpaMedica - Hull		100.0	100.0	100.0	100.0		11.0	12.4	13.0	13.5
SpaMedica - Kendal				100.0	100.0				60.9	29.7
SpaMedica - Leeds					100.0					14.6
SpaMedica - Leicester				100.0	100.0				38.5	43.5
SpaMedica - Liverpool	100.0	98.6	100.0	100.0	100.0	32.5	27.8	36.5	26.9	28.0
SpaMedica - Manchester	97.2	99.8	100.0	100.0	98.3	53.2	41.2	34.5	32.2	46.2

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
SpaMedica - Newark				100.0	100.0				41.6	46.2
SpaMedica - Newcastle Under Lyme		100.0	100.0	100.0	100.0		72.6	73.2	56.2	55.8
SpaMedica - Newton-le-Willows	100.0	100.0				60.5	43.0			
SpaMedica - Norwich				100.0	100.0				29.0	38.1
SpaMedica - Oldham					100.0					23.3
SpaMedica - Peterborough				100.0	100.0				59.0	37.0
SpaMedica - Poole				100.0	100.0				31.5	33.8
SpaMedica - Preston			100.0	100.0	100.0			61.5	37.9	33.1
SpaMedica - Romford				100.0	100.0				33.1	26.1
SpaMedica - Sheffield	100.0	99.1	100.0	100.0	100.0	29.5	25.2	43.3	49.6	44.0
SpaMedica - Sittingbourne				100.0	100.0				31.1	46.1
SpaMedica - Solihull					100.0					34.1
SpaMedica - Southampton				100.0	100.0				34.4	32.0
SpaMedica - Stockton-on-Tees			100.0	100.0	99.5			20.8	19.3	20.7
SpaMedica - Swansea					**					55.4
SpaMedica - Wakefield	100.0	100.0	100.0	100.0	100.0	22.3	16.6	28.6	22.0	20.0
SpaMedica - Watford				100.0	100.0				22.3	14.8
SpaMedica - West Lancashire	100.0	100.0	100.0	100.0	100.0	53.0	43.2	33.2	29.5	25.8
SpaMedica - Widnes		100.0	100.0	100.0	100.0		29.9	21.9	35.4	28.3
SpaMedica - Wokingham			100.0	100.0	100.0			59.4	35.0	31.6
SpaMedica - Wolverhampton		100.0	100.0	99.6	99.9		65.6	81.3	62.8	57.8
St. Stephens Gate Medical Practice	**	**	**	**	**	33.8	27.5	31.8	45.0	15.8
Surrey and Sussex Healthcare NHS Trust	11.7	4.6	100.0	99.8	97.9	17.8	32.2	31.3	47.6	59.3
Swansea Bay University Local Health Board	1.3					42.9				
Tetbury Hospital			98.0					26.3		
The Dudley Group NHS Foundation Trust	37.3	50.3	100.0	86.1	89.6	40.3	36.9	45.8	53.2	59.9
The Hillingdon Hospitals NHS Foundation Trust	100.0	98.8	100.0	98.9	99.7	46.2	46.6	55.6	58.5	57.7

**Appendix Q table continued: Participating centres case ascertainment and percentage of eyes with any ocular co-pathology / known risk factor for the 2018-2022 NHS years**

Centre name	Case ascertainment %*					Any co-pathology / known risk indicator %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
The Newcastle upon Tyne Hospitals NHS Foundation Trust	96.8	98.3	100.0	95.1	98.0	40.1	38.2	42.4	47.2	45.4
The Princess Alexandra Hospital NHS Trust	89.4	98.0	100.0	100.0		66.6	65.2	64.4	55.3	
The Rotherham NHS Foundation Trust	34.0					55.2				
The Shrewsbury and Telford Hospital NHS Trust	92.9	99.1	100.0	97.2	98.5	38.4	41.5	50.8	47.2	52.1
The Stoneygate Eye Hospital		**	**	**	**		11.1	16.7	5.4	8.6
Torbay and South Devon NHS Foundation Trust	100.0	99.7	100.0	99.1	100.0	57.8	53.5	63.0	56.8	54.1
United Lincolnshire Hospitals NHS Trust	51.6	24.1	89.1	94.9	98.9	43.7	50.3	41.8	55.3	62.1
University Hospital Southampton NHS Foundation Trust	91.5	90.9	100.0	98.1	97.8	56.8	57.3	61.5	58.0	59.2
University Hospitals Birmingham NHS Foundation Trust	100.0	98.8	100.0	99.3	99.6	60.4	62.2	59.8	66.7	66.2
University Hospitals Bristol and Weston NHS Foundation Trust	100.0	96.0	100.0	96.2	86.1	61.2	59.1	66.8	64.2	68.6
University Hospitals Coventry and Warwickshire NHS Trust	98.2	95.9	100.0	98.2	97.6	96.7	93.8	94.1	80.9	79.1
University Hospitals Dorset NHS Foundation Trust	67.2	82.8	88.7	89.6	89.2	41.1	36.2	40.7	44.4	50.9
University Hospitals Plymouth NHS Trust	94.5	95.9	100.0	99.0	98.9	61.2	58.7	57.4	54.9	57.6
University Hospitals Sussex NHS Foundation Trust	46.2	53.4	32.2	27.8	33.6	36.3	33.7	39.3	48.0	44.9
Warrington and Halton Teaching Hospitals NHS Foundation Trust	91.2	92.7	100.0	100.0	99.9	44.5	47.2	52.1	58.0	60.5
West Suffolk NHS Foundation Trust	****	32.3	62.6	32.0	48.2	****	36.6	50.0	50.7	54.3
Wirral University Teaching Hospital NHS Foundation Trust	85.3	98.9	100.0	98.1	99.0	51.4	50.6	55.8	62.7	61.1
Worcestershire Acute Hospitals NHS Trust			100.0	69.2				22.6	37.4	
Wrightington, Wigan and Leigh NHS Foundation Trust	98.0	94.6	100.0	98.5	100.0	38.9	37.5	40.6	58.6	52.1
York and Scarborough Teaching Hospitals NHS Foundation Trust	100.0	100.0	100.0	100.0	100.0	40.7	37.5	34.2	53.4	56.6
<b>Overall for all centres</b>	<b>86.5</b>	<b>89.6</b>	<b>100.0</b>	<b>99.0</b>	<b>96.0</b>	<b>44.3</b>	<b>41.4</b>	<b>39.3</b>	<b>39.3</b>	<b>35.5</b>

\*The estimate of the proportion of cases submitted to the audit is derived from the number of completed cataract operations supplied to NHS Digital or DHCW for the relevant NHS year. This estimation uses a pro rata calculation for a centre's denominator where the proportion of time during the NHS year that a centre had been recording cataract operations was multiplied by the number of cataract operations supplied to NHS Digital or DHCW. The numerator was the number of operations a centre had supplied to the audit. Centres that had more operations submitted to the national audit than in the NHS Digital or DHCW data were all assumed to have a complete submission rate as the actual rate was not possible to estimate. For a full explanation of how case ascertainment was estimated see the Statistical Analysis Plan on the audit website. \*\*These centres had no data in the indicated NHS year NHS digital or DHCW data. \*\*\*These centres do not have to report to either NHS Digital or DHCW. \*\*\*\*These centres submitted data for <50 eligible operations in the indicated NHS year.



## Appendix R: Percentage of eyes with each ocular co-pathology / known risk indicator for the 2018 – 2022 NHS years

Ocular co-pathology / know risk indicator	NHS year				
	2018	2019	2020	2021	2022
Age-related macular degeneration	10.1	9.1	8.0	8.1	7.4
Corneal pathology	4.5	5.1	8.6	7.3	7.1
Unspecified 'other' ocular co-pathology	8.9	8.0	5.8	6.5	5.6
Glaucoma	10.3	9.2	6.8	6.4	5.3
Brunescent/white/mature cataract	5.3	4.8	5.5	5.5	4.4
Other macular pathology	3.2	3.3	3.7	3.9	3.8
Diabetic retinopathy	5.6	5.0	3.9	4.0	3.4
No fundal view/vitreous opacity	2.1	2.2	3.0	3.5	3.1
High myopia	3.4	2.9	2.4	2.2	1.9
Previous vitrectomy surgery	1.8	1.7	1.6	1.3	1.0
Amblyopia	1.7	1.5	1.1	1.1	0.9
Inherited eye disease	0.2	0.3	0.7	0.9	0.9
Other retinal vascular pathology	1.0	1.0	0.8	0.8	0.7
Pseudoexfoliation/phacodonesis	0.9	0.8	0.8	0.7	0.7
Uveitis/synaechiae	0.8	0.7	0.6	0.6	0.5
Optic nerve/CNS disease	0.4	0.4	0.3	0.3	0.2
Previous trabeculectomy surgery	0.4	0.3	0.3	0.3	0.2

## Appendix S: Participating centres percentage of eyes with VA data for the 2018 – 2022 NHS years

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Aneurin Bevan University Local Health Board	96.2	94.9	97.9			42.1	85.1	96.8		
Barking, Havering and Redbridge University Hospitals NHS Trust	88.6	89.0	92.7	88.3	84.3	63.1	58.7	48.2	60.3	53.2
Barnsley Hospital NHS Foundation Trust	19.3	3.4		13.5		41.3	98.9		97.7	
Barts Health NHS Trust	90.9	91.2	61.9	78.7	87.9	87.5	87.3	69.0	73.4	61.1
Benenden Health				**	78.8				**	29.1
Bolton NHS Foundation Trust	99.1	98.6	95.8	97.4	95.3	86.5	93.4	87.2	83.9	79.1
Bradford Teaching Hospitals NHS Foundation Trust	93.7	89.8	49.5	78.2	77.8	72.1	84.8	51.5	73.0	82.0
Buckinghamshire Healthcare NHS Trust	1.9	24.2	31.9	69.8	75.3	*	10.9	9.1	13.7	26.1
Calderdale and Huddersfield NHS Foundation Trust	97.3					79.3				
Cambridge University Hospitals NHS Foundation Trust	92.0	91.6	70.4	70.6	69.0	81.2	82.8	76.1	76.2	81.6
Cardiff & Vale University Local Health Board	89.1	89.4	84.0	90.8	86.2	48.1	44.3	43.7	39.4	33.1
CHEC (Accrington)					97.8					*
CHEC (Atria Watford)		89.6	80.8	85.4	99.3		66.1	40.9	55.1	74.4
CHEC (Blackpool)			97.6	93.3	97.5			55.3	64.9	85.2
CHEC (Bridgend)		**		99.7	99.7		**		5.7	74.4
CHEC (Coventry)				90.4	95.6				54.6	78.6
CHEC (Face and Eye)		90.9	**				0.0	**		
CHEC (Grange Medical Centre)			**	84.6	**			**	41.0	**
CHEC (Leicester)				100.0	99.5				*	62.5
CHEC (New Cross)				97.2	95.6				56.1	66.4
CHEC (Newcastle)					98.9					69.3
CHEC (Northampton)					99.5					61.1
CHEC (Nottingham)				99.4	99.0				*	49.4
CHEC (Preston)			99.2	92.9	98.9			*	60.3	83.6
CHEC (Slough)				93.2	98.5				40.6	61.0

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
CHEC (Stoke)		95.5	90.3	93.1	97.9		1.1	9.1	24.2	43.3
Chesterfield Royal Hospital NHS Foundation Trust	97.1	97.2	59.6	83.3	76.6	95.3	95.8	97.2	94.1	84.4
County Durham and Darlington NHS Foundation Trust	84.5	92.3	42.8	86.5	78.4	97.1	98.6	51.0	66.6	63.6
Cwm Taf Morgannwg University Local Health Board	86.2	88.9	51.1	90.2	94.4	81.4	74.9	54.1	73.3	61.5
East Cheshire NHS Trust	64.7	93.9	68.9	91.5	85.5	59.8	40.6	55.9	65.8	67.7
East Kent Hospitals University NHS Foundation Trust	88.7	93.7	45.6	89.7	82.9	59.0	60.9	54.5	59.5	58.1
East Suffolk and North Essex NHS Foundation Trust	93.6	96.1	72.9	82.9	72.2	40.2	46.7	64.4	76.0	84.5
East Sussex Healthcare NHS Trust	84.8	86.1	71.8	84.9	89.7	79.5	81.6	74.5	71.3	71.9
Epsom and St Helier University Hospitals NHS Trust	97.7	98.3	79.4	89.2	80.4	92.3	90.3	64.0	78.5	56.9
Exeter Eye	74.2	93.6	87.1	91.0	89.9	93.2	73.0	74.2	70.5	75.8
Frimley Health NHS Foundation Trust	98.5	98.3	91.0	93.0		69.7	79.7	60.1	57.4	
George Eliot Hospital NHS Trust	97.5	77.3	29.8	93.9	95.4	*	97.5	96.0	97.2	95.5
Gloucestershire Hospitals NHS Foundation Trust	80.4	78.1	59.1	92.6	91.8	77.4	79.6	76.8	79.4	81.8
Great Western Hospitals NHS Foundation Trust	91.7	96.4	92.1	95.7	92.1	84.4	89.4	88.4	86.2	87.9
Guy's and St Thomas' NHS Foundation Trust	69.0	85.9	89.0	87.7	90.6	63.5	86.6	94.4	87.0	83.9
Hampshire Hospitals NHS Foundation Trust	95.1	85.3	71.3	79.9	78.0	75.5	78.1	47.1	66.6	64.7
Harrogate and District NHS Foundation Trust	96.2	96.6	79.5	85.6	69.4	87.1	88.9	16.8	69.5	73.8
Hywel Dda University Local Health Board	10.2	3.4	23.6	**		4.7	25.8	*	**	
Imperial College Healthcare NHS Trust	94.0	96.6	78.0	92.2	91.3	93.9	93.0	77.7	87.0	90.1
Isle of Wight NHS Trust	92.5	84.8	68.6	86.2	77.9	74.1	81.7	85.9	82.3	80.9
James Paget University Hospitals NHS Foundation Trust	88.2	87.8	68.9	85.9	86.8	74.4	77.2	79.7	78.9	65.0
Kettering General Hospital NHS Foundation Trust	1.7	20.4	33.1	63.7	93.7	*	5.4	8.3	11.2	26.7
King's College Hospital NHS Foundation Trust	97.0	97.2	89.2	97.1	99.0	93.5	92.5	87.3	90.3	89.6
Kingston Hospital NHS Foundation Trust	12.4	4.3	5.5	40.8	90.7	1.7	0.1	0.1	53.3	95.7
Leeds Teaching Hospitals NHS Trust	97.7	98.6	82.9	98.6	99.4	88.3	84.7	78.9	86.5	84.5
Liverpool University Hospitals NHS Foundation Trust	91.1	90.4	42.1	63.6	70.2	71.9	81.5	86.0	92.7	89.8

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
London North West University Healthcare NHS Trust	67.9	**		79.3	97.7	59.9	**		87.1	97.1
Manchester University NHS Foundation Trust	98.4	96.4	84.3	68.8	89.6	88.4	82.5	28.9	37.6	28.2
Medical Specialists Group (Guernsey)	97.6	97.9	80.1	95.1	93.5	98.4	98.8	72.3	76.0	73.5
Mersey and West Lancashire Teaching Hospitals NHS Trust	95.1	92.6	84.3	83.1	80.7	71.0	78.3	58.3	71.5	78.0
Mid and South Essex NHS Foundation Trust	67.8	60.5	36.4	50.4	64.9	9.5	6.6	7.1	20.5	32.3
Mid Cheshire Hospitals NHS Foundation Trust	94.2	95.0	85.4	70.4	76.8	78.5	85.0	76.8	86.3	86.0
Mid Yorkshire Teaching NHS Trust	99.3	98.9	77.2	98.2	91.5	84.0	85.6	79.0	83.3	79.4
Moorfields Eye Hospital NHS Foundation Trust	72.1	77.0	70.6	93.5	94.7	71.1	75.5	72.6	90.8	93.2
Newmedica (Aztec West)					28.8					7.6
Newmedica (Barlborough)		0.0	52.0	80.3	83.8		0.0	51.6	0.8	84.2
Newmedica (Birmingham)					95.0					*
Newmedica (Brigg)			42.2	69.1	72.1			*	0.0	62.0
Newmedica (Bristol)		0.0	26.8	70.8	23.5		0.0	7.6	6.3	4.2
Newmedica (Exeter)			28.0	46.3	79.2			12.6	29.3	23.8
Newmedica (Frome)			65.6	82.5	26.6			*	5.8	5.3
Newmedica (Gloucester - Aspen)		0.0	20.4	94.5	84.4		0.0	6.1	69.1	59.2
Newmedica (Gloucester - Brighouse)			**	92.5	87.0			**	63.1	58.2
Newmedica (Grimsby)		0.0	6.6	62.2	82.3		0.0	2.2	0.0	53.7
Newmedica (Ipswich)			0.0	0.0	0.0			0.0	0.0	0.0
Newmedica (Leeds)		0.0	6.9	81.9	63.6		0.0	0.6	0.0	0.0
Newmedica (Leicester)				56.8	28.3				67.6	2.1
Newmedica (Newcastle)					45.3					51.6
Newmedica (North Derbyshire)					62.5					65.0
Newmedica (Northampton)				**	97.7				**	77.0
Newmedica (Norwich)				19.9	32.6				50.7	72.6
Newmedica (Oxfordshire)					72.4					60.0

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Newmedica (Plymouth)					68.8					57.3
Newmedica (Shrewsbury)				46.9	77.6				8.0	1.9
Newmedica (Teesside)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Newmedica (Wakefield)			0.0	14.3	59.8			*	0.0	0.0
Newmedica (Worcester)					57.2					72.9
Norfolk and Norwich University Hospitals NHS Foundation Trust	94.1	94.2	77.0	88.2	91.7	14.8	11.8	17.4	13.6	19.5
North Cumbria Integrated Care NHS Foundation Trust	95.7	93.4				11.3	8.1			
North Middlesex University Hospital NHS Trust	85.7	97.3	53.0	90.4	93.6	93.3	98.3	94.5	97.4	98.3
North West Anglia NHS Foundation Trust	97.5	96.8	82.7	90.9	93.0	88.0	80.9	71.5	67.7	64.5
Northampton General Hospital NHS Trust	66.3	69.7	28.8	40.9	29.1	19.9	16.0	9.2	29.0	19.0
Northern Care Alliance NHS Foundation Trust			40.5	72.1	49.2			*	87.9	56.9
Northern Lincolnshire and Goole NHS Foundation Trust	73.9					96.6				
Nottingham University Hospitals NHS Trust	86.2	87.9	48.7	81.0		89.6	90.1	89.5	87.5	
Optegra Eye Health Care (Birmingham Eye Hospital)	43.9	55.2	90.7	97.3	99.1	95.8	90.7	67.1	53.6	57.1
Optegra Eye Health Care (Central London Eye Hospital)	93.1	88.7	99.5	98.7	**	49.4	70.2	87.6	80.1	**
Optegra Eye Health Care (Hampshire Eye Hospital)	99.3	99.2	98.5	99.1	98.9	94.3	95.5	78.9	58.8	53.3
Optegra Eye Health Care (Maidstone Eye Clinic)					100.0					80.7
Optegra Eye Health Care (Manchester Eye Hospital)	85.6	87.4	96.2	98.7	99.1	86.0	87.0	73.1	54.7	60.2
Optegra Eye Health Care (Newcastle Eye Clinic)				99.3	99.4				88.3	61.6
Optegra Eye Health Care (North London Eye Hospital)	98.4	96.6	86.1	96.3	98.6	95.2	96.6	76.7	66.7	61.2
Optegra Eye Health Care (Surrey Eye Hospital)	90.6	86.9	92.4	97.3	99.5	57.2	62.9	74.8	66.6	57.1
Optegra Eye Health Care (Uttoxeter Eye Clinic)					100.0					*
Optegra Eye Health Care (Yorkshire Eye Hospital)	94.2	93.8	90.0	96.2	97.9	91.2	93.0	60.6	62.3	66.1
Optimax Clinic (Leicester)					100.0					62.3
Optimax Clinic (Newton Abbot)					98.6					76.0
Oxford University Hospitals NHS Foundation Trust	90.6	79.4	62.7	91.3	93.7	30.7	28.1	39.7	63.7	48.0

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Portsmouth Hospitals University NHS Trust	96.6	97.1	93.2	96.2	97.1	93.3	93.8	91.2	89.8	94.5
Practice Plus Group Hospital, Barlborough					97.2					100.0
Practice Plus Group Hospital, Emersons Green	99.6	99.6	82.3	98.1	97.5	65.1	49.7	71.0	46.6	76.2
Practice Plus Group Hospital, Ilford	96.1	97.3	65.6	90.2	70.5	97.4	95.7	23.8	42.9	32.5
Practice Plus Group Hospital, Plymouth	92.0	97.1	35.5	59.5	36.0	92.8	53.8	17.9	13.0	12.9
Practice Plus Group Hospital, Shepton Mallet	99.1	99.4	65.0	96.7	97.4	95.0	97.1	96.4	96.5	95.5
Practice Plus Group Hospital, Southampton	52.7	42.2	26.4	33.6	95.4	50.8	41.9	35.1	30.5	23.1
Practice Plus Group Ophthalmology, Rochdale	98.4	99.6	97.8	99.4	98.7	67.9	69.8	86.7	68.5	69.7
Practice Plus Group Surgical Centre, Devizes	100.0	100.0	88.2	65.5	91.1	99.8	83.4	97.4	93.0	97.1
Practice Plus Group Surgical Centre, Gillingham	99.4	96.4	70.5	72.8	30.3	98.9	60.1	67.0	67.5	69.4
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	99.7	99.8	62.5	98.9	99.4	97.2	77.2	29.4	60.7	76.1
Royal Berkshire NHS Foundation Trust	93.6	93.0	46.6	90.0	92.9	89.6	94.8	44.2	79.9	41.4
Royal Cornwall Hospitals NHS Trust	86.8	95.6	81.0	92.9	96.5	86.0	68.9	60.9	58.2	54.0
Royal Devon University Healthcare NHS Foundation Trust	97.1	97.5	96.6	98.4	96.4	89.3	89.3	81.4	83.6	58.8
Royal Free London NHS Foundation Trust	92.5	93.2	42.3	70.4	68.8	32.2	58.3	55.9	77.5	67.2
Royal Surrey County Hospital NHS Foundation Trust	97.9	97.6	**			96.2	98.0	**		
Royal United Hospitals Bath NHS Foundation Trust	88.9	92.0	71.8	88.7	91.6	61.4	59.0	45.9	48.2	60.1
Salisbury NHS Foundation Trust	99.3	97.5	37.9	88.3	97.5	98.2	95.1	77.9	91.1	97.2
Sandwell and West Birmingham Hospitals NHS Trust	96.1	97.5	80.3	75.0	93.4	93.4	93.0	89.9	80.1	90.7
Sheffield Teaching Hospitals NHS Foundation Trust	98.6	99.4				96.8	93.1			
Sherwood Forest Hospitals NHS Foundation Trust	73.0	74.0	61.0	63.3	75.7	54.0	64.6	48.5	59.3	69.6
Somerset NHS Foundation Trust	99.9	75.9	68.5	85.8	83.0	99.1	70.6	82.0	90.8	92.6
South Tees Hospitals NHS Foundation Trust	94.9	39.0	31.3	44.4	49.8	59.6	62.5	38.9	43.1	45.6
South Warwickshire University NHS Foundation Trust	98.4	97.9	85.2	85.0	85.6	77.8	70.1	72.7	76.2	69.3
SpaMedica - Bedford		99.7	95.2	99.1	98.2		95.7	84.5	88.6	83.4
SpaMedica - Birkenhead	99.8	99.9	96.0	99.5	97.0	90.9	92.1	89.2	93.0	71.6

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
SpaMedica - Birmingham	99.9	99.5	96.7	99.1	98.7	93.1	90.9	85.5	87.7	86.6
SpaMedica - Bolton	99.9	99.7	97.2	99.2	98.6	89.6	89.8	89.5	92.1	93.2
SpaMedica - Bradford	100.0	99.7	96.6	98.7	97.7	90.3	85.2	77.6	82.0	80.5
SpaMedica - Brighton				99.6	97.4				88.0	85.1
SpaMedica - Bristol			**	98.8	93.4			**	77.2	80.9
SpaMedica - Bromley			99.4	99.2	97.2			97.5	85.9	85.8
SpaMedica - Chelmsford		99.8	97.6	98.9	95.3		94.8	80.1	83.6	88.6
SpaMedica - Coventry			98.8	99.5	98.3			89.6	88.1	88.4
SpaMedica - Derby			99.4	99.7	99.1			86.7	86.4	86.3
SpaMedica - Doncaster					99.3					71.3
SpaMedica - Epsom				98.4	99.3				95.8	88.8
SpaMedica - Exeter				99.6	99.0				88.0	87.8
SpaMedica - Gateshead				100.0	93.1				87.5	87.6
SpaMedica - Gloucester				99.6	97.1				81.9	81.0
SpaMedica - Hull		99.7	96.6	99.3	98.8		90.6	89.2	89.2	86.1
SpaMedica - Kendal				99.7	98.5				93.8	92.5
SpaMedica - Leeds					98.7					83.4
SpaMedica - Leicester				99.3	98.9				87.8	82.0
SpaMedica - Liverpool	99.9	99.4	96.4	98.7	95.5	86.2	87.0	87.8	91.5	89.0
SpaMedica - Manchester	99.7	99.6	95.7	97.3	92.4	85.7	88.8	81.8	85.6	87.3
SpaMedica - Newark				99.7	99.0				87.9	87.8
SpaMedica - Newcastle Under Lyme		99.6	96.2	97.4	94.6		91.8	91.3	92.4	89.3
SpaMedica - Newton-le-Willows	99.9	99.8				87.8	93.8			
SpaMedica - Norwich				100.0	97.4				86.4	84.4
SpaMedica - Oldham					99.0					89.4
SpaMedica - Peterborough				99.7	99.2				91.1	80.6

**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
SpaMedica - Poole				98.7	98.5				89.4	88.8
SpaMedica - Preston			94.4	99.0	97.6			88.1	88.9	89.1
SpaMedica - Romford				99.3	96.4				73.6	64.3
SpaMedica - Sheffield	99.9	99.7	94.8	98.9	96.1	88.6	89.0	74.6	80.0	85.9
SpaMedica - Sittingbourne				100.0	99.0				90.9	81.3
SpaMedica - Solihull					99.7					86.6
SpaMedica - Southampton				99.3	98.4				91.2	90.7
SpaMedica - Stockton-on-Tees			100.0	99.5	96.0			91.4	89.6	88.8
SpaMedica - Swansea					99.4					*
SpaMedica - Wakefield	99.9	99.6	98.0	99.1	98.1	87.1	87.2	82.0	82.8	83.1
SpaMedica - Watford				99.3	98.0				92.4	86.5
SpaMedica - West Lancashire	100.0	99.1	92.6	99.2	99.0	87.5	87.7	91.1	93.0	93.0
SpaMedica - Widnes		99.8	97.4	99.2	98.1		89.4	84.1	86.8	78.4
SpaMedica - Wokingham			99.7	99.2	96.7			91.6	87.1	86.7
SpaMedica - Wolverhampton		99.7	97.6	98.1	96.5		92.7	89.9	86.6	85.0
St. Stephens Gate Medical Practice	99.6	100.0	92.2	99.5	100.0	37.2	31.7	36.6	37.0	*
Surrey and Sussex Healthcare NHS Trust	68.9	78.8	94.6	98.1	96.8	3.2	3.4	48.2	46.7	53.7
Swansea Bay University Local Health Board	96.4					44.6				
Tetbury Hospital			63.3					94.4		
The Dudley Group NHS Foundation Trust	46.1	51.0	43.1	56.2	65.6	75.1	67.0	76.3	68.0	88.2
The Hillingdon Hospitals NHS Foundation Trust	97.0	96.9	76.3	92.6	95.1	85.8	88.1	41.7	63.3	70.2
The Newcastle upon Tyne Hospitals NHS Foundation Trust	92.9	87.7	36.7	76.3	92.1	81.8	80.6	44.3	54.8	44.6
The Princess Alexandra Hospital NHS Trust	95.9	93.1	83.4	92.9		90.5	93.1	88.3	93.0	
The Rotherham NHS Foundation Trust	96.0					35.4				
The Shrewsbury and Telford Hospital NHS Trust	89.7	87.5	67.0	64.5	75.8	84.7	86.1	61.6	61.2	62.5
The Stoneygate Eye Hospital		100.0	95.6	98.6	90.5		*	98.2	97.7	41.5



**Appendix S table continued: Percentage of eyes with preoperative and postoperative visual acuity data for participating centres for the 2018 – 2022 NHS years**

Centre name	Preoperative VA %					Postoperative VA %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Torbay and South Devon NHS Foundation Trust	88.9	83.0	71.3	76.1	62.3	53.7	67.5	53.6	49.8	33.7
United Lincolnshire Hospitals NHS Trust	96.6	95.8	51.9	86.8	89.2	54.8	57.4	47.2	65.1	68.1
University Hospital Southampton NHS Foundation Trust	97.7	97.1	84.9	96.9	97.9	94.6	89.9	92.0	95.6	93.9
University Hospitals Birmingham NHS Foundation Trust	97.0	96.7	71.9	90.7	96.0	97.3	95.5	84.4	93.0	91.2
University Hospitals Bristol and Weston NHS Foundation Trust	97.8	98.9	62.4	86.2	90.1	89.3	84.4	65.8	66.8	73.6
University Hospitals Coventry and Warwickshire NHS Trust	95.0	91.8	59.3	83.3	75.6	93.1	96.4	89.7	87.2	90.9
University Hospitals Dorset NHS Foundation Trust	89.4	83.6	81.9	80.2	75.3	68.3	72.2	61.3	64.7	57.9
University Hospitals Plymouth NHS Trust	99.3	98.3	68.3	86.0	87.9	90.1	87.0	73.5	79.5	76.2
University Hospitals Sussex NHS Foundation Trust	94.0	74.1	61.1	88.2	91.4	3.9	16.8	3.9	5.6	4.9
Warrington and Halton Teaching Hospitals NHS Foundation Trust	95.0	94.1	37.2	65.0	80.2	82.7	84.9	96.4	99.2	99.0
West Suffolk NHS Foundation Trust	**	80.1	83.3	96.3	97.5	**	73.4	69.6	73.5	81.7
Wirral University Teaching Hospital NHS Foundation Trust	80.4	87.2	73.9	88.4	87.9	81.6	73.1	87.2	90.9	95.5
Worcestershire Acute Hospitals NHS Trust			51.8	78.2				30.9	27.3	
Wrightington, Wigan and Leigh NHS Foundation Trust	98.9	97.5	78.7	93.9	72.1	92.6	93.6	92.0	87.3	92.7
York and Scarborough Teaching Hospitals NHS Foundation Trust	70.8	54.0	36.2	82.3	80.2	80.1	81.4	33.1	52.8	67.5
<b>Overall for all centres</b>	<b>90.0</b>	<b>85.7</b>	<b>70.8</b>	<b>86.2</b>	<b>86.5</b>	<b>75.9</b>	<b>73.0</b>	<b>60.9</b>	<b>67.5</b>	<b>69.0</b>

\*No estimate is produced for centres with <50 eligible operations in the postoperative qualifying time period. \*\*These centres supplied data for <50 eligible operations in the relevant audit year.

## Appendix T: Participating centres case complexity adjusted PCR and Vision Loss for the 2018 – 2022 NHS years

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Aneurin Bevan University Local Health Board	0.23	1.16	0.65				0.95	1.39		
Barking, Havering and Redbridge University Hospitals NHS Trust	0.86	0.55	1.19	1.04	1.03					
Barnsley Hospital NHS Foundation Trust	0.00	0.00		0.00						
Barts Health NHS Trust	0.81	0.63	1.24	0.99	0.84	0.64	1.01			
Benenden Health				*	0.66				*	
Bolton NHS Foundation Trust	0.80	0.73	0.81	0.88	0.88	1.08	0.34	0.39	0.36	0.54
Bradford Teaching Hospitals NHS Foundation Trust	0.82	1.20	1.09	1.72	1.17	0.67	0.65			0.91
Buckinghamshire Healthcare NHS Trust	0.81	0.78	0.40	0.52	0.54	*				
Calderdale and Huddersfield NHS Foundation Trust	0.60					0.72				
Cambridge University Hospitals NHS Foundation Trust	0.50	0.56	0.25	0.42	0.45	1.31	0.37			
Cardiff & Vale University Local Health Board	1.02	1.06	1.04	1.38	0.52					
CHEC (Accrington)					1.09					*
CHEC (Atria Watford)		0.54	0.51	0.34	0.32		*			0.11
CHEC (Blackpool)			0.41	0.63	0.96				0.34	0.48
CHEC (Bridgend)		*		0.31	0.24		*			2.35
CHEC (Coventry)				0.19	0.23					0.76
CHEC (Face and Eye)		0.00	*					*		
CHEC (Grange Medical Centre)			*	0.00	*			*		*
CHEC (Leicester)				0.00	0.37				*	0.47
CHEC (New Cross)				0.76	0.20					0.36
CHEC (Newcastle)					0.54					1.87
CHEC (Northampton)					0.67					1.32
CHEC (Nottingham)				0.59	0.45				*	

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
CHEC (Preston)			1.78	0.34	0.61			*		2.43
CHEC (Slough)				0.62	0.11					1.27
CHEC (Stoke)		0.27	0.63	0.10	0.41					
Chesterfield Royal Hospital NHS Foundation Trust	1.16	1.78	0.70	0.63	1.92	0.84	0.57		0.33	1.01
County Durham and Darlington NHS Foundation Trust	1.06	0.55	1.15	1.28	1.22	0.32	0.35			
Cwm Taf Morgannwg University Local Health Board	0.69	0.73	1.87	0.65	1.25	1.33	0.65		1.16	
East Cheshire NHS Trust	0.83	0.50	0.46	0.59	0.71				1.03	
East Kent Hospitals University NHS Foundation Trust	0.78	0.59	0.28	0.71	0.24					
East Suffolk and North Essex NHS Foundation Trust	0.97	0.89	0.77	0.79	0.89				0.76	
East Sussex Healthcare NHS Trust	0.61	0.64	0.91	0.47	0.64	0.42	0.29		0.28	0.55
Epsom and St Helier University Hospitals NHS Trust	0.96	0.87	0.98	1.00	0.88	0.31	0.42		0.41	
Exeter Eye	0.00	0.13	0.72	0.28	0.11		0.00	0.00	0.00	0.00
Frimley Health NHS Foundation Trust	0.93	0.65	0.79	0.41		0.95	0.79			
George Eliot Hospital NHS Trust	1.04	0.77	0.97	1.24	1.19	*	0.16		1.09	1.93
Gloucestershire Hospitals NHS Foundation Trust	0.70	0.92	0.90	0.99	1.06	0.56	0.25		0.43	0.49
Great Western Hospitals NHS Foundation Trust	0.73	0.84	0.69	0.74	0.85	0.52	0.25	0.54	0.32	0.53
Guy's and St Thomas' NHS Foundation Trust	0.45	0.55	0.52	0.98	0.63		0.61	0.29	0.09	0.56
Hampshire Hospitals NHS Foundation Trust	0.76	0.81	0.48	0.88	1.11	0.34	0.37			
Harrogate and District NHS Foundation Trust	0.41	0.52	0.00	0.95	0.32	0.47	0.64		0.58	
Hywel Dda University Local Health Board	0.90	1.27	0.00	*			*			
Imperial College Healthcare NHS Trust	1.18	1.05	1.23	1.27	0.95	0.68	0.64	0.85	0.77	0.80
Isle of Wight NHS Trust	0.60	0.90	0.85	1.03	0.97	2.26	1.13		0.78	0.32
James Paget University Hospitals NHS Foundation Trust	0.94	0.62	0.52	0.74	0.53	0.18	0.09		0.57	
Kettering General Hospital NHS Foundation Trust	0.00	0.64	1.19	0.72	0.97	*				
King's College Hospital NHS Foundation Trust	0.94	0.98	1.00	1.00	0.83	0.66	0.52	0.30	0.45	0.56
Kingston Hospital NHS Foundation Trust	1.35	1.22	0.93	0.86	0.62					0.15

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Leeds Teaching Hospitals NHS Trust	0.64	0.60	0.94	0.91	0.90	0.28	0.53	0.84	0.50	0.38
Liverpool University Hospitals NHS Foundation Trust	1.05	0.94	1.62	1.47	1.40	0.68	0.92			0.61
London North West University Healthcare NHS Trust	1.40	*		1.02	0.62		*		0.00	0.16
Manchester University NHS Foundation Trust	1.01	0.95	0.97	1.08	1.59	0.40	0.49			
Medical Specialists Group (Guernsey)	0.32	1.15	1.40	0.79	0.83	0.21	0.15	0.58	0.65	0.32
Mersey and West Lancashire Teaching Hospitals NHS Trust	0.62	0.95	0.79	0.68	1.31	1.03	1.68		0.57	1.45
Mid and South Essex NHS Foundation Trust	0.88	0.79	1.00	1.20	1.22					
Mid Cheshire Hospitals NHS Foundation Trust	0.69	0.82	1.19	0.96	0.99	0.49	0.25	0.76	0.75	0.51
Mid Yorkshire Teaching NHS Trust	0.76	0.52	0.73	1.26	1.24	0.46	0.25		0.64	1.04
Moorfields Eye Hospital NHS Foundation Trust	0.73	0.78	0.78	0.72	0.70	0.41	0.45		0.43	0.43
Newmedica (Aztec West)					0.60					
Newmedica (Barlborough)		0.31	0.31	0.42	0.44					0.72
Newmedica (Birmingham)					0.42					*
Newmedica (Brigg)			0.42	0.09	0.36			*		
Newmedica (Bristol)		0.32	0.42	0.42	0.64					
Newmedica (Exeter)			0.27	0.09	0.29					
Newmedica (Frome)			0.77	0.34	0.25			*		
Newmedica (Gloucester - Aspen)		0.14	0.37	0.15	0.52				0.70	
Newmedica (Gloucester - Brighouse)			*	0.26	0.37			*	1.24	
Newmedica (Grimsby)		0.49	0.00	0.04	0.07					
Newmedica (Ipswich)			0.11	0.28	0.06					
Newmedica (Leeds)		0.32	0.25	0.31	0.11					
Newmedica (Leicester)				0.26	0.19				0.46	
Newmedica (Newcastle)					0.14					
Newmedica (North Derbyshire)					0.31					

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Newmedica (Northampton)				*	0.16				*	0.81
Newmedica (Norwich)				0.40	0.24					
Newmedica (Oxfordshire)					0.00					
Newmedica (Plymouth)					0.38					
Newmedica (Shrewsbury)				0.21	0.43					
Newmedica (Teesside)		0.08	0.46	0.33	0.32					
Newmedica (Wakefield)			0.00	0.31	0.00			*		
Newmedica (Worcester)					0.44					0.69
Norfolk and Norwich University Hospitals NHS Foundation Trust	0.45	0.62	0.37	0.80	0.93					
North Cumbria Integrated Care NHS Foundation Trust	1.00	1.83								
North Middlesex University Hospital NHS Trust	1.03	0.91	1.23	1.57	1.42	0.49	0.19		0.53	0.39
North West Anglia NHS Foundation Trust	0.66	0.94	0.80	0.90	1.33	0.29	0.26		0.65	0.55
Northampton General Hospital NHS Trust	0.76	1.03	1.05	0.81	0.81					
Northern Care Alliance NHS Foundation Trust			0.98	1.58	1.15			*	5.06	
Northern Lincolnshire and Goole NHS Foundation Trust	0.98					1.75				
Nottingham University Hospitals NHS Trust	0.69	0.65	0.93	0.53		0.55	0.30		0.56	
Optegra Eye Health Care (Birmingham Eye Hospital)	0.62	0.89	0.81	0.46	0.48					
Optegra Eye Health Care (Central London Eye Hospital)	1.94	1.45	1.39	0.20	*		1.17	0.00	0.00	*
Optegra Eye Health Care (Hampshire Eye Hospital)	0.65	0.68	0.75	0.28	0.30	0.00	0.19	0.27		
Optegra Eye Health Care (Maidstone Eye Clinic)					0.09					0.62
Optegra Eye Health Care (Manchester Eye Hospital)	0.68	0.62	0.41	0.20	0.16	0.37	0.71	0.18		
Optegra Eye Health Care (Newcastle Eye Clinic)				0.16	0.22				0.90	0.52
Optegra Eye Health Care (North London Eye Hospital)	0.49	0.57	0.28	0.32	0.33	0.00	0.00	0.59	0.46	0.56
Optegra Eye Health Care (Surrey Eye Hospital)	0.81	0.36	0.28	0.29	0.27			0.49	0.39	
Optegra Eye Health Care (Uttoxeter Eye Clinic)					0.73					*

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Optegra Eye Health Care (Yorkshire Eye Hospital)	0.42	0.22	0.47	0.33	0.38	0.17	0.17		0.91	0.75
Optimax Clinic (Leicester)					0.00					*
Optimax Clinic (Newton Abbot)					0.18					0.00
Oxford University Hospitals NHS Foundation Trust	0.99	0.78	1.46	0.83	0.79					
Portsmouth Hospitals University NHS Trust	0.91	0.63	0.84	0.80	1.20	0.71	0.79	0.63	0.63	0.82
Practice Plus Group Hospital, Barlborough					1.36					0.91
Practice Plus Group Hospital, Emersons Green	0.27	0.36	0.14	0.25	0.42	0.44				0.56
Practice Plus Group Hospital, Ilford	0.32	0.41	0.86	1.28	0.75	0.00	0.24			
Practice Plus Group Hospital, Plymouth	0.45	0.18	0.52	0.14	0.68	0.91				
Practice Plus Group Hospital, Shepton Mallet	0.27	1.08	0.51	0.44	0.31	0.21	0.56		0.74	0.29
Practice Plus Group Hospital, Southampton	1.36	0.52	0.48	0.98	0.09					
Practice Plus Group Ophthalmology, Rochdale	0.24	1.09	0.56	0.38	0.36	1.14	0.88	0.87	0.50	1.40
Practice Plus Group Surgical Centre, Devizes	0.39	0.00	0.00	0.00	0.31	0.36	0.38	0.00	0.70	0.92
Practice Plus Group Surgical Centre, Gillingham	0.61	0.53	0.47	0.73	0.59	0.63				
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	0.76	0.56	0.65	0.64	0.60	0.18	0.31		0.58	0.37
Royal Berkshire NHS Foundation Trust	0.89	0.62	0.63	0.55	0.60	0.73	0.32		0.63	
Royal Cornwall Hospitals NHS Trust	0.65	0.53	0.43	0.29	0.39	0.56	0.35			
Royal Devon University Healthcare NHS Foundation Trust	0.35	0.28	0.51	0.68	0.83	0.32	0.60	0.60	0.61	
Royal Free London NHS Foundation Trust	1.20	1.05	1.26	1.35	1.22				0.75	
Royal Surrey County Hospital NHS Foundation Trust	0.00	0.00	*			2.41	0.00	*		
Royal United Hospitals Bath NHS Foundation Trust	0.67	0.67	0.95	1.06	0.56					
Salisbury NHS Foundation Trust	0.89	0.43	1.08	0.91	0.49	0.15	0.07		0.00	0.31
Sandwell and West Birmingham Hospitals NHS Trust	1.19	1.14	1.75	1.25	1.75	0.41	0.76	0.62		1.62
Sheffield Teaching Hospitals NHS Foundation Trust	0.75	0.64				0.69	0.79			
Sherwood Forest Hospitals NHS Foundation Trust	0.64	0.46	0.46	0.79	0.76					

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Somerset NHS Foundation Trust	1.20	0.57	0.79	0.66	0.83	0.18	0.31		0.17	0.53
South Tees Hospitals NHS Foundation Trust	0.83	1.23	1.63	1.77	1.06					
South Warwickshire University NHS Foundation Trust	0.62	0.64	0.62	0.54	0.17	0.23	0.29	0.36	0.18	0.25
SpaMedica - Bedford		0.00	0.51	0.25	0.50		0.00	0.23	0.11	0.23
SpaMedica - Birkenhead	0.21	0.19	0.28	0.25	0.36	0.24	0.12	0.00	0.25	0.27
SpaMedica - Birmingham	0.33	0.36	0.29	0.17	0.12	0.15	0.14	0.19	0.14	0.23
SpaMedica - Bolton	0.29	0.39	0.27	0.51	0.54	0.16	0.20	0.30	0.13	0.35
SpaMedica - Bradford	0.58	0.45	0.65	0.70	0.55	0.72	0.34	0.41	0.33	0.65
SpaMedica - Brighton				0.55	0.69				0.77	0.29
SpaMedica - Bristol			*	0.62	0.58			*	0.23	0.32
SpaMedica - Bromley			0.88	0.64	0.51			1.01	0.24	0.24
SpaMedica - Chelmsford		0.81	0.54	0.32	0.39		0.00	0.28	0.24	0.23
SpaMedica - Coventry			0.34	0.22	0.21			0.19	0.28	0.09
SpaMedica - Derby			0.13	0.35	0.17			0.00	0.20	0.20
SpaMedica - Doncaster					0.49					0.52
SpaMedica - Epsom				1.29	1.56				0.00	0.00
SpaMedica - Exeter				0.79	0.35				0.56	0.12
SpaMedica - Gateshead				0.79	0.59				0.00	0.57
SpaMedica - Gloucester				0.65	0.63				0.62	0.48
SpaMedica - Hull		0.86	0.43	0.90	0.86		0.69	0.53	0.31	0.50
SpaMedica - Kendal				0.37	1.06				0.17	0.41
SpaMedica - Leeds					0.39					0.24
SpaMedica - Leicester				1.02	0.14				0.00	0.28
SpaMedica - Liverpool	0.43	0.37	0.14	0.27	0.22	0.10	0.00	0.00	0.23	0.29
SpaMedica - Manchester	0.42	0.47	0.36	0.69	0.71	0.27	0.18	0.27	0.58	0.49

**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
SpaMedica - Newark				0.30	0.17				0.00	0.25
SpaMedica - Newcastle Under Lyme		0.46	0.32	0.31	0.49		0.43	0.10	0.16	0.29
SpaMedica - Newton-le-Willows	0.13	0.21				0.13	0.00			
SpaMedica - Norwich				0.62	0.56				0.75	0.69
SpaMedica - Oldham					0.56					0.49
SpaMedica - Peterborough				0.41	0.52				0.57	0.32
SpaMedica - Poole				0.44	0.49				0.72	0.38
SpaMedica - Preston			0.31	0.42	0.78			0.17	0.31	0.29
SpaMedica - Romford				0.42	0.65				0.42	0.68
SpaMedica - Sheffield	0.71	0.43	0.36	0.33	0.20	0.32	0.46	0.06	0.31	0.21
SpaMedica - Sittingbourne				0.66	0.67				0.47	0.45
SpaMedica - Solihull					0.42					0.44
SpaMedica - Southampton				0.33	0.39				0.00	0.39
SpaMedica - Stockton-on-Tees			0.36	0.45	0.41			1.45	0.32	0.28
SpaMedica - Swansea					0.63					*
SpaMedica - Wakefield	0.44	0.63	0.50	0.23	0.37	0.36	0.28	0.25	0.38	0.32
SpaMedica - Watford				0.49	0.63				0.34	0.47
SpaMedica - West Lancashire	0.00	0.39	0.24	0.49	0.29	0.37	0.36	0.24	0.38	0.19
SpaMedica - Widnes		0.39	0.69	0.35	0.43		0.23	0.14	0.26	0.31
SpaMedica - Wokingham			0.94	0.44	0.48			0.00	0.28	0.27
SpaMedica - Wolverhampton		0.00	0.11	0.10	0.17		0.00	0.18	0.12	0.14
St. Stephens Gate Medical Practice	0.36	0.48	0.66	0.00	0.00					*
Surrey and Sussex Healthcare NHS Trust	1.64	3.25	1.67	1.49	1.41					
Swansea Bay University Local Health Board	1.92									
Tetbury Hospital			0.69							



**Appendix T table continued: Participating centres case complexity adjusted PCR and Vision Loss rates for participating centres for the 2018 – 2022 NHS years**

Centre name	Posterior Capsule Rupture %					Postoperative Vision Loss %				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
The Dudley Group NHS Foundation Trust	0.94	0.93	2.40	2.07	0.78					
The Hillingdon Hospitals NHS Foundation Trust	0.86	0.87	0.51	1.34	0.69	0.44	0.94			1.13
The Newcastle upon Tyne Hospitals NHS Foundation Trust	0.97	0.86	0.57	0.83	0.78	0.43	0.46			
The Princess Alexandra Hospital NHS Trust	1.49	0.73	0.82	1.56		1.09	0.27	2.61	0.00	
The Rotherham NHS Foundation Trust	0.56									
The Shrewsbury and Telford Hospital NHS Trust	0.82	0.68	1.02	1.25	0.78	0.92	1.01			
The Stoneygate Eye Hospital		0.00	0.00	0.20	0.48		*	3.46	0.44	
Torbay and South Devon NHS Foundation Trust	1.08	0.69	0.71	0.69	0.68					
United Lincolnshire Hospitals NHS Trust	0.59	0.84	0.66	0.81	0.94					1.38
University Hospital Southampton NHS Foundation Trust	0.89	0.87	0.65	0.80	0.98	0.50	0.32	0.24	0.43	0.36
University Hospitals Birmingham NHS Foundation Trust	0.87	0.60	0.86	0.84	1.01	0.52	0.51		0.43	0.74
University Hospitals Bristol and Weston NHS Foundation Trust	0.91	0.95	0.42	1.01	1.32	0.57	0.84			0.64
University Hospitals Coventry and Warwickshire NHS Trust	0.64	0.71	0.63	0.79	0.56	0.25	0.17		0.14	0.16
University Hospitals Dorset NHS Foundation Trust	0.56	0.62	0.53	0.77	0.44	0.81	0.55			
University Hospitals Plymouth NHS Trust	0.42	0.40	0.49	0.47	0.74	0.38	0.13		0.59	0.41
University Hospitals Sussex NHS Foundation Trust	0.39	0.71	1.12	1.16	1.42					
Warrington and Halton Teaching Hospitals NHS Foundation Trust	0.37	0.42	0.83	0.78	0.76	0.52	0.70			0.34
West Suffolk NHS Foundation Trust	*	0.28	0.76	1.23	0.55	*	0.78		0.00	0.18
Wirral University Teaching Hospital NHS Foundation Trust	0.47	0.40	0.56	0.66	0.70	1.45	0.89	1.32	0.47	0.96
Worcestershire Acute Hospitals NHS Trust			0.31	0.31						
Wrightington, Wigan and Leigh NHS Foundation Trust	0.50	1.06	0.66	0.38	0.54	1.29	1.23	2.51	0.60	1.40
York and Scarborough Teaching Hospitals NHS Foundation Trust	0.56	0.61	0.36	0.32	0.32					
<b>Overall for all centres</b>	<b>0.75</b>	<b>0.70</b>	<b>0.66</b>	<b>0.64</b>	<b>0.61</b>	<b>0.51</b>	<b>0.45</b>	<b>0.33</b>	<b>0.40</b>	<b>0.44</b>

\*These centres supplied data for <50 eligible operations or had <50 eligible operations in the postoperative time period in the relevant audit year.

## Appendix U: Participating centres percentage of eyes with VA data at different time intervals in the 2022 NHS year

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Barking, Havering and Redbridge University Hospitals NHS Trust	1,602	84.3	83.1	81.6	80.3	1,305	48.4	51.1	52.5	53.2
Barts Health NHS Trust	2,268	87.9	83.5	78.2	69.3	1,899	47.9	55.9	59.5	61.1
Benenden Health	3,026	78.8	75.3	63.9	43.0	2,428	27.2	28.2	28.8	29.1
Bolton NHS Foundation Trust	1,534	95.3	93.5	90.5	84.6	1,229	73.0	75.0	76.9	79.1
Bradford Teaching Hospitals NHS Foundation Trust	1,583	77.8	72.8	67.2	59.8	1,284	77.2	79.6	80.8	82.0
Buckinghamshire Healthcare NHS Trust	4,391	75.3	73.1	69.4	63.1	3,736	22.0	23.7	25.2	26.1
Cambridge University Hospitals NHS Foundation Trust	2,203	69.0	63.9	55.8	46.3	1,799	63.3	71.5	77.7	81.6
Cardiff & Vale University Local Health Board	1,882	86.2	84.8	83.3	81.6	1,443	29.1	31.3	32.3	33.1
CHEC (Accrington)	93	97.8	97.8	97.8	97.8	12	*	*	*	*
CHEC (Atria Watford)	5,374	99.3	99.3	99.3	99.2	4,198	71.9	73.3	74.2	74.4
CHEC (Blackpool)	3,089	97.5	97.5	97.5	97.5	2,473	83.5	84.4	85.0	85.2
CHEC (Bridgend)	653	99.7	99.7	99.7	99.7	636	73.0	74.1	74.4	74.4
CHEC (Coventry)	2,406	95.6	95.6	95.6	95.6	1,847	75.7	77.6	78.1	78.6
CHEC (Leicester)	2,037	99.5	99.5	99.5	99.5	1,786	57.2	60.0	61.7	62.5
CHEC (New Cross)	3,192	95.6	95.6	95.6	95.6	2,565	62.7	65.0	65.7	66.4
CHEC (Newcastle)	945	98.9	98.9	98.9	98.9	528	61.2	67.2	69.1	69.3
CHEC (Northampton)	443	99.5	99.5	99.5	99.5	306	56.9	58.8	60.5	61.1
CHEC (Nottingham)	2,572	99.0	99.0	99.0	99.0	2,300	46.6	48.5	49.1	49.4
CHEC (Preston)	971	98.9	98.9	98.9	98.9	862	81.8	82.5	83.3	83.6
CHEC (Slough)	1,902	98.5	98.5	98.5	98.5	1,540	57.9	59.5	60.2	61.0
CHEC (Stoke)	2,729	97.9	97.9	97.9	97.9	2,309	41.1	42.5	43.0	43.3
Chesterfield Royal Hospital NHS Foundation Trust	685	76.6	70.8	64.2	54.0	571	82.0	83.4	84.2	84.4
County Durham and Darlington NHS Foundation Trust	1,214	78.4	68.1	51.9	36.4	961	60.2	62.2	63.1	63.6

**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Cwm Taf Morgannwg University Local Health Board	801	94.4	92.3	87.6	84.8	652	59.4	60.4	60.6	61.5
East Cheshire NHS Trust	1,144	85.5	83.7	80.6	76.7	944	64.5	66.3	67.3	67.7
East Kent Hospitals University NHS Foundation Trust	1,504	82.9	78.9	73.7	65.6	1,250	53.0	55.0	56.8	58.1
East Suffolk and North Essex NHS Foundation Trust	4,665	72.2	65.9	57.0	45.9	3,831	59.2	66.3	80.3	84.5
East Sussex Healthcare NHS Trust	3,551	89.7	87.1	83.6	78.7	2,991	67.3	70.0	71.3	71.9
Epsom and St Helier University Hospitals NHS Trust	2,396	80.4	71.0	57.6	40.9	1,995	52.6	54.9	56.0	56.9
Exeter Eye	851	89.9	84.6	78.8	66.6	763	75.1	75.2	75.6	75.8
George Eliot Hospital NHS Trust	765	95.4	93.2	88.6	84.2	647	94.3	95.5	95.5	95.5
Gloucestershire Hospitals NHS Foundation Trust	2,101	91.8	88.4	80.2	64.2	1,799	78.4	80.4	81.2	81.8
Great Western Hospitals NHS Foundation Trust	1,108	92.1	88.6	83.8	73.7	873	85.9	87.2	87.6	87.9
Guy's and St Thomas' NHS Foundation Trust	1,604	90.6	87.9	84.2	78.2	1,373	81.4	82.4	83.4	83.9
Hampshire Hospitals NHS Foundation Trust	2,050	78.0	74.9	72.9	70.2	1,712	62.5	63.2	64.1	64.7
Harrogate and District NHS Foundation Trust	706	69.4	66.6	63.9	58.1	585	69.6	72.5	73.7	73.8
Imperial College Healthcare NHS Trust	2,779	91.3	88.8	84.9	77.6	2,379	86.3	88.8	89.7	90.1
Isle of Wight NHS Trust	1,614	77.9	71.3	64.4	57.1	1,254	79.8	80.6	80.7	80.9
James Paget University Hospitals NHS Foundation Trust	1,973	86.8	83.9	79.0	71.8	1,644	58.7	62.3	64.0	65.0
Kettering General Hospital NHS Foundation Trust	665	93.7	92.8	91.7	89.9	550	22.2	23.6	25.8	26.7
King's College Hospital NHS Foundation Trust	5,042	99.0	96.5	92.9	87.1	4,194	84.2	87.7	89.0	89.6
Kingston Hospital NHS Foundation Trust	2,413	90.7	84.5	74.1	59.7	2,044	94.9	95.4	95.5	95.7
Leeds Teaching Hospitals NHS Trust	2,176	99.4	98.9	98.1	96.4	1,739	82.1	83.8	84.1	84.5
Liverpool University Hospitals NHS Foundation Trust	2,718	70.2	64.8	58.0	50.2	2,316	80.8	86.9	88.6	89.8
London North West University Healthcare NHS Trust	782	97.7	97.6	96.7	93.9	663	94.7	96.4	97.0	97.1
Manchester University NHS Foundation Trust	1,053	89.6	87.6	85.2	79.0	1,053	27.7	28.1	28.2	28.2
Medical Specialists Group (Guernsey)	511	93.5	88.8	79.6	68.1	422	71.3	72.7	73.0	73.5
Mersey and West Lancashire Teaching Hospitals NHS Trust	1,379	80.7	76.4	71.4	66.7	1,128	74.7	76.5	77.5	78.0

## Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Mid and South Essex NHS Foundation Trust	3,156	64.9	60.9	53.4	41.5	2,641	26.2	29.2	30.9	32.3
Mid Cheshire Hospitals NHS Foundation Trust	1,916	76.8	75.6	73.0	68.4	1,632	81.7	83.9	85.0	86.0
Mid Yorkshire Teaching NHS Trust	1,174	91.5	83.6	73.2	60.7	942	75.7	77.8	78.8	79.4
Moorfields Eye Hospital NHS Foundation Trust	20,661	94.7	92.6	88.2	79.8	17,259	89.8	91.8	92.8	93.2
Newmedica (Aztec West)	3,425	28.8	24.1	21.0	18.8	2,579	7.4	7.4	7.6	7.6
Newmedica (Barlborough)	222	83.8	81.5	73.9	58.6	222	83.3	83.8	84.2	84.2
Newmedica (Birmingham)	200	95.0	95.0	95.0	95.0	23	*	*	*	*
Newmedica (Brigg)	2,828	72.1	71.5	70.3	66.9	2,372	59.0	60.6	61.6	62.0
Newmedica (Bristol)	2,406	23.5	21.2	19.2	17.6	2,116	4.0	4.1	4.1	4.2
Newmedica (Exeter)	2,992	79.2	74.5	62.4	53.9	2,423	21.7	22.1	22.4	23.8
Newmedica (Frome)	1,617	26.6	21.4	18.6	14.2	1,271	5.1	5.3	5.3	5.3
Newmedica (Gloucester - Aspen)	1,675	84.4	80.4	75.3	66.4	1,538	53.9	57.6	59.0	59.2
Newmedica (Gloucester - Brighouse)	5,427	87.0	83.5	77.2	67.9	4,529	52.9	56.6	57.7	58.2
Newmedica (Grimsby)	2,963	82.3	81.5	79.9	74.7	2,379	51.3	53.0	53.4	53.7
Newmedica (Ipswich)	5,659	0.0	0.0	0.0	0.0	4,565	0.0	0.0	0.0	0.0
Newmedica (Leeds)	3,664	63.6	61.7	57.6	50.3	2,995	0.0	0.0	0.0	0.0
Newmedica (Leicester)	3,371	28.3	27.8	27.5	27.4	2,648	1.8	1.8	2.0	2.1
Newmedica (Newcastle)	2,021	45.3	45.3	45.0	44.3	1,354	51.6	51.6	51.6	51.6
Newmedica (North Derbyshire)	4,189	62.5	59.3	48.6	36.6	3,176	64.7	64.9	65.0	65.0
Newmedica (Northampton)	2,306	97.7	96.5	93.1	86.8	1,780	68.8	73.4	76.0	77.0
Newmedica (Norwich)	4,021	32.6	32.1	30.7	27.0	3,182	68.5	70.9	72.2	72.6
Newmedica (Oxfordshire)	214	72.4	72.4	72.4	72.4	85	60.0	60.0	60.0	60.0
Newmedica (Plymouth)	1,635	68.8	68.5	67.6	64.2	988	56.7	57.2	57.3	57.3
Newmedica (Shrewsbury)	4,491	77.6	75.1	69.0	62.0	3,658	1.9	1.9	1.9	1.9
Newmedica (Teesside)	5,529	0.0	0.0	0.0	0.0	4,706	0.0	0.0	0.0	0.0

**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Newmedica (Wakefield)	843	59.8	55.9	48.0	36.2	738	0.0	0.0	0.0	0.0
Newmedica (Worcester)	3,219	57.2	57.1	56.7	55.1	2,296	72.6	72.8	72.9	72.9
Norfolk and Norwich University Hospitals NHS Foundation Trust	1,613	91.7	90.1	87.5	84.4	1,296	16.6	18.1	18.9	19.5
North Middlesex University Hospital NHS Trust	1,198	93.6	88.9	81.9	69.1	987	97.8	98.3	98.3	98.3
North West Anglia NHS Foundation Trust	1,697	93.0	90.8	87.5	83.1	1,430	59.0	62.2	63.4	64.5
Northampton General Hospital NHS Trust	2,145	29.1	27.4	25.0	23.1	1,777	17.2	18.0	18.5	19.0
Northern Care Alliance NHS Foundation Trust	1,462	49.2	43.9	39.7	34.2	1,217	46.8	52.1	55.1	56.9
Optegra Eye Health Care (Birmingham Eye Hospital)	4,908	99.1	98.5	97.0	93.6	3,918	54.0	55.7	56.7	57.1
Optegra Eye Health Care (Hampshire Eye Hospital)	5,474	98.9	98.1	96.5	92.9	4,379	51.3	52.5	53.1	53.3
Optegra Eye Health Care (Maidstone Eye Clinic)	761	100.0	99.6	98.4	95.8	420	76.7	80.2	80.5	80.7
Optegra Eye Health Care (Manchester Eye Hospital)	7,904	99.1	98.7	98.1	96.1	6,367	58.3	59.4	60.0	60.2
Optegra Eye Health Care (Newcastle Eye Clinic)	3,686	99.4	98.6	96.8	93.4	2,841	58.4	60.2	61.1	61.6
Optegra Eye Health Care (North London Eye Hospital)	4,516	98.6	97.8	96.1	93.1	3,518	57.9	59.7	60.6	61.2
Optegra Eye Health Care (Surrey Eye Hospital)	4,718	99.5	99.0	97.7	95.1	3,799	55.2	56.4	56.9	57.1
Optegra Eye Health Care (Uttoxeter Eye Clinic)	236	100.0	100.0	100.0	100.0	0	*	*	*	*
Optegra Eye Health Care (Yorkshire Eye Hospital)	2,737	97.9	96.3	92.9	83.8	2,123	61.6	64.7	65.7	66.1
Optimax Clinic (Leicester)	72	100.0	98.6	97.2	95.8	53	45.3	50.9	60.4	62.3
Optimax Clinic (Newton Abbot)	560	98.6	97.3	93.4	80.2	367	46.0	65.1	72.5	76.0
Oxford University Hospitals NHS Foundation Trust	3,394	93.7	90.3	85.6	75.6	2,840	42.7	45.3	46.7	48.0
Portsmouth Hospitals University NHS Trust	2,028	97.1	95.7	93.1	87.7	1,663	94.3	94.5	94.5	94.5
Practice Plus Group Hospital, Barlborough	141	97.2	97.2	97.2	96.5	118	100.0	100.0	100.0	100.0
Practice Plus Group Hospital, Emersons Green	2,199	97.5	96.0	93.5	87.8	1,819	75.2	75.7	75.9	76.2
Practice Plus Group Hospital, Ilford	1,010	70.5	61.7	55.0	46.5	790	29.0	30.8	31.6	32.5
Practice Plus Group Hospital, Plymouth	1,265	36.0	26.7	19.8	15.7	1,134	10.5	11.6	12.2	12.9
Practice Plus Group Hospital, Shepton Mallet	1,658	97.4	96.2	94.7	90.4	1,415	95.3	95.4	95.5	95.5

**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
Practice Plus Group Hospital, Southampton	1,183	95.4	94.3	92.6	90.0	1,043	21.8	22.4	22.8	23.1
Practice Plus Group Ophthalmology, Rochdale	1,861	98.7	98.4	96.5	92.9	1,631	57.0	67.0	68.8	69.7
Practice Plus Group Surgical Centre, Devizes	886	91.1	87.5	81.7	74.0	729	94.9	96.6	96.8	97.1
Practice Plus Group Surgical Centre, Gillingham	1,763	30.3	26.0	23.1	20.9	1,353	68.7	69.0	69.3	69.4
Practice Plus Group Surgical Centre, St. Mary's Portsmouth	3,550	99.4	98.5	97.1	92.4	2,932	75.7	76.0	76.1	76.1
Royal Berkshire NHS Foundation Trust	2,977	92.9	89.0	83.5	72.1	2,495	35.1	38.0	40.2	41.4
Royal Cornwall Hospitals NHS Trust	3,823	96.5	95.1	92.6	88.6	3,109	38.7	46.8	52.3	54.0
Royal Devon University Healthcare NHS Foundation Trust	447	96.4	95.7	94.0	93.1	447	57.3	58.6	58.8	58.8
Royal Free London NHS Foundation Trust	3,014	68.8	67.0	64.4	60.6	2,537	63.9	65.4	66.3	67.2
Royal United Hospitals Bath NHS Foundation Trust	1,131	91.6	87.4	76.8	63.4	954	55.9	57.5	58.9	60.1
Salisbury NHS Foundation Trust	871	97.5	94.5	91.5	86.3	751	95.6	96.3	96.8	97.2
Sandwell and West Birmingham Hospitals NHS Trust	2,450	93.4	90.0	85.2	78.3	2,006	88.5	89.4	90.5	90.7
Sherwood Forest Hospitals NHS Foundation Trust	1,283	75.7	74.2	70.5	62.9	1,049	62.1	64.9	67.5	69.6
Somerset NHS Foundation Trust	3,357	83.0	78.4	74.3	69.0	2,876	91.4	92.1	92.4	92.6
South Tees Hospitals NHS Foundation Trust	1,782	49.8	44.1	36.1	26.8	1,468	34.3	38.8	43.2	45.6
South Warwickshire University NHS Foundation Trust	1,200	85.6	77.8	67.3	52.0	1,006	52.6	62.6	67.1	69.3
SpaMedica - Bedford	4,260	98.2	97.7	96.6	94.1	3,411	81.3	82.6	83.3	83.4
SpaMedica - Birkenhead	5,895	97.0	95.6	93.8	90.2	4,774	69.5	70.6	71.3	71.6
SpaMedica - Birmingham	6,089	98.7	97.8	96.8	94.0	4,989	84.3	85.6	86.3	86.6
SpaMedica - Bolton	6,396	98.6	97.8	96.0	91.8	5,249	91.9	92.6	93.0	93.2
SpaMedica - Bradford	2,438	97.7	96.3	94.3	90.7	1,826	77.2	78.7	80.0	80.5
SpaMedica - Brighton	4,373	97.4	96.0	93.0	86.9	3,673	82.4	84.0	84.6	85.1
SpaMedica - Bristol	3,429	93.4	91.2	87.6	81.6	2,724	79.4	80.4	80.7	80.9
SpaMedica - Bromley	3,844	97.2	95.8	92.8	85.7	2,958	82.9	84.3	85.3	85.8
SpaMedica - Chelmsford	5,834	95.3	93.3	89.7	81.4	4,757	86.9	87.8	88.3	88.6

**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
SpaMedica - Coventry	5,261	98.3	97.3	95.2	91.4	4,366	86.3	87.4	88.1	88.4
SpaMedica - Derby	4,928	99.1	98.7	97.7	95.1	3,966	83.5	85.0	85.9	86.3
SpaMedica - Doncaster	1,629	99.3	98.8	98.1	96.2	1,127	68.0	70.3	71.0	71.3
SpaMedica - Epsom	1,202	99.3	98.6	97.8	95.0	1,028	87.3	87.9	88.4	88.8
SpaMedica - Exeter	4,127	99.0	98.4	96.8	93.7	3,396	84.6	86.5	87.5	87.8
SpaMedica - Gateshead	4,613	93.1	87.0	75.9	58.1	3,595	85.2	86.4	87.1	87.6
SpaMedica - Gloucester	2,580	97.1	96.3	94.2	90.0	2,186	79.8	80.6	81.0	81.0
SpaMedica - Hull	3,787	98.8	98.4	97.5	94.9	3,197	84.2	85.1	85.7	86.1
SpaMedica - Kendal	5,235	98.5	97.6	95.7	91.4	4,153	90.4	91.7	92.1	92.5
SpaMedica - Leeds	2,376	98.7	98.4	97.3	94.4	1,790	81.2	82.7	83.1	83.4
SpaMedica - Leicester	2,841	98.9	98.4	97.4	94.4	2,348	79.7	81.2	81.7	82.0
SpaMedica - Liverpool	4,717	95.5	94.7	93.1	90.2	3,805	86.3	88.1	88.7	89.0
SpaMedica - Manchester	5,067	92.4	90.4	87.3	80.5	4,483	85.9	86.7	87.1	87.3
SpaMedica - Newark	3,538	99.0	98.7	97.7	95.5	2,945	85.9	87.0	87.7	87.8
SpaMedica - Newcastle Under Lyme	5,330	94.6	93.7	92.2	90.3	4,383	87.6	88.7	89.1	89.3
SpaMedica - Norwich	2,482	97.4	96.0	92.9	86.7	2,038	80.6	82.7	83.8	84.4
SpaMedica - Oldham	3,911	99.0	98.7	97.9	96.4	2,829	87.8	89.0	89.3	89.4
SpaMedica - Peterborough	2,469	99.2	98.9	97.3	94.3	1,934	76.7	79.0	80.0	80.6
SpaMedica - Poole	4,383	98.5	97.6	95.8	92.1	3,550	85.9	87.7	88.5	88.8
SpaMedica - Preston	4,501	97.6	96.7	94.5	91.0	3,735	86.9	88.2	88.9	89.1
SpaMedica - Romford	4,164	96.4	94.0	89.8	82.5	3,151	58.3	61.9	63.4	64.3
SpaMedica - Sheffield	6,354	96.1	95.0	92.5	87.8	5,138	84.1	85.1	85.7	85.9
SpaMedica - Sittingbourne	2,699	99.0	98.5	97.1	93.6	2,341	77.6	80.1	80.9	81.3
SpaMedica - Solihull	1,215	99.7	99.3	99.1	97.8	731	83.9	85.9	86.3	86.6
SpaMedica - Southampton	2,673	98.4	97.8	96.9	94.8	2,057	88.1	89.7	90.4	90.7

**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
SpaMedica - Stockton-on-Tees	3,873	96.0	93.7	88.6	81.0	3,100	87.2	88.3	88.7	88.8
SpaMedica - Swansea	343	99.4	99.4	99.4	99.4	37	*	*	*	*
SpaMedica - Wakefield	6,311	98.1	97.7	96.5	93.3	5,182	81.0	82.1	82.7	83.1
SpaMedica - Watford	3,457	98.0	97.3	95.6	92.4	2,786	81.3	84.7	86.0	86.5
SpaMedica - West Lancashire	2,360	99.0	98.6	96.8	92.5	1,820	91.9	92.6	92.9	93.0
SpaMedica - Widnes	5,482	98.1	97.1	95.0	90.8	4,436	75.6	77.3	78.0	78.4
SpaMedica - Wokingham	5,062	96.7	95.2	93.0	89.0	4,053	84.4	86.0	86.5	86.7
SpaMedica - Wolverhampton	6,244	96.5	95.1	92.6	88.5	5,219	82.9	84.1	84.7	85.0
St. Stephens Gate Medical Practice	203	100.0	100.0	100.0	100.0	9	*	*	*	*
Surrey and Sussex Healthcare NHS Trust	1,589	96.8	94.3	90.7	84.4	1,341	45.0	48.7	51.8	53.7
The Dudley Group NHS Foundation Trust	810	65.6	57.5	51.4	43.6	661	84.9	86.4	87.6	88.2
The Hillingdon Hospitals NHS Foundation Trust	1,416	95.1	92.9	88.1	78.4	1,223	63.5	67.6	69.3	70.2
The Newcastle upon Tyne Hospitals NHS Foundation Trust	7,316	92.1	86.6	76.5	56.9	6,065	37.8	41.5	43.3	44.6
The Shrewsbury and Telford Hospital NHS Trust	2,321	75.8	70.2	64.0	55.1	1,919	59.8	61.0	62.0	62.5
The Stoneygate Eye Hospital	675	90.5	83.0	54.7	28.7	675	29.3	36.3	38.5	41.5
Torbay and South Devon NHS Foundation Trust	1,881	62.3	55.3	47.7	39.2	1,586	27.0	30.7	32.8	33.7
United Lincolnshire Hospitals NHS Trust	1,512	89.2	82.8	74.1	62.2	1,300	59.5	63.3	66.1	68.1
University Hospital Southampton NHS Foundation Trust	3,283	97.9	97.0	95.6	91.3	2,721	87.5	90.9	92.9	93.9
University Hospitals Birmingham NHS Foundation Trust	2,353	96.0	93.1	85.4	72.0	2,012	87.7	89.7	90.5	91.2
University Hospitals Bristol and Weston NHS Foundation Trust	3,061	90.1	86.7	82.6	76.7	2,632	66.0	69.6	71.7	73.6
University Hospitals Coventry and Warwickshire NHS Trust	1,808	75.6	67.0	57.9	46.8	1,535	89.3	90.0	90.7	90.9
University Hospitals Dorset NHS Foundation Trust	3,202	75.3	68.6	60.6	50.9	2,644	52.8	55.4	57.2	57.9
University Hospitals Plymouth NHS Trust	1,892	87.9	85.5	81.9	75.3	1,556	65.7	71.4	74.9	76.2
University Hospitals Sussex NHS Foundation Trust	2,153	91.4	87.6	84.0	77.7	1,789	2.6	4.0	4.5	4.9
Warrington and Halton Teaching Hospitals NHS Foundation Trust	621	80.2	69.6	55.2	41.9	518	98.8	99.0	99.0	99.0



**Appendix U table continued: Participating centres percentage of eyes with VA data at different time intervals for the 2022 NHS year**

Centre name	Preoperative VA					Postoperative VA				
	Number of eligible operations	6 months %	5 months %	4 months %	3 months %	Number of eligible operations	3 months %	4 months %	5 months %	6 months %
West Suffolk NHS Foundation Trust	484	97.5	96.1	94.2	90.9	399	78.4	79.9	81.5	81.7
Wirral University Teaching Hospital NHS Foundation Trust	1,272	87.9	80.5	70.3	56.0	1,011	93.6	94.5	95.0	95.5
Wrightington, Wigan and Leigh NHS Foundation Trust	958	72.1	66.5	60.2	53.4	822	90.0	91.6	92.5	92.7
York and Scarborough Teaching Hospitals NHS Foundation Trust	3,019	80.2	75.6	70.2	62.1	2,423	56.3	61.0	65.1	67.5
<b>Overall for all centres</b>	<b>481,530</b>	<b>86.5</b>	<b>84.4</b>	<b>80.9</b>	<b>75.3</b>	<b>391,598</b>	<b>65.5</b>	<b>67.4</b>	<b>68.4</b>	<b>69.0</b>

\*No estimate is produced for centres with <50 eligible operations in the postoperative qualifying time period.

## Appendix V: Operative procedures combined with phacoemulsification ± IOL

Operative procedure	Frequency
Insertion of pupil ring expander	6,531
Intraoperative phenylephrine	4,231
Automated anterior vitrectomy	2,233
Insertion of Iris hooks	2,020
Capsular tension ring	1,837
Intravitreal injection	1,275
Limbal relaxing incisions / Opposite clear corneal incisions	858
Synaechiolysis	789
Stretching of the Iris	547
IVI steroids	487
Injection of bleb (antimetabolite)	375
Suture of Cornea	83
Sphincterotomy	81
Injection into anterior chamber	71
Sub-conjunctival injection	53
IOL removal	38
Anterior chamber of eye and/or lens operation	36
Pars plana vitrectomy	33
IOL exchange	28
Examination under anaesthesia	24
Incision of cornea	17
Sub-Tenon steroid injection	14
Orbital floor injection	12
Peribulbar injection of therapeutic substance	8
Pupilloplasty	8
Other operation on iris	5
Peripheral iridectomy	5
Fragmatone lensectomy	4

**Appendix V table continued: Operative procedures combined with phacoemulsification ± IOL**

Operative procedure	Frequency
Scleral-fixed IOL	4
Stretching of lens capsule	4
Broad iridectomy	3
Insertion of minijet implant	3
Photocoagulation of ciliary body	3
Removal of cornea sutures	3
Removal of retained lens fragments	3
Excision of lesion of Cornea	2
Implantation of posterior chamber intraocular lens	2
Insertion of punctal plug	2
Excision of prolapsed iris	1
IVI Antibiotics	1
Other conjunctiva operation	1
Punctual cautery	1
Removal of retained lens nucleus	1

National Ophthalmology Database Audit  
The Royal College of Ophthalmologists  
18 Stephenson Way, London NW1 2HD

T. 020 7935 0702  
[noa.project@rcophth.ac.uk](mailto:noa.project@rcophth.ac.uk)  
[nodaudit.org.uk](http://nodaudit.org.uk)

